

Heuristics used in credibility judgment of health information on Facebook

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การใช้แนวคิดแบบรวบรัดในการตัดสินความน่าเชื่อถือของข้อมูลสุภาพที่ปรากฏบนเฟซบุ๊ก



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาโทสาขาสถาปัตยกรรมศาสตร์
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ญานินี เพชรานันท์ : การใช้แนวคิดแบบรวบรัดในการตัดสินความน่าเชื่อถือของ
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ผู้ใช้เฟซบุ๊กทั่วโลกกำลังเผชิญกับปัญหาความน่าเชื่อถือของข้อมูลที่ปรากฏบนเฟซบุ๊ก การวิจัยครั้งนี้มุ่งศึกษากระบวนการตัดสินความน่าเชื่อถือของข้อมูลที่ปรากฏบนเฟซบุ๊กของผู้ใช้เฟซบุ๊กในประเทศไทยโดยเลือกศึกษาข้อมูลสุขภาพเป็นการเฉพาะและใช้แนวคิดเชิงรวบรัดเป็นกรอบแนวทางในการศึกษา ผู้วิจัยใช้วิธีการสัมภาษณ์เชิงลึกในการเก็บข้อมูลจากผู้ใช้งานเฟซบุ๊กชาวไทยจำนวน 50 คน และใช้แบบสอบถามออนไลน์ในการเก็บข้อมูลจำนวน 480 ชุด ทั้งนี้ ผู้ให้ข้อมูลคือผู้ใช้เฟซบุ๊กชาวไทยที่มีอายุตั้งแต่ 18 ปีขึ้นไป และมีประสบการณ์การใช้เฟซบุ๊กอย่างน้อย 1 ปี ผลการศึกษพบว่าผู้ใช้เฟซบุ๊กในประเทศไทยมีกระบวนการในการตัดสินความน่าเชื่อถือของข้อมูลสุขภาพที่ปรากฏบนเฟซบุ๊ก 3 ลักษณะใหญ่ ๆ และพบว่าการอ้างอิงตัวชี้แนะแบบรวบรัด (heuristic cues) ลักษณะต่างๆ 5 กลุ่ม อันได้แก่ กลุ่มตัวชี้แนะที่แสดงถึงความมีชื่อเสียงของผู้ให้ข้อมูล (reputation heuristic) กลุ่มตัวชี้แนะที่แสดงความมีอำนาจในการให้ข้อมูล (authority heuristic) กลุ่มตัวชี้แนะที่ขัดแย้งกับความคาดหวังของผู้รับสาร (expectancy violation heuristic) กลุ่มตัวชี้แนะที่แสดงความมุ่งมั่นในการโน้มน้าวใจ (persuasive intense heuristic) และกลุ่มตัวชี้แนะที่อ้างอิงความเห็นของผู้อื่น (bandwagon heuristic) โดยกลุ่มตัวชี้แนะที่แสดงความมีอำนาจในการให้ข้อมูล กลุ่มตัวชี้แนะที่แสดงถึงความมีชื่อเสียงของผู้ให้ข้อมูล กลุ่มตัวชี้แนะที่ขัดแย้งกับความคาดหวังของผู้รับสาร และกลุ่มตัวชี้แนะที่อ้างอิงความเห็นของผู้อื่น ตามลำดับ นอกจากนี้ ผลการศึกษายังพบว่าผู้ใช้เฟซบุ๊กที่มีความแตกต่างกันในด้านแรงจูงใจด้านสุขภาพ การรับรู้ถึงความรุนแรงของประเด็นสุขภาพ ความรอบรู้ด้านสุขภาพ ความเป็นผู้รู้ด้านสุขภาพออนไลน์ และแนวคิดการมองโลกแบบองค์รวม มีการอ้างอิงตัวชี้แนะในแต่ละกลุ่มเพื่อตัดสินความน่าเชื่อถือของข้อมูลสุขภาพที่ปรากฏบนเฟซบุ๊กแตกต่างกัน

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Facebook users worldwide had been facing challenges of information credibility. This study aimed to address this issue among Thai Facebook users by focusing on health information in particular, through a lens of heuristic approach. Data were collected from 50 informants by in-depth interviews and 480 responses from online surveys. All participants were at least 18 years old with a minimum of one year experience in using Facebook. The results revealed three different processes and five heuristics, namely, reputation heuristic, authority heuristic, expectancy violation heuristic, persuasive intense heuristic, and bandwagon heuristics that participants adopted when making a credibility judgment of health information on Facebook. Persuasive intense heuristic was found to be most commonly used, followed by authority heuristic, reputation heuristic, expectancy violation heuristic, and bandwagon heuristic, respectively. Additionally, the empirical findings yielded the difference in using each group of heuristics among Thai Facebook who were different in term of health motivation, perceived seriousness of health issue, health literacy, health e-mavens, and holistic worldview.

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TABLE OF CONTENTS

	Page
.....	iii
ABSTRACT (THAI)	iii
.....	iv
ABSTRACT (ENGLISH).....	iv
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
List of tables.....	viii
List of figures.....	xii
Chapter 1 Introduction	1
1.1 Rationale	1
1.2 Objectives of the study	11
1.3 Scope of the study.....	11
1.4 Significance of the study	12
Chapter 2 Literature Review	13
2.1 Credibility	13
2.2 Heuristics in decision making and its application in credibility judgment.....	21
2.3 Heuristics in credibility judgment of health information on Facebook.....	34
2.3.1 Research question 1:.....	37
2.3.2 Research question 2.....	37
2.3.3 Research question 3:.....	38
2.4 Variables	39
2.4.1 Health motivation	39
2.4.2 Perceived seriousness of health issues	43
2.4.3 Health literacy	46
2.4.4 Health e-maven.....	51
2.4.5 Holistic and analytic worldview: Cultural influence in decision making style	54
2.5 A conceptual framework.....	60
2.6 Operational definitions	61
Chapter 3 Research Methods	62

3.1 Qualitative method: An in-depth interview	62
3.2 Quantitative method: Survey	64
Chapter 4 Results from qualitative data	72
4.1 Health information exposure on Facebook	72
4.2 To what extent individuals applied heuristics when making credibility judgment of health information on Facebook.....	82
4.3 A process of credibility judgment of health information on Facebook	100
Chapter 5 Quantitative results and analysis	111
5.1 Participant characteristics	111
5.2 Variables	115
5.2.1. Health motivation	115
5.2.2 Perceived seriousness of health issues	117
5.2.3 Health literacy on Facebook	120
5.2.4 Health e-mavens	122
5.2.5 Holistic and analytic worldview	126
5.2.6 Uses of heuristics in credibility judgment	128
5.3 Research questions and hypothetical test	186
5.4. Path analysis	214
Chapter 6 Conclusion, discussion, and recommendation	220
6.1 Conclusion	220
6.2 Discussion.....	227
6.3 Research contribution	235
6.4 Limitation and Flaws of the study	237
6.5 Recommendation for future research.....	238
REFERENCES	239
Appendix.....	252
Appendix A.....	252
Appendix B	283
VITA.....	293

List of tables

	Page
Table 1: Informants' systematic and heuristic processing in making credibility judgment of health information on Facebook	109
Table 2: Frequency distribution of participants' gender	111
Table 3: Frequency distribution of participants' ages.....	111
Table 4: Frequency distribution of participants' educational background	112
Table 5: Frequency distribution of participants' number of years using Facebook ..	113
Table 6: Frequency distribution of participants' use of Facebook	113
Table 7: Frequency distribution of participants' average time spending on Facebook	114
Table 8: Frequency distribution of participants' choice of devices when accessing Facebook	114
Table 9: Frequency distribution of participants' self-rating of health status	115
Table 10: Frequency, percentage distribution, and average mean score of participants' health motivation	116
Table 11: Frequency, percentage distribution, and average mean score of participants' perceived seriousness of 'muscle soreness'	118
Table 12: Frequency, percentage distribution, and average mean score of participants' perceived seriousness of 'Alzheimer's disease'	119
Table 13: Frequency, percentage distribution, and average mean score of participants' health literacy by item.....	121
Table 14: Frequency, percentage distribution, and average mean score of participants' health e-mavens by item	124
Table 15: Frequency, percentage distribution, and average mean score of participants' opinions toward holistic and analytic worldview by item	127
Table 16: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item.....	130
Table 17: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case A.....	134
Table 18: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case B	138
Table 19: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case C	142
Table 20: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case D.....	146

Table 21: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case E	150
Table 22: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case F	154
Table 23: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case G.....	158
Table 24: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case H.....	162
Table 25: Comparison of mean scores by items and by cases	169
Table 26: Comparison of mean scores by items and by source and message manipulations	175
Table 27: Comparison of mean scores by items and by interactivity manipulations	181
Table 28: Results of repeated measure ANOVA and pairwise comparison on uses of heuristics in credibility judgment of health information on Facebook by heuristic groups.....	187
Table 29: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.....	188
Table 30: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.....	189
Table 31: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.....	190
Table 32: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.....	190
Table 33: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.....	191
Table 34: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness).....	192
Table 35: Results of ANOVA and post hoc test on uses of reputation heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease).....	193
Table 36: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of	

participants with different level of perceived seriousness of health issue (muscle soreness).....	194
Table 37: Results of ANOVA and post hoc test on uses of authority heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease).....	195
Table 38: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness).....	196
Table 39: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease).....	197
Table 40: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness).....	198
Table 41: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease).....	198
Table 42: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness).....	199
Table 43: Results of ANOVA and post hoc test on uses of bandwagon heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease).....	200
Table 44: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy	201
Table 45: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy	202
Table 46: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy	203
Table 47: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy	204

Table 48: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy	205
Table 49: Results of ANOVA and post hoc test on uses of reputation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven	206
Table 50: Results of ANOVA and post hoc test on uses of authority heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven	207
Table 51: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven	208
Table 52: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven	209
Table 53: Results of ANOVA and post hoc test on uses of bandwagon heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven	210
Table 54: Results of ANOVA and post hoc test on uses of reputation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview	211
Table 55: Results of ANOVA and post hoc test on uses of authority heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview	212
Table 56: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview	213
Table 57: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview	213
Table 58: Results of ANOVA and post hoc test on uses of bandwagon heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview	214
Table 59: Results of path analysis of factors influencing uses of heuristics in credibility judgment of health information on Facebook	217
Table 60: Results of hypothetical test by variables	227

List of figures

	Page
Figure 1 : Three sections of heuristic cues Facebook users referred to when making credibility judgment of a Facebook page.....	93
Figure 2 : Type A process of credibility judgment of health information on Facebook	101
Figure 3 : Type B process of credibility judgment of health information on Facebook	103
Figure 4 : Type C process of credibility judgment of health information on Facebook	105
Figure 5 : A path analysis model of factors influencing uses of heuristics in credibility	219

Chapter 1

Introduction

1.1 Rationale

Importance of online health information

Individuals, either they were direct users or lay information mediary, acquired health information because of many reasons (Abrahamson, Fisher, Turner, Durrance, & Turner, 2008; Cutrona et al., 2015; De Choudhury, Morris, & White, 2014; Fogg, 2002; Reifegerste, Bachl, & Baumann, 2017; Sillence, Briggs, Harris, & Fishwick, 2007; Taha, Sharit, & Czaja, 2009; Wagner, Baker, Bundorf, & Singer, 2004; Yi, Stvilia, & Mon, 2012). Overall, Johnson (2014) reviewed several scholar works and listed the following reasons why people sought for health information; information gain, affective support, emotional adjustment, social adjustment, attitude change, knowledge change, behavior maintenance, a feeling of greater control over events, reduction of uncertainty, and compliance with medical advice.

Looking at direct users or patients in particular, these group of people sought for health information to self-diagnose, to cope with their illness, to better make their health decision, to empower themselves, and to improve their health condition (De Choudhury et al., 2014; Sillence et al., 2007; Taha et al., 2009; Wagner et al., 2004; Yi et al., 2012). For surrogate seekers, caregivers or lay information mediary, these groups needed information to help patients, who were family members or someone they were closed to, deal with illness and to give proper care and support (Abrahamson et al., 2008; Cutrona et al., 2015; Reifegerste et al., 2017).

As communication technology had been developed, there was a shift in the way individuals acquired health information. They gained more access to and obtained health information from more than one source (Carlsson, 2000; Hess, 2010; Hess et al., 2005; O'Malley, Kerner, & Johnson, 1999; Sillence et al., 2007; Smith, Menn, & McKyer, 2011). Before Internet, people discussed their health issues with physicians, nurses, or other health professionals through face-to-face communication (Aaronson, Mural, & Pfoutz, 1988; Kassulke, Stenner-Day, Coory, & Ring, 1993; O'Malley et al., 1999). Also, individuals looked for health information from mass media such as newspapers, magazines, radio, and televisions (Chatterjee, 1999; Johnson & Meischke, 1994; O'Malley et al., 1999). The commencement of Internet

offered individuals more choices of health information resources. Hess et al.(2005) found that individuals with cancer reached out for more information with computer-mediated communication through Internet, but their physicians still ranked as the most trusted source of health information and the first wanted choice they turned to when specific health information was needed. The results from Hess et al. (2005) also added that participants in fact went online before consulting their physicians. On the contrary, studies in the recent years found that health information was obtained from Internet the most, followed by family members, and health care professionals (Cotten & Gupta, 2004; Sillence et al., 2007; Smith et al., 2011).

There were empirical evidences showing that Internet became a popular source of health information (Andreassen et al., 2007; Chang & Im, 2014; Cline & Haynes, 2001; Fox, 2011; Galarce, Ramanadhan, & Viswanath, 2011; Hess et al., 2005; Miller & Bell, 2012; Rideout, 2001; Sarasohn-Khan, 2008; Siliquini, 2011; Sillence et al., 2007). A telephone survey conducted by Pew Research Center (2011) showed that US Internet users had looked for health topics online, read someone else's commentary or experience or watch online videos about health or medical issues, consulted online reviews of particular drugs, medical treatments, doctors, health-related providers, hospitals or medical facilities, and look for others who might have the same health issues as theirs. Research also showed that Internet helped promoting health (Corcoran, 2013), helped patients taking care of themselves (Cutrona et al., 2015; De Choudhury et al., 2014; Sillence et al., 2007; Taha et al., 2009; Wagner et al., 2004; Yi et al., 2012), allowed patients to seek care from a different doctor (Eysenbach, 1999; Wagner et al., 2004), was a resource for health self-education (Pautler et al., 2001; Peterson & Fretz, 2003), and was a platform which individuals could use to track their personal health information (Cutrona et al., 2015).

Additionally, Internet allowed individuals to participate in support group, and consulting with health professionals (Cline & Haynes, 2001; Cutrona et al., 2015; Eysenbach, 1999; Sillence et al., 2007). These people communicated with doctors or doctors' office via email and the Internet, read and shared medical stories on social media, as well as joined a support group.

Moreover, Internet also enabled individuals to share information with others. De Choudhury et al. (2014) found that individuals used social media as a channel to share health information as well. Participants in De Choudhury et al.'s research reported their intention to share their immediate health status or symptom and information or news about the condition.

Even though many research were conducted concentrating on online health information behavior of individuals in the United States, this area of research had been studied in other countries as well (Andreassen et al., 2007; Inthiram, 2016; Jo, Kim, & Song, 2008; Kim & Park, 2004; Kitikannakorn & Sittiworanan, 2009; Obasola & Agunbiade, 2016; Siliquini, 2011; Wangberg, Andreassen, Kummervold, Wynn, & Sorensen, 2009; Wilson et al., 2008; Wong, Harrison, Britt, & Henderson, 2014). The results were quite similar to the US studies. Research conducted in European countries showed that, as years went by, the number of European individuals using Internet for health-related purposes was increased constantly, mostly in health information seeking task (Andreassen et al., 2007; Siliquini, 2011; Wangberg et al., 2009). Many used those information as supplement to other health services (Andreassen et al., 2007). They used obtained health information to help making decision whether to see a doctor and to prepare for and follow up on their doctors' appointments. They also joined a forum or self-helped groups, used the Internet to connect with health professionals whom they had not met. Norwegian users not only read health information that related to health and illness, but they also looked for lifestyle-related information (Wangberg et al., 2009). Moreover, they pointed that online-obtained health information inspired them to change their behaviors.

In Nigeria, even though they were facing some limitation on Internet access, high cost of the Internet access, and poor service, participants reported looking for health information about nutrition, fitness/exercise, HIV/AIDS, malaria, sore throat, mental health, menstrual pain, and sexual/reproductive health (Obasola & Agunbiade, 2016). After acquiring online health information, most of Nigerian participants mentioned that they consulted with their physicians rather than talked to friends or relied on self-medication.

Similar to Nigerians, individuals from South Korea searched for disease-related information, information about exercise and nutrition, and online advice (Chang & Im, 2014; Kim & Park, 2004). The results replicated to the research conducted with Korean community in the United States (Yi et al., 2012). Also, South Koreans believed that online health information was helpful in solving health-related issues, while information from other sources such as mass media or healthcare professionals were unnecessary (Jo et al., 2008; Kim & Park, 2004).

In Thailand, most Internet users used search engines to obtain health information (Chinthanorm, 2008; Jametim & Yuenyong, 2017; Kitikannakorn & Sittiworanan, 2009). Participants reported performing online health information acquisition on daily basis (Kitikannakorn & Sittiworanan, 2009), while elderly people rarely used Internet for health information acquisition (Jametim & Yuenyong, 2017). There were several types of information they searched such as general health information (Jametim & Yuenyong, 2017; Kitikannakorn & Sittiworanan, 2009), and others such as disease and treatment (Chinthanorm, 2008; Jametim & Yuenyong, 2017; Kitikannakorn & Sittiworanan, 2009), exercise and nutrition (Chinthanorm, 2008; Kitikannakorn & Sittiworanan, 2009), mental health, alternative medicine, and dental health (Chinthanorm, 2008). These obtained online health information were found having several personal impacts to the searchers such as increasing general health knowledge, giving more understanding and compliance about treatment planning, raising concern on follow-up schedule (Kitikannakorn & Sittiworanan, 2009).

When asking about online health information searching experience, individuals from Southeast Asia reported that they had more positive than negative experience (Inthiram, 2016). Inthiram (2016) interviewed 50 participants representing Malaysian, Indonesian, Thai, and Cambodian and learned that they satisfied with the information they found, especially if the information matched with what they learned from their doctors. They also satisfied with those information when it helped them recovered from the illness.

Australian patients were found searching for health information online as well (Wong et al., 2014). Similar to people in Nigeria and Thailand, Australians looked for information concerning a specific illness or disease the most, following by

information about diet and fitness. Furthermore, they sought for undiagnosed symptom, medication, other medication treatments, and immunization/ vaccinations (Wong et al., 2014). This study also found that the younger they were, the more use of Internet of health information acquisition task. Elderly Australians (Wilson et al., 2008) reported that they were willing to receive unsolicited online health information.

There were several reasons explaining why individuals turned to Internet when seeking for health information (De Choudhury et al., 2014; Eysenbach, 1999). Some reasons were related to personal experiences and opinions while others were related to features of channels they chose to use. A study by Eysenbach (1999) found some reasons explaining why patients turned to Internet for health information such as 1) they felt helpless or got frustrated from fail medical treatment, 2) they lacked of trust in their current physicians or health care provider, 3) they could be anonymous to reduce fear of asking 'stupid' question, 4) they felt that they had not enough information or were uninformed in certain areas, and 5) they sought for health information for someone else such as family members and friends. De Choudhury et al. (2014) also found some same reasons supporting the work by Eysenbach (1999). Participants in the study mentioned that they turned to Internet because 1) they did not satisfied with what have been told by their physicians and needed more detailed information, 2) they wanted to find more information that they could share with or ask their healthcare providers, 3) in some cases, medical care was not available, and 4) monetary cost for performing online medical or health information seeking was cheaper than going to see doctors.

De Choudhury et al. (2014) also focused on individuals' motivation of using search engines and social media, which were claimed to be two most favorite channels of Internet for health information seeking. In case of search engines, participants in the study reported using search engines for online health information acquisition because of its convenience, plurality of results, and privacy of health information seeking experience. In case of social media, which in this case researchers selected Twitter, participants in the study mentioned that they sought health information because 1) they found it convenient, 2) they saw that the application can serve large audience, 3) they wanted to try something different, and 4) they wanted to find others' recommendation, advice, or opinion on treatment of

managing health conditions. In the meantime, those participants stated that they shared health information on social media because 1) they wanted to reach large audience, 2) they wanted others to benefit from information they personally found useful, 3) they wanted to make complaints, and 4) they believed they had more privacy on Twitter, comparing to Facebook which many of their family and friends were on.

To participants from South East Asia in particular, they reasoned that it was easy to locate online health information and the information was updated and complete (Inthiram, 2016; Kitikannakorn & Sittiworanan, 2009). The health information they found was easy to read. When communicating on Facebook community groups in particular, they found that they received response quickly and worldwide from one simple post (Inthiram, 2016). South Korean individuals reported that they turned to Internet to get general health information and to seek for more information about hospitals before making decision (Jo et al., 2008).

Internet users in Europe also pointed out that Internet provided a fast access and great amount of health information (Siliquini, 2011). Also, they reported that online-obtained health information had several consequences as following; they were willing to change their diet or lifestyle habits (Andreassen et al., 2007; Wangberg et al., 2009), they received suggestions or queries on their diagnoses (Andreassen et al., 2007), and they possessed feelings of reassurance or relief (Andreassen et al., 2007; Wangberg et al., 2009).

It must be noted that there were many others who were encountering unsolicited online health information while surfing through Internet, especially on their social networking accounts. It was reasonable to assume that they could probably use that health information to keep themselves and their closed ones healthy, to tackle their health issues if they have some, and to share some encountering health information which were considered as useful ones with others.

Among various channels of communication on Internet such as websites, blogs, newsgroups, it was reasonable to believe that social networking sites such as Facebook had been widely used for health information seeking as well.

Facebook and health information

There were many reasons to explain why individuals rely on Facebook for information and social connection. According to Kietzmann, Hermkens, McCarthy, and Silvestr (2011), Facebook possessed several features or ‘functional blocking,’ a qualification of social networking sites that accommodated individuals’ needs. For example, Facebook provided a platform for individuals to speak out and connect with others who are like-minded or share the same interest. Facebook also allowed individuals to reach out to others. The application could tell if other users were accessible or it could provide a location. Facebook also helped individuals to identify the standing of others in the social media setting. Furthermore, the application provided related information such as mutual friends, personal background, number of followers, likes, and shares. In addition, individuals could form a community and a subcommunity in which members could share and exchange information concerning their interest.

Taken Facebook as a resource of health information, according to guidance on improving individual’s health behavioral outcomes proposed by Neuhauser and Kreps (2003), this social networking site was considered to be an effective channel for health communication. That was, Facebook’s features allowed the application to reach its users at emotional levels as well as rational level (Newman, Lauterbach, Munson, Resnick, & Morris, 2011; Zhang, He, & Sang, 2013), which was contrary to traditional media in which provided information that allowed individuals to only make a judgment on a rational basis (Neuhauser & Kreps, 2003). At emotional level, Facebook allowed its users to send and receive moral support the same way they could do on face-to-face communication. Newman et al. (2011) found that people who concerned with weight loss and type II diabetes used Facebook for emotional support, motivation, and accountability. Moreover, according to Facebook announcement (Callisson-Burch, Probst, & Govea, 2015), the application enabled individuals to remember or memorialize their ‘friends’ who lost their lives including those who were fatally caused by health condition.

At rational level, there were empirical evidences confirming that individuals relied on Facebook as health resource. Newman et al. (2011) studied use of Facebook among people who concerned about type II diabetes and weight loss and found that these people searched for advice in relation to diabetes management and weight loss.

A work by Zhang et al. (2013) also showed that those who suffered with or concerned about diabetics used Facebook to interact with others worldwide and to ask for more information, lifestyles and experiences, or personal opinions toward products and treatment on a community or 'health group' that was created on this platform even though participants probably faced some language barrier. In the meantime, Kim and colleagues (2014) found that Facebook was used among health professionals as well. Healthcare providers in Korea used Facebook as a virtual community for cardiovascular care. This community became a platform where they shared exchanged ideas and experiences.

Challenge for credibility judgment of health information on Facebook

The coming of Internet and digital technologies had changed the information landscape. According to the work of Metzger and Flanagin (2013), it took huge investment and complex process to produce and disseminate information via traditional media. As such, there were a limited number of information producer and the information were scarce. On the contrary, cost of producing and disseminating information was lower in digital media setting. Therefore, this digital media environment drew enormous number of information providers and accommodated abundant information.

This different media environment led to different process of credibility filtering process and challenged individuals' credibility judgment (Metzger, 2007; Metzger & Flanagin, 2013; Metzger, Flanagin, & Medder, 2010). That was, in information scarcity era, professional gatekeepers were able to filter all information available before dissemination. On the other hand, in the information abundance era, it was impossible that all information available had been through filtering process by professional gatekeepers. As such, individuals were facing underlying challenges in term of originality and quality of the information. Those challenges were, for example, abundance of informative and non-informative content, lack of assurance of uniformity in content quality that users could refer to when assessing credibility or quality of content (Metzger, 2007; Sundar, 2008), information with unclear or unidentified sources (Self, 2009; Sundar, 2008), and uneven quality of information available (Benigeri & Pluye, 2003). Sundar (2008) also pointed out there were

multiple layers of source in online information transmission that could make users confused easily.

Although individuals who used social media indicated that truthfulness was important for spreading information on social media, they admitted that they had shared misinformation on social media platform (Chen & Sin, 2013). That was because of many reasons such as 1) to get others' opinion on that information, 2) to express their own opinion, and 3) to interact with others (Chen & Sin, 2013).

According to aforementioned literature, it was reasonable to believe that individuals could face the same struggle on Facebook setting. With features possessed by Facebook, there might be a challenge individuals would face when processing and making credibility judgment of health information they found on the application. One challenge was that there were plenty of fake accounts on the application. Since the application allowed its users to create their own account, persons can manage the account in the way they want to be perceived. Some people chose to use their real identity while others preferred 'nickname' or 'pseudo name.' According to an article published on Slate.com (2018), Facebook had a policy asking its users to create an account with their real name since the application debuted in 2004. Still, in May 2012 Facebook reported that five to six percentage of accounts on the platform were fake. It must be noted that the more fake information individuals encountered, the more difficulty they were facing when trying to differentiate between 'real' and 'fake' accounts or making a credibility judgment.

Another challenge was that, even though individuals received information from the 'real' account, the account owners can tell stories or share any information the way they want. According to Newman et al. (2011), some users revealed that they wrote or shared only what they wanted to be seen and omitted their problems or struggles. That was possibly because those people tried to manage their image to impress others. A study confirmed that using Facebook affected people's perception of others (Chou & Edge, 2012). The longer users had been used Facebook, the easier they saw positive messages and photos posted on their friends' accounts and the stronger they believed that their friends were happier.

There were empirical evidences showing that it was not an easy task for any individuals to identify credible online information, especially online health

information. Liao and Fu (2014) conducted a research and found that some Internet users were less able to make correct credibility judgment of online health information. They cannot differentiate content of high credibility from those of low credibility. Cutrona et al. (2015) reported that more than 50% of US self-seekers and surrogate seekers showed concern on quality of obtained online health information. Looking into social networking sites in particular, Zhang (2013) conducted a research on college students' perception of social networking sites for health information. The results showed that college students rated health information as not credible. The information were reported to be not reliable, false, not systematic, and biased. Zhang et al. (2013) also found that some voluntarily or responding messages found on Facebook failed to provide fact and valid explanation to symptoms or conditions.

Under those circumstance, it was difficult for individuals to single out credible information. Even though Facebook provided a mechanism to help users eliminate fraud accounts, and false or mislead information, it is impossible to get rid of and prevent individuals from those frauds. Also, it would become risky if individuals make a wrong credibility judgment and change their health behaviors and lifestyles accordingly.

In Thailand, to the researcher's knowledge, there was none of systematic and statistic study on individuals' credibility judgment of health information found on Facebook. However, there were incidents pointing that Thai Facebook users were facing such challenge. For example, there were several Facebook pages and accounts trying to point out and clarify some misinformation spreading on the media and Facebook such as an account under a name of 'Jessada Denduangboripant' and a Facebook page 'Oh I see by Ajarn Jess' which had been managed by Associate Professor Jessada Denduangboripant from Faculty of Science at Chulalongkorn University, a Facebook page 'SureAndShare' which was another communication channel of 'Sure And Share Center', a Thailand's fact-checking site run by Mass Communication Organization of Thailand (MCOT).

Siriraj Hospital organized a forum entitled 'Be sure before share' concerning fraud or misinformation found online to urge people to check for content accuracy before spread it out and to warn those who share other's personal health information that the action is against the law. Those who shared the information would be

imprisoned or fined (Prachatai.org, 2015). Also, during another activity set up by the hospital to provide proper health information to public, Associate Professor Chairat Permpikul, Chairman of Department of Medicine, Faculty of Medicine, Siriraj Hospital said that social media was very powerful. Information found on SNS, if they were mistreated, would affect one's health. Misinformation could put one's health at risk (ManagerOnline, 2016).

Thai News Agency, Mass Communication Organization of Thailand (TNAMCOT) allocated its timeslot to clarify doubtful information sharing on SNS. Numbers of topic are health-related one such as using talcum powder would elevate risk on cancer, honey would help losing weight, cold water is harmful to your body, etc. (Thai News Agency).

As such, it was worth to study how individuals made credibility judgment of information they found on Facebook, especially health information which really mattered to individuals' well-being.

1.2 Objectives of the study

This research aimed to

- Provide understanding on individuals' decision-making process in Facebook health related information credibility judgment using heuristic approach
- Propose a model describing individuals' credibility judgment of health information on Facebook

1.3 Scope of the study

This study aimed to understand and explain how heuristics have been used in credibility judgment of health information on Facebook among users in Thailand. The study used a mixed-method approach applying both qualitative and quantitative research. An In-depth interview was used to collect primary data on how users made a credibility judgment and to identify reasons underneath the taken action. A questionnaire was developed to collect data from larger group of Facebook users in Thailand. The questionnaire was administered to collect demographic data, a self-report on users' behaviors toward credibility judgment of health information found on Facebook.

1.4 Significance of the study

The results from the study were hoped to shed light on how people nowadays assessed credibility of health information on Facebook. Also, it would raise awareness among users toward health literacy and digital media literacy and prepare them to be active receivers and credible source of health information on Facebook platform. Moreover, it was expected to help those who were in charge of promoting health and digital literacy understand users' behaviors and their rationale. The potential model proposed here was expected to exhibit how individuals made a credibility judgment of health information on Facebook.



Chapter 2

Literature Review

2.1 Credibility

In the field of communication, credibility was one of topics that had been studied constantly. Debuting in persuasion communication, the concept had been adopted and studied widely from the field of interpersonal communication to mass communication and online communication at present. Originated with the ancient Greeks, credibility, according to Plato, was rooted from the knowledge of truth (Self, 2009). Aristotle (Self, 2009), on the other hand, proposed some qualification of source that could indicate 'credibility' by pointing that credibility came from the communicator's ability to inspire confidence and belief in what was being said (Self, 2009). These characteristics of source was referred to as the 'ethos' of the communicator.

Scholars attempted to defined 'credibility' based on what they learned from their study (Burgoon et al., 2000; Fogg & Tseng, 1999; Hovland, Janis, & Kelly, 1953; Hovland & Weiss, 1951; Olaisen, 1990; Tseng & Fogg, 1999; Wilson & Sherrell, 1993).

Credibility was defined as believability (Castillo, Mendoza, & Poblete, 2011; Fogg & Tseng, 1999; Hovland et al., 1953; Hovland & Weiss, 1951; Self, 2009; Wilson & Sherrell, 1993). Wilson and Sherrell (1993, p. 102) were more specific by pointing that credibility was 'a global evaluation of believability of the message source'. Fogg and Tseng (1999, p. 80) also added that 'credible people is believable people' and 'credible information is believable information'. To Fogg and Tseng (1999), credibility was a perceived quality that can be evaluated from two key components; trustworthiness and expertise.

As it was indicated in the definition, studies in the previous time on credibility focused on source credibility in the persuasive communication setting (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003; Self, 2009). Source credibility was defined as 'judgment made by a perceiver concerning the believability of a communicator (Wilson & Sherrell, 1993). According to several scholars, there were two dimensions individuals perceived of credibility: trustworthiness and expertise (Fogg & Tseng, 1999; Hovland et al., 1953; Hovland & Weiss, 1951; Olaisen, 1990; Self, 2009; Tseng

& Fogg, 1999; Wilson & Sherrell, 1993). Trustworthy was referred to as being honest, careful in what to be said, and disinclined to deceive (Olaisen, 1990). Additionally, Fogg and Tseng (1999, p. 80) defined trustworthy with terms such as 'well-intentioned, truthful, and unbiased. Hovland and Weiss (1951) found that trustworthy source in the communication affected audiences' change of opinion. Trustworthy source was identified as a factor influencing credibility of a health-related website (Chinthanorm, 2008).

Expertise was defined by terms such as 'knowledgeable, experienced, competent' (Fogg & Tseng, 1999, p. 80) By competent, it referred to a source's ability to observe or investigate accurately (Fogg & Tseng, 1999; Tseng & Fogg, 1999). Wilson and Sherrell (1993) studied source effects in communication and found that, in persuasive communication, audience were more likely to adopt message arguments if they came from expertise source as well as from trustworthy sources. Moreover, the same study showed that source expertise seemed to have stronger effect in a persuasive communication than other type of source qualification. That was because source expertise was more relevant and created a cognitive message. Also, source expertise was the objective qualification that message's audiences could easily assess from educational background or years of experience.

Other than these two dimensions of source credibility; trustworthiness and expertise, studies also revealed other dimensions such as dynamism and sociability (Berlo, Lemert, & Mertz, 1969), authoritativeness and character (McCroskey, 1966, referred to in McCroskey & Young, 1981).

Several variables were found influencing audiences' perception of source credibility such as source's friendliness, pleasantness, physical attractiveness (O'Keefe, 1990, referred to in Metzger et al., 2003), similarity in attitudes, traits, ability, demographical variable such as occupation, age, or social status (Metzger et al., 2003).

Research found that not only a source as an individual but also an organization which generated persuasive messages influencing changes in consumers' attitudes and behaviors (Metzger et al., 2003). It was found in advertising and marketing literature as corporate credibility, institutional credibility, or advertiser credibility. Corporate credibility was defined by Goldsmith, Lafferty, and Newell (2000) as 'the degree to

which consumers, investors, and others believe in the organization's trustworthiness and expertise'. This definition showed the similarity in qualification of credible source either as an individual and an organization.

In digital setting, websites can be treated as source of information either as an individual or as an organization (Metzger et al., 2003). Apparently, websites could not show their personal traits as individuals did, but websites had shared several other dimension of message sources. For example, websites were able to reflect their expertise through their site informativeness, display of credentials, its reputation. The website communicated their trustworthiness through their policy, and uses of advertising and sponsorship. The websites' attractiveness or dynamism were able to be identified by the websites' appearances such as their design, layout, graphic, color, etc.

Other than source credibility, there were studies focused on message credibility. Scholars defined this dimension of credibility as a matter of audience or recipients' judgment toward message (Burgoon et al., 2000; Fogg & Tseng, 1999). Message credibility was believed to be a result of an interaction between source characteristics, message characteristics, and receiver's characteristics (Wathen & Burkell, 2002). Credible message or information must be believable and convincing (Burgoon et al., 2000). Fogg and Tseng (1999) proposed that information credibility, particularly information from computer product, came from information believability. The credibility of the message becomes more important in the situation where the source itself was not highly credible (Self, 2009).

Message credibility consisted of three dimensions (Metzger et al., 2003), namely, message structure, message content, and message delivery. Message structure was referred to as the message organization. Unorganized were rated less credible than well-organized message. Research showed that message organization affected perception of source expertise (McCroskey & Mehrley, 1969, referred to in Metzger et al., 2003). In the meantime, message content was found influencing credibility judgment in term of information quality, language intensity, and message discrepancy. Information quality was defined as audience perception on how well written and interesting the message was (Slater & Rouner, 1997, referred to in Metzger et al., 2003), use of evidence (McCroskey & Mehrley, 1969, referred to in

Metzger et al., 2003). This information quality can be assessed by its accuracy, comprehensiveness, currency, reliability, validity (Rieh & Belkin, 1998), error-free message (Fogg & Tseng, 1999; Maier, 2005), message consistency, rationale information (Hamilton, 1998, referred to in Metzger et al., 2003). There was an evidence confirmed that, in the case of newspaper, the more frequent and severed of error were found, the less credibility of the message itself and its sources were perceived (Maier, 2005).

Language intensity was referred to as an opinionated language (Metzger et al., 2003). Research showed that when sources of the information used opinionated language, they were perceived to be less credible than those who used less opinionated or intense language. In the meantime, message discrepancy was defined as ‘the distance between the perceived position of the source and the premessage position of the receiver’ (Hamilton, 1998, referred to in Metzger et al., 2003). The lower the message discrepancy, the higher message credibility (Hovland & Weiss, 1951).

In relation to message discrepancy, message familiarity was found to be another factor affecting message credibility (Begg, Anas, & Farinacci, 1992; Self, 2009). Begg and colleagues (1992) conducted a series of experiments asking participants to rate how truthful the message was after hearing it. Participants were told which source was telling a lie in the early stage of the experiments and were asked to rate the statement in the last experiment. The results revealed that the more individual was familiar with the message, the more credible the message was perceived. Familiarity could increase message credibility even though the message in question was false or came from the source that was lying (Begg et al., 1992).

Message delivery was referred to as the way the message was presented by a source (Metzger et al., 2003). The more a source delivered flaws in message presentation, the less credible the source and the message were perceived.

Taken message credibility into digital setting, research showed that users applied similar criteria, namely, information accuracy, comprehensiveness, currency, reliability, and validity, when making credibility judgment of online message (Rieh & Belkin, 1998). Information accuracy, comprehensive, and currency were found to be the most important factors that helped increasing trustworthiness (Fogg et al., 2001)

as well as the use of evidence (Sundar, 1998). Potential of commercial bias was another predictor of message credibility in the web setting. Consumers rated websites showing no commercial bias more credible than ones with commercial intention (Fogg et al., 2001). Commercial implication attached in the content reduced individuals' perception on the web's credibility. Contents that mixed with advertising were perceived negatively on credibility aspect by users (Fogg et al., 2001).

Presentation style was also adapted into message credibility judgment in digital setting. Professional design and presentation were expected from credible websites as well as typographical error and attachment of broken external links (Fogg et al., 2001). Chinthanorm (2008) found that error free message could affect credibility of health-related websites.

According to communication technology advancement and the growing of Internet, Internet gained more popularity and was part of individual daily lives. Then, computer credibility, Internet credibility, or new media credibility became an issue several scholars had studied (Castillo et al., 2011; Flanagin & Metzger, 2010; Fogg & Tseng, 1999; Metzger, 2007; Metzger et al., 2003; Morris, Counts, Roseway, Hoff, & Schwarz, 2012; Tseng & Fogg, 1999; Wathen & Burkell, 2002). In their study on computer credibility, Fogg and Tseng (1999, p. 80) defined credibility as 'believability', which was not different from the definition by other scholars. Computer credibility were able to be assessed by the two major dimensions, namely, trustworthiness and expertise which suggested that *'highly credible computer products will be perceived to have high levels of both trustworthiness and expertise'*.

Tseng and Fogg (1999) proposed four types of computer credibility, namely, presumed credibility, reputed credibility, surface credibility, and experienced credibility. *Presumed credibility* described how much people believed someone or something based on their general assumption in their mind. If one believed that a friend was telling the truth, that friend became credible person. People doubted the credibility of salespersons because they were perceived that they did not always give the correct information. According to Fogg and Tseng (1999), presumed credibility depended on assumptions and stereotypes of each culture. Putting this credibility into computer setting, Tseng and Fogg (1999) found no empirical evidence pointing that computer was more credible than human.

Reputed credibility described how much people believed someone or something based on others had said about that person or thing (Tseng & Fogg, 1999). When computer-related magazine gave a review on a computer product and praised a computer company that owned or created the product, that was called reputed credibility. This could also be applied other setting as well. For example, one became an expert, earning respects and credibility from being awarded a renown reward such as ‘The Nobel Prize’, or bestowed an official title, ‘a doctor’ or ‘a professor’. A university ranked top 10 by a renown media was also recognized as a credible educational institute. In the website environment, a link from one website to another one was considered as endorsement as well.

Surface credibility described the how much people believed someone or something based on exterior impression or a simple inspection (Tseng & Fogg, 1999). Some people thought of a website’s credibility based on its beautiful design. That was the same as some people decided to buy a book from its cover. People judged panelists on the stage whether or not they were credible based on the way those panelists dressed, and the language they spoke.

Experienced credibility described how much people believed someone or something based on their first-hand experience (Tseng & Fogg, 1999). For example, someone who regularly exercised rated his or her heart monitor as highly reliable after using it over a period of time. On the contrary, a website often made a typographical error, misspellings. Heart monitor application gave wrong or error information several times. It suggested that this type of computer credibility can be decreased over time if people found some flaws and errors.

There were several models and theories proposed for Internet or online credibility assessment. Some models proposed credibility judgment by tasks or levels (Fogg, 2003; Wathen & Burkell, 2002), while others proposed credibility judgment based on dual process models (Fogg & Tseng, 1999; Metzger, 2007; Sundar, 2008).

Credibility judgment by tasks or levels (Fogg, 2003; Wathen & Burkell, 2002)

- Wathen and Burkell’s model

Wathen and Burkell (2002) proposed a four-level model for credibility assessment defined by tasks. This iterative processed model started when users entered a website. The first proposed task was for user to rate credibility of the medium based on its surface characteristics such as appearance or presentation (color/ graphic/ font size/ error free/ etc.), usability (download speed/ interactivity/ navigability/ etc.), and organization of the information (layer/ ease of access/ choice of detail level). If the first evaluation resulted as 'pass', users would proceed to the next task.

The second task was to rate the credibility of the message source. In this task, users would assess source's trustworthiness, expertise, competence, credential using direct experience, specific knowledge, referral from other sources, inference from its label or credentials.

The third task was to assess the interaction of the message presentation. In term of message, users would assess level of details, message accuracy, message currency, relevance to their personal needs. Motivation and prior knowledge were keys in this process of assessment. Highly motivated users were expected to proceed to the next task when they found personally relevant information, even though they might face barriers of peripheral cues.

The last task was to judge the information. Users who were highly motivated and knowledgeable in the field were expected to be more skeptical and scrutinized the information more closely.

The model by Wathen and Burkell (2002) can be divided into two levels of assessment, namely, surface credibility and message credibility. Surface credibility occurred when users made a judgment on appearance, interface design, download speed, etc. In the meantime, message credibility occurred when users made a judgment on source and message considering source expertise competence, trustworthiness, altogether with content accuracy currency, and relevance to users' needs.

- Prominence-Interpretation Theory (Fogg, 2003)

Fogg (2003) proposed 'Prominence-Interpretation Theory' for online credibility assessment pointing that two things happened when people assess credibility of online information. They noticed 'something', which referred to

‘prominence’, and they made a judgment about it, which referred to ‘interpretation’. If one thing did not happen, the other thing would not happen as well. Also, it was an iterative process that happened more than once when people noticed and interpreted new aspect of a website in question.

Prominence was referred to an element’s likelihood of being notice and of being perceived (Fogg, 2003). This element would affect users’ credibility judgment of the website, if only that element was noticed. For example, if users noticed a commercial banner on the top of the website, that banner would affect users’ credibility assessment of the site. Five factors were identified affecting ‘prominence’, namely, users’ involvement, content of the website, users’ tasks, users’ experiences, and individuals differences such as literacy level, learning styles, etc.

Interpretation, in this theory, was referred to users’ judgment about the element under examination (Fogg, 2003). For example, users could rate typographic errors as a sign of neglect or careless of the web site, which would lead to a lower credibility perception. There were four factors affecting ‘interpretation’, namely, users’ assumptions, users’ knowledge and skill, context (such as norm, expectation), and users’ goals.

Credibility judgment based on dual process models (Fogg & Tseng, 1999; Metzger, 2007; Sundar, 2008)

There were three models for credibility judgment based on dual process models including;

- Fogg and Tseng’s three models for credibility assessment (Fogg & Tseng, 1999)
- Metzger’s dual processing model for credibility assessment (Metzger, 2007)
- Sundar’ MAIN model (Sundar, 2008)

To better understand these three models for credibility judgment, heuristics and dual process models, as roots of these three models, were reviewed in the following section and followed by the summary of these aforementioned models.

2.2 Heuristics in decision making and its application in credibility judgment

Decision making was a process aiming to select the best out of choices offered. Early decision-making theories assumed that those who made a decision were fully informed about all options and outcomes, infinitively sensitive to distinction among outcomes, and fully rational in their choice of options (Sternberg, 2003). However, there was no perfect option to be chosen by everyone. One must accept that sometimes people were making decision by calculating cost and benefit, or pain and gain, or predicting the optimal decision. Moreover, in the recent years, information was coming from complex form of media, sources, and messages, it was possible that individuals may not put much effort into their decision or judgment.

The notion that individuals did not always put their full cognitive effort into information processing can also be traced back to the theory of bounded rationality proposed by Nobel Prize laureate Herbert A. Simon (Simon, 1972). He coined the term ‘satisficing (Scottish word means ‘satisfying’) to describe problem solving and decision-making process when all possible alternatives could not be examined and only a set of them were encountered under limitation of time and knowledge (Simon, 1972). As such, when making a decision, decision maker would set a criteria and search for a satisfactory alternative (Gigerenzer & Todd, 1999; Simon, 1972). A satisfactory procedure, a procedure to attain satisfactory alternative, in Simon’s view was similar to *heuristic* method where user puts moderate effort searching for satisfactory alternatives (Gigerenzer & Todd, 1999; Simon, 1972). This notion also led to a metaphor of ‘a cognitive miser’ (Fiske & Taylor, 1991), a concept which described human characteristics that ‘people strive to process information efficiently and to make decisions without consuming too many cognitive resources’ (Corcoran & Mussweiler, 2010, p. 79).

There are two key components in Simon’s bounded rationality; the limitation of human mind and the structure of the environment (Gigerenzer & Todd, 1999). Take a game of chess as an example (Simon, 1972). Even though there is always a best move at every step, but the limitation of human mind plus time constraint, player could only pick the satisfied choice of strategy. They cannot consider all possible moves. For environmental structure, heuristics to be used would change depending on the structure of the information in the environment. Simon (1972) gave an example

where in one environment food was distributed randomly in heap. Any organism lived in this environment needs vision and movement heuristic to find food. Meanwhile, another organism lived in an environment where food is hidden. The organism then needed to employ different heuristics (Gigerenzer & Todd, 1999). As such, it was important to note that which heuristics to be chosen at certain environment, when to be used, and why the chosen heuristic worked the best.

Simon's work had inspired many researches in judgment and decision making fields. Almost one quarter of articles published in *Journal of Behavioral Decision Making* and in *Judgment and Decision making* during 2006-2010 directly cited his work (Katsikopoulos & Lan, 2011).

Kahneman (2012, p. 98) gave a technical definition to heuristic as “a simple procedure that helps find adequate, though often imperfect, answers to difficult questions”. Also, the term ‘heuristics’ was later defined by Sherman and Corty (1984, p. 193, referred to in Bellur & Sundar, 2014) as “general purpose judgmental tools that can be applied in a wide variety of decision-making circumstance”. Some scholars thought of heuristics as mental shortcuts (Fiske & Taylor, 1991) or ‘a rule-of-thumb’ (Statt, 1997).

There were three types of heuristic that were frequently used in decision making process, namely, the representative heuristic (Tversky & Kahneman, 1974), the availability heuristic (Statt, 1997; Tversky & Kahneman, 1974), and the attitude heuristic (Statt, 1997).

The representative heuristic was applied when one made a decision about new thing based on some characteristics that he/she was familiar with. For example, eating fatty food could make them fat. Going to a hospital, one saw the many doctors wearing glasses, when they were asked to identify medicine students out of others, they would use that information they had about doctor stored in their memory as a cue in decision making.

The availability heuristic was used when one made a decision based on information stored in his/her memory. Take a case of conducted by Fox (2006) as an example. Two groups of students were asked to fill in an evaluation form. Each group received a different question. One of them needed to write recommended improvement and positive aspects earned from the class. The other group had to

written ten suggestions a teacher need to improve. Both groups, at the end of the evaluation form, had to rate the class from one to seven. The results showed that the group that had to write ten suggestions rated the class less harshly comparing to the other group. That was because the former had difficult time recalling the information.

The attitude heuristic meant that one made any decision based on his/her personal attitude or, in some cases, global attitude. For example, those who had a positive attitude toward a famous newscaster would not believe that he was involved in a corruption case, but those with negative attitude would believe that. To put into health information context, those who believed herbs and herbal product was good for health may possibly believe in health information shared on Facebook mentioning herbs could cure cancer.

There were two dual information processing models; the Elaborative-Likelihood Model or ELM (Petty & Cacioppo, 1986) and the Heuristic-Systematic Model or HSM by Shelly Chaiken (Todorov, Chaiken, & Henderson, 2002) that adopted the concept of 'heuristics'. These two models proposed that individuals try to understand and make judgment on their circumstances via two processes. Those processes were what Bellur and Sundar (2014) labeled as conscious (central route in ELM and systematic process in HSM) and automatic (peripheral route in ELM and heuristic process in HSM) processes. These two models were reviewed as following.

Heuristic-Systematic Model of decision making process (HSM)

Heuristic-Systematic Model (HSM) was a dual-processing model proposed by Shelly Chaiken in 1980 (Todorov et al., 2002). The model presented that message recipients put different effort and referred to different cues in information processing (Chaiken, 1980). In persuasive situations, recipients put more efforts in systematic processing. They focused on message content and looked for cues such as amount, comprehensiveness, validity of argument while source characteristics had lesser influence. On the contrary, message recipients employed less effort in heuristic processing. They paid more attention to other cues such as source or communicator identity, source likability. The recipients used systematic approach if they were highly involved with or had personal related to the issue. They used heuristic approach if they were lowly involved with the issue.

Motivation played an important role in HSM. There were three types of motivation assumedly to triggers individuals' choice of information process, either systematic or heuristic process (Todorov et al., 2002). At the beginning, HSM was based on accuracy motivation (Chaiken, 1980). Accuracy-motivated people devoted their effort in achieving the attitudes that were consistent with reality. According to Chaiken (1980, p. 201), accuracy- motivated processing 'was characterized as an open-minded processing in which persuasion information is treated even-handedly.' Accuracy-motivated people aimed to make the judgment close to the fact as much as possible. Chaiken (1980) also posited that accuracy motivation did not exclude biased processing. Even in systematic processing, bias could occur from prior knowledge or prior heuristic cues. Accuracy could either come from systematic processing or heuristic processing, even though heuristic processing could lead to less accurate judgments.

Later, the model was extended and two types of motivation were added into the assumption, namely, defense motivation and impression motivation. On the contrary to accuracy motivation, defense motivation was characterized as a closed-minded processing. Defense-motivated people put much efforts in defending attitude and beliefs that were consistent with their personal attitudes and beliefs. Their ultimate aim was to secure or confirm the validity of preferred attitudes and beliefs. Defense-motivated processing can be systematic processing or heuristic processing or both. However, HSM predicted that in a situation which defense motivation was high and people had enough resources, they would prefer systematic with biased processing.

Impression motivation was referred to 'the desire to express socially acceptable attitudes or attitudes and belief that satisfy the person's immediate social goals' (Chaiken, 1980, p. 203). The processing objective of impression motivation was to assess social acceptability of alternative positions. People who were impression-motivated were concerned about the interpersonal consequence of expressing their attitude in persuasion setting. People with impression motivation tended to express their views that hopefully matched with their audience. They opted to use moderate view if audiences' views were unknown. Similar to defense motivation, if their impression motivation was high, and they had enough resources,

but heuristic processing could not close a gap between actual and desired confidence, they would prefer systematic with biased processing.

Starting from psychology, HSM had been applied and used as a framework for academic research in other fields such as marketing (Drake, Freedman, & Chaiken, 1995; Maheswaran, Mackie, & Chaiken, 1992; Zuckerman & Chaiken, 1998), risk communication (Kahlor, Dunwoody, Griffin, Neuwirth, & Giese, 2003; Kim & Paek, 2009), health science (Steginga, 2004), and computer science (Luo, Zhang, Burd, & Seazzu, 2013), knowledge gain (Smith et al., 2013).

The Elaborative Likelihood Model

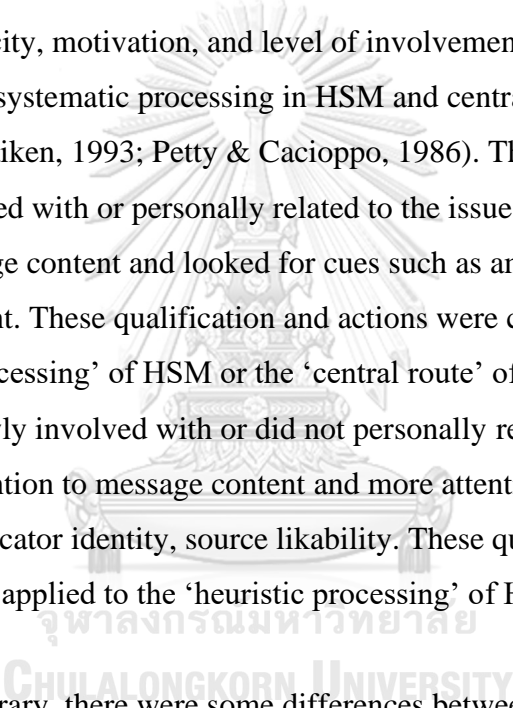
Elaborative Likelihood Model (ELM) of persuasion is a dual process model developed by Richard E. Petty and John T. Cacioppo (1986). Petty and Cacioppo (1986) proposed two distinctive routes of persuasion. The first one was central route which was resulted from ‘individuals’ careful and thoughtful consideration of the true merits of the information presented in support of an advocacy’ (Petty & Cacioppo, 1986, p. 125). The second one was called peripheral route which was resulted from ‘simple cue in the persuasion context’ (Petty & Cacioppo, 1986, p. 125).

Motivation and ability to engage in the persuasion communication played an important role deciding which route people would process. Those who were highly motivated and possessed ability to process the message and topics would attend to the appeal, access to all associated information stored in memory to assess the recommendation carefully and thoughtfully. In the meantime, those who were not motivated or had less or no interest and ability to process would engage in ‘automatic, shallow, heuristic, and/or mindless’ analyses such as people would agree with other people they liked, or people would rely on their significant others.

ELM outlined that source factors had affected persuasion in many ways (Petty & Cacioppo, 1986). Source can be an argument, a cue, or affect argument processing. When people were unmotivated or unable to process the argument, they would rely on simple cues of source of the message such as source attractiveness, or source expertise. When people were highly motivated or had an ability to process the argument, strong argument would be more effective in persuasion than attractiveness of the source. People would try to use all available information in immediate

persuasive context, ignoring source factor. However, there were also times when source features may serve as a persuasive argument by providing information related to central of the merit of attitude object. For example, physical attractiveness of source would be a persuasive visual testimony for beauty products.

Comparing these two models, they similarly proposed dual processes; systematic and heuristic processing in HSM, and central and peripheral route of information processing in ELM. According to both models, message recipients put different amount of effort and referred to different cues in information processing. Additionally, capacity, motivation, and level of involvement played an important role as determinants of systematic processing in HSM and central route in ELM (Chaiken, 1980; Eagly & Chaiken, 1993; Petty & Cacioppo, 1986). That was, when recipients were highly involved with or personally related to the issue, they put more effort focusing on message content and looked for cues such as amount, comprehensiveness, validity of argument. These qualification and actions were considered to be applied to the 'systematic processing' of HSM or the 'central route' of ELM. In contrast, when recipients were lowly involved with or did not personally related to the issue, they employed less attention to message content and more attention to other cues such as source or communicator identity, source likability. These qualification and actions were considered to applied to the 'heuristic processing' of HSM or the 'peripheral route' of ELM.

On the contrary, there were some differences between these two models. For example, firstly, concepts of heuristic processing of HSM and peripheral route of ELM were different (Eagly & Chaiken, 1993)(Eagly & Chaiken, 1993). That was, heuristic processing was referred narrowly to simple rules, schemata, or cues that mediated individual's attitude judgment while peripheral route of ELM was referred to 'any of a variety of affective and cognitive mechanisms that are presumed to produce persuasion in the absence of argument scrutiny (Eagly & Chaiken, 1993, p. 327)'.


Secondly, the assumption on activation of peripheral route of ELM and heuristic processing of HSM were different. ELM postulated that people would take peripheral route if their elaborative ability is low, ignoring the possibility of cognitive

antecedents that may exist in this route (Eagly & Chaiken, 1993), but HSM's concept of heuristics as 'learned procedural knowledge structure' (Eagly & Chaiken, 1993, p. 329) implied that heuristics, which was stored in memory (Bellur & Sundar, 2014), was governed by three rules of knowledge activation; availability, accessibility, and applicability (Chen & Chaiken, 1999; Todorov et al., 2002). That means *heuristics*, the storage of a knowledge structure in one's memory, should be *available* to the person. Then, the available storage of a knowledge structure should be able to be activated or *accessible* to the person. The available and accessible knowledge structure will be used if only that it is *applicable* to the information task to be solved.

Lastly, while ELM proposed that central and peripheral route were nonconcurrent and operated exclusively (Eagly & Chaiken, 1993; Petty & Cacioppo, 1986; Todorov et al., 2002), HSM postulated that systematic and heuristic processing were co-occurred or act simultaneously (Eagly & Chaiken, 1993; Todorov et al., 2002). In the persuasive communication setting, Todorov et al. (2002, pp. 203-204) explained the interaction of both processing modes as following.

“If the implications of the processing modes are congruent, they have additive effects on persuasion. If the implications are incongruent, systematic processing attenuates the impact of heuristic processing. Finally, when persuasion arguments are ambiguous, heuristic cues can bias their interpretation independent of the person's motivation.”

According to HSM, it must be noted that heuristics could be triggered by heuristic cues (Todorov et al., 2002) during both 'effortful and effortless processing' (Bellur & Sundar, 2014, p. 118). Heuristic cues referred to 'any variable whose judgmental impact is hypothesized to be mediated by simple decision rule' (Eagly & Chaiken, 1993, p. 327). A few heuristic cues or a single cue were considered by individuals when they wanted to form a judgment (Todorov et al., 2002). Instead of scrutinizing quality of each argument in a persuasive message, individuals considered the attractiveness of the message source or length of the message or both of them if they were not sufficiently motivated or did not have sufficient knowledge cognitive resources available.

One heuristic cues can trigger more than one heuristic (Bellur & Sundar, 2014). Take a logo or brand name of popular product as an example. It can be used to trigger heuristics that related to credibility, popularity, or being successful.

From the aforementioned literature on heuristic, it can be said that there were two groups of factors predicting use of heuristics; user-related factors and message-related factors. On user-related factors, use of heuristics can be predicted by user's motivation, background knowledge, individual's ability, individuals' task, and personal experiences. On message-related factors, use of heuristics can be predicted by heuristics cues that were tied to messages. Those cues could be logo or name of product brand, length of the message, presentation of the message, or validity of arguments in the message. If those cues are available, accessible, applicable to user's task, it would assumedly predict the use of heuristic in the mentioned case.

Credibility judgment based on dual process models (Fogg & Tseng, 1999; Metzger, 2007; Sundar, 2008)

- Fogg and Tseng's three models for credibility assessment

Fogg and Tseng (1999) proposed three models for credibility assessment based Elaborative Likelihood Model by Petty and Cacioppo (1986). The three models included binary model, threshold model, spectral model.

The binary model (Fogg & Tseng, 1999) was the model in which a computer product was perceived whether it was credible or not. Uses used this model when 1) they had less interest in that topic, 2) they possessed low ability to process information, maybe, because of lack of cognitive abilities or situational factor, 3) they were not familiar with the subject matter, and 4) there was no reference point for users to compare with.

The second model was the threshold model. This model was expected to be applied when there were upper and lower threshold for credibility judgment. Those computer products that were above upper threshold were considered to be credible while those that fell into the lower threshold were considered to be not credible. Those were in the middle threshold were considered as 'somewhat credible' or 'fairly credible'. Users utilized this model when 1) they had moderate interest in the topic, 2) they possessed moderate ability to process the information, maybe, because of

moderate level of cognitive abilities or situational factors, 3) they were partially familiar with the topic, and 4) they had moderate ability to compare the product with various sources.

The third model was the spectral model. Comparing to the two previous model, Fogg and Tseng (1999) claimed this model was the most sophisticated as the model offered no complete opposite category such as black and white. Instead, the model offered various shades of gray. Users were expected to apply spectral strategy in making credibility judgment when 1) they had high interest in the topic, 2) they possessed high ability to process information because of their cognitive abilities and situational factors, 3) they are highly familiar with the subject matter, and 4) there were opportunities to compare the information with other sources. For example, a person who looked for health information on Internet to cope with their health problem would adopt this spectral strategy.

Fogg and Tseng (1999) also proposed that evaluating credibility of computer product can be made through two perspectives; the system perspectives and the psychological perspectives. The system perspectives consisted of four different aspects (Fogg & Tseng, 1999). The first aspect was device aspect. In this aspect, people evaluated physical aspect of the product such as a physical design. The second aspect was interface credibility. In this aspect, people evaluated the display of the computer product and the interaction experience. Any interaction experience that disagree with users' expectation would be evaluated as less credible. The third aspect was functional aspect. In this aspect, people evaluated the computer's performance in term of services, processes, or calculation. The last aspect was information credibility. In this aspect, people evaluated believability of the information coming from the computer product. Any information disagreed with what people viewed as 'correct' would be evaluated as less credible.

In the psychological perspective, Fogg and Tseng (1999) also proposed four psychological targets for credibility assessment. Those four targets included on-screen characters, computer itself, brand of the computer product, and the expert who created the computer product.

- Metzger's dual processing model for credibility assessment

Adopted an idea from the heuristic-systematic model by Chen and Chaiken (1999, cited in Metzger, 2007), Metzger (2007) proposed a dual processing model for credibility assessment emphasizing users' motivation and ability to evaluate Internet information. The model operated in three phases, namely, exposure phase, evaluation phase, and judgment phase.

Exposure phase was where users exposed to website. Metzger assumed that not all Internet users searched for information purposefully. In some cases, attached hyperlinks might lead users to other websites. Those users, then, may not motivate to evaluate the information encountering. No evaluation would occur. On the contrary, motivated users would take a step further asking themselves whether they have ability to evaluate or not. Ability, in this model, was referred to users' knowledge in evaluating credibility. As such, the degree of evaluation would vary depending on individual ability, motivation, and awareness of and degree of consequentiality of the information.

Evaluation phase was where individual decided whether or not they would evaluate Internet information credibility and which route should be taken for their evaluation process in the last phase which was called judgment phase. Lowly motivated users either took no action or applied heuristics or peripheral evaluation. Highly motivated with non or less ability would take heuristics or peripheral route as well. Only those who were highly motivated and possessed ability to evaluate would apply systematic or central evaluation to make credibility judgment.

Works of Flanagin and Metzger (Flanagin & Metzger, 2007; Metzger et al., 2010) found five cognitive heuristics to be used in credibility assessment of online information including reputation heuristic, endorsement heuristic, consistency heuristic, expectancy violation heuristic, and persuasive intent heuristic. Each heuristic was reviewed as following.

Using reputation heuristic meant recipients referred to reputation of websites or source for credibility assessment. Those websites or sources must be ones that they recognized or knew. Cues could be name of the person, the organization, or brand of the products and service. For example, people seemed to trust information from national media outlet's website or Facebook account rather than one from unknown person.

Endorsement heuristic was used when people believed that the information was credible when others did. Users trusted links that was shared by Thairath because they trusted this media outlet. The information also found credible if they were recommended by known others/ significant others. One would rate one piece of information at high level of credibility if it was shared by his/her professors, family members, and friends. On the contrary, endorsement heuristic would apply to recommendation made by unknown person as well. Those cues were reviews and rating attached to items in questions. For example, other than price, backpackers booked an accommodation for their trips based on reviews or rating showed on a booking website. This could clearly be applied to social media context. By looking at the number of likes and shares on Facebook or number of likes of retweet on Twitter, one could believe that the shared information was credible.

Consistency heuristic was referred to an act of checking with other sites or seeing the same content from different people. Seeing a post or a tweet being shared or retweeted repeatedly on one's wall/timeline could then be called cues in consistency heuristic.

Expectancy violation heuristic was triggered when one found something that fail to meet his or her expectation or did not conform with the person's personal belief. Appearance and functionality were included as cues in this type of heuristic as well. Number of websites had been designed to look alike ones belonged media outlet, but they provided false information. This information was treated as if they were credible and came from professional news organization. Bad grammar and misspelling were also falling into this group. Credible contents were expected to be grammatically flawless and error-free. In Facebook context where every post would appear on the same template, grammar and spelling would undoubtedly be cues users could apply.

Persuasive intense heuristic was triggered when users found advertising attached to the information. Health information enclosed with tied-in products or services would be rated low in credibility.

- Sundar's MAIN model

Sundar (2008) proposed the MAIN model using heuristic approach to present technology effect on credibility. Sundar (2008), pointed out that there were challenges found in the digital media setting that could make users confuse easily, namely, 1) plethora of informative and non-informative content that should be organized, and 2) lack of assurance of uniformity in content quality that users could refer to when assessing credibility or quality of content.

Known to be 'cognitive miser,' Sundar pointed out human can win these two challenges relying on cognitive heuristics. Through his ten years of research, Sundar nominated and grouped several heuristics under four technological affordances. Affordance was psychologically defined as 'the qualities or properties of an object that define its possible users or make clear how it can or should be used,' (Affordance, n.d.). The four technological affordances included modality (M), agency (A), interactivity (I), and navigability (N). These four affordances triggered cognitive heuristics differently and led to positive or negative credibility judgment.

There were many modalities offered in digital media including text, aural, and audiovisual. Encountering these modalities would trigger certain heuristics that help assessing credibility of online content such as 'realism heuristic', in which users tend to believe audiovisual content because it highly resemble to the real world, 'being-there heuristic', in which users feel that they are part of the universe portrayed by the digital media, 'intrusiveness heuristic, in which pop-up advertising send a negative feeling to users. Sundar (2008) pointed out that young users rely more on modality-based heuristics than adult users. Youth are easily impressed by new modalities.

Agency played an important role considering that source of information was the center of attention when discussing credibility. Agency in Sundar (2008)'s point of view had various facets. It could be computer, television if we looked at agency as a 'front-end box', or device. It could be an online location such as media websites. It could also be a person, or attributed source of the information. Agency could trigger heuristics such as 'machine heuristic' when users think content chosen by machine is bias free, 'bandwagon heuristic' when users believe what others believe. If others think one story told in the media is good, then users follow through. Agency also trigger 'authority heuristic' when expert of official authority is identified as the source

of the information. The story would be rated as credible. These heuristics were believed to be highly triggered in youth' s minds, but the valiance was depending on context.

The next affordance, interactive affordance, was exclusively found in digital media. Sundar (2008) posited that this term had two qualities; interaction and activity. Interactivity triggered 'interaction heuristic' when many contents users consuming online were products of their prior interaction and they have an impact on credibility perception. Interactivity also triggered 'activity heuristic' when clicking mouse and enjoying content found online amid their boredom granted users a positive feeling.

The last affordance, the navigability affordance, enabled users to travel Internet space and access to information in non-linear style. The affordance triggered heuristics such as 'browsing heuristic', which was a simple-selection menu or a pull-down menu aiding users in navigating websites, 'elaboration heuristic', in which woven external links into paragraph could make users pause and wonder about the relationship between the given links and the site's main content. Heuristics listed under this affordance helped users assessing credibility of information by pinpointing its relevance, completeness, clarity and utility.

Clearly, heuristics had been adopted into credibility judgment studies that led to several models. Those heuristics can be categorized as shown in the following table.

Heuristics by Tversky & Kahneman, 1974 Statt, 1997	Heuristics in credibility judgment by Flanagin & Metzger, 2007 Metzger et al., 2010	Heuristics in credibility judgment by Sundar, 2008
Representative heuristic	authority heuristic reputation heuristic	authority heuristic interactivity heuristic activity heuristic
Availability heuristic	expectancy violation heuristic	elaboration heuristic browsing heuristic
Attitude heuristics	bandwagon/endorsement heuristic persuasive intense heuristic	bandwagon heuristic realism heuristic intrusiveness heuristic

2.3 Heuristics in credibility judgment of health information on Facebook

To the researcher's knowledge, there was no theory or models had been proposed for online health information credibility judgment in particular. However, there were attempts to understand how individuals assessed online health information they found (Cline & Haynes, 2001; Dutta-Bergman, 2003; Eysenbach & Kohler, 2002; Hajli, Sims, Featherman, & Love, 2015; Liao & Fu, 2014; Prybutok & Ryan, 2015). These results agreed with research conducted in general online information showing individuals assessed health information credibility based on their perception on source or message believability. For example, Prybutok and Ryan (2015) reported that college students assessed health related website as a credible website if the site had a professional design, current and updated information. Dutta-Bergman (2003) pointed that individuals rated personal doctor, medical university, and federal government as trusted online source of health information. Other than website's design and authority, Eysenbach and Köhler (2002) reported that individuals rated the health information they found credible based on the given site's writing style and scientific reference. Cline and Haynes (2001) found that individuals relied on peer review to evaluate online health information which was supported by a work of Liao and Fu (2014) showing that peer review or user review had a strong impact towards individuals' credibility judgment of online health information. Moreover, Prybutok and Ryan (2015) pointed out that online health information attached with statistics and references and curated by health professionals were rated as credible.

Applying HSM into this study would help better understanding the process individuals used and how much effort they put when making credibility judgment of health information they found on Facebook. Applying systematic processing would mean that individuals actively deliberate credibility judgment of health information they found on Facebook. Individuals then are expected to be able to make proper credibility judgment. In the meantime, applying heuristic processing would mean that individuals used less effortful ways to make credibility judgment. Relying on cues found on Facebook could possibly lead to different results. Some people would be able to make a proper judgment while others may not be able to do so. Results from this study will help identify heuristics individuals used when making credibility judgment of health information on Facebook. Also, they will help health professionals

and educators better understand and find ways to improve individuals' credibility judgment outcome.

Referring to the metaphor of 'a cognitive miser,' Sundar (2008) pointed out that human can win credibility challenges in digital media by relying on cognitive heuristics. Researchers and scholars proposed some heuristic tools individuals applied when making a credibility judgment (Cline & Haynes, 2001; Diviani, van der Putte, Giani, & van Weert, 2015; Dochterman & Stamp, 2010; Eysenbach & Kohler, 2002; Flanagin & Metzger, 2007; Hajli et al., 2015; Metzger et al., 2010; Sillence et al., 2007; Sundar, 2008; Tseng & Fogg, 1999). Some of them can be grouped and applied into Facebook setting as follow.

Reputation heuristic (Cline & Haynes, 2001; Diviani, 2016; Flanagin & Metzger, 2007; Metzger et al., 2010; Tseng & Fogg, 1999): Using reputation heuristic means recipients refer to reputation of websites or sources for credibility assessment. Those websites or sources must be ones that they recognize or know. Cues could be name of the person, the organizations, or brand of products and service. For example, people seem to trust information from national media outlet website or Facebook account rather than one from unknown person.

Authority heuristic (Cline & Haynes, 2001; Diviani, 2016; Dochterman & Stamp, 2010; Eysenbach & Kohler, 2002; Sundar, 2008): When expert or official authority is identified as the source of the information, users would likely rate the story as high credibility. Facebook health information posted or shared by source identified as authority person would be rated as credible content. A work by Kim and Syn (2016) which studied college students' perception of credibility of health information on Facebook confirmed that, regardless of health topic sensitivity, sources such as medical or health professionals, medical or health organization and government agency were more credible than media agencies, family, or friends.

Bandwagon / Endorsement heuristic (Borah & Xiao, 2018; Cline & Haynes, 2001; Diviani, 2016; Flanagin & Metzger, 2007; Hajli et al., 2015; Metzger et al., 2010; Sundar, 2008; Sundar & Nass, 2001; Tseng & Fogg, 1999): Bandwagon or endorsement heuristic will be used when people believe that the information is credible when others do. Users trust links that was shared by certain media outlets because they trust those media outlets. The information also found credible if they

were recommended by known others/ significant others. One would rate one piece of information at high level of credibility if it was shared by his/her professors, family members, and friends. In contrary, bandwagon/ endorsement heuristic would apply to recommendation made by unknown person as well. Those cues are reviews and rating attached to items in questions. For example, other than price, backpackers booked an accommodation for their trip based on review or rating show on the website. This could clearly be applied to Facebook context. By looking at the number of likes and shares on Facebook or retweets on Twitter, one could believe that information is true or credible.

Expectancy violation heuristic (Cline & Haynes, 2001; Diviani, 2016; Flanagin & Metzger, 2007; Metzger et al., 2010): Expectancy violation heuristic will be triggered when one found something that fail to meet his/her expectation, or something do not conform of that person's personal belief. Bad grammar and misspelling are also falling into this group. Credible contents are expected to be grammatically flawless and error-free. In the meantime, appearance and functionality were included as cues in this type of heuristic as well. Number of websites had been designed to look alike ones belonged to media outlet, but they provided false information. Some audiences treated those information as if they were credible content and came from the professional news organization. In Facebook context where every post would appear under the same template, grammar and spelling would undoubtedly be cues users could apply.

Persuasive intense heuristic (Cline & Haynes, 2001; Diviani, 2016; Flanagin & Metzger, 2007; Metzger et al., 2010; Sillence et al., 2007): this heuristic was triggered when users found advertising attached to the information. No matter how big the businesses were, businesses at all sizes had ever used Facebook for their commercial purpose (Derham, Cragg, & Morrish, 2011; Nobre & Silva, 2014; Park, Rodger, & Stemmler, 2011). Park, Rodger and Stemmler (2011) found that health organizations used Facebook not only for health promotion, but also for organizational brand image management and marketing. Facebook helped facilitating communication between business owners and their customers. SMEs used Facebook to promote their business, reduced negative feedbacks from customers, and extended positive feedbacks to current and future customers (Derham et al., 2011; Nobre &

Silva, 2014). As such, it is inevitable that Facebook users could avoid information attached with commercial purpose. Also it is plausible to assume that health information enclosed with tied-in product or services would be rated low in credibility. Health information found on Facebook that attached with commercial content or commercial sponsorship would also lose trust from its audience.

The researcher selects these five types of heuristics that can be found on Facebook to be manipulated in this study. They are categorized into two groups of cues: cues responding to source credibility, and cues responding to message credibility.

	Types of heuristics	Cues on Facebook
Source	Reputation heuristic	Account name, account's affiliation
	Authority heuristic	Account name Information shown in the profile
Message	Bandwagon / Endorsement heuristic	Number of positive reactions Number of shares
	Expectancy violation heuristic	Proper use of language and grammar
	Persuasive intense heuristic	Noncommercial content attached in the message

According to previous research in credibility judgment and HSM, individuals would put different level of effort into online information credibility judgment based on their interest of the given topic, cognitive ability to make judgment, familiarity, personal relevance, and involvement. The researcher then proposes the following questions:

2.3.1 Research question 1: To what extent individuals applied heuristics when making credibility judgment of health information on Facebook? And what are cues and heuristics individuals use to assess credibility judgment of health information on Facebook?

2.3.2 Research question 2: How did individuals applied heuristic processing into credibility judgment of health information on Facebook?

Individuals' decision to process information systematically or heuristically were affected by either their motivation or their cognitive resources and/or ability (Todorov et al., 2002). Todorov et al. (2002) reviewed number of academic works and listed following motivational variables: the personal relevance of the persuasion message, the need of cognition, task importance, accountability for one's attitudes, and exposure to unexpected message content. They also found following cognitive resources/ability variables: distraction, message repetition, time pressure, communication modality, and knowledge and expertise.

In this research, the researcher aimed to identify both motivational and cognitive variables that affect an activation of either systematic and heuristic process altogether with cultural variable that, to the researcher's knowledge, has never been studied. Two motivational variables: health motivation and perceived seriousness of health issue, two cognitive variables: health literacy, and health e-mavens, and holistic and analytic worldview are chosen to be tested.

Variables	General information	Health-related information
motivational	Personal relevance The need for cognition, Task importance Accountability for one's attitudes Exposure to unexpected message content	Health motivation Perceived seriousness of health issues
cognitive	Distraction Message repetition, Time pressure Communication modality Knowledge and expertise	Health literacy Health e-mavens
cultural	-	Holistic-analytic worldview

2.3.3 Research question 3: what are relationship among independent variables (health motivation, perceived seriousness of health issues, health literacy, health e-mavens, and holistic/analytical worldview) and uses of heuristics in credibility judgment of health information on Facebook?

2.4 Variables

2.4.1 Health motivation

According to Moorman and Matulich (1993), health motivation was defined as individuals' goal-directed arousal to engage in preventive health behaviors. It focused on 'individuals' willingness to perform or interest in performing health behavior' (Moorman & Matulich, 1993, p. 210). As Petty and Cacioppo (1986) pointed out that motivation triggered individuals' interest to certain topics and enabled them to actively engage in activities and behaviors regarding those topics, health motivation indicated an active participation in health related activities and behaviors (Dutta-Bergman, 2004).

The work of Moorman and Matulich (1993) indicated that health motivation increased the amount of health information acquisition. Those who were highly health-motivated were found using active communication channels such as interpersonal channels, print readership, and Internet communication as primary sources (Dutta-Bergman, 2004). Health motivation was also facilitated health behaviors, preventive behaviors in particular (Jayanti & Burns, 1998; Moorman & Matulich, 1993). This preventive behaviors referred to any health-related behaviors that prolonged individual healthy life and lessen the effects of any health diseases and ailments (Jayanti & Burns, 1998). The extent to engage in preventive behaviors was individually varied depending on several factors such as social influence, family support and urging, commercial messages, recommendations from health care providers, situational and emotional factors, misperception, etc. (Jayanti & Burns, 1998).

There were empirical evidences implied the influence of health motivation on health behavior as suggested by the works of Moorman and Matulich (1993), Dutta-Bergman (2004), Jayanti and Burns (1998), and Rutten and colleagues (2006). Research results exhibited that individuals acquired health information online for themselves and their closed ones to be healthy (De Choudhury et al., 2014; Diviani, 2016; Eysenbach, 1999; Rutten et al., 2006). They searched for health information either to improve their health condition, to keep staying healthy, to get healthier, or to get proper information for medical decision that at the end will bring them back to a healthier status. Rutten and colleagues (2006) found that those who was diagnosed

having cancer or who had family members having cancer were more likely to be health information seeker than those who had no personal related to cancer.

A study by Eysenbach (1999) found some reasons explaining why patients turned to Internet for health information such as 1) they felt helpless or got frustrated from fail medical treatment, 2) they lacked of trust in their current physicians or health care provider, 3) they could be anonymous to reduce fear of asking ‘stupid’ question, 4) they felt that they had not enough information or were uninformed in certain areas, and 5) they sought for health information for someone else such as family members and friends. De Choudhury et al. (2014) also found some similar reasons supporting the work by Eysenbach (1999). Participants in the study mentioned that they turned to Internet because 1) they did not satisfied with what have been told by their physicians and needed more detailed information, 2) they wanted to find more information that they could share with or ask their healthcare providers, 3) in some cases, medical care was not available, and 4) monetary cost for performing online medical or health information seeking was cheaper than going to see doctors. These results were also supported by the work of Diviani, van Den Putte, Meppelink, & van Weert (2016) which showed that individuals seek for online health information because of several reasons; self-diagnosis, complement general physician visit, general physician visit preparation, curiosity, doctor or hospital information, impossibility to visit general physicians, and current diagnosis challenge.

De Choudhury et al. (2014) also focused on individuals’ motivation of using search engines and social media, which were claimed to be two most favorite channels of Internet for health information seeking. In case of search engines, participants in the study reported using search engines for online health information acquisition because of its convenience, plurality of results, and privacy of health information seeking experience. In case of social media, which in this case researchers selected Twitter, participants in the study mentioned that they sought health information because 1) they found it convenient, 2) they saw that the application can serve large audience, 3) they wanted to try something different, and 4) they wanted to find others’ recommendation, advice, or opinion on treatment of managing health conditions.

Taking a look at health information in Thai context, several studies implied the influence of health motivation on health information acquisition as well (Brandbuffet, 2017; Puypirom & In-Mor, 2016; Tongsawas, 2002). Tongsawas (2002) conducted a study regarding needs and uses of Internet health information, particularly websites, among Thais in Bangkok area and found that participants needed general health inquiries, and information concerning their family members' health care the most. Tongsawas (2002) also revealed that Thais relied online health information as it was a basic information for self-care and discussion with others, enabled them to take a proper of their their family members, and lessened risk or seriousness of health issues. The study by Puypirom and In-Mor (2016) yielded supporting results to Tongsawas (2002)' s work. The results revealed that participants in the study used Internet as a resources of health information because they wanted to stay healthy, to update health information, to seek health advices by themselves (Puypirom & In-Mor, 2016). These participants believed that online health information were accurate and reliable (Puypirom & In-Mor, 2016).

Additionally, a consumer survey conducted by Branbuffet.com (Brandbuffet, 2017) found that Thai individuals turned to Internet when acquiring health information. A survey conducting among customers from 11 countries; China, Hong Kong, Taiwan, Singapore, Malaysia, Thailand, Philippines, Ukraine, United Kingdom, Netherlands, and France, presented that Thai consumers relied on Internet and social media as their main resource for health (Brandbuffet, 2017). 37 percent of Thais rated themselves having good knowledge about health, which below than the world average at 51%. Most of them were aware that exercise was good for health, however, 48% of Thais regularly exercised. They opted to take supplementary vitamins to be healthy (Brandbuffet, 2017). Thais mostly concerned about weight loss/weight control, healthy food, and skin care. Although Thai people concerned about health issues (Bangkokbiznews.com, 2013, January 25th), 73% of Thais' death were resulted by non-communicable disease (NCD) (ManagerOnline, 2016). Top four causes of Thai death from NCD are stroke, coronary artery disease, hypertension, and obesity.

Given that Facebook was considered as sources of online health information (Newman et al., 2011; Zhang et al., 2013) and a popular communication platform for

Thai users (BangkokPost.com, 2018), it was assumable that Thai users received both solicited and unsolicited health information easier and faster. Also, there was a possibility that these users will encounter more fraud or misinformation, comparing to mass media and other traditional channels, as Facebook lacked of filtering system. Accordingly, it was worth to investigate how Thai Facebook users with different level of health motivation handle credibility issues of health information they found on Facebook.

Based on the existing literature, health motivated users would pay close attention to health information encountering on Facebook. By extensively elaborate every detail of the information, those users could rely on the content and act accordingly to improve their health condition and stay healthy. In contrary, those who are in lower level of health motivation or pay less attention on their health condition would highly make judgment toward health information based on cues attached such as source identity, language use in the message, numbers of likes and shares.

This led to the following hypothesis:

H1: Low health-motivated people use heuristics in credibility judgment of health information on Facebook more than high health-motivated people.

H1a: Low health-motivated people use reputation heuristic in credibility judgment of health information on Facebook more than high health-motivated people.

H1b: Low health-motivated people use authority heuristic in credibility judgment of health information on Facebook more than high health-motivated people.

H1c: Low health-motivated people use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-motivated people.

H1d: Low health-motivated people use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-motivated people.

H1e: Low health-motivated people use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-motivated people.

2.4.2 Perceived seriousness of health issues

People perceived severity or seriousness of illness differently. That was because they made judgment based on their emotion when thinking about that disease and the difficulties of health condition they believed the disease will cause (Rosenstock, 1974). Seriousness of health issue, to some persons, reflected on the medical or clinical consequence. To others, seriousness of health issue reflected on the effect of the disease towards the person's life or social consequences (Janz & Becker, 1984; Rosenstock, 1974).

Perceived severity was identified as one element of risk perception (Janz & Becker, 1984; Sheeran, Harris, & Epton, 2014) and risk perception influenced intention and behavior change (Sheeran et al., 2014). Increasing in severity perception in risk appraisal had a greater effect on intention and behavior (Sheeran et al., 2014).

Patients' perception of seriousness of health issue influenced their medical adherence. The greater seriousness individuals perceived of the illness the better adherent they were (DiMatteo, Haskard, & Williams, 2007). That was because when encountering with perceived serious health illness, individuals were facing threat and fear. According to the Health Belief Model, perceived seriousness of the disease affected perceived threat of the disease that would influence the likelihood of taking health preventive action (Rosenstock, 1974). One action expected to be taken is searching for more information to better understand the illness and manage compliance.

Prior research showed that Internet has been a platform for individuals to seek for health information regardless of the seriousness or severity of disease or illness, such as breast cancer (Rees & Bath, 2001), cancer (Han et al., 2010; Ramanadhan & Viswanath, 2006; Rutten et al., 2006; Shaw et al., 2008), neuro-related physical disability (Liang, Xue, & Chase, 2011), mental illness (McKinley & Ruppel, 2014), HIV/AIDS (Samal et al., 2011). Online health resource was not to replace but complement offline health resource (Hu, Bell, Kravitz, & Orange, 2012). Patients with health issues were motivated to search for more information concerning the illness for better understanding and supporting their health decision making.

Although numerous studies had shown that individuals or patients looked for health information on online platform, findings were not clearly pointed out whether seriousness of disease influenced individuals to rely on online health information. Some of those who have serious illness did not rely much on online health information they found (Mano, 2014). Some people who had been diagnosed with cancer avoided to look for health information concerning the disease, partially because they lacked of trust in non-medical source of information. They only trusted their doctors and healthcare providers (Ramanadhan & Viswanath, 2006). Some women denied to look for health information because of several reasons such as they wanted to bypass their subsequently feelings of worry, it was too frightened to receive any information regarding her health condition, and they perceived those information as too negative and depressing (Rees & Bath, 2001). In the case of mental health issue, those with high level of self-efficacy, when perceiving mental health problem as a serious concern, were reported less motivated to use online health resource (McKinley & Ruppel, 2014).

On the contrary, there were several empirical evidences supported that those with serious health issues acquired more information concerning their symptoms or diseases (Liang et al., 2011; Ramanadhan & Viswanath, 2006; Rees & Bath, 2001). Liang and colleagues (2011) found that the worsen the physical condition individuals get, the more likely that they will seek health information on Internet. That was because their physical condition makes them anxious and they want to know more about that condition to the extent that they could care less about information usefulness. Women with breast cancer who participated in the work of Rees and Bath (2001) pointed that they searched for more information concerning breast cancer to cope with her illness, to gain self-confidence and a feeling of secure, and to get a sense of control in a perceived uncontrollable situation. Ramanadhan and Viswanath (2006) also found some evidences from previous studies suggesting that health information seeking had several impacts on cancer patients such as participating in decision making, received greater satisfaction with medical treatment, and reporting non-side effect.

Regardless the extent individuals performed health information acquisition concerning serious health issues, it was worth to study how perceived seriousness of

health issues play a role in influencing individual's credibility judgment of health information on Facebook. It was clear that Facebook provided both solicited and unsolicited health information on individuals' newsfeed. Those information could concern both perceived less serious and perceived more serious health issues. Decision making concerning credibility of those health information was important for both cases, but it would be more challenging in the case of perceived more seriousness. Wrong decision or judgment regarding information credibility of perceived more serious health issues, in the worst case scenario, could take one's life,

In the current study, the research expected people to consciously elaborate every details before making credibility judgment of information concerning perceived serious health issues. That was because the more serious the topic was, the more risk was taken. Meanwhile, people were expected to intuitively make credibility judgment of information concerning perceived less serious health issue as the outcome of decision would not be a risk taking. This led to the following hypotheses

H2: Individuals who perceived low seriousness of health issue use heuristics in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2a: Individuals who perceived low seriousness of health issue use reputation heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2b: Individuals who perceived low seriousness of health issue use authority heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2c: Individuals who perceived low seriousness of health issue use expectancy violation heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2d: Individuals who perceived low seriousness of health issue use persuasive intense heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2e: Individuals who perceived low seriousness of health issue use bandwagon heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

2.4.3 Health literacy

Health literacy became a topic of concern when there were empirical evidences suggested the widespread of low literacy in health care setting, resulting in poor health outcomes (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004; Nutbeam, 2008). DeWalt and colleagues (2004) conducted a systematic review of a number of research regarding literacy and health outcome. Although skills of literacy included listening, speaking, reading, writing, and numeracy skills, reviewed research only focused on reading skill. The results showed that reading skill was related to knowledge about health in many aspects, such as hospitalization and some chronic diseases (DeWalt et al., 2004).

Nutbeam (2008) proposed two approaches of health literacy, namely health literacy as a risk factor, and health literacy as asset. Given health literacy as a risk factor, Nutbeam (2008) stated that the concept started as health-related literacy when researchers noticed a relationship between level of literacy and health which caused negative effect both to general public and health organization. Health literacy at the early stage was a term describing a set of skills individuals needed to function in health setting. Looking at health literacy as an asset, health literacy was seen as a mean allowing individuals to take a greater control over their health and health-related determinants (Nutbeam, 2008). This asset can be built on health education and communication (Nutbeam, 2008).

The concept of health literacy then emerged and evolved over the years (Baker, 2006; Berkman, Davis, & McCormack, 2010; Chinn & McCarthy, 2013; Nutbeam, 2008). Even though the topic of health literacy had been discussed widely, there was no share meaning for this term (Baker, 2006; Berkman et al., 2010). To some organizations, according to Baker (2006), health literacy was presented as an individual capacity. Take the definitions by Healthy People 2010 and the Institute of Medicine (IOM) as an example. Health literacy was defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (cited in Baker, 2006, p. 878). Berkman and colleagues (2010) pointed out that this definition focused more on the goals of being health literate, not a set of skills. In the meantime,

there was an argument that health literacy was not solely depended on individuals, but also healthcare providers (Baker, 2006). Additionally, some organizations raised that health knowledge must be included as well (Baker, 2006). As such, this perspective saw health literacy as “an achieved level of knowledge or proficiency that depends upon and individual’s capacity (and motivation to learn) and the resources provide by the health care system” (Baker, 2006, p. 878). Later definition of health literacy extended to several areas, such as ability to use technology, cognitive ability, networking and social skills (Berkman et al., 2010). For example, World Health Organization (cited in Ilgun, Turac, & Orak, 2015; Nutbeam, 2008; WHO, 2015) defined health literacy as social and cognitive skills that provide personal talent and motivation in understanding and usage of the information for to provide and pursue keeping healthy.

As the current study focused on Thai participants, it was worth to address a term ‘health literacy’ defined by Ministry of Public Health of Thailand. That was, ‘health literacy was defined as an individual capacity to scrutinize, assess, and make a proper decision on health behavior, products and services (Ministry of Public Health, 2017, cited in Kaeodumkoeng, 2019). Comparing to other definitions proposed by international scholars and organization, the definition of health literacy by the Ministry of Public Health of Thailand did not specify what kinds of skills individuals need. However, it focused more on the goals of being health literate.

Clearly, being health literate was not only able to perform those skills in reading nutrition labels on food containers or understanding the meaning of number on blood pressure measurement, individual who possess health literacy skills should also have some basic knowledge about body, health behaviors, and the working of health system (Department_of_Health_and_Human_Service, n.d.; Jensen, 2012; Raynor, 2012).

As mentioned earlier that there was no universal definition for health literacy, several scholars attempted to categorize health literacy skills into several domains and levels (Kanj & Mitic, 2009; Nutbeam, 2008). These categorization not only identified what skills individuals should possess and how these skills enable them to reach the goals that were mentioned in the definitions. Nutbeam (2008) classified skills needed in health literacy into three groups; functional, interactive, and critical literacy. Each

group was different in term of level of skills. Functional health literacy was referred to basic skills of reading and writing which were essential in communication for information. Interactive health literacy was referred to advanced cognitive, social and literacy skills. These skills enabled individuals to improve their capacity to act independently on knowledge, motivation and self-confidence. Critical health literacy was referred to more advanced cognitive, social, and literacy skills enabling them to analyze health information critically and to use those information in taking a greater control over their life in health-related events and situations.

Kanj and Mitic (2009) proposed quite similar categories as Nutbeam's. Kanj and Mitic (2009) categorized health literacy into three groups; functional literacy, conceptual literacy, and health literacy as empowerment. Functional literacy referred to skills that allowed an individual to read consent forms, medicine labels, and health care information and to understand written and oral information given by physicians, nurses, pharmacists, or other health care professionals and to act on direction by taking medication correctly, adhering to self-care at home, and keeping appointment schedules. This category resembled to Nutbeam's functional health literacy.

Conceptual literacy, which was resemble to Nutbeam's interactive health literacy, was referred to wide range of skills, and competencies that people develop over their lifetimes to seek out, comprehend, evaluate, and use health information and concepts to make informed choices, reduce health risks, and increase quality of life. Lastly, health literacy as empowerment was a level that strengthening active citizenship for health by bring together a commitment to citizenship with health promotion and prevention efforts and involving individuals in: understanding their rights as patients and their ability to navigate through the health care system; acting as informed consumers about the health risks of products and services and about options in health care providers, and acting individually or collectively to improve health through the political system through voting, advocacy or membership of social movements. This category was resemble to Nutbeam's critical health literacy.

Suri et al. (2016) grouped health literacy skills into five different domains with more specific skills: 1) an ability to find health information, 2) an ability to appraise health information, 3) an ability to understand health information well enough to act, 4) an ability to actively manage one's health, and 5) an e-health literacy.

Health literacy was not a novel topic as it had been scholarly discussed for more than 50 years (Ad Hoc Committee on Health Literacy for the American Council on Scientific Affairs, 1996). This topic, however, was still in attention. In 2016, the WHO released the ‘Shanghai Declaration on promoting health in the 2030 Agenda for Sustainable Development. Health literacy was recognized as an integral part of the 2030 Agenda’s goal (WHO, 2016). WHO highlighted the importance of health literacy that competencies in health literacy will empower people and enable their engagement in health promotion (WHO, 2016) WHO declared their commitment that

“ We commit to

- *Recognize health literacy as a critical determination of health and invest in its development; develop, implement and monitor intersectional national and local strategies for strengthening health literacy in all populations and all educational settings;*
- *Increase citizens’ control of their own health and its determinants, through harnessing the potential of digital technology;*
- *Ensure that consumer environments support healthy choices through pricing, policies, transparent information and clear labelling.”*

Given that WHO had a commitment to ‘increase citizens’ control of their own health and its determinants through harnessing the potential of digital technology,’ it showed that issues of health literacy on digital platform must not be ignored.

There were several evidences supporting the notion that Internet and Facebook were popular platforms for health informa (Andreassen et al., 2007; Chang & Im, 2014; Cline & Haynes, 2001; Fox, 2011; Galarce et al., 2011; Hess et al., 2005; Miller & Bell, 2012; Neuhauser & Kreps, 2003; Newman et al., 2011; Rideout, 2001; Sarasohn-Khan, 2008; Siliquini, 2011; Sillence et al., 2007; Zhang et al., 2013). Also, there were number of research conducting on health literacy and online health information, but only few of them focused on health literacy and evaluation of online health information (Diviani et al., 2015; Diviani, 2016; Gutierrez, Kindratt, Pagels, Foster, & Gimpel, 2014; Neter & Brainin, 2012). To the researcher’s knowledge,

none of them studied health literacy and evaluation of online health information found on Facebook.

Health literacy skills were found relating to and influencing individuals' ability to seek and evaluate health information (Diviani et al., 2015; Neter & Brainin, 2012). Individuals with low level of health literacy encountered difficulties in health information seeking (Diviani et al., 2015; Gutierrez et al., 2014). Neter and Brainin (2012) reported that high e-health literate individuals reported searching for health information with caution. High e-health literate individuals used following search strategies; use a link recommended by a physician, follow links that appear on websites, ask questions in forums, use personal 'favorite' list, and use a site recommended by friends and physicians, more than low e-health literate individuals. They also evaluated health information they encountered with a careful scrutiny (Neter & Brainin, 2012). The results from a work by Diviani et al. (2015) confirmed that low health literate individuals lacked of skills by showing that this group of people did not modify their searching strategies.

In the meantime, high health literate individuals used more rigorous search process and gave more attention to more serious illness (Diviani, 2016). The more seriousness of the health issue they were searching for, the more attention the high health literate individuals will add into their searching process (Diviani, 2016). The work of Diviani et al. (2016) showed that individuals referred to several cues when assessing online health information. For example, medical authorship, presence of author's credentials, absence of advertising, overall design of the website, same information on other websites, perceived number of users, currency of information, etc. These individuals assessed that overall information found online were low quality.

Based on this literature, it led to the conclusion that individuals with high level in health literacy were able to understand their health issues, made a proper health-related decision, actively engaged in healthy lifestyles while individuals with low level of health literacy encountered difficulties in health information seeking (Diviani et al., 2015; Gutierrez et al., 2014).

Putting into the context of the current study, it was assumable that individuals with high level of health literacy were aware of heuristic cues they were facing and

were cautious when encountering information on Facebook. In the meantime, individuals with low level of health literacy were not only aware of , but also relied on those cues when making credibility judgment of health information on Facebook.

This led to the following hypothesis.

H3: Low health-literate individuals use heuristics in credibility judgment of health information on Facebook more than high health-literate individuals.

H3a: Low health-literate individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals.

H3b: Low health-literate individuals use authority heuristic in credibility judgment of health information on Facebook more than high health-literate individuals.

H3c: Low health-literate individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals.

H3d: Low health-literate individuals use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-literate individuals.

H3e: Low health-literate individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-literate individuals.

2.4.4 Health e-maven

A maven concept originated from a field of marketing (Boster, Kotowski, Andrews, & Serota, 2011; Clark & Goldsmith, 2005; Fieck & Price, 1987; Goldsmith, Clark, & Goldsmith, 2006; Sun, Liu, & Krakow, 2015). A term ‘maven’ was coined by Lawrence L. Fieck and Linda L. Price (1987). ‘Market maven’ was described as following (Fieck & Price, 1987, p. 85).

‘individuals who have information about many kinds of products, place to shop, and other facets of markets, an initiate discussions with consumers and respond to request from consumers for market information.’

According to Fieck and Price (1987), people who were identified as market mavens possessed general knowledge, expertise, and influence regarding market place. Taken influence into consideration, Fieck and Price (1987) argued that a concept of 'maven' was not entirely resemble that of 'opinion leader'. These two terms shared some similarities that both terms based their influence on knowledge and expertise. However, maven's influence derived more from general market expertise, not a product specific. Market mavens were found to be sensible to new market products across categories, willing to share information with others, engaged in general market information acquisition, and showed their market interest and attentiveness.

Originally, 'market maven' cannot be identified only by demographic difference (Fieck & Price, 1987; Goldsmith et al., 2006; Goodey & East, 2008), but the work by Goodey and East (2008) suggested that there was difference in personality characters between male and female mavens. Barnes and Pressey (2016) found that market mavens in cyber setting, which were labeled as 'cyber maven', were well educated and slightly older consumers.

In a broader sense, it could be said that the concept of 'mavens' referred to individuals with a general interest in a topic area who actively participate in information exchanges (Clark & Goldsmith, 2005; Fieck & Price, 1987). Several scholars adopted the concept of 'market maven' and attempted to identify mavens in areas other than marketing and consumer (Belch, Krentler, & Willis-Flurry, 2005; Boster et al., 2011; Sun et al., 2015). Belch et al. (2005, p. 569) discovered 'teen Internet mavens' and defined their characteristics as 'an individual who is relied upon more for providing information from the virtual marketplace'. Teen Internet mavens enjoyed surfing on Internet and had more influence in the family decision-making than those who were non-mavens (Belch et al., 2005). Boster, Kotowski, Andrews, and Serota (2011) adopted this concept into health communication setting. They identified 'health mavens' as someone who had a broad range of knowledge across health behaviors and health topics. Health mavens were happy to share health information with others. There was a possibility that health mavens would be recognized by others as health advocates (Boster et al., 2011). Sun, Liu and Krakow

(2015) had taken this 'health maven' into more specific setting and coined a term 'health e-maven. This 'health e-maven' was referred to "individuals who are consistently and actively involved with health information acquisition and information transmission on the web space (Sun et al., 2015, p. 1073).

By its definition and characteristics, it showed two dimensions of mavens' behaviors; acquisition and transmission (Barnes & Pressey, 2016; Belch et al., 2005; Boster et al., 2011; Fieck & Price, 1987; Kontos, Emmons, Puleo, & Viswanath, 2011; Sun et al., 2015). They not only have abundance of information in the area, but also share the information they have with others (Barnes & Pressey, 2016; Belch et al., 2005; Boster et al., 2011; Fieck & Price, 1987; Kontos et al., 2011; Sun et al., 2015). Applying into online health communication setting, acquisition would mean individuals performed tracking and consulting online health information, while information sharing and online posting can be referred to as acts of transmission (Sun et al., 2015).

According to the literature, Facebook was one of platforms where health e-mavens can be found. Facebook allowed its users to post and share health information instantly. It also provided spaces where users can create a virtual community as a Facebook page in which members can post, share, discuss and exchange health information. Numerous health-related page can be found on Facebook at present. Health e-mavens could get health information intentionally and voluntarily on their personal news feed either from their 'friends. Those who were on 'friend' list probably have other types of relationship with the account owner such as family members, relatives, their doctors, their bosses, their colleagues, someone they happened to know from work, or someone who share the same interest or accounts or Facebook pages that they have followed.

Considering health e-mavens as a source of online health information (Kontos et al., 2011; Sun et al., 2015), individuals identified as a health e-mavens must put more effort when acquiring health information on Facebook. Since the platform has a multi-layer of source identity and uneven quality of information, health e-mavens then would be aware of risk they are facing. With their personal experience, as being actively in health information acquisition and transmission, health e-mavens would be able to assess the information effectively by considering every detail of the

information before adapting into their health lifestyle and transmitting to others. Health e-mavens can share health information with others by posting on their walls or Facebook pages in which they created or followed. Also, health e-mavens can discuss about health issues with others via the Facebook's commentary section or Facebook messenger application in case that they need some privacy.

As such, it was assumable that individuals who possessed health e-mavens then would be aware of risk they are facing and be cautious when encountering information on Facebook.

This led to the following hypothesis

H4: Low health e-maven individuals use heuristics in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4a: Low health e-maven individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4b: Low health e-maven individuals use authority heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4c: Low health e-maven individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4d: Low health e-maven individuals use persuasive heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4e: Low health e-maven individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals.

2.4.5 Holistic and analytic worldview: Cultural influence in decision making style

Admittedly, Hofstede's theoretical perspective on cultural difference between the East and West; collectivism-individualism had been adopted as a framework for a number of research in the area of intercultural communication. Based on his large

survey with more than 100,000 IBM employees, Hofstede (1980, cited in Kim, Kim, Dindia, & Burrell, 2010) proposed well-known cultural dichotomies; individualism-collectivism, based on the degree of interdependence a society maintains among its members. Individualistic culture was found in a society where people tended to put their own interest and those of their loved ahead of the society's interest. People in these societies looked after themselves and had a loose tie with other members in the group. Individual success was considered to be more important than those of the groups in the societies. Most of western countries were listed in this group. Take the United States of America and Canada as examples. On the contrary, collectivistic culture was in a society where people prioritized societal interest before their personal interest. Members of collectivistic societies were expected to take care of each other. Eastern countries such as Korea, China, even Thailand were listed under this categories (Kim et al., 2010).

Although many previous research were conducted in cultural setting using individualism vs. collectivism by Hofstede as a framework, some scholars critiqued that this concept had some limitation. Nishida (1996) pointed out that individualism properly illustrated North American cultural characteristics, but the concept of collectivism failed to describe non-individualistic societies. Take Japan as an example. Benu (1980) pointed that Japanese people had two different selves; public self and private self. Public self was expressed in a way of collectivistic while private self was presented in a way of individualistic.

McSweeney (2002) commented on Hofstede's work that Hofstede failed to acknowledge error and its weakness. Even though the sampling number from total 66 countries were more than 100,000, it was questioned if those sampling truly represented the population. The average number of sampling in each country was very small. There were six nations that each had more than 1,000 participants. Fifteen nations including Thailand had less than 200 participants. Also, the survey was taken at only one business organization and narrowly for 'marketing-plus-sale employee.'

In avoidance of those limitation, a holistic-analytic worldview had been proposed as the fundamental cultural differences instead of Hofstede's individualism-collectivism (Kim et al., 2010; Lim & Giles, 2007; Nisbett, Peng, Choi, & Norenzayan, 2001). This concept dichotomized cultural difference based on the way

people in the society approach the world, not the in-group orientation (Kim et al., 2010; Lim & Giles, 2007; Nisbett et al., 2001).

Several scholarly works supported the notion that people from the East and the West approached the world differently (Kim et al., 2010; Lim & Giles, 2007; Lowe, Kainzbauer, Tapachai, & Hwang, 2015; Nisbett, 2003; Nisbett et al., 2001). Nisbett, Peng, Choi, and Norenzayan (2001) and Nisbett (2003) drew the difference between the East, represented ancient China, and the West, represented by Greek, based on evidences from philosophical, historical, and social science research. Ancient Greek and Chinese society were chosen as they were “two civilizations that were most distant from one another and probably influenced one another the least” (Nisbett et al., 2001, p. 292). Additionally, these civilization made a great contribution to modern society as ancient Greek to European civilization and ancient China to East Asian civilization, which greatly influenced Southeast Asia (Nisbett et al., 2001).

These two civilizations were different in many aspects. These differences influenced their difference in system of thoughts. Ancient Greeks had a strong sense of individual power that showed no counterpart in any civilization (Nisbett et al., 2001). They possessed skills of a capable debater that allowed ordinary people to stand up and challenge anyone. Ancient Greeks also developed a sense of curiosity about their surroundings, looked for their causal relation and establish rules for them (Nisbett et al., 2001). On the contrary, ancient Chinese were the opposite (Nisbett, 2003; Nisbett et al., 2001). While ancient Greeks valued personal agency, ancient Chinese valued collective agency. Ancient Chinese believed individuals were part of a group they belonged, either a family or a community and their actions governed by the approval of the group (Nisbett et al., 2001). Ancient Chinese, even though they showed several technological advancement that could not be found in Greek civilization, had never developed the law of nature. Instead, ancient Chinese was found living by intuition and empiricism (Nisbett, 2003; Nisbett et al., 2001).

Moreover, Nisbett (2003) proposed that people from the East, especially Asian, think differently from people from the West because of influences of different philosophies. Chinese ways of living had been influenced by three philosophies: Taoism, Confucianism, and Buddhism. All three philosophies emphasized on harmony, relativity between human and nature, and the need to see things as a whole

(Nisbett, 2003). On the contrary, Greek philosophies emphasized linear method of understanding. Greek-influenced individuals, or Westerners, understood the world based on logical reasoning (Nisbett, 2003), saw things separately and regardless of context.

Aforementioned differences showed that ancient Chinese and ancient Greek were a member of different systems of thought; holistic and analytic thoughts (Kim et al., 2010; Lim & Giles, 2007; Nisbett, 2003; Nisbett et al., 2001). Ancient Chinese was listed as a member of holistic system of thought, in which holistic was defined as *'involving an orientation to the context or a field as a whole, including attention to relationship between a focal object and the field, and a preference for explaining and predicting event on basis of such relationship'* (Nisbett et al., 2001, p. 293). In the opposite, ancient Greeks was categorized as having analytic thoughts, in which analytic was defined as *'involving detachment of the object from its context, a tendency to focus on attributes of the object to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior'* (Nisbett et al., 2001, p. 293).

Applying Nisbett's concept of holistic and analytic worldview, scholars confirmed that culture shaped individuals' cognitive and perceptual process (Buchtel & Norenzayan, 2008; Cai, Fink, Payne, & Wang, 2004; Lim & Giles, 2007; Nisbett & Miyamoto, 2005; Norenzayan, Smith, Kim, & Nisbett, 2002; Song et al., 2016). Norenzayan et al. (2002) found that cultural difference influenced in reasoning strategies. European American relied on formal reasoning more than East Asian while the latter relied on intuitive reasoning more than the former. Members of formal reasoning group are those who solved problems based on rules, logical inferences, and overlooked sense experience when it conflicts with rule of logic. On the contrary, those of intuitive reasoning group, when solving problems, relied on sense experience and concrete instance, and overlooked rules and logic when they are at odds with intuition. This notion was supported by the work of Buchtel and Norenzayan (2008) studying cultural differences in the perceived value of analytic versus intuitive reasoning between Korean and American participants. The results showed that Korean participants ranked personality traits in relative to 'intuition' as more

important than personality traits in relative to ‘logic’, while American participants showed no statistically different in preference.

Moreover, considering online health communication setting in particular, Song et al. (2016) confirmed the notion that culture influenced individuals’ perception on things and agreed with the work of Norenzayan and colleague published in 2002 by presenting that individuals with different cultural background perceived trust on online health information differently. Individuals in Korea and Hong Kong showed that they more trusted experience-based information than individuals in the United States. Meanwhile, US individuals preferred expertise-based information.

There were also evidences supporting that attention orientation was different between holistic and analytic system of thoughts as well (Masuda & Nisbett, 2001). Masuda and Nisbett (2001) found that Japanese recalled and perceived objects in relation to field, while Americans recalled objects independently. This led to a conclusion that people who approached the world with holistic thinking had their attention oriented toward relationship between object and context or field. In contrast, people who approached the world with analytic thinking had their attention oriented to the object itself (Choi, Koo, & Choi, 2007; Masuda & Nisbett, 2001).

Even though none of aforementioned research specifically used Thais as representatives for the East, Thais are considered to have holistic worldview. It was also clarified that ‘the East’ was not geographically restricted to East Asia, however, it also referred to Southeast Asia, where ancient Chinese civilization played a great deal of influence (Nisbett et al., 2001). Nisbett (2003, p. xxii) expected the misunderstanding, then made a clarification that

“When I speak of East Asia I mean China and the countries that were heavily influenced by its culture, most notably Japan and Korea. (I will sometimes abbreviate ‘East Asian’ to ‘Easterner’ and sometimes to ‘Asian’).... The cultures and subcultures of the East differ as dramatically from one another as do those of the West. But the board-brush term ‘East Asian’ can be justified.”

Lowe, Kainzbauer, Tapachai, and Hwang (2015) provided evidences showing holistic worldview in Thai business context influenced by Buddhism and Thai culture. Organization leaders in Thailand applied strategies that concerned not only on business outcome and success, but also morality and spirituality of local staff.

To boost sale of product, one company held a Buddhism ceremony having nine Buddhist monks to bless the product and the sale staff. Feeling spiritually stronger, the sale staff put more effort into selling product and that led to an increase of sales. In the meantime, Thai customers made a purchasing decision not only based on quality of product or service itself, but also relationship they had established with those product or service providers.

As the literature showed that holistic and analytic thinking affected cognitive and perception process, altogether with lack of study regarding holistic thinking with Thai participants, the current study incorporated holistic and analytic system of thought to investigate the relationship between styles of thinking and credibility judgment of health information on Facebook. Also, according to the literature regarding heuristics, Facebook was considered to be a platform worth studying credibility judgment of Thai users. Obviously different from traditional media, information was presented with various elements that could trigger any person's heuristic cues such as identification of sources of the information, interactive links to references or more information, number of reactions and emotions, interactions between sources and receivers, etc. If Thais are to be categorized under holistic system of thoughts, it was assumable that those elements would take a role as heuristic cues in their credibility judgment.

As such, the hypothesis were proposed as following:

H5: Individuals who have low holistic worldview use heuristics in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

H5a: Individuals who have low holistic worldview use reputation heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

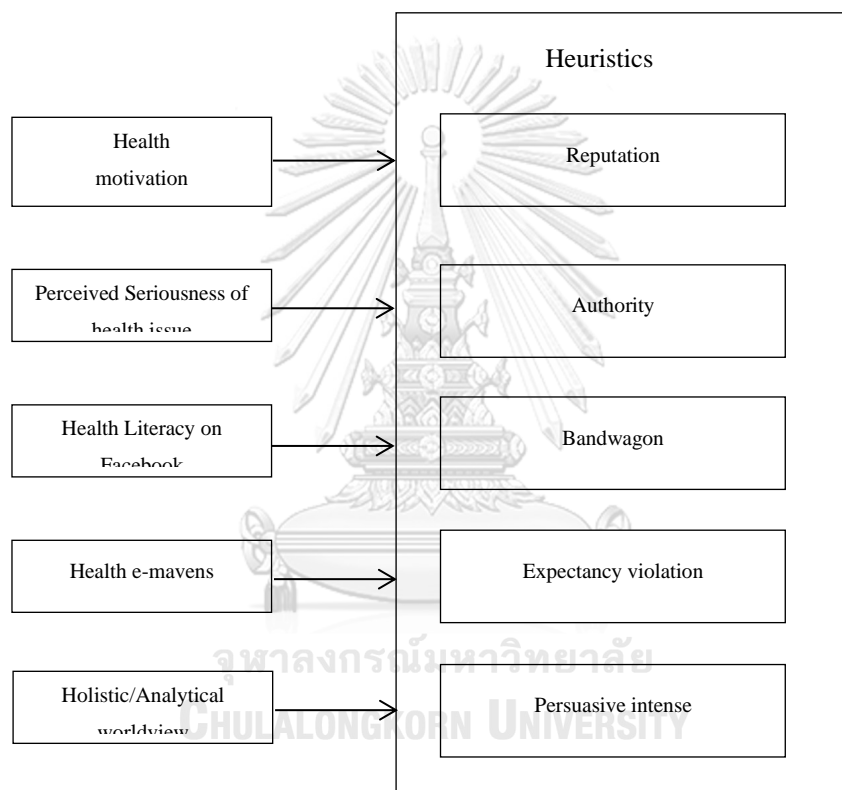
H5b: Individuals who have low holistic worldview use authority heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

H5c: Individuals who have low holistic worldview use expectancy violation heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

H5d: Individuals who have low holistic worldview use persuasive intense heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

H5e: Individuals who have low holistic worldview use bandwagon heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

2.5 A conceptual framework



2.6 Operational definitions

heuristics:	mental shortcuts individuals use to make a judgment on credibility of health information on Facebook
health motivation:	the act or desire or need concerning health that gives individuals a reason to make a judgment on credibility of health information on Facebook
seriousness of health issues	individual's reflection on medical and social consequence of the health issue and its effect towards the person's life
health literacy:	skills individuals possess that enable them to obtain, process, and understand health information and services on Facebook
health e-mavens	individuals who are consistently and actively involved with health information acquisition and information transmission on the web space
holistic/analytical worldview	a cultural difference between the East and the West on the way they approach the world. Holistic worldview refers to the way individuals from the East, especially Asian, approach the world by seeing things as a whole, relying on sense experience, and ignoring rules or logic. Analytical worldview refers to the way individuals from the West approach the world based on logical reasoning, seeing things separately and regardless of context.
credibility judgment	Facebook users' judgment toward source and message believability of health information.

Chapter 3

Research Methods

With the intention to investigate uses of heuristics approach in credibility judgment on health information among Thai Facebook users, the current study applied a mixed-method research approach, an in-depth interview and an online questionnaire, to complete research objectives. This chapter discussed each method in term of the research design, population and sample, sampling method, data collection, validity and reliability, altogether with data analysis, respectively.

3.1 Qualitative method: An in-depth interview

3.1.1 Research design

This study utilized a face-to face in-depth interview to get the essence on health information acquisition, credibility judgment of health information on Facebook from active Thai Facebook users. This method was adopted as it allowed participants to share their opinion without bias and to be free from influences of other participants. Results from the in-depth interview method, along with the literature, was used to develop a questionnaire for an online survey.

3.1.2 Population and samples

As the current study aimed to get the essence of participants' health information acquisition and uses of heuristics in credibility judgment of health information on Facebook, not only that participants were expected to age at least 18 years old, at least one year of experience on Facebook was a required qualification. The sample size was not assigned at the first place. An in-depth interview were proceeded to the 50th interview when existing interviews yielded the same information and no new theme was found.

3.1.3 Sampling method and data collection

To capture the essence of participants' health information acquisition and uses of heuristics in credibility judgment of health information on Facebook, the current study applied purposive sampling method to recruit participants from different demographic groups.

The semi-structured interview was adopted because this type of interview allowed the research to be more flexible with order of questions and word choices to be used in the questions for each participants. According to Barriball and While (1994, p. 330), a semi-structured interview was *'well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issue and enable probing for more information and clarification of answers'*. It must be noted that participants in the current study came from different demographic groups. As such, one question may sound clear to some participants, but confused to others. To have freedom in paraphrasing, explaining the questions was essential to the current study.

The interview was conducted during April to May in 2018. All interviews was taken place in a face-to-face setting. All participants was informed and asked for a permission for tape-recording beforehand. Each interview lasted from 25 to 40 minutes. All interviews was conducted in Thai.

3.1.4 Instrument

Questions for the in-depth interview was developed based on the literature as presented on chapter 2. As the current study utilized a semi-structured interview, questions were changed in term of order and word choice, and also added when it was needed to maximize the potential of interaction and insights from participants.

3.1.5 Validity and reliability

The validity and reliability are necessity to all research as the validity show the accuracy of the measurement in reflecting the concept under consideration , while reliability reflected quality of measurement that the research measurement would collect same data in repeated observation of the same phenomenon (Babbie, 2013).

According to Helen Noble and Joanna Smith (2015), the concept of validity and reliability in qualitative research can be established as well as in the quantitative research, only that it required different application. In qualitative research, validity referred to *'integrity and application of the method undertaken and the precision in which the findings accurately reflect the data'* (Noble & Smith, 2015, p. 34). In the meantime, reliability in qualitative research meant *'consistency within the employed analytical procedure'* (Noble & Smith, 2015, p. 34).

To establish validity and reliability of the qualitative measurement in the current study, a list of questions was prepared and tested with several participants to check its clarification, its effectiveness in yielding valid outcomes, and the interview flow. The results from this pilot study not only pointed out unrecognized flaws, but also improved the existing question list into the better version as well.

3.1.6 Data analysis

The in-depth interview was conducted in Thai. 50 interviews were recorded with consent and verbatim transcribed. Raw data were categorized by themes and subthemes responding to the research questions and were analyzed by content analysis technique.

3.2 Quantitative method: Survey

3.2.1 Research design

An online questionnaire was applied to draw empirical data on Thai Facebook users' uses of heuristics in credibility judgment of health information. The questionnaire was also used to assess Thai Facebook users' difference in several variables; health motivation, perceived seriousness of health issues, health literacy, health e-maven, holistic/analytic worldview, and to analyze their relationship with uses of heuristics in credibility judgment onward.

3.2.2 Population and samples

This study aimed to collect data from the sample size of at least 400 (rounded off the nearest whole). Numbers of sample was calculated using an equation developed by Cochran (1963).

$$n_0 = \frac{Z^2 pq}{e^2}$$

n_0 = the sample size

Z^2 = the abscissa of the normal curve that cuts off an area α at the tails

p = the estimated proportion of an attribute that is present in the population

e = the acceptable sampling error

Since the study focused on Thai Facebook users' credibility judgment of health information on Facebook, collecting data through online platform was

preferable. Not to mention time and cost saving, collecting data through online survey research granted an access to unique populations (Wright, 2005).

3.2.3 Sampling method and data collection

There were two stages of survey; a pilot study and a main study. Since the current study aimed to investigate participants' credibility judgment of health information on Facebook, it was essential to conduct a pilot study, not only for validity and reliability check, but also for manipulation check as well.

This study incorporated convenient sampling and snowball sampling method to collect data from a larger group of participants. An online questionnaire was developed using Google Forms. The questionnaires consisted of scales, rating, open-ended questions, multiple choices and multiple checkboxes. All questions was developed originally in English and applied a back translation between Thai and English to confirm its accuracy.

A link to online survey research was distributed via Facebook's instant message application, Messenger, because of three main reasons. First of all, only those who had an account on Facebook was able to communicate on the application. That meant any person saw the link on the application was partially qualified as a participant of the study.

Secondly, according to changes on Facebook algorithm as the company presented in January 2018 (Mosseri, 2018), the company prioritized how high a post will be on newsfeed based on number of reaction, comments, and share. Also, they put the post they predicted to set off conversation and interaction among users. As such, a post containing a survey link may neither be chosen by Facebook at the high position, nor guarantee that everyone on the friend list would see the link and participate into the study.

Thirdly, it was impossible to reach a designate sampling number within one post. In the meantime, reposting the same link on the wall several times may not draw any new participants, but could possibly annoy friends who saw it.

A direct message was sent via 'Messenger' to 300 recipients for six weeks, during June 26th - August 6th, 2019, asking for their participation and help on forwarding the link to at least five more people on their Facebook friends' list.

3.2.4 Instrument

The questionnaires was developed on online platform using Google Forms. The questionnaires for a pilot study consisted of nine parts including manipulation checks, while a main study consisted of eight parts.

For the pilot study, the first to the fourth part of the questionnaire were to assess participants' differences on several variables; health motivation, health literacy, health e-maven, respectively. The fifth part was to measure participants' perception on seriousness of health issues in which several questions were added for manipulation checks on chosen health topics. The sixth part measured participants' credibility judgment of health information. The seventh part was the manipulation check for language uses. The eighth part consisted of questions regarding participants' demographic information. The ninth part concerned participants' health status.

It must be noted that participants, both in the pilot study and the main study, were asked to give a consent before proceeding to the next section of the questionnaire. No identification information was collected in regard to participants' privacy protection.

Measurement

The measurements were developed based on the existing literature and insights from the in-depth interview. Copies of the questionnaires, both the pilot study and the main study, are presented in Appendix A

Health motivation. Participants' health motivation was assessed through a 7-point Likert scale. The scale was adopted from Moorman (1990)'s study, asking participants to indicate what extent they agree with eight statements, three positive statements (item 1, 2, and 8) and five negative statements (item 3, 4, 5, 6, 7), such as "I try to prevent health problems before I detect any symptoms" and "I don't take any action against health hazards I hear about until I know I have a problem". The results were reported on a 7-point Likert scale ranging from '1 = strongly disagree', '2 = disagree', '3 = slightly disagree', '4 = neutral', '5 = slightly agree', '6 = agree', to '7 = strongly agree'.

Health literacy. Participants were asked to indicate what extent they agree with ten statements concerning their health literacy on Facebook on a 7-point Likert

Scale. The seven options of answer were ranged from 1=strongly disagree to 7 = strongly agree. These ten statements included six positive statements (item 1, 2, 3, 8, 9, and 10) and four negative statements (item 4, 5, 6, and 7). A sample item from this measurement was “not all ‘seem to be’ doctors on Facebook are actually doctors who professionally practice in hospital”.

Health e-maven. A self-administered scale was adapted from the work of Sun et al. (2015) to assess participants’ level of being health e-maven. Participants were asked to rate 25 positive statement regarding activities and engagement in online health information seeking and sharing with seven options of answers ranging from 1 = never to 7 = always. A sample item from this measurement was “post a story of bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on your Facebook wall”.

Holistic/analytic worldview. The measurement was adopted from Kim et al. (2010) and Cai et al. (2004) to assess participants’ way of thinking toward the world. Eight statements reflected holistic worldview (item 1-6, 10, and 11), while three statements reflected analytic worldview (item 7-9). Participants had seven options of answer to respond, ranging from 1 = strongly disagree to 7 = strongly agree. Taken the following statement as an example, “it is more important to pay attention to the whole than its parts”.

Perceived seriousness of health topics. Participants were asked to assess seriousness of health issue shown in a doctored ‘Facebook post’ through five positive statement with seven options of answers. The answers was ranged from 1 = strongly disagree to 7 = strongly disagree. The sample item was “I make a judgment on seriousness of this health issue based on the fact that the issue is a life threatening one”.

It must be noted that there were two health issues used in the current study, one more serious issue and one less serious health issue. Muscle soreness was chosen

to represent less seriousness while Alzheimer's disease represented the more serious one.

The manipulation check was conducted in a pilot study to confirm that these two issues were perceived as manipulated. Each participants was asked to rate these two health issues in term of seriousness on a 7-point Likert Scale, ranging from 1 = not serious at all, to 7 = very serious. Additionally, each participant was asked to rank ten health issues, including Alzheimer's disease and muscle soreness, in term of its seriousness. The ranking 1-10 were participants' options in which 1= the most serious health issue, and 10 = the least serious health issue.

Credibility assessment. As this part of the questionnaire aimed to capture participant's use of heuristics in credibility assessment of health information on Facebook, participants were randomly assigned to read one health information designed as it was appeared on Facebook. The health information in question was one of eight different health information that were designed as they were appeared on Facebook.

These eight different Facebook posts (2 x 2 x 2) were derived from two different sources (doctor and friend), two different health issues (Alzheimer's disease and muscle soreness), and two different number of interaction (high number and low number). In term of sources, doctor was chosen to represent a credential source while friend was chosen to represent a non-credential source. The message posted by a doctor was presented professionally without commercial intention, misspelling, and grammatical errors, while the message posted by a friend was presented in the opposite features. The manipulation check was conducted in a pilot study to confirm that the message presentation was perceived as manipulated.

Once the participants read the health information, they were asked to indicate what extent they agree with 26 statements regarding their credibility judgment. These statements were developed from the existing literature and qualitative data, consisting of 24 positive statements (item 1-13, 15, 17-26) and two negative statements (item 14 and 16). Participants responded to these statement with sever options of answers, ranging from 1 = strongly disagree to 7 = strongly agree. A sample item was "I make a credibility judgment by considering whether the information seems to have a

commercial purpose”. Five more open-ended questions were added into the measurement to yield results regarding number of reaction toward the Facebook post.

Basic demographic information. Multiple choices and checkboxes were used to gather participants’ background information such as gender, age, educational background, nationality.

Facebook usages. Participants were asked to provide information concerning their Facebook usages through following questions; (1) how long have you had active an account on Facebook?, (2) frequency of Facebook usage, (3) average time spend on Facebook each time you use it, and (4) device you use to access Facebook. Responding choices were provided for questions (2), (3), and (4).

Health status. Participants were asked to rate health status with seven options of answer, ranging from 1 = poor to 7 = excellent.

Definition of mean score

The following criteria showed how the mean score of the current study was defined, scored, and presented in the class interval.

7-point Likert scales of level of agreement (1= strongly disagree, 7 = strongly disagree)

Score	Definition
1.000 - 1.856	Strongly disagree
1.857 - 2.713	Disagree
2.714 - 3.570	Slightly disagree
3.571 - 4.427	Neutral
4.428 - 5.284	Slightly agree
5.285 - 6.142	Agree
6.143 - 7.000	Strongly agree

7-point Likert scales of level of frequency (1= never, 7 = always)

Score	Definition
1.000 - 1.856	Never
1.857 - 2.713	Rarely
2.714 - 3.570	Occasionally

3.571 – 4.427	Sometimes
4.428 – 5.284	Frequently
5.285 – 6.142	Usually
6.143 – 7.000	Always

3.2.5 Validity and reliability

The questionnaire was reviewed and approved by experts in communication from two universities in Thailand and one university in the United States; Chulalongkorn University, Bangkok University, and Temple University. The content validity was evaluated using index of item-objective congruence (IOC) value. An IOC value of 0.5 and more were considered satisfactory. A completed copy of the current study's IOC value was presented in Appendix B. Also, the current study conducted a pilot study with 59 participants. A link to an online pilot questionnaire was administered via 'Messenger,' an instant message application operated by Facebook. This pilot study aimed to assure the clarification of the questions and the technological stability of the chosen platform.

In the meantime, the current study adopted Cronbach's alpha reliability coefficient to check the questionnaire's internal consistency. Normally, Cronbach's alpha coefficient was ranged from 0 to 1 (Cronbach & Shavelson, 2004). As the value was closer to 1, that meant the second time the same measurement was used would yield almost the same outcome from the same person. It showed the greater internal consistency of the items in the testing measurement (Gliem & Gliem, 2003). George and Mallery (2003, cited in Gliem & Gliem, 2003, p. 87) proposed the following Cronbach's alpha coefficient rule of thumb.

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$\alpha < 0.5$	Unacceptable

According to the results from the pilot study conducting with 59 participants, the Cronbach's alpha coefficient score was 0.906. The internal consistency was considered to be excellent. The scales for evaluating other variables were scored higher than 0.7; including health motivation ($\alpha = 0.741$, acceptable), health literacy ($\alpha = 0.811$, good), health e-maven ($\alpha = 0.939$, excellent), holistic/analytic worldview ($\alpha = 0.824$, good), perceived seriousness of health issue ($\alpha = 0.847$, good), and credibility judgment ($\alpha = 0.910$, excellent).

3.2.6 Data analysis

The SPSS software version 24 was utilized to analyze quantitative data. The current study presented its results with 1) descriptive statistics; frequency, percentage, mean, and standard deviation, and 2) inferential statistics: one way analysis of variance (ANOVA), and 3) a regression statistical analysis: path analysis.

Before applying one way analysis of variance (ANOVA) to identify any significant difference in credibility judgment between participants with different qualification (motivation, skills, engagement, cultural way of thinking, and perception), participants were divided into three groups (low, medium, high) by their position in the quartiles. Participants placed in the first quartile (the 1st to the 25th percentile of the total sample) were categorized into 'low' level group. Participants placed in the fourth quartile (the 76th percentile and above) were categorized into 'high' level group, while the rest (the 26th to 75th percentile of the total sample) were categorized into 'medium' level group.

Chapter 4

Results from qualitative data

The semi structured interview was used to collect qualitative data from 50 informants aged from 18-44 years old. These informants had various educational background, ranging from primary school to master's degree. Also, they were from different occupational background. Some of them were college students, while others were janitor, stay-home mother, tour guide, governmental officer, computer programmer, etc. To answer the first and second research question; to what extent individuals applied heuristics and what cues they used when making credibility judgment of health information on Facebook, the results are reported as following.

4.1 Health information exposure on Facebook

All respondents reported encountering health information on Facebook. The topics, sources, and frequency of the health information they found were different, as it was explained in the following.

What kind of health information individuals found on Facebook?

Respondents in the study reported that they found health information in various topics. Those topics can be categorized into two groups; health prevention and health treatment.

Categorized in the first group is health information on Facebook that concerns health prevention. Scrimshaw, White, and Koplan (2001, p. 5) described the concept of health prevention as

'...an approach to health that complement traditional medicine's emphasis on treatment by seeking to decrease risk factors for disease and to promote healthy behaviors. Prevention can focus on individual behavioral change, such as diet and exercise, on

pharmaceuticals, such as vaccines, or be accomplished through policy and community actions, such as mandating the use of seatbelt or the removal of lead from gasoline.’

While scrolling down their Facebook wall, respondent reported they found health information such as exercise, healthy diet, clean eating, non-carbohydrate food, weight loss, etc. Taking a topic of exercise as an example, respondents encountered many exercise-related information. Those who were teenager, in particular, reported having read many health information and stories about exercise that helped losing weight, building muscle, complementing running. Considering themselves or being bullied as chubby persons, those teenagers were somehow getting thinner at the moment and satisfied with their body. To them, these kinds of health information kept them staying in shape and staying away from health issue that happened in the past.

Who	Say what
Informant no. 20 (Generation Z)	<i>“I am interested in running. As such, I follow a Facebook page of a female doctor who last year ran with P’Toon¹. I got a lot of information from the doctor on how to exercise properly.’</i>
Informant no. 39 (Generation Z)	<i>“I found the information about exercise and weight training very often because I’m interested in this topic. I used to be a chubby when I was young. Back then, I lacked of self-confident. Seeing others in a better shape, I want to be like them.”</i>
Informant no. 42 (Generation Y)	<i>“When I was a kid, I was bullied because of my skinny body. I have wanted a good body shape with nice muscles. So, when growing up, I have been looking for information to me in a better shape such as a proper diet, muscle building.”</i>

Healthy diet was another topic that was frequently found on Facebook. Respondents received information about what should and should not eat, benefits from fruits consumption, food that is good to health, eat more-gain less, etc.

Who	Say what
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¹ Artiwara Kongmalai, known to public as P’Toon, is a leading vocal of a Thai rock band, Bodyslam. In 2018, He ran from the Betong, Yala Province to Chiangrai to raise fund supporting 11 hospitals in Thailand.

Informant no. 23 (Generation Z)	<i>"Often time, I found a lot of information saying that eating vegetables and fruit is good to my health, my skin. Also, some information warns me to stay way of unhealthy food."</i>
Informant no. 43 (Generation Z)	<i>"Most of information I found are about eating for sliming and healthy body."</i>
Informant no. 46 (Generation Z)	<i>"I am into eating, so I found many posts about healthy eating, plus some tips about exercise that I could do at home."</i>

The second group of health information found on Facebook were those about health treatment. Health information categorized into this group represented information about symptom of a disease and a disorder and the management and care of a patient, and/or the combating of a disease or disorder,' (treatment, n.d.). Topics posted, shared, and discussed on their Facebook walls were various.

Who	Say what
Informant no. 2 (Generation X)	<i>"I found a lot of information about cancer and herbal use. But I don't know whether it was true or false."</i>
Informant no. 7 (Generation Y)	<i>"I found information about hepatitis. It gave all the details; symptoms, its causes, the disease's prevention. I also found information about hyperlipidemia and high cholesterol."</i>
Informant no. 19 (Generation Z)	<i>"Most of health information on my Facebook news feed are about herbal medicine."</i>
Informant no. 29 (Generation Z)	<i>"I read a lot of information about insomnia and cancer. Although I am not really into these topics, but I think they are useful for my friends and family. I can share this information with them."</i>

How often did individuals find health information on Facebook?

Most of respondents found health information on Facebook frequently. There were three main reasons explaining why they saw health information frequently. These reasons also reflected sources of health information on Facebook, which was reported in the next section.

The first reason was that they had interacted frequently with their Facebook friends who were interested in health. Some participants were not quite interested in health or self-care, while others did. If any health-related posts matched with participants' personal interest, they liked and shared those posts.

Who	Say what
Informant no. 24 (Generation Z)	<i>“I found information about dietary supplement and easy-step-exercise from friends on Facebook, who shared this information from other Facebook pages. Some friends posted their own video clips while exercising. I am interested in this kind of information.”</i>
Informant no. 36 (Generation Z)	<i>“Personally, I was not into health information. But still I found health information. Most of them came from my relatives, who were friend on Facebook, because they were taking care themselves.”</i>
Informant no. 45 (Generation Z)	<i>“I did not really care about health. However, I saw many posts about facial and skin care, weight-loss, and exercise when my Facebook friend liked and shared from other Facebook pages.”</i>

This can be explained by Facebook new algorithm. According to Facebook (2018a), the application prioritized personal account over corporate account. It meant a person could see more posts from their friend than from any pages they had followed. Mark Zuckerberg, the founder of Facebook, posted on his account that Facebook was ‘making sure that time we spent on Facebook is time well spent.’ To complete the mission, Facebook predicts which posts its users would want to interact. By doing so, Facebook monitored individuals’ reaction to, comments on and share post. The more number the post received the more likely the future post from the same sources will be shown in a higher position on users’ news feed. As such, the more informants interacted with certain accounts would allow posts from those accounts to appear at the higher position on the news feed than those from lesser interacted accounts. In this study, most of informants reported finding health information from their friends. Clearly, even though the informants themselves may not be interested in health information, but their friends on Facebook have been interested in health information. When those friends found information that matched their interest, they shared it. Then, those posted were shown on the informants’ news feed. It was confirmed as many informants pointed out that their friends shared the information from other Facebook pages and also shared their own experiences.

The second reason was that the informants themselves were interested in health information. Many informants admitted that they concerned about their health.

They followed Facebook pages that provided health information responding to their need such as running, childcare, exercise, taking care of elders, etc.

Who	Say what
Informant no. 30 (Generation Z)	<i>"I frequently found health information from several Facebook pages I followed."</i>
Informant no. 31 (Generation Z)	<i>"My grandmother got sick, so I had followed several Facebook pages that provided information about elderly care, herbal use. Also, I got health information shared by my grandmother's friends."</i>

Even though Facebook announced its new algorithm that pushed public contents and pages' post to the lower rank of priority, the Facebook page that match individuals' interests still made the cut. Those ones that really matters were set to 'See First' as news feed preference.

The third reason was that some respondents saw health information on news feed since they were sponsored contents that were randomly appeared according to Facebook algorithm. These respondents themselves were not interested in health issues in particular, however, they may have interacted with others who were interested in health issues, or had previously given a positive interaction on the post related to health.

Who	Say what
Informant no. 5 (Generation Y)	<i>"I found many posts on weight-loss pills, dietary supplements from sponsored pages that automatically shown on my newsfeed."</i>
Informant no. 16 (Generation Z)	<i>"I found a guideline about how to eat for good health. Many of them came with commercials for supplement diets. They were claimed to be risk-free."</i>
Informant no. 21 (Generation Z)	<i>"Recently, I saw a lot of posts about beauty or weight loss products."</i>
Informant no. 50 (Generation Z)	<i>"I was not health-concern type of person. So, health information on my newsfeed were mostly from sponsored Facebook pages and a few from friends."</i>

According to Facebook's new policy, the application chose which posts to be appeared on its users' news feed based on four factors; inventory, signal, prediction,

and final score (Swan, 2019). By ‘inventory,’ Facebook meant a stock of every posts from friends and publishers that can be displayed to users’ news feed. Signal was the information Facebook gathering from each content such as what type of content it was, who the publisher was, what its purpose was, etc. Then, Facebook performed ‘prediction’ which referred to users’ behaviors and how likely a positive interaction will occur when users see the post. Final score was a number Facebook assigned to that post based on the likelihood that the post will receive a positive interaction from users. This policy applied with friends’ contents, so did with positive branded or sponsored contents.

However, few respondents revealed that health information came on their news feeds because they worked and knew someone in health-related field. Their colleagues became ‘friend’ on Facebook. So, it was inevitable to not receive health information on the feed. Meanwhile, one respondent argued that it was a trend. When the world talked about health, you talked about health with them. As such, they looked for more health information and share what they found with their friends.

Who	Say what
Informant no. 4 (Generation X)	<i>“I feel that it becomes a trend that recently people care more about their health than they did in the past. I have many friends sharing information about exercise, fitness, yoga, clean eating or non-carbohydrate food.”</i>

From whom did individuals get health information on Facebook?

The results in the previous section clearly showed that individuals exposed to health information voluntarily and intentionally. Voluntarily, individuals found health information that were posted and shared by their Facebook friends. To the respondents in the study, their ‘Facebook friends’ were friends whom they had known in person, their seniors from schools and workplaces, their family members and relatives.

Who	Say what
Informant no. 3 (Generation Y)	<i>“I work with doctors, so it is inevitable not to see health information on my news feed daily.”</i>
Informant no. 8 (Generation Y)	<i>“Health information on my news feed mostly came from my friends. They shared a lot of information about healthy lifestyle and</i>

	<i>exercise.”</i>
Informant no. 11 (Generation Z)	<i>“Usually, health information on Facebook came from my friends and grown-up relatives. They shared information about healthy eating, weight control and a few of commercial-attached contents.”</i>
Informant no. 36 (Generation Z)	<i>“Health information on my Facebook most came from my relatives because they concerned about their health, while I didn’t. They shared a lot of information on exercise.”</i>

All but one respondent reported that her ‘Facebook friends’ were someone she happened to know only on Facebook and they shared a lot of health information on Facebook.

Who	Say what
Informant no. 2 (Generation X)	<i>“I don’t know them in person. They just sent me a friend request and I clicked ‘confirm.’</i>

As mentioned earlier, respondents also pointed out that they exposed to health information that were sponsored contents. These contents were generated to individuals’ news feed by Facebook’s algorithm.

Who	Say what
Informant no. 5 (Generation Y)	<i>“I faced a lot of sponsored contents that automatically show up on my news feed.”</i>
Informant no. 10 (Generation Z)	<i>“most of health information on my Facebook news feed were information about skin care products that were randomly selected by Facebook.”</i>
Informant no. 20 (Generation Z)	<i>“Health information on my news feed came from various sources and sponsored contents chose by Facebook was one of them.”</i>
Informant no. 22 (Generation Z)	<i>“Other than friends, I think I saw a lot of health information that were sponsored contents on Facebook.</i>

Reversely, some respondents exposed to health information intentionally. For those who were interested in specific health topics, they chose to follow individual accounts and Facebook pages that shared the same interest and provided needed information. Some knew about the pages as they were suggested by others. Those who concerned about health either for themselves or for their loved ones regularly exchanged information among group of friends. Meanwhile, some respondents

followed Facebook pages that run by health-related media. As a regular consumer, they did not hesitate to follow the media's Facebook pages once they found out that the media had ones.

Who	Say what
Informant no. 6 (Generation Y)	<i>"I followed Prasert Plitponkanpim M.D. account because he gave good advice and well-rounded information. I also followed 'Mae-Rak-Look (Mother loves her children) page as suggested by my friends. I think the pages give a lot of details in good parenting."</i>
Informant no. 12 (Generation Z)	<i>"I regularly read health-related magazine. So, I followed Cheewajit and Women's Health Facebook page. As a media, I think I can trust them."</i>

On whether health information found on Facebook is credible or not

When asking how they saw the credibility of health information they found on Facebook, overall, respondents reported that health information found on Facebook were mix of credible and non-credible. Those who confided that health information found on Facebook was credible claimed that health information they found conformed with their previous knowledge or what they had learnt from school. This reason showed that informants relied on expectancy violation heuristics. Some informants signaled that they applied a systematic processing by reasoning that they found sources of the posts provided a solid proof of evidence on the post. In the meantime, others thought third party reaction was the key of credibility judgment. This reason indicated the use of bandwagon heuristics.

Who	Say what
Informant no. 35 (Generation Z)	<i>"I think the information I received from Facebook were useful. More importantly, they matched with what I knew."</i>
Informant no. 39 (Generation Z)	<i>"I think health information I found was credible. Look at my trainer. He is healthy. He has never sold any product (on Facebook) and he teaches me to do several correct moves when exercising"</i>
Informant no. 40	<i>"Several pieces of health information I found triggered what I</i>

(Generation Z)	<i>already have back in my mind. So, they were credible to me.”</i>
Informant no. 44 (Generation Z)	<i>“the information was from a page that many friends shared. No doubt, it was credible.”</i>

On the contrary, many respondents found that health information on Facebook was not credible. That judgment came from several reasons. Firstly, respondents mentioned that most of the posts on Facebook attached with commercial contents. The commercial intention, to them, diluted the credibility of the whole content. This reason given was pointing that informants relied on persuasive intense heuristic. Also, secondly, some of health information on Facebook was found giving only one side of the story. Many respondents doubted that the contents were only created to draw attention, to get a positive reaction from viewers, and to add more followers. This reason confirmed that informants applied persuasive intense heuristic when making credibility judgment of health information on Facebook. In the meantime, a lot of health information posts on Facebook were reported lacking of references. Respondents, as a receiver of the information, expressed that those kinds of information sometimes came from personal beliefs, so they could not be trusted. People who shared those kinds of information may not verify the information before sharing them. Apparently, it showed that some informants applied systematic processing in credibility judgment.

Who	Say what
Informant no. 5 (Generation Y)	<i>“Health information on Facebook was not credible at all. More than 90 per cent of them aim to sell products.”</i>
Informant no. 32 (Generation Z)	<i>“60 per cent of health information on Facebook had commercial intention. They were not credible.”</i>
Information no. 37 (Generation Z)	<i>“Less than 10 per cent were credible. I think recently people posted and shared information without prior fact checking.”</i>

However, there were group of respondents who had a mix feeling. They called the credibility of health information on Facebook at 50:50. Some respondents mentioned that they did not make any credibility judgment until they had tried to follow the health information they found and received a result themselves. To some

informants, some health information posted and shared on Facebook were attached with, reliable sources such as healthcare institutes, physicians, academic research, etc., while others showed none of them. Some health information had no evidence to support the argument or recommendation made in the post.

Who	Say what
Informant no. 3 (Generation Y)	<i>“There were both (credible and not credible). If they were from sources like the Association of Physicians per se, they were credible because they can be traced to the original. Other sources in the field of public health were ok, too. But, many posts on Facebook were from someone I don’t know, from unknown source. Even worse, I didn’t see any reference.”</i>
Informant no. 17 (Generation Z)	<i>“I think we have to try to do or act as suggested in the post to know if it was credible or not. I cannot make a judgment only from reading the information.”</i>
Information no. 46 (Generation Z)	<i>“It was 50:50. Sometimes I found the information that I knew right away it was fault. For example, drink only orange juice to lose weight. That cannot be true.”</i>
Information no. 47 (Generation Z)	<i>“To me, 50:50. That’s because sometimes I didn’t know whether the pages that shared the content is credible enough to trust their content.”</i>
Information no. 50 (Generation Z)	<i>“I think it was 50:50 because there were people who really know what they were talking about posted the information and those who listened from somewhere else posted the information. The posts from the latter could be error or missing some important parts. Who knows?”</i>

What did they do with that information?

People reported to be cautious about reaction they had with health information posted on Facebook. Most people mentioned that they only read it because they were not sure if the information was credible.

Who	Say what
Informant no. 4 (Generation X)	<i>“I rarely liked or shared health-related post because I was not sure if the information was credible or not. I was not an expert on this topic.”</i>
Informant no. 19 (Generation Z)	<i>“Not at all. I didn’t like it. I used to read some posts shared by my friends. I thought they focused on commercial side.”</i>

Informant no. 44 (Generation Z)	<i>"I just didn't do it. I was not an expert who would know whether the information was right or wrong."</i>
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However, there were many people that 'liked' and/or 'shared' the post they saw. That was because of several reasons. Some people 'liked' the post if it matched with their prior knowledge and experience and conformed with their beliefs. They also 'liked' if they thought the information was useful to others. The post that gave a lot of details or gave a clear how-to direction was 'liked', too. People 'shared' the post when they wanted to save the post and return to read later. They 'liked' and 'shared' the post that was relatable, perceived as credible information, enclosed with pictures, video clips, or nice infographics.

Who	Say what
Informant no. 10 (Generation Z)	<i>"Sometimes, I liked a post that gave information I already knew it was true. I also liked a post that sounded reasonable to me."</i>
Informant no. 13 (Generation Z)	<i>"It depended. I shared a post if I wanted to save it for later, or if I thought it would be useful in the future."</i>
Informant no. 17 (Generation Z)	<i>"I liked a post that gave detailed information, or broke down long information into easy steps, or provided a direction that was easy to follow."</i>
Informant no. 23 (Generation Z)	<i>"If the information was relatable or concerned the problem I had at that moment, I liked and shared that post. I did that because I wanted to save for later use."</i>
Informant no. 27 (Generation Z)	<i>"I always like and share Facebook posts about healthy food, especially those with nice pictures, interesting video clips that I can follow easily."</i>
Informant no. 38 (Generation Z)	<i>"I liked any posts that provided reliable references. I only shared posts that I can relate to. For example, I had an allergic disease so I shared any credible posts about allergies."</i>
Informant no. 43 (Generation Z)	<i>"I preferred share to post. I shared because I wanted to read it later and wanted others to see this post, too."</i>

4.2 To what extent individuals applied heuristics when making credibility judgment of health information on Facebook.

According to in-depth interviews with 50 respondents, Facebook users obviously applied heuristic when making credibility judgment on health information

they found on the application. They hugely referred to heuristic process when making a decision which sources of health information to be allowed on their personal news feed and whether each piece of health information on their personal Facebook news feed was credible or not.

Heuristics used when deciding to follow health-related Facebook page

Individuals followed certain Facebook pages when acquiring health information because of five following reasons; page owners or administrator, contents, significant others' influence, pages' popularity, and interactivity of the pages. According to the literature, some of these reasons showed that individuals applied heuristics approach when deciding whether they would follow certain Facebook pages or not. It must be noted that none of these reasons was solely outweighed the others. Respondents mentioned using more than one of these reasons before making decision.

Firstly, Facebook users acquired health information from Facebook pages that was either owned or administrated by someone who are or have educational background in health professional field or health organization. That was because these pages were expected to be knowledgeable and trusted health resources. Those who studied or worked in the health professional field must know what they were talking about and also know what is right and what is wrong. This resonated with *reputation* and *authority heuristics* as discussed in the literature.

Who	Say what
Informant no. 3 (Generation Y)	<i>"I followed famous doctors and also someone I have known."</i>
Informant no. 5 (Generation Y)	<i>"I chose 'Drama addict' because I knew from somewhere that the admin of the page is a doctor. I am confident that he ."</i>
Informant no. 29 (Generation Z)	<i>"I just followed pages that belongs to hospitals."</i>

To some respondents, the page owners or administrator may not have been directly in health professional field, but they had experienced that were useful to the respondents in this study. Respondents thought health information that came from direct experiences were useful and credible as well. Respondents believed that people

who shared health-related stories had been into a discussed situation and knew what was useful and what was not. Source with direct experience was categorized under *authority heuristic*.

Who	Say what
Informant no. 4 (Generation X)	<i>"I followed 'Vanessa Race'. I believed that the information she had shared was credible. I believed that the information had been tested and verified. She also shared her plant-based eating lifestyle not the same as vegan, which was interesting and resonated with my belief that natural food was better than supplementary or artificial ingredients."</i>

On the contrary, some pages were not run by a person who possess educational background or experience in health professional field, but they were someone whom the respondents have known in person. Having known the administrator or owner of the pages in person helped respondents checked whether the information that were sharing on the pages were matching with their real-life situation or not.

Who	Say what
Informant no. 8 (Generation Y)	<i>"I followed a page that run by a friend whom I have known in person for years. This friend was also a fitness trainer. I think my friend has enough knowledge and experience to share about exercise. And sure, it must be credible."</i>

Secondly, Facebook users followed health information Facebook pages by considering content that had been provided on the pages. Respondents preferred Facebook pages that provided health information accommodating their personal interest or serving their needs. At the same time, they ignored health information pages that were not relatable. Moreover, respondents liked the health information Facebook pages that gave detailed and rational information. Respondents chose to follow health information Facebook pages that provided solid references to the contents. Moreover, some informants implied that they applied systematic processing in making credibility judgment when they double checked with other sources to confirm its content credibility. In addition, if the health information Facebook pages

could provide information they have never known before, they would be more likely to follow those pages.

Who	Say what
Informant no. 17 (Generation Y)	<i>“Information concerning health on the pages that I followed was making sense to me. They were talking about exercising in various positions. I follow suit and got a satisfied result.”</i>
Informant no. 30 (Generation Z)	<i>“I checked with other sources and found the same information. To me this confirmed that the pages provided useful information. It was then ok to follow them.”</i>
Informant no. 31 (Generation Z)	<i>“I chose pages that referred to doctors’ recommendation. I also double checked with Google for content credibility. If it gave the same information, then I followed those pages.”</i>

Thirdly, respondents reported that they followed some health information Facebook pages because of significant others’ influence which signaled the use of *bandwagon heuristic*. When these respondents saw their friends or family members shared health information from the same Facebook pages frequently, that made them think that those Facebook were credible enough to follow as well.

Who	Say what
Informant no. 26 (Generation Y)	<i>“Other than the fact that Facebook pages gave health information that I was interested in, I chose to follow some Facebook pages because those were followed by my friends, they had a lot of followers, and they at least had one thousand likes on their page.”</i>
Informant no. 27 (Generation Z)	<i>“Mostly, I followed pages that my friends followed and frequently shared.”</i>

Fourthly, respondents chose to follow Facebook pages providing health information by checking on pages’ popularity. This was also another kind of *bandwagon heuristic* as well. This popularity was identified by number of likes of the pages, numbers of likes on the post, number of shares on the post. Someone would look further to number of comments, too. However, respondents did not have unanimous agree on minimum number of likes, share, and comment that will signify credibility of the pages.

Who	Say what
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Informant no. 17 (Generation Z)	<i>“I checked number of followers although I didn’t have a minimum number of criteria. If it is a personal account, I also checked a profile and photo posted whether they are related to health topics in discussion and match my interest or not.”</i>
Informant no. 27 (Generation Z)	<i>“Other than the fact that those pages had been followed by my friends, I looked at the pages’ number of followers as well. I think they must have at least a thousand of followers.”</i>
Informant no. 28 (Generation Z)	<i>“If Facebook pages have a lot of followers, that mean the health information that the pages shared was ok enough. To me, the minimum number of followers should be at least ten thousand.”</i>
Informant no. 30 (Generation Z)	<i>“To decide which Facebook pages to follow, I gave 50% of decision weight to number of followers.”</i>
Informant no. 31 (Generation Z)	<i>“A page to follow must have at least 10,000 followers. Also, I read users’ reviews and comments as other who followed the page would share their experiences.”</i>
Informant no. 48 (Generation Y)	<i>“I followed pages that talked about exercise. I chose ones that match my personal interest. Then, I checked number of followers of that page. I think a page to follow must have at least thousands of followers.”</i>

Lastly, respondents considered interactivity between the page owners or administrators and followers as another key element before following each Facebook page. Respondents expected Facebook pages to follow to be attentive, consistent, responsive, and interact with good manner which resonated with *expectancy violation heuristics*. Languages used did not have to be formal but must not contain vulgarity. In the meantime, respondents referred to comments of the pages made by followers or visitors when considering following the pages. To some respondents, agreeing comments made the page and its contents credible, while others expected to see more opposite comments to make sure that comments were from organic followers or visitors.

Who	Say what
Informant no. 6 (Generation Y)	<i>“Other than the page owner or admin’s reputation, I think interaction between the admin and visitors is important. I expect to see rationale responses from the admin of the page.”</i>

Informant no. 14 (Generation Y)	<i>"I followed pages that mainly focused on health issues. A few numbers of pages that I followed were those of influencers that reviewed health-related products. In this case, I would check with comments to see if there was any agreeing comment to support the review."</i>
Informant no.21 (Generation Z)	<i>"I always check comments to see the interaction in between admin and visitors."</i>
Informant no. 22 (Generation Z)	<i>"The page I followed always post video clips. Those clips demonstrated how to exercise in several moves which echoed what I had learned previously. The most importantly, the page is very consistent. The admin keeps it moving regularly."</i>
Informant no.30 (Generation Z)	<i>"I think credibility of the pages can be judged from its consistency. I expect the credible health-related Facebook pages to post new contents at least every week."</i>
Informant no. 37 (Generation Z)	<i>"I think number of followers can be varied, but the consistency is required. I would prefer the pages that give an update at least twice a week."</i>

Heuristics used when deciding whether health information they found on Facebook is credible or not

What elements on Facebook post were taken into consideration when user made a credibility judgment?

There are several elements that respondents referred to when making a credibility judgment on health information on Facebook. Those elements were related to source of the post, the content on that post, and interaction such as number of 'likes,' 'share,' and comments of that post. The respondents did not solely base their decision on one element. They applied more than one of them. However, it cannot be pinpointed which one was the most influent.

Taken source-related cues of the post into consideration, they were listed under two groups of heuristics; *authority heuristics* and *reputation heuristics*, that informants reported using when making credibility judgment of health information on Facebook. In term of *authority heuristics*, they rated any posts from a source that was identified as a person who worked in or had an educational background in or an organization in health professional field to be credible. Additionally, any post from a source with non-health professional background could also be rated as credible one as

well if its source could provide some proof of expertise in the discussed topic. For example, the person clearly showed that he or she has been interested in the topic for a period of time. He or she posted other information in this topic consistently.

In term of *reputation heuristics*, informants rated credibility of health information on Facebook based on source who had been well known to public, appeared on the media. They were undoubtedly perceived as a trusted source of information. To some respondents, if the post was posted or shared by someone they known or celebrities, it was credible. Moreover, health information coming from media organization were considered to be credible as well since the media were well known to the public and those information from the media were expected to be verified by the editorial staff before releasing to the public.

Who	Say what
Informant no. 2 (Generation X)	<i>"I expected a source to be someone who really know what they were talking about, who already tried all those steps they suggested and really received a good result. Someone who were expert or someone whom I had ever seen on other media such as on TV."</i>
Informant no. 18 (Generation Z)	<i>"I checked, the first thing, who post the information. General Facebook page was less credible than hospital-run Facebook page. A page run by a media organization is acceptable."</i>
Informant no. 20 (Generation Z)	<i>"Who shares that post? Is he or she really interested in the topic? Is he or she really into exercise? Some people shared a post for later reading."</i>
Informant no. 21 (Generation Z)	<i>"If the post was from a hospital, surely it was more credible than a post from general page. Media is ok. If you want me to rank them, my ranking will be experts, media, general public/ ordinary person. Media usually have a reference to their information. For an ordinary person, his or her post can be rated as credible if the person has a direct experience and evidence to confirm the credibility (in that topic) ."</i>
Informant no.26 (Generation Y)	<i>"If that post was from a page that I already followed, then I tended to think it was credible. If not, I checked the page whether it was by a doctor, (fitness) trainer. If it was, then the post was more credible. That was because these groups of people had direct experiences. They knew what they were talking about."</i>

When looking at the content-related cues, they were listed under two groups of heuristics; *expectancy violation heuristics and persuasive intense heuristics*. In term of *expectancy violation heuristics*, informants reported that credibility judgment were triggered by solid rationale, proper language, traceable reference, and evidence of success. Respondents believed that the credible post was the one that sounded reasonable to them. The argument, recommendation, and suggestion were expected to conform with their prior knowledge or personal belief. At the same time, language used in the post was not needed to be ultimately formal. However, it should not be too informal. Grammatical and typo error appearing on the post were signals of non-credible contents, in respondents' opinions.

Respondents also mentioned that references attached to the content allowed them to cross check the content's credibility. In the case of health information, academic or medical research seemed to be a solid reference. Moreover, if the topic was interesting and they wanted to know more about it, they could refer to the reference and traced back to its originality. Many of them used these references as keywords when using search engines such as Google to help verifying the fact. Moreover, reference was believed to increase the post's credibility when the source or sender of the post was not someone from health professional field, or someone well known to the public.

In term of *persuasive intense heuristics*, some informants mentioned that credible health information must not be attached with commercial intention. Even though the content was presented professionally and rationally, informants would rate it as not credible when they saw any information about product or service. They reasoned that all rationale and reference may only use for persuasion and it may not true.

Who	Say what
informant no. 1 (Generation X)	<i>"Facebook had too much advertising. I thought a post with advertising was not credible."</i>
Informant no. 3 (Generation Y)	<i>"Other than who posted or shared the information, I checked the correctness of language use."</i>
Informant no. 5 (Generation Y)	<i>"I looked at how the information was presented. Is it reasonable? Also, I looked at the language that was used in the post. Where did</i>

	<i>the information come from? Did they come from medical resources?"</i>
Informant no. 6 (Generation Y)	<i>"Have they been referred to any experts in the field? Any academic research related? I don't really care about who post or share it. I care more about the content of it."</i>
Informant no. 7 (Generation Y)	<i>"I needed to see the reference because, if it was very interesting (to me), I can trace back to verify the fact. Sometimes, people just claimed or said something without any reference."</i>
Informant no. 14 (Generation Y)	<i>"Content is the main area that I looked when judging the credibility. I would think about the possibility of the argument or the suggestion made in the post. What kind of language the writer use. To me, health information should be presented with quite formal language, but easy to follow through. If it was for a product review, spoken language was acceptable."</i>
Informant no. 17 (Generation Z)	<i>"Any product or service found attached to the content really sent a negative feeling to me. It made me doubt if the information was true or credible. Or the source just made it sound credible to sell their stuff. I used to watch one interesting video clip, but almost the end of clip revealed that it was a commercial. That was not ok."</i>
Informant no. 20 (Generation Z)	<i>"It's important to have a strong reference such as academic research. If it had, where did that research come from?"</i>
Informant no. 21 (Generation Z)	<i>"After reading through the whole content, I used my prior knowledge plus my experience to judge its credibility. I asked myself if it was possible to claim that?"</i>
Informant no. 23 (Generation Z)	<i>"Reference in the content was very important, especially in the case that a person who posted or shared the information was not from health professional field or not well known to the public. Reference would help confirm that the information was credible. Also, the information must be presented in a reasonable tone. Some might consider adding pictures to the post as evidence of success."</i>
Informant no. 24 (Generation Z)	<i>"I looked at the topic title, reference, and use of language. I didn't care who posted or shared it."</i>
Informant no. 27 (Generation Z)	<i>"I read and asked myself whether it conformed with my belief or what I have already known. If not, I checked with Google. I always clicked the first link listed by Google, then went on for 3-4 links until I found the information I wanted to check."</i>
Informant no. 29 (Generation Z)	<i>"I checked how the information was written. If there was no typo error, then it was credible."</i>
Informant no. 33	<i>"I checked the content. I expected the language to be semi-formal."</i>

(Generation Z)	<i>Formal language was too much to read on Facebook while informal or spoken language made the content looked non-credible. In the content must said where the information came from. When people said 'a doctor said.' that was not enough for me. It should be attached with pictures or video clips to confirm its credibility."</i>
Informant no. 41 (Generation Z)	<i>"From the content, I would check it with my prior knowledge. I looked for reference of the information. I think it should enclose with a hyperlink that readers can click and read for more information.</i>

Facebook users also referred to interaction-related cues when making credibility judgment of health information on Facebook. According the literature, those cues were listed under a group of *bandwagon heuristics*. These interactions were number of 'likes,' number of 'share,' and comments on the post. Respondents mentioned that high number of 'likes' and 'shares' confirmed the credibility of that information. It proved that people had followed the suggestion in the post and received a satisfied result. If the information was non sense, no one would like or share it. The more people liked and shared the post showed the more credible the post was. The more the post was shared the more opportunity was available to others to see the post. After seeing the post, those people would probably leave useful comments either agree or disagree with the information. In term of comment, to the respondents, this part was very important since they thought comments gave them details on the information. The agreeing comments helped confirm that the information was credible. Meanwhile, any disagreeing comments probably made an interesting argument. In some comments, commentators probably left a hyperlink that other people can follow for more information.

Who	Say what
Informant no. 2 (Generation X)	<i>"I looked at comments. If people had tried what was suggested in the post, what did they say?"</i>
Informant no. 9 (Generation Y)	<i>"I randomly read about ten comments to see if other people said it was good."</i>
Informant no. 14 (Generation Y)	<i>"Number of likes and shares had an impact toward my credibility judgment. The more the post was shared, the more it got exposed. It allowed others who saw it to exchange their opinions whether agree</i>

	<i>or disagree. If no one was against the information, it proved that the information was credible. I did not stop just at the number. I went further. I checked what others wrote about the information when they shared that post. Was it positive or negative? .”</i>
Informant no. 20 (Generation Z)	<i>“I read comments to know what the majority thought about the post. There will have someone who knew about it more than me. Also, I would doubt if the post obviously received a lot of positive comments. It was suspicious. Those comments would be a set-up that the page owner really wanted to add credibility to the post. At the same time, more disagreeing comment was not always diluted the credibility. If you really want to know about that information, you need to check furthermore.”</i>
Informant no.22 (Generation Z)	<i>“To me, I gave more credit to number of share than number of like. It was too easy to click like. To click share, however, it took a lot of thought. Those who shared the post would had read at least half of the content, So, they had taken the information into consideration. And no one want to discredit themselves by sharing false information.”</i>
Informant no. 26 (Generation Y)	<i>“If the information was not true, who would want to like and share it. So, if the post got at least a thousand ‘likes’ and ‘shares,’ that was it. Comments also helped me made a decision. Reading comment I found unexpected information. Someone answered some questions that I did not know.”</i>
Informant no. 44 (Generation Z)	<i>“Comments were a key to the post’s credibility. That was because people commented from their own experiences.”</i>
Information no. 46 (Generation Z)	<i>“I expected a greater number of likes for a health information post from a general Facebook page. Ten thousand shares, at least. It can be lesser number for a page run by healthcare institution such as a hospital. That was because the source itself was much credible.”</i>
Information no. 50 (Generation Z)	<i>“Sometimes, I read comments, because if the information was false, someone would correct it at the comments.”</i>

In summary, Facebook users mentioned several cues that they used when making a credibility judgment of health information on Facebook. Those cues can be grouped into five heuristics. These five heuristics are found in three areas of health information posted on Facebook as shown in Figure 1. Some cues, in each group of

heuristics, are the same as those found of Internet credibility in general, while others are different according to features of each platform.

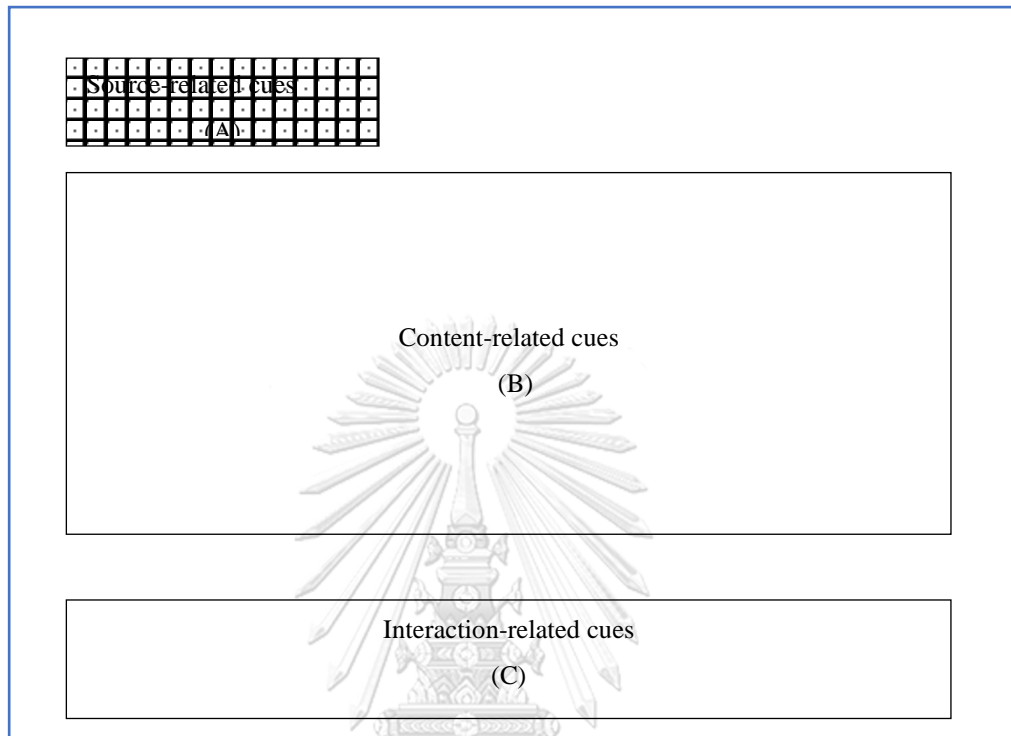


Figure 1 : Three sections of heuristic cues Facebook users referred to when making credibility judgment of a Facebook page

In area A, the results showed that there are two groups of heuristics were used when making a credibility judgment of health information on Facebook. The first group of heuristics is called *reputation heuristic*. As it was described in the literature, reputation heuristics referred to shortcuts related to reputation of website or source of the information when making a credibility judgment. In this study, Facebook users had mentioned several times when they looked an identity of a source of the information, they considered how well known the source is. Some sources, as a person, are very well known to the public. They have appeared on mass media. Some sources may or may not appear on the media, but Facebook users knew that the source is famous or well known by looking at number of likes on the page or number of followers that account has.

There were reasons why Facebook users relied on reputation of the source when making credibility judgment. Well-known accounts are believed to be more careful when posting or sharing any information. Facebook users reasoned that these accounts could lose huge number of followers if they post or share something not true or not credible. Some users mentioned that those accounts were famous because of their contents. Then, there was no reason to publish false information. They must only post and share something that they confided it was true.

Who	Say what
Informant no. 20 (Generation Z)	<i>“Absolutely. If a well-known person has a lifestyle or direct experience that I know he or she really knows about the asking topic, I believe that person. Take P’Toon as an example. I believed him when he gave a recommendation or suggestion on long distance running. That was because I knew and saw from the media that he really knew what he was talking about.”</i>
Informant no. 22 (Generation Z)	<i>“I think what a Facebook page was doing while posting or sharing the health information was promoting the page as well. So, the page administrator will not hurt itself or ruin its reputation by distributing false information.”</i>
Informant no. 23 (Generation Z)	<i>“a Facebook page that has a lot of follower will be careful when posting or sharing any information, I believe.”</i>
Informant no.40 (Generation Z)	<i>“I think a famous Facebook page will filter the information before the page post and share any information. The page must be afraid to post any false information.”</i>
Informant no.46 (Generation Z)	<i>“Based on the number of followers, a Facebook page is like any mass media. If the page post or share good information, that is another way to build the page’s credibility, too.”</i>

The second group of heuristics, also appeared in the area A of Figure 1, is called *authority heuristic*. According to the literature, this heuristic referred to shortcuts related to expertise and officiality of the sources. In this study, Facebook users relied to the account identity and its background information. Authorized sources, in their opinions, were someone who either have educational background in health science, have practiced in health institute, have expertise in the asking health

topics, or have a direct experience in the asking health topics. The Facebook users also included health institutes into this group of heuristics as well.

Having educational background and/or working in health-related professional institutes, to the Facebook users, guaranteed that the persons know enough what they were talking about. Experiences they gained while training at school and working allowed the sources to tell what was right and what was wrong. This kind of reason also worked with someone who did not medical or health science degree but had direct experiences on the asking health topics.

Who	Say what
Informant no. 20 (Generation Z)	<i>“If the post was about exercise, it was important to know if the source was really interesting in this topic. The source did not have to be in health-related field. The source probably did some research, had tested it, and was able to give reference to the post. If there was a proof of those actions, the post was credible to me.”</i>
Informant no. 37 (Generation Z)	<i>“Even though I had not followed the page yet, I would consider the post from that page credible if the source can prove that he or she had a direct experience on that matter.”</i>

In the area B, the results showed that there were two groups of heuristics that Facebook users used when making credibility judgment on health information. Based on the literature, the first group of heuristics found in this area is called *expectancy violation heuristic*. This type of heuristic was triggered when Facebook users found something that miss or fail their expectation. Also, it can be something that did not conform with their personal belief. When encountering health information on Facebook, Facebook users expected that credible piece of information must be free from misspelling and grammatical error. To Facebook users, using correct and proper language showed the content was created professionally. Misspelling and grammatical error reduced the information credibility drastically. Informal language was found acceptable case by case.

Who	Say what
Informant no.1 (Generation X)	<i>“Typo error really affected my judgment. Those who really know what they were talking must be able to write correctly.”</i>
Informant no. 5 (Generation Y)	<i>“Typo error made that content less credible. It looked funny more than credible.”</i>

Informant no. 7 (Generation Y)	<i>“That proved that the person who posted or shared did not really know about that topic. It was just what we called ‘haste makes waste’.”</i>
Informant no. 12 (Generation Z)	<i>“Use of proper language really matters, to me personally. Informal language did not go with health information. Health information need to be credible. The language must be something serious, or academic.”</i>
Informant no.13 (Generation Z)	<i>“Seeing health information written in informal language made me feel like the person who posted or shared did not want us to believe the information. I expected correct and formal language.”</i>
Informant no. 22 (Generation Z)	<i>“How the information was written really matters. Seeing a lot of error on the information made me doubt how can I trust this information.”</i>
Informant no. 29 (Generation Z)	<i>“Language use is important. The more error I found on the information, the less credible I think the information was.”</i>
Informant no. 35 (Generation Z)	<i>“Credibility of the information comes with the correctness of the language that is used. Those who posted the credible information was expected to use the language correctly.”</i>
Informant no. 38 (Generation Z)	<i>“Language is very important, especially to Facebook pages that have a lot of followers. I think language is a communication tool. If a person cannot make it right, how can I trust his or her information gathering and screening process.</i>
Informant no. 47 (Generation Z)	<i>“Formal language help increase credibility of the information. It is not telling a joke that you can use informal language. A person who posted or shared the content should proofread before releasing the contents to public.”</i>
Informant no. 49 (Generation Z)	<i>“There should not be any error in the information. If there was an error, that mean a person who posted the content did not pay attention on what he or she was doing. And it made the information not credible at all.”</i>

The second group that was found in the area B is called *persuasive intense heuristic*. According the literature, *persuasive intense heuristic* will be triggered when Facebook users found commercial intention attached to a post. Commercial intention attached to the information can be a brand name, a tag line of a company, a tie-in product, a picture of products or service, etc. Commercial intention attached influenced Facebook users’ credibility judgment in reciprocally direction. To some

users, commercial intention or advertising lessen the credibility of the content. No matter how the information was written in a proper language, or supported by academic research, Facebook users felt that the real reason behind that post to promote or sell product and service, not to inform or help others.

Who	Say what
Informant no.4 (Generation X)	<i>“Commercial surely affected the way I see that information. It made me think that the post aimed to support or create a good image to a product and service. The information is probably true and credible, but I just feel that a person who post a content like this want to sell his or her product more than provide useful information.”</i>
Informant no. 5 (Generation Y)	<i>“It decreased the content’s credibility. It was created just to promote a product or service.”</i>
Informant no. 17 (Generation Z)	<i>“It gave a negative feeling. I made me felt that all information was to sell product. I doubted whether the information was credible or just some kind of advertising.”</i>
Informant no. 30 (Generation Z)	<i>“It really reduced the content’s credibility. On the scale of 100, it would go down to 30.”</i>
Informant no.31 (Generation Z)	<i>“It made me felt that the information was for marketing purpose.”</i>
Informant no. 50 (Generation Z)	<i>“A post with commercial attached really annoyed me. I think it made the contents not credible. Just a post that was used to sell product or service. If the product or service is really good, there was no need to promote much.”</i>

In the last area, area C, the results showed that there was one group of heuristics that Facebook users referred to when making credibility judgment on health information. According to the literature, this group of heuristics was called *bandwagon or endorsement heuristic*. *Bandwagon or endorsement heuristic* was triggered when a person believed that the content was credible if others believed so. Similar to commercial websites where buyers checked on reviews by someone unknown before placing an order, Facebook users relied number of likes, shares, and comments. Facebook users believed that prior reaction shown under that post came from those who probably knew about, had a direct experience on, or verified that piece of information. However, it must be noted that there was no unanimous number

of likes, shares, and comments that all participants set as a lowest bar of credibility. To some Facebook users, they expected a credible health information to have at least one thousand likes and five hundred shares. In the meantime, other users looked for fifty thousand to one hundred thousand likes and hundreds to a couple of thousand shares.

These numbers were used as cues for credibility judgment because Facebook users believed that the more the post was liked and shared, the more the post got exposed and verified. When the asking post was seen by many people, those who found it not credible would not 'like' or 'share' that post. In the contrary, when people saw the post and found it credible, those people then would click 'like' and/or 'share'.

Many Facebook users also browsed through comments to get some glimpses on what others thought about the information. The more positive comments the post received, the more credible the post was rated.

Who	Say what
Informant no.14 (Generation Y)	<i>"Number of 'likes' and 'shares' really affected my decision. The post that was highly shared was the post that was highly seen. That meant there were more opened to discussion. Someone can argue and offered another side of the story. If there was no argument or disagreement, that meant the information was credible."</i>
Informant no. 18 (Generation Z)	<i>"I expected to see at least one thousand likes and five hundred shares to believe that the post was credible."</i>
Informant no.20 (Generation Z)	<i>"I read comments to see how others thought about the asking information. There would probably be someone who knew something I had never known left a useful comment. Too many positive comments sometimes made me doubt its credibility. There were fake accounts on Facebook that were created just to make up comment and boost the information's credibility."</i>
Informant no.22 (Generation Z)	<i>"I personally think number of shares has more influence on my judgment than number of likes. It was very easy to click 'like,' but not for 'share.' I think before clicking 'share' people took some times to read the information at least half of it and think about it. Also, who would want to discredit themselves by sharing something not credible?"</i>
Informant no.27	<i>"If the post received many likes that meant people liked it and it was</i>

(Generation Z)	<i>credible. I think a thousand likes and three hundred shares are a lot.”</i>
Informant no.31 (Generation Z)	<i>“I paid more attention to number of shares because I thought people must be confident in what they were sharing. I also looked for supportive comments because it proved the information was credible.”</i>
Informant no.34 (Generation Z)	<i>“I expected to see at least fifty thousand likes and a couple thousand of shares. The higher the number was the more credible the information must be.”</i>
Informant no. 37 (Generation Z)	<i>“I checked the comment section because sometimes people left external links on their comments that would lead you to more information on that topic.”</i>
Informant no. 40 (Generation Z)	<i>“I started with number of followers. If the number of followers was low, there was a possibility that the asking page just copied contents from somewhere else. That was why not many people followed the page. Then, I checked number of likes and shares of the asking post. I expected to see at least a thousand likes and a hundred shares. I read comments because I wanted to know what others think about the information.”</i>
Informant no. 42 (Generation Y)	<i>“Not only that I checked number of likes, number of shares, and number of comments, I took it further to emo-icon on comments. I think it really helped me assess the credibility of the post.”</i>
Informant no. 44 (Generation Z)	<i>“Comment section is where should not be missed because it was a place where many people shared their own experiences.”</i>
Informant no. 45 (Generation Z)	<i>“I read comments to see if there were any positive or negative comments. You can not only judge from the content. Also, number of likes and shares were important. I think any credible post should receive at least a hundred thousand likes and a ten thousand shares. However, if the information was from the page of a hospital, I think it was ok because it was an authoritative sender.”</i>
Informant no. 50 (Generation Z)	<i>“I read comments because sometimes the information may not be misled or correct. People who had correct information would clarify it.”</i>

Moreover, to some users, a person tended to believe the information was credible if someone they trusted, significant others, believed so. These significant others could be parents, family members, close friends, teachers. They made a quick

judgment based on others' opinion because these people were someone Facebook users thoughts taking credibility judgment seriously. They believed that their significant others had deliberately reviewed the information. More importantly, they believed that their significant others would not lie to them.

Who	Say what
Informant no.7 (Generation Y)	<i>"I believed that the post that I saw had been verified by the person who shared it. Because that person thought it was credible, then he or she 'liked,' 'posted,' or 'shared' that information."</i>
Informant no. 8 (Generation Y)	<i>"I trusted the person. So, when he or she shared it, I basically thought it was credible."</i>
Informant no.14 (Generation Y)	<i>"They were close to me. They will not lie to me."</i>
Informant no.17 (Generation Z)	<i>"If it was from someone I knew, I believed the information was credible."</i>
Informant no.21 (Generation Z)	<i>"There was a high possibility that the information was credible. I think it was like a kid listen to their parents. Elders knew better."</i>
Informant no.33 (Generation Z)	<i>"The information from the family was undoubtedly credible. I trusted my family members."</i>
Informant no. 38 (Generation Z)	<i>"I just knew that if this person shared something, it must be true. That was because I knew him or her in person. I knew very well. Some people rarely shared anything, but when they shared, it was definitely credible and true."</i>

RQ2: How did Facebook users applied heuristic processing into credibility judgment of health information

4.3 A process of credibility judgment of health information on Facebook

Apparently, the qualitative results revealed that informants relied on heuristics when making credibility judgment of health information on Facebook. Taking a further look into a process of credibility judgment, the results also revealed three types of credibility judgment process. These three types of process all referred to cues relating to source, content, and interaction of the post. They were, however, different in the beginning point as explained in the following.

The first type, which is called in this report as type A process, which was the process that Facebook users started looking at the sources related cues, in which cues were found the area A of the figure 1.

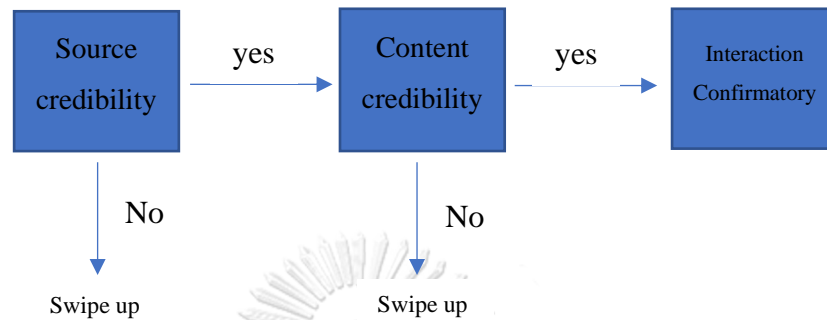


Figure 2 : Type A process of credibility judgment of health information on Facebook

In this type of process, Facebook users started their judgment process at the source of the information. They looked at who the source was and how credible the source was. As it was reported earlier, Facebook users expressed that credible sources must be either health institution, health professionals, or someone with an area of expertise in health field. Some people went further to the point that sources did not have to be an expert, but that person must reveal who he or she was. Some people looked at the source's background. If the person was someone they have known in person, they knew that anything posted by the person had been filtered enough to be trusted. If the sources fell into one of these qualifications, the users would move on to check the content. If not, they swiped away to the next post on their news feed. Only few users mentioned that they would stay on the post if the health topic was very interesting.

After viewing the source of the information, users consider the credibility of the post by looking at the content itself. Facebook users expected to see solid rationale, reference of the content, clean language, non-commercial intention of the post. Some people expected to see pictures or video clips enclosed with the post. Some people even checked the previous posts to see if the person really cared about this topic.

Facebook users, then, scrolled down to the area of interaction. Number of ‘likes,’ number of ‘shares,’ and comments signaled credibility of the post. Positive comments, in Facebook users’ opinions, helped confirmed that the post was credible.

Who	Say what
Informant no. 4 (Generation X)	<i>“First of all, I checked a source of the asking post. The credible source must be those of scientific page, physicians, hospitals, an organization that really study about that topic. If the post was not from those sources, I would only continue to read as the topic matched my interest. Then, I read the content to see if there was any evidence or reference attached with the content. Was there any commercial intention attached?”</i>
Informant no. 5 (Generation Y)	<i>“I started from the page that post the content because I wanted to know what kind of page it was. Was the page really interested in this topic? What were topics that the page regularly posted about? Then, I checked the reference and use of language because it affected its credibility. After that, I read comments to see what others thought about the post; agree or disagree.”</i>
Informant no. 9 (Generation Y)	<i>“If the person who post was someone I knew, such as a teacher, I think the content must be credible. That was because these people must have checked it before they posted anything. Next, I read the content to see how rationale the post was and how proper the language was used. Improper language and misspelling showed how unprofessional the source was. Then, I looked at number of ‘shares,’ number of ‘likes,’ and comments. A thousand of shares was acceptable. If all comments were positive, it meant that post was credible.”</i>

The second type of credibility judgment process, which is called as type B process in this report, which was the one that Facebook users started with the content related cues. These content related cues were found in the area B of the figure 1.

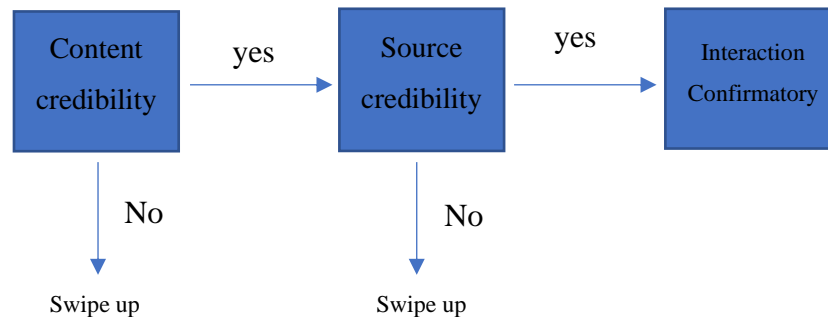


Figure 3 : Type B process of credibility judgment of health information on Facebook

In this type of process, Facebook users read the contents before looking at the source of the post and the interaction. Reading the content helped them to make decision whether or not they should continue to read the post. If the topic of the post matched with their interest, they continued to read and see if the content was possible. Also, Facebook users checked on use of language. When Facebook users found the content was possible, the language use was proper, and no misspelling was spotted, they, then, checked source of the information and reaction on the post. After that, Facebook users went to check either on source of the post or the interaction. Sometimes, when checking on source of the post, people went beyond that post by looking back at the previous posts. They wished to see consistency of the content that person posted. Hopefully, they could see some changes that happened when that person lived his/her life as written in the posts. If they did, they thought that post was credible. In the meantime, number of ‘likes,’ number of ‘shares,’ and comments were checked as well. Each Facebook users had different minimum number of ‘likes,’ and ‘shares’ in their mind. However, most of them agreed that positive comments helped guaranteed the credibility of the post.

Who	Say what
Informant no. 12 (Generation Z)	<i>“Content must come first. I needed to see if the content matched my interest or not. If it did, I continued to read it. If there was a possibility in the content, then I moved to check the source of the</i>

	<p><i>post. Sometimes, I traced back to that account's previous posts to get a sense of the account. Who he or she was? Take one account that I followed as an example. Previously, that person was really chubby [and I saw some changes]. If I checked some accounts and didn't see any changes, I would not follow that account."</i></p>
<p>Informant no. 22 (Generation Z)</p>	<p><i>"I checked a topic before anything. If I was interested in that topic, then I stayed with it. Next, I read to see if there was any commercial intention attached. That was because commercial-intention post benefited the person who posted it. So, the content must be in favor of his or her benefit. That was not credible. It could be fraud. If that post was not for commercial, then who posted or shared it. After that I went back to the content again and performed fact-checking with other resources."</i></p>
<p>Informant no. 23 (Generation Z)</p>	<p><i>"I looked at the content first. If there was a picture attached, I checked the picture. I expected an attached picture to be striking. Then I read the content. The content must be rationale, attached with reference. For interaction, I expected at least ten thousand likes. In case of comment, a good post must have positive comments. I also wanted to know if there was any negative comment. Then I looked at the source. If it was from a Facebook page, I would check a number of followers, recency and consistency of the posts. The asking page must at least have ten thousand followers and update the content every other day."</i></p>
<p>Informant no. 35 (Generation Z)</p>	<p><i>"I looked for rationale of the post and how possible it was. I also looked at reference and double checked with other resources such as search engine like Google, or [asking] my aunt, who was a nurse. Then I looked at the source of the post to know who was the sender, what kind of job he or she had. The asking person may not tell the truth, but I needed to know it if I could. After that I checked previous posts to get an idea of things in his or her interest. Personally, I didn't think health information should only come from people in health profession. Anyone with knowledge and experience could do that as well. I did not pay much attention on number of 'likes,' and 'shares,' since someone just clicked it without reading the content."</i></p>
<p>Informant no. 47 (Generation Z)</p>	<p><i>"First of all, I checked the content. If it was interesting, then I checked the page that posted or shared that information, followed by comments, and number of 'likes,' and 'shares'. If not, I just swiped away to the next post on my [news]feed."</i></p>

The third type or type C of credibility judgment process is the one that Facebook users looked at the interaction of the post, which responding cues were found in the area C of the figure 1.

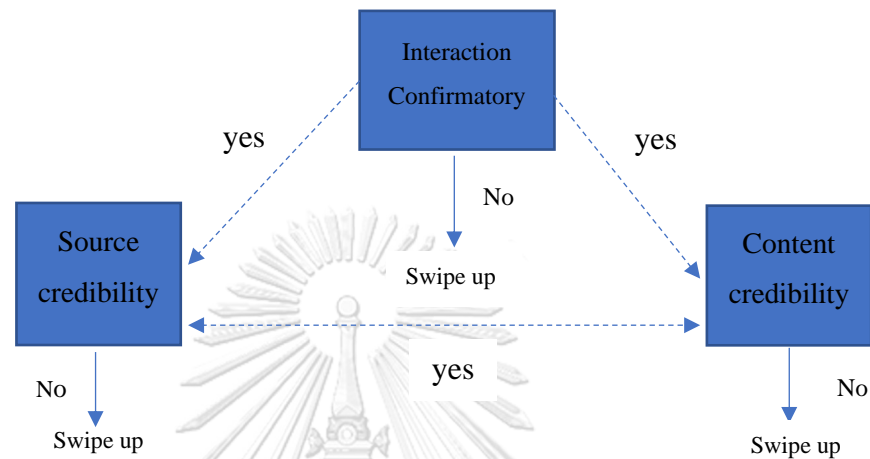


Figure 4 : Type C process of credibility judgment of health information on Facebook

In this type of process, Facebook users put the interaction of the post as the first priority. This interaction confirmatory included number of ‘likes,’ number of ‘shares,’ and comments. Few Facebook users reported that these kinds of interaction helped them judge the credibility of the post. The higher the number of likes and shares was the more credible the post was rated. At the same time, these people read comments to see if the post received more of agreeing or disagreeing comments. Agreeing comments added more credibility to the post, while disagreeing comments deteriorated the post’s credibility. However, it must be noted, to some users, disagreeing comments were perceived as balanced opinions for the post. Too many positive comments sometimes made some users doubts of their genuineness. After that, Facebook users went to check either on the source or the content of the post.

Who	Say what
Informant no. 17 (Generation Z)	<i>“Number of likes of that post comes first. If the asking post has at least a thousand likes, it makes me feel that the post is quite credible.”</i>

	<i>I prefer number of likes to number of shares. That is because I think some people just click share without reading it. Then, I check the comment section to see whether other people agree or disagree. The more positive comments the post receive, the more credible the post will be rated. If there were negative more than positive comments. That post is over. I think it is not credible. ”</i>
Informant no.30 (Generation Z)	<i>“I check number of shares because I think number of likes can be boosted, but not number of shares. For any unpopular page, the post with 25 shares is good enough. But for the popular page, I think the post should have at least 200 shares to be rated as a credible post. Then, I read the content to see if there is any proof of evidence attached with the content. Sometimes people post or share some information that they said they had tried and it worked very well. I tried and received the same result, too. Some people attached video clips on the post. That make me believe in the content because I can see that that the person who post or share really did as it said in the post. After that, I read comments to see the interaction between the sender and other users.”</i>

Facebook users reported that they did not apply the same process of credibility judgment to every health information they found on Facebook. It depended on their personal interest and perceived seriousness of the asking health topics. Scrolling down their news feed, Facebook users reported ignoring posts that did not match with their interest. They only paid attention on interesting health information and those ones that were perceived as serious topic. Interesting health topics can be listed endlessly as each person has different personal interest in an area of health, but they all agreed in perception of serious health topics. Seriousness of health topics, in their opinions, referred to any health topics that related to taking anything into their body, and fatal diseases. Any health information on Facebook that suggested readers to eat certain kinds of foods, herbs, vitamins, or medicine were considered to be serious health topics. In case of an interesting but not serious topic, Facebook users relied on their own knowledge and cues they found on the post. In a case, Facebook users double checked with other sources to make sure that the information was credible.

Who	Say what
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Informant no. 4 (Generation X)	<i>"If it was not about something risky to my life or well-being, I just checked with what I have known. If it was very serious or risky, I think I have to check a lot more than that."</i>
Informant no.9 (Generation Y)	<i>"I crossed check on information about exercise the least. If it was a topic about something that I could take into my body (eat), I think it is serious."</i>
Informant no. 16 (Generation Z)	<i>"I did not use the same process all the times. I used that process [of relying on cues] only for general health topics. If topics that I cared liked exercise showed up on my [news] feed, I tested them by following the suggestion. I think if the information did not tell you to take anything into your body, that was less risky. However, if the information suggested readers to eat something, vitamins or herbs, I checked with those who had tried doing so to ask about the results, plus read through comments on the post. I didn't totally believe the comments though. Too positive comments sometimes were suspicious."</i>
Informant no. 20 (Generation Z)	<i>"I paid more intention on posts about eating because I think that what we take into our body. I feel that it is risky. In a case of fatal disease, it makes me double checked thoroughly. It is more intense when you have someone in your family or someone closed to you been diagnosed with that disease. That is because you want to get credible information to share with them ."</i>
Informant no. 35 (Generation Z)	<i>"If it was about something I already knew, I did not double check it. If it was about diseases but not relatable, I did not check, too."</i>
Informant no. 38 (Generation Z)	<i>"If it was interesting and relatable such as a disease that I was diagnosed with, I double checked thoroughly. If it was just general health topics e.g. fitness, exercise, I just skimmed. Anything that I think I can handle it by myself, I did not take it seriously. However, if it was about a disease that was widespread at that moment, I paid special attention. Or something that I take into my body, I think that is risky. "</i>

As Facebook users mentioned that they double checked the health information they found before making credibility judgment, they began their process of double checking with electronic resources. Search engines, especially Google, was the most popular, followed by official websites of health institutions such as a website of Food

and Drug Administration (FDA), a website run by Faculty of Medicine, a portal site such as Pantip.com.

After deciding that the asking post needed to be rechecked, Facebook users looked for a keyword or keywords that could allow a search engine like Google lead them to the answers. No matter how many links to the answers that Google listed aggregated for the users, they chose only couple of them. To most people, a first couple of links was their targets. Some people clicked every links that were listed on the first page of the results. In the contrary, some people ignored chronological order. They looked at the link enclosed and chose ones that belonged to health institution such as hospitals or medical schools. They also went to www.pantip.com, a portal site where people exchange ideas on various topics.

For a specific case such as make-ups, beauty products, supplements, Facebook users double checked the credibility of the information by going to <https://oryor.com>, an official website of the Food and Drug Administration. They put a registered number enclosed on the asking product's label to protect themselves from buying unsafe, disqualified or fraud products.

To some people, fact-checking electronically was not enough. They discussed the information from the asking post with their significant others and physicians. Their significant others were parents, seniors, fitness trainers (if the topic was about exercise), or anyone whom they think was an expert in that area.

Who	Say what
Informant no. 6 (Generation Y)	<i>"I checked with Google. Sometimes, I discussed with family members. If the information was about health and medicine, I went to the Food and Drug Administration website and checked with registered numbers. I was afraid that some products was not good or fake."</i>
Informant no. 21 (Generation Z)	<i>"Besides my prior knowledge and experience, I used Google. Then I clicked some links from the list."</i>
Informant no. 28 (Generation Z)	<i>"Sometimes, I posted a thread on a community website that I thought it was credible. I also searched from Google and first four or five links provided."</i>
Informant no. 31 (Generation Z)	<i>"I relied on Internet and my grandparents. On the Internet, I used Google and read into the links on the first two pages. Sometimes, I</i>

	<i>went to YouTube looking for some clips on the asking topics. For my grandparents, I discussed with them about herbal medicine because they had a lot of knowledge and experience in this topic.”</i>
Informant no. 50 (Generation Z)	<i>“I used Google and other websites that physicians or pharmacists were the person who posted the information. I did not care about where the link was listed on Google’s result pages. I cared more about whose link it was.”</i>

In conclusion, informants performed both systematic and heuristic processing when making credibility judgment of health information on Facebook as shown in table 1.

Table 1: Informants’ systematic and heuristic processing in making credibility judgment of health information on Facebook

Credibility judgment	Systematic processing	Heuristic processing	
		Heuristic group	Heuristic cues
Source	1)double checked with other resources to find out who the source was 2) looked back at the previous post to check source’s expertise	Authority heuristics	source’s background
		Reputation heuristics	1)source’s background 2)number of followers 3)appearing on other media outlet 4)being well known to general public
Contents	1)double checked with other resources to check the content’s credibility 2)followed attached links on the post to check the content’s credibility	Expectancy violation heuristics	1)conformity with prior knowledge 2)conformity with personal belief 3)proof of evidence 4)content rationality 4)language use 5)typographic error free 6)grammatical error free 7)content recency

		Persuasive intense heuristic	1)product/service attachment 2)commercial intention attachment 3) biased content
Interaction	n/a	Bandwagon heuristic	1)number of likes 2)number of shares 3)number of comments 4)liked or shared by significant others



Chapter 5

Quantitative results and analysis

5.1 Participant characteristics

Gender

There were 480 Facebook users participated in the study. Most of them were female (n=314, 65.42 %), followed by male (n=142, 29.58%). 21 of them (4.38%) preferred not to specify their gender, while three other participants (0.62%) identified themselves as LGBT members.

Table 2: Frequency distribution of participants' gender

Gender	Frequency	Per cent
Male	142	29.58
Female	314	65.42
Preferred not to specify	21	4.38
Other	3	0.62
Total	480	100

Age

Participants in the study were from different groups of age. Almost half of participants were between 20-34 years old (n=221, 46.04%), followed by those whose age were 35-44 years old (n=165, 34.38%), 45-54 years old (n=47, 9.79%), under 20 years old (n=33, 6.87%), 55 years old and over (n=14, 2.92%), respectively.

Table 3: Frequency distribution of participants' ages

Age (years old)	Frequency	Per cent
Under 20	33	6.87
20-34	221	46.04
35-44	165	34.38
45-54	47	9.79
55-64	13	2.71
Older than 64	1	0.21

Total	480	100
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Education

Most of participants in this study had finished at least bachelor degree (n=398, 82.92%). 217 of them graduated bachelor degree (45.21%), 157 with master's degree (32.71%), 12 of them with Ph.D. or equivalent (2.50%), and 12 others were attending graduate school (2.50%). Meanwhile, 74 participants were attending undergraduate level (15.42%), seven of 480 finished secondary school (1.46%), and one finished primary school (0.21%).

Table 4: Frequency distribution of participants' educational background

Education background	Frequency	Per cent
Primary school	1	0.21
Secondary school	7	1.46
(attending) Undergraduate	74	15.42
(completed) Undergraduate	217	45.21
(attending) Graduate school	12	2.50
Master's degree	157	32.71
Ph.D. or equivalent	12	2.50
Total	480	100

Number of years using Facebook

Most of Facebook users participating in the study had used the application for at least five years (n=462, 96.25%). 370 participants had used Facebook about 5-10 years (77.08%). About one fifth of all participants had used Facebook for more than 10 years (n=92, 19.17%). Less than five per cent of the participants (n=18, 3.75%) had Facebook accounts for less than five years.

Table 5: Frequency distribution of participants' number of years using Facebook

Number of years	Frequency	Per cent
Less than five years	18	3.75
5-10 years	370	77.08
More than 10 years	92	19.17
Total	480	100

Frequency on Facebook use

Participants mostly reported that they used Facebook more than once a day (n=392, 81.67%). 36 participants used it once a day (7.50%) while others used once in a couple of days (n=30, 6.25%), less than once a week (n=8, 1.67%), once a week (n=7, 1.46%), and once a month (n=7, 1.46%), respectively.

Table 6: Frequency distribution of participants' use of Facebook

Frequency	Frequency	Per cent
More than once a day	392	81.67
Once a day	36	7.50
Once in a couple of days	30	6.25
Once a week	7	1.46
Less than once a week	8	1.67
Once a month	7	1.46
Total	480	100

Duration stay on Facebook each time

The majority of participants spent not exceeding 30 minutes in each time that they logged on their Facebook account (n=382, 79.58%). 215 participants spent about 11-30 minutes (44.79%) while 167 participants (34.79%) spent less than 10 minutes. However, there were one fifth of participants that stayed longer on Facebook. 51 participants (10.63%), each time they logged on, stayed on the application about an hour, while 47 others (9.79%) reported scrolling up and down their news feed, posting, sharing, commenting on Facebook longer than one hour.

Table 7: Frequency distribution of participants' average time spending on Facebook

duration/ time	Frequency	Per cent
Less than 10 minutes	167	34.79
11-30 minutes	215	44.79
31-60 minutes	51	10.63
More than one hour	47	9.79
Total	480	100

Device used for Facebook access

There were four types of devices that participants reported using to access Facebook. Mobile phone was the most popular device as being used by 461 participants (96.04%), followed by desktop computer (n=115, 23.96%), laptop computer (n=107, 22.29%), respectively. Tablet was the least popular device as being used by 63 participants (13.13%)

Table 8: Frequency distribution of participants' choice of devices when accessing Facebook

Devices	Number of 480	Per cent
Desktop	115	23.96
Laptop	107	22.29
Tablet	63	13.13
Mobile phone	461	96.04

Health status

When asking to rate their health status, almost 80 per cent of participants saw themselves in a good shape (n=381). 172 participants (35.83%) rated their health status as slightly well, 146 (30.42%) rated as 'almost excellent,' and 63 participants (13.13%) rated as 'excellent'. In the same time, there were 81 participants (16.86%) thought that they were in 'fair' condition. Only about four per cent of all participants graded their health status as 'almost poor' (n=1, 0.21%), and 'slightly poor' (n=17, 3.54%).

Table 9: Frequency distribution of participants' self-rating of health status

Health condition	Number	Per cent
Slightly-almost poor	18	3.75
Fair	81	16.86
Slightly well	172	35.83
Almost excellent	146	30.42
Excellent	63	13.13
Total	480	100

5.2 Variables

5.2.1. Health motivation

According to the statistic figures, Overall, participants reported being health motivated at the medium level ($\bar{x} = 4.86$, S.D.= 0.99).

The empirical evidence suggested that most of participants concerned of health hazards and be aware of health prevention. Comparing average mean score among items, item no.8 stating that 'I am concerned about health hazards and try to take action to prevent them' received the highest mean score of 5.95 (S.D.=1.12) with 89.59% of participants agreed with the statement. The second highest average mean score was item no. 1 stating that 'I try to prevent health problems before I detect any symptoms' ($\bar{x} = 5.76$, S.D.=1.30). There were 82.92 % of participants agreed with the statement. The third highest average mean score was item no. 2 stating that 'I try to protect myself against health hazards I hear about' ($\bar{x} = 5.66$, S.D.=1.21). There were 82.50% of participants agreed with the statement.

In the meantime, the statistic figures also revealed that some people did not take any action to protect themselves until they had health problem. By comparing average mean score among items, item no.7 stating that 'Item 7: I'd rather enjoy life than try to make sure I'm not exposing myself to a health hazard' received the lowest score of 3.98(S.D. = 1.86). 43.34% of participants agreed with the statement. The second lowest mean score was given to item no.5 stating that 'I often worry about the health hazards I hear about, but I don't do anything about them' ($\bar{x} = 4.03$, S.D.=1.76). 38.96% of participants agreed with this statement.

Table 10: Frequency, percentage distribution, and average mean score of participants' health motivation

Health motivation $\bar{x} = 4.86$ S.D. = 0.99 (medium level of health motivation)											
Item 1: I try to prevent health problems before I detect any symptoms.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	3	10	7	62	106	103	189	480	5.76	1.30	2
%	0.63	2.08	1.46	12.92	22.08	21.46	39.38	100			
Item 2: I try to protect myself against health hazards I hear about											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	1	6	12	65	119	127	150	480	5.66	1.21	3
%	0.21	1.25	2.50	13.54	24.79	26.46	31.25	100			
Item 3: I don't worry about health hazards until they become a problem for me or someone close to me.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	93	71	79	76	66	55	40	480	4.43	1.92	6
%	19.38	14.79	16.46	15.83	13.75	11.46	8.33	100			
Item 4: There are so many things that can hurt you these days, but I'm not going to worry about them.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	68	77	88	114	65	43	25	480	4.46	1.69	5
%	14.17	16.04	18.33	23.75	13.54	8.96	5.21	100			
Item 5: I often worry about the health hazards I hear about, but I don't do anything about them.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	50	65	69	109	76	74	37	480	4.03	1.76	7
%	10.42	13.54	14.38	22.71	15.83	15.42	7.71	100			
Item 6: I don't take any action against health hazards I hear about until I know I have a problem.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	99	99	73	60	74	46	29	480	4.66	1.87	4
%	20.63	20.63	15.21	12.50	15.42	9.58	6.04	100			
Item 7: I'd rather enjoy life than try to make sure I'm not exposing myself to a health hazard.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	55	70	64	83	89	69	50	480	3.98	1.86	8
%	11.46	14.58	13.33	17.29	18.54	14.38	10.42	100			
Item 8: I am concerned about health hazards and try to take action to prevent them.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	3	2	7	38	92	150	188	480	5.95	1.12	1
%	0.63	0.42	1.46	7.92	19.17	31.25	39.17	100			

*f= frequency, #= ranking by mean score

5.2.2 Perceived seriousness of health issues

As it was mentioned in the ‘methodology’, there were two different topics of health issues; muscle soreness and Alzheimer, being used as cases in a randomly assigned questionnaire. The results of this variable were reported by topics.

236 participants from a total of 480 (49.17%) were assigned to read the Facebook post about muscle soreness. Overall, participants perceived ‘muscle soreness’ as a medium seriousness of health issues ($\bar{x} = 3.71$ S.D. = 1.39).

The statistic evidences suggested that more than one third of participants perceived ‘muscle soreness’ as not quite serious health issues because the issues was not incurable, a life-threatening health issue and did not impede a person from a daily life. Comparing the average mean score among items, item no. 4 stating ‘I make a judgment on seriousness of this health issue based on the fact that ‘muscle soreness’ impede a person from regular daily routines, prevents the person from working, or strongly affects the person physically and mentally’ received the highest mean score of 4.08 (S.D. = 1.85). About 46% of the participants agreed with the statement while 36% of them disagreed, and 18% were neutral. The second highest mean score was given to item no.3 stating that ‘I make a judgment on seriousness of this health issue based on the fact that ‘muscle soreness’ is a life-threatening health issue’ at the mean score of 4.06 (S.D. = 1.82). More than half of the participants (56.78%) did not agree with the statement. The third highest mean score was given to item no.5 stating that ‘I make a judgment on seriousness of this health issue based on the fact that ‘muscle soreness’ is incurable’ at the mean score of 3.78 (S.D. = 1.93). About 60% of the participants did not agree with the statement.

Table 11: Frequency, percentage distribution, and average mean score of participants' perceived seriousness of 'muscle soreness'

Perceived seriousness of health issues (muscle soreness) $\bar{x} = 3.71$ S.D. = 1.39 (medium level of perceived seriousness)											
Item 1: I consider a health topic of 'muscle soreness' a serious health issue											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	42	43	41	55	39	10	6	236	3.25	1.59	5
%	17.80	18.22	17.37	23.31	16.52	4.24	2.54	100			
Item 2: I make a judgment on seriousness of this health issue based on how 'muscle soreness' has been widely discussed recently.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	42	42	35	60	32	14	11	236	3.36	1.69	4
%	17.80	17.80	14.83	25.42	13.56	5.93	4.66	100			
Item 3: I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is a life-threatening health issue.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	27	28	31	48	44	35	23	236	4.06	1.82	2
%	11.44	11.86	13.14	20.34	18.64	14.83	9.75	100			
Item 4: I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' impede a person from regular daily routines, prevents the person from working, or strongly affects the person physically and mentally.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	29	29	27	43	47	39	22	236	4.08	1.85	1
%	12.29	12.29	11.44	18.22	19.91	16.53	9.32	100			
Item 5: I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is incurable.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	45	26	28	44	43	29	21	236	3.78	1.93	3
%	19.07	11.02	11.86	18.64	18.22	12.29	8.90	100			

*f= frequency, #= ranking by mean score

244 participants from a total of 480 (50.83%) were assigned to read the Facebook post about Alzheimer's disease. Overall, participants perceived 'Alzheimer's disease' as a medium seriousness of health issues ($\bar{x} = 3.99$ S.D. = 1.16).

Similar to the post about muscle soreness, the statistic evidences suggested that more than one third of participants perceived 'Alzheimer's disease' as not quite serious health issues because the issues was not incurable, a life-threatening health

issue and did not impede a person from a daily life. Comparing the average mean score among items, item no.3 stating that ‘I make a judgment on seriousness of this health issue based on the fact that ‘Alzheimer’s disease’ is a life-threatening health issue’ received the highest mean score of 4.33 (S.D. = 1.60). Almost 50% of the participants agreed with the statement while 27% of them disagreed. The second highest mean score was given to item no. 4 stating ‘I make a judgment on seriousness of this health issue based on the fact that ‘Alzheimer’s disease’ impede a person from regular daily routines, prevents the person from working, or strongly affects the person physically and mentally’ at the mean score of 4.30 (S.D. = 1.60). About 45% of the participants agreed with the statement while 25.83% disagreed. The third highest mean score was given to item no.5 stating that ‘I make a judgment on seriousness of this health issue based on the fact that ‘muscle soreness’ is incurable’ at the mean score of 4.24 (S.D. = 1.53). About 60% of the participants agreed with the statement while 25.83% disagree and 33.20% were neutral.

Table 12: Frequency, percentage distribution, and average mean score of participants’ perceived seriousness of ‘Alzheimer’s disease’

Perceived seriousness of health issues (Alzheimer’s disease) $\bar{x} = 3.99$ S.D. = 1.16 (medium level of perceived seriousness)											
Item 1: I consider a health topic of ‘Alzheimer’s disease’ a serious health issue											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	40	29	36	79	36	16	8	244	3.50	1.60	5
%	16.39	11.89	14.75	32.38	14.75	6.56	3.28	100			
Item 2: I make a judgment on seriousness of this health issue based on how ‘Alzheimer’s disease’ has been widely discussed recently.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	30	40	38	67	46	15	8	244	3.56	1.57	4
%	12.30	16.39	15.57	27.46	18.85	6.15	3.28	100			
Item 3: I make a judgment on seriousness of this health issue based on the fact that ‘Alzheimer’s disease’ is a life-threatening health issue.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	Ran #
f	15	20	32	58	64	31	24	244	4.33	1.60	1
%	6.15	8.20	13.11	23.77	26.23	12.70	9.84	100			
Item 4: I make a judgment on seriousness of this health issue based on the fact that ‘Alzheimer’s disease’ impede a person from regular daily routines, prevents the person from working, or strongly affects the person physically and mentally.											

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	18	17	28	70	52	39	20	244	4.30	1.60	2
%	7.38	6.97	11.48	28.69	21.31	15.98	8.20	100			
Item 5: I make a judgment on seriousness of this health issue based on the fact that 'Alzheimer's disease' is incurable.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	14	19	30	81	55	22	23	244	4.24	1.53	3
%	5.74	7.79	12.30	33.20	22.54	9.02	9.43	100			

*f= frequency, #= ranking by mean score

5.2.3 Health literacy on Facebook

To assess participants' health literacy', they were asked to rate a level of their agreeing or disagreeing toward 10 statements using a seven-point Likert scale ('strongly disagree', 'disagree', 'slightly disagree', 'neutral', 'slightly agree', 'agree', and 'strongly agree'). Overall, participants rated all the statement regarding their health literacy at the average mean score of 5.24 (S.D.= 0.82).

The statistic evidences revealed that participants were quite health literate. They were aware of being deceived by fake photos, be careful of sharing health information they found on Facebook. Comparing the average mean score among items, item no.8 stating that 'Facebook users must be aware of 'doctored' photos that attached to health information. These photos may be used to deceive others received the highest mean score of 6.36 (S.D. = 1.12). About 93% of the participants agreed with this statement. The second highest mean score was given to item no.9 stating that 'not all health information posted on Facebook can be applied to others' with the score of 5.88 (S.D. = 1.42). 81% of participants agreed with this statement. The third highest mean score was given to item no. 10 stating that 'not all health information posted on Facebook should be shared with others at the score of 5.66 (S.D. = 1.46). About 79% of participants agreed with the statement.

The empirical figures also showed a sign of hesitation when participants were asked about health information that came from others' experience. The results revealed that the least mean score was given to item no. 5 stating that 'anecdotes concerning health symptoms or treatments that are shared on Facebook can be applied to anyone. They are very useful,' at the score of 4.39 (S.D. = 1.88). One third of the participants disagreed with the statement and one fifth of the participants were

indecisive. The second least mean score was given to item no. 6 stating that ‘if health information shared on Facebook worked with others, it will work for me as well’ with the score of 4.52 (S.D. = 1.75). One third of the participants agreed with the statement and about 22% of participants were indecisive.

Table 13: Frequency, percentage distribution, and average mean score of participants’ health literacy by item

Health literacy $\bar{x} = 5.24$ S.D. = 0.82 (medium level of health literacy)											
Item 1: To find credible health information, I should go to the official pages of accredited hospitals or health facilities.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	8	14	31	60	77	102	188	480	5.59	1.53	4
%	1.67	2.92	6.46	12.50	16.04	21.25	39.17	100			
Item 2: To find credible health information, I should go to a Facebook account of doctors whom I have known in person.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	25	35	54	114	99	78	75	480	4.59	1.67	8
%	5.21	7.29	11.25	23.75	20.63	16.25	15.63	100			
Item 3: Not all ‘seem to be doctor’ doctors on Facebook are actually doctors who professionally practice in hospitals.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	22	9	24	63	96	90	176	480	5.45	1.64	5
%	4.58	1.88	5.00	13.13	20.00	18.75	36.67	100			
Item 4: I will not hesitate to share any health-related posts on my wall if those posts already got more than 200 shares or at least 500 likes.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	166	87	58	90	45	16	18	480	5.25	1.72	6
%	34.58	18.13	12.08	18.75	9.38	3.33	3.75	100			
Item 5: Anecdotes concerning health symptoms or treatments that are shared on Facebook can be applied to anyone. They are very useful.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	90	73	55	99	79	47	37	480	4.39	1.88	10
%	18.75	15.21	11.46	20.63	16.46	9.79	7.71	100			
Item 6: If health information shared on Facebook works for others, it will work for me as well.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	86	77	67	105	87	33	25	480	4.52	1.75	9
%	17.92	16.04	13.96	21.88	18.13	6.88	5.21	100			
Item 7: If the health information shared on Facebook received a lot of agreeing comments, that means the information is											

reliable.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	95	75	83	99	85	24	19	480	4.68	1.69	7
%	19.79	15.63	17.29	20.63	17.71	5.00	3.96	100			
Item 8: Facebook users must be aware of 'doctored' photos that attached to health information. These photos may be used to deceive others.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	4	6	5	19	39	96	311	480	6.36	1.12	1
%	0.83	1.25	1.04	3.96	8.13	20.00	64.79	100			
Item 9: Not all health information posted on Facebook can be applied to others.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	9	5	12	65	62	94	233	480	5.88	1.42	2
%	1.88	1.04	2.50	13.54	12.92	19.58	48.54	100			
Item 10: Not all health information posted on Facebook should be shared with others.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	8	11	19	64	83	106	189	480	5.66	1.46	3
%	1.67	2.29	3.96	13.33	17.29	22.08	39.38	100			

*f= frequency, #= ranking by mean score

5.2.4 Health e-mavens

To identify participants' as a 'health e-maven', each participant was asked to respond to a list of online health information seeking and sharing activities using a seven-point Likert scale ('never', 'rarely', 'occasionally', 'moderate', 'often', 'very often', and 'always'). Overall, participants reported 'occasionally' involved in asking activities ($\bar{x} = 3.18$, S.D.= 1.24).

The statistic evidences revealed that, in average, participants were not quite health e-mavens. They were passive recipients who mostly read others' stories about health, but rarely posted or shared health information on online platform. Comparing the average mean score among items, item no.3 stating that 'read someone else's commentary or experience about health or medical issues on an online news groups, websites, blogs' received the highest mean score of 4.59 (S.D. = 1.54). About 56% of the participants agreed with this statement. The second highest mean score was given to item no.4 stating that 'read someone else's commentary or experience about health or medical issues on Facebook' with the score of 4.46 (S.D. = 1.57). 53.54% of

participants agreed with this statement. The third highest mean score was given to item no. 6 stating that ‘watch video clips about health or medical issues on non-Facebook online platform such as YouTube, or other websites’ at the score of 4.32 (S.D. = 1.55). About 48% of participants agreed with the statement.

The empirical figures also suggested that participants, in overall, had never or rarely posted and shared any negative health-related experience on their Facebook wall. The results revealed that the least mean score was given to item no. 22 stating that ‘post a story about bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform’ at the score of 2.13 (S.D. = 1.72). 61.25% of the participants reported having never done that, while 10% rarely posted such a story and about 6% posted that kind of the story occasionally. The second least mean score was given to item no. 18 stating that ‘post a review of your bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities on non-Facebook online platform’ with the score of 2.23 (S.D. = 1.73). 57.50% of the participants had never done that, while 10% of them rarely posted that kind of a story and 8% posted occasionally. The third least mean score was given to item no.21 stating that ‘post a story about bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities that your family members, friends, or colleagues have on your Facebook wall,’ with the score of 2.31 (S.D. = 1.81). 56.46% of the participants reported that they had never done that while 9.38% of them rarely posted the story and 7.92% did it occasionally.

Table 14: Frequency, percentage distribution, and average mean score of participants' health e-mavens by item

Health e-mavens $\bar{x} = 3.18$ S.D. = 1.24 (medium level of health e-mavens)											
Item 1: Sign up to receive email updates or alerts about health or medical issues											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	200	56	52	72	52	25	23	480	2.76	1.89	16
%	41.67	11.67	10.83	15.00	10.83	5.21	4.79	100			
Item 2: Follow or like personal accounts or Facebook pages that provide health related information on Facebook.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	80	52	63	101	98	56	30	480	3.78	1.80	8
%	16.67	10.83	13.13	21.04	20.42	11.67	6.25	100			
Item 3: Read someone else's commentary or experience about health or medical issues on an online news group, website, blog.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	20	33	52	108	125	92	50	480	4.59	1.54	1
%	4.17	6.88	10.83	22.50	26.04	19.17	10.42	100			
Item 4: Read someone else's commentary or experience about health or medical issues on Facebook.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	23	37	64	99	130	81	46	480	4.46	1.57	2
%	4.79	7.71	13.33	20.63	27.08	16.88	9.58	100			
Item 5: Watch video clips about health or medical issues posted or shared on Facebook.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	31	36	71	109	125	72	36	480	4.29	1.58	4
%	6.46	7.50	14.79	22.71	26.04	15.00	7.50	100			
Item 6: Watch video clips about health or medical issues on non-Facebook platform such as YouTube, or other websites.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	30	35	60	126	117	78	34	480	4.32	1.55	3
%	6.25	7.29	12.50	26.25	24.38	16.25	7.08	100			
Item 7: Go to Facebook to find information that responds to your personal health concerns.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	84	63	56	76	100	60	41	480	3.81	1.91	7
%	17.50	13.13	11.67	15.83	20.83	12.50	8.54	100			
Item 8: Go to Facebook to find information that responds to your closed ones' health concerns.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	82	56	67	72	96	67	40	480	3.84	1.91	6
%	17.08	11.67	13.96	15.00	20.00	13.96	8.33	100			
Item 9: Go to Facebook to find information that responds to health concerns in the society.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	100	71	56	106	85	45	17	480	3.43	1.77	9
%	20.83	14.79	11.67	22.08	17.71	9.38	3.54	100			
Item 10: Consult high ranking or highly reviewed doctors or other healthcare providers on Facebook about your health concerns.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	202	45	50	78	56	32	17	480	2.80	1.88	15

%	42.08	9.38	10.42	16.25	11.67	6.67	3.54	100			
Item 11: Consult high ranking or highly reviewed doctors or other healthcare providers on non-Facebook online platform about your health concerns.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	170	41	56	72	78	36	27	480	3.13	1.97	10
%	35.42	8.54	11.67	15.00	16.25	7.50	5.63	100			
Item 12: Contact high ranking or highly reviewed hospitals or other medical facilities on their Facebook account/page.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	176	57	45	78	63	41	20	480	3.00	1.93	13
%	36.67	11.88	9.38	16.25	13.13	8.54	4.17	100			
Item 13: Consult reviews on Facebook before using or applying drugs or medical treatments you have never known of.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	163	65	47	71	55	46	33	480	3.13	2.01	11
%	33.96	13.54	9.79	14.79	11.46	9.58	6.88	100			
Item 14: Consult reviews on non-Facebook online platform before using or applying drugs or medical treatments you have never known of.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	94	57	38	85	81	72	53	480	3.90	2.02	5
%	19.58	11.88	7.92	17.71	16.86	15.00	11.04	100			
Item 15: Post a review of your good experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities on your Facebook wall.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	231	44	36	64	51	38	16	480	2.66	1.93	17
%	48.13	9.17	7.50	13.33	10.63	7.92	3.33	100			
Item 16: Post a review of your good experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities on non-Facebook online platform.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	259	46	40	51	43	27	14	480	2.40	1.83	20
%	53.96	9.58	8.33	10.63	8.96	5.63	2.92	100			
Item 17: Post a review of your bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities on your Facebook wall.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	258	45	35	57	42	29	14	480	2.42	1.84	19
%	53.75	9.38	7.29	11.88	8.75	6.04	2.92	100			
Item 18: Post a review of your bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities on non-Facebook online platform.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	276	48	40	49	34	20	13	480	2.23	1.73	23
%	57.50	10.00	8.33	10.21	7.08	4.17	2.71	100			
Item 19: Post a story about good experience with medical treatment and service from doctors, healthcare providers, hospitals, medical facilities that your family members, friends, or colleagues have on your Facebook wall.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	235	41	38	66	51	34	15	480	2.62	1.90	18
%	48.96	8.54	7.92	13.75	10.63	7.08	3.13	100			
Item 20: Post a story about good experience with medical treatment and service form doctors, healthcare providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.											

	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	264	40	43	47	44	29	13	480	2.39	1.83	21
%	55.00	8.33	8.96	9.79	9.17	6.04	2.71	100			
Item 21: Post a story about bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities that your family members, friends, or colleagues have on your Facebook wall.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	271	45	38	51	37	21	17	480	2.31	1.81	22
%	56.46	9.38	7.92	10.63	7.71	4.38	3.54	100			
Item 22: Post a story about bad experience with medical treatment and service from doctors, healthcare providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	294	49	28	44	32	20	13	480	2.13	1.72	24
%	61.25	10.21	5.83	9.17	6.67	4.17	2.71	100			
Item 23: Share any health-related posts on your Facebook wall so your Facebook friends could see and read the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	160	54	56	83	64	40	23	480	3.10	1.92	12
%	33.33	11.25	11.67	17.29	13.33	8.33	4.79	100			
Item 24: Share any health-related posts from your Facebook news feed with your family and friends on non-Facebook online platform.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	187	61	46	88	44	39	15	480	2.82	1.86	14
%	38.96	12.71	9.58	18.33	9.17	8.13	3.13	100			

*f= frequency, #= ranking by mean score

5.2.5 Holistic and analytic worldview

To assess participants' way of thinking towards things around themselves, they were asked to rate a level of their agreeing or disagreeing toward 11 statements using a seven-point Likert scale ('strongly disagree', 'disagree', 'slightly disagree', 'neutral', 'slightly agree', 'agree', and 'strongly agree'). Overall, participants reported having a medium level of holistic worldview ($\bar{x} = 4.27$, S.D.= 0.57).

As predicted by the literature, the empirical figure revealed that participants were found to have holistic worldview as they considered the picture and compromised with all possible options when making any decision. Comparing the average mean score among items, item no.10 stating that 'I compromise between different possible solutions when I make decisions' received the highest mean score of 5.76 (S.D. = 1.09). About 85% of the participants agreed with this statement. The second highest mean score was given to item no.11 stating that 'I consider the whole "scene" when I make a decision' with the score of 5.69 (S.D. = 1.22). 83.34% of

participants agreed with this statement. The third highest mean score was given to item no. 6 stating that ‘we should consider the situation a person is faced with, as well as his/her personality, in order to understand one’s behavior’ at the score of 5.65 (S.D. = 1.29). About 80% of participants agreed with the statement.

The empirical figures also showed a sign of analytic worldview as well. The results revealed that the least mean score was given to item no. 9 stating that ‘I weigh the merit of each argument and piece of information before I make a decision,’ at the score of 2.29 (S.D. = 1.13). 85% of the participants agreed with the statement. The second least mean score was given to item no. 7 stating that ‘I examine the specific information before I make decision,’ with the score of 2.31 (S.D. = 1.16). About 83% of the participants agreed with the statement. The third least mean score was given to item no. 8 stating that ‘I dissect the arguments into their component parts to make decisions,’ with the score of 2.32 (S.D. = 1.14). 85% of the participants agreed with the statement.

Table 15: Frequency, percentage distribution, and average mean score of participants’ opinions toward holistic and analytic worldview by item

Holistic and analytic worldview $\bar{x} = 4.27$ S.D. = 0.57 (medium level of holistic worldview)											
Item 1: The whole, rather than its parts, should be considered in order to understand a phenomenon.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	14	18	42	142	87	76	101	480	4.88	1.56	5
%	2.92	3.75	8.75	29.58	18.13	15.83	21.04	100			
Item 2: It is more important to pay attention to the whole than its parts.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	23	32	51	155	87	70	62	480	4.48	1.58	7
%	4.79	6.67	10.63	32.29	18.13	14.58	12.92	100			
Item 3: The whole is greater than the sum of its parts.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	23	25	49	146	83	88	66	480	4.60	1.59	6
%	4.79	5.21	10.21	30.42	17.29	18.33	13.75	100			
Item 4: It is more important to pay attention to the whole context rather than the details.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	45	61	70	140	77	56	31	480	3.91	1.64	8
%	9.38	12.71	14.58	29.17	16.04	11.67	6.46	100			

Item 5: It is not possible to understand the parts without considering the whole picture.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	11	15	43	99	106	96	100	480	5.09	1.53	4
%	2.29	3.13	8.96	20.63	22.08	20.00	22.92	100			
Item 6: We should consider the situation a person is faced with, as well as his/her personality, in order to understand one's behavior.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	4	6	15	68	101	130	156	480	5.65	1.16	3
%	0.83	1.25	3.13	14.17	21.04	27.08	32.50	100			
Item 7: I examine the specific information before I make decisions.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	1	3	10	67	115	139	145	480	2.31	1.16	10
%	0.21	0.63	2.08	13.96	23.96	28.96	30.21	100			
Item 8: I dissect the argument into their component parts to make decisions.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	1	2	13	56	130	138	140	480	2.32	1.14	9
%	0.21	0.42	2.71	11.67	27.08	28.75	29.17	100			
Item 9: I weigh the merit of each argument and piece of information before I make a decision.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	0	0	17	54	132	124	153	480	2.29	1.13	11
%	0.00	0.00	3.54	11.25	27.50	25.83	31.88	100			
Item 10: I compromise between different possible solutions when I make decisions.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	0	0	11	59	114	148	148	480	5.76	1.09	1
%	0.00	0.00	2.29	12.29	23.75	30.83	30.83	100			
Item 11: I consider the whole 'scene' when I make a decision.											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	1	7	12	60	116	129	155	480	5.69	1.22	2
%	0.21	1.46	2.50	12.50	24.17	26.88	32.29	100			

*f= frequency, #= ranking by mean score

5.2.6 Uses of heuristics in credibility judgment

As it was mentioned in the 'methodology', there were eight different scenarios derived from two different health issues being used as cases in a randomly assigned questionnaire. Participants' uses of heuristics in credibility judgment of health information on Facebook was reported in all cases and by cases as following.

5.2.6.1 all cases

To assess their uses of heuristics in credibility judgment, participants were asked to read a health-related Facebook post and respond to 26 statements using a seven-point Likert scale (strongly disagree, disagree, slightly disagree, neutral,

slightly agree, agree and strongly agree which were interpreted into degree of use in item 2-26 that reflected their heuristic uses as ‘never, ‘rarely’, ‘occasionally, ‘sometimes’, ‘often, ‘usually’, and ‘always’, respectively). Overall, participants reported they ‘sometimes’ used heuristics in credibility judgment of health information on Facebook ($\bar{x} = 3.92$, S.D.= 0.91).

Overall, the statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on authorized source, and bias free with non-commercial message the most. Comparing the average mean score among items, item no.6 stating that ‘I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health’ received the highest mean score of 5.12 (S.D. = 1.60). 68.33% of the participants reported that they referred to this authority heuristic cue frequently, while 16.25% of them reported that sometimes they used this cue.

The second highest mean score was given to item no.18 stating that ‘I make a credibility judgment by considering whether the information itself is bias free’ with the score of 5.11 (S.D. = 1.48). 65.41% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 21.87% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 17 stating that ‘I make a credibility judgment by considering whether the information seems to have a commercial purpose’ at the score of 4.93 (S.D. = 1.81). 84.17% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 16.46% of participants reported using this cue at the medium frequency.

Table 16: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item

Use of heuristics in credibility judgment $\bar{x} = 3.92$ S.D. = 0.91 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	77	79	73	131	71	37	12	480	3.41	1.61	19
%	16.04	16.46	15.21	27.29	14.79	7.71	2.50	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	104	76	66	114	68	30	22	480	3.30	1.74	20
%	21.67	15.83	13.75	23.75	14.17	6.25	4.58	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	25	32	50	97	112	90	74	480	4.68	1.66	6
%	5.21	6.67	10.42	20.21	23.33	18.75	15.42	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	44	45	70	114	103	68	36	480	4.11	1.67	13
%	9.17	9.37	14.58	23.75	21.46	14.17	7.50	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	38	40	62	118	96	80	46	480	4.29	1.68	8
%	7.92	8.33	12.92	24.58	20.00	16.67	9.58	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	17	21	36	78	94	128	106	480	5.12	1.60	1
%	3.54	4.37	7.50	16.25	19.58	26.67	22.08	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	39	43	64	119	124	56	35	480	4.15	1.61	11
%	8.13	8.96	13.33	24.79	25.83	11.67	7.29	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	21	30	38	99	113	105	74	480	4.80	1.61	4

%	4.37	6.25	7.92	20.62	23.54	21.87	15.42	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	43	40	54	117	111	75	40	480	4.25	1.67	10
%	8.96	8.33	11.25	24.37	23.12	15.62	8.33	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	153	77	55	91	55	32	17	480	2.96	1.80	24
%	31.87	16.04	11.46	18.96	11.46	6.67	3.54	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	64	69	56	133	93	48	17	480	3.70	1.65	15
%	13.33	14.37	11.67	27.71	19.37	10.00	3.54	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	120	67	70	116	67	26	14	480	3.16	1.70	21
%	25.00	13.96	14.58	24.17	13.96	5.42	2.92	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	92	66	73	89	98	48	14	480	3.49	1.74	18
%	19.17	13.75	15.21	18.54	20.42	10.00	2.92	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	32	35	51	109	110	96	47	480	3.53	1.64	17
%	6.67	7.29	10.62	22.71	22.92	20.00	9.79	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	47	47	69	122	118	58	19	480	3.97	1.58	14
%	9.79	9.79	14.37	25.42	24.58	12.08	3.96	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	17	28	90	112	140	81	480	2.88	1.45	25
%	2.50	3.54	5.83	18.75	23.33	29.17	16.87	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	39	19	35	79	89	109	110	480	4.93	1.81	3

%	8.12	3.96	7.29	16.46	18.54	22.71	22.92	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	10	14	37	105	101	113	100	480	5.11	1.48	2
%	2.08	2.92	7.71	21.87	21.04	23.54	20.83	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	34	20	41	104	97	89	95	480	4.79	1.73	5
%	7.08	4.17	8.54	21.67	20.21	18.54	19.79	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	134	67	52	107	74	34	12	480	3.15	1.77	22
%	27.92	13.96	10.83	22.29	15.42	7.08	2.50	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	139	77	59	89	65	37	14	480	3.06	1.79	23
%	28.96	16.04	12.29	18.54	13.54	7.71	2.92	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	195	78	53	78	45	23	8	480	2.59	1.69	26
%	40.62	16.25	11.04	16.25	9.37	4.79	1.67	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	20	21	54	130	130	84	41	480	4.55	1.45	7
%	4.17	4.37	11.25	27.08	27.08	17.50	8.54	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	31	44	67	132	119	63	24	480	4.14	1.51	12
%	6.46	9.17	13.96	27.50	24.79	13.12	5.00	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	33	41	56	130	104	83	33	480	4.28	1.59	9
%	6.87	8.54	11.67	27.08	21.67	17.29	6.87	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	105	57	48	96	89	50	35	480	3.62	1.91	16
%	21.87	11.87	10.00	20.00	18.54	10.42	7.29	100			

*f= frequency, #= ranking by mean score

5.2.6.2 case A (a post about muscle soreness from a doctor, presented with professional written language with 500 positive reactions (like, love, laugh), 300 shares, and 20 comments)

60 participants were randomly assigned to read a Facebook post from a doctor about muscle soreness with 500 likes and 300 shares. They reported medium frequency of using heuristics in credibility judgment of health information on Facebook. ($\bar{x} = 3.95$, S.D.= 0.87).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on authorized source, and bias free with non-commercial message the most. Comparing the average mean score among items, item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health' received the highest mean score of 5.12 (S.D. = 1.60). 68.33% of the participants reported that they referred to this authority heuristic cue frequently, while 16.25% of them reported that sometimes they used this cue.

The second highest mean score was given to item no.18 stating that 'I make a credibility judgment by considering whether the information itself is bias free' with the score of 5.11 (S.D. = 1.48). 65.41% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 21.87% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 17 stating that 'I make a credibility judgment by considering whether the information seems to have a commercial purpose' at the score of 4.93 (S.D. = 1.81). 84.17% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 16.46% of participants reported using this cue at the medium frequency.

Table 17: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case A

Use of heuristics in credibility judgment $\bar{x} = 3.95$ S.D. = 0.87 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	7	15	4	16	10	7	1	60	3.53	1.65	19
%	11.67	25.00	6.67	26.67	16.67	11.67	1.67	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	7	12	7	18	6	7	3	60	3.62	1.70	18
%	11.67	20.00	11.67	30.00	10.00	11.67	5.00	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	6	7	9	12	16	7	60	4.62	1.72	5
%	5.00	10.00	11.67	15.00	20.00	26.67	11.67	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	6	10	12	10	13	6	60	4.38	1.69	10
%	5.00	10.00	16.67	20.00	16.67	21.67	10.00	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	5	10	14	8	12	7	60	4.35	1.74	11
%	6.67	8.33	16.67	23.33	13.33	20.00	11.67	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	2	8	9	9	20	11	60	5.12	1.53	2
%	1.67	3.33	13.33	15.00	15.00	33.33	18.33	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	6	8	10	15	12	3	60	4.17	1.72	12
%	10.00	10.00	13.33	16.67	25.00	20.00	5.00	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	7	4	11	11	17	8	60	4.75	1.68	4

%	3.33	11.67	6.67	18.33	18.33	28.33	13.33	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	7	6	14	12	11	7	60	4.43	1.69	8
%	5.00	11.67	10.00	23.33	20.00	18.33	11.67	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	14	10	9	5	5	1	60	2.87	1.68	25
%	26.67	23.33	16.67	15.00	8.33	8.33	1.67	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	13	7	15	11	7	2	60	3.72	1.63	15
%	8.33	21.67	11.67	25.00	18.33	11.67	3.33	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	12	8	13	7	5	2	60	3.20	1.74	21
%	21.67	20.00	13.33	21.67	11.67	8.33	3.33	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	12	9	12	13	8	0	60	3.63	1.58	17
%	10.00	20.00	15.00	20.00	21.67	13.33	0	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	8	11	14	16	5	60	3.35	1.54	20
%	3.33	6.67	13.33	18.33	23.33	26.67	8.33	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	11	8	13	17	6	1	60	3.83	1.52	14
%	6.67	18.33	13.33	21.67	28.33	10.00	1.67	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	3	6	9	19	16	6	60	3.10	1.40	22
%	1.67	5.00	10.00	15.00	31.67	26.67	10.00	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	1	5	11	14	16	10	60	5.00	1.56	3

%	5.00	1.67	8.33	18.33	23.33	26.67	16.67	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	3	3	13	13	19	9	60	5.15	1.34	1
%	0	5.00	5.00	21.67	21.67	31.67	15.00	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	2	7	13	13	16	5	60	4.62	1.60	5
%	6.67	3.33	11.67	21.67	21.67	26.67	8.33	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	17	10	6	12	9	5	1	60	3.08	1.78	24
%	28.33	16.67	10.00	20.00	15.00	8.33	1.67	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	15	9	12	10	7	7	0	60	3.10	1.69	22
%	25.00	15.00	20.00	16.67	11.67	11.67	0	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	26	10	10	7	3	4	0	60	2.38	1.57	26
%	43.33	16.67	16.67	11.67	5.00	6.67	0	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	1	10	13	18	15	1	60	4.55	1.31	7
%	3.33	1.67	16.67	21.67	30.00	25.00	1.67	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	9	10	16	11	10	3	60	4.15	1.49	13
%	1.67	15.00	16.67	26.67	18.33	16.67	5.00	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	4	10	12	8	19	3	60	4.42	1.66	9
%	6.67	6.67	16.67	20.00	13.33	31.67	5.00	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	11	12	4	9	11	8	5	60	3.68	1.99	16
%	18.33	20.00	6.67	15.00	18.33	13.33	8.33	100			

*f= frequency, #= ranking by mean score

5.2.6.3 case B (a post about muscle soreness from a doctor, presented with professional written language with 20 positive reactions (like, love, laugh), 2 shares, and 20 comments)

61 participants were randomly assigned to read a Facebook post from a doctor about muscle soreness with 20 likes and 2 shares. They reported medium frequency of using heuristics in credibility judgment of health information on Facebook. ($\bar{x} = 4.08$, S.D. = 0.89).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on bias free message and source's reputation and authority the most. Comparing the average mean score among items, item no.18 stating that 'I make a credibility judgment by considering whether the information itself is bias free' received the highest mean score of 4.97 (S.D. = 1.14). 65.58% of the participants reported that they referred to this persuasive intense heuristic cue frequently, while 24.59% of them reported that sometimes they used this cue. Only 9.84% of the participants reported that they referred to this cue occasionally.

The second highest mean score was given to item no. 3 stating that 'I make a credibility judgment by considering that the source is a renowned person or organization in a field of health' with the score of 4.84 (S.D. = 1.54). 60.65% of participants showed high frequency of using this reputation heuristic cue. At the same time, 16.39% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' at the score of 4.80 (S.D. = 1.63). 60.65% of participants showed high frequency of using this authority heuristic cue. At the same time, 16.39% of participants reported using this cue at the medium frequency.

Table 18: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case B

Use of heuristics in credibility judgment $\bar{x} = 4.08$ S.D. = 0.89 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	4	10	11	17	11	5	3	61	3.79	1.54	18
%	6.56	16.39	18.03	27.87	18.03	8.20	4.92	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	9	9	16	12	4	3	61	3.64	1.65	19
%	13.11	14.75	14.75	26.23	19.67	6.56	4.92	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	3	10	10	13	15	9	61	4.84	1.54	2
%	1.64	4.92	16.39	16.39	21.31	24.59	14.75	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	6	11	13	15	6	5	61	4.07	1.65	15
%	8.20	9.84	18.03	21.31	24.59	9.84	8.20	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	4	13	13	14	7	6	61	4.21	1.62	13
%	6.56	6.56	21.31	21.31	22.95	11.48	9.84	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	6	7	10	13	14	10	61	4.80	1.63	3
%	1.64	9.84	11.48	16.39	21.31	22.95	16.39	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	15	9	21	3	7	61	4.31	1.52	9
%	3.28	6.56	24.59	14.75	34.43	4.92	11.48	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	10	10	15	13	9	61	4.79	1.56	4

%	3.28	3.28	16.39	16.39	24.59	21.31	14.75	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	2	14	12	18	8	2	61	4.11	1.50	14
%	8.20	3.28	22.95	19.67	29.51	13.11	3.28	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	14	9	10	10	11	4	3	61	3.31	1.81	24
%	22.95	14.75	16.39	16.39	18.03	6.56	4.92	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	5	13	13	18	5	2	61	3.93	1.49	16
%	8.20	8.20	21.31	21.31	29.51	8.20	3.28	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	11	7	12	12	13	3	3	61	3.49	1.71	21
%	18.03	11.48	19.67	19.67	21.31	4.92	4.92	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	7	14	13	12	7	3	61	3.87	1.60	17
%	8.20	11.48	22.95	21.31	19.67	11.48	4.92	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	3	8	14	18	11	5	61	3.42	1.44	23
%	3.28	4.92	13.11	22.95	29.51	18.03	8.20	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	12	14	17	9	3	61	4.30	1.42	10
%	3.28	6.56	19.67	22.95	27.87	14.75	4.92	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	4	6	9	19	12	10	61	3.08	1.51	26
%	1.64	6.56	9.84	14.75	31.15	19.67	16.39	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	2	7	11	12	16	8	61	4.69	1.73	6

%	8.20	3.28	11.48	18.03	19.67	26.23	13.11	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	0	6	15	22	11	7	61	4.97	1.14	1
%	0	0	9.84	24.59	36.07	18.03	11.48	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	6	6	12	16	12	8	61	4.70	1.55	5
%	1.64	9.84	9.84	19.67	26.23	19.67	13.11	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	5	9	13	16	4	2	61	3.59	1.72	20
%	19.67	8.20	14.75	21.31	26.23	6.56	3.28	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	8	10	12	12	5	2	61	3.44	1.74	22
%	19.67	13.11	16.39	19.67	19.67	8.20	3.28	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	19	7	7	10	12	4	2	61	3.15	1.86	25
%	31.15	11.48	11.48	16.39	19.67	6.56	3.28	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	1	10	15	18	8	7	61	4.61	1.43	7
%	3.28	1.64	16.39	24.59	29.51	13.11	11.48	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	3	10	16	18	8	4	61	4.39	1.39	8
%	3.28	4.92	16.39	26.23	29.50	13.11	6.56	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	3	11	20	16	8	2	61	4.30	1.24	10
%	1.64	4.92	18.03	32.79	26.23	13.11	3.28	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	6	12	13	15	8	5	61	4.26	1.54	12
%	3.28	9.84	19.67	21.31	24.59	13.11	8.20	100			

*f= frequency, #= ranking by mean score

5.2.6.4 case C (a post about Alzheimer's disease from a doctor, presented with professional written language with 500 positive reactions (like, love, laugh), 300 shares, and 20 comments)

62 participants were randomly assigned to read a Facebook post from a doctor about Alzheimer's disease with 500 likes and 300 shares. They reported medium frequency of using heuristics in credibility judgment of health information on Facebook. ($\bar{x} = 3.97$, S.D.= 0.80).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on bias free message and source's expertise and authority the most. Comparing the average mean score among items, item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' received the highest mean score of 5.31 (S.D. = 1.61). 74.19% of the participants reported that they referred to this authority heuristic cue frequently, while 11.29% of them reported that sometimes they used this cue. 11.29% of the participants reported that they referred to this cue less frequent while 3.23% of them had never used this heuristic cue.

The second highest mean score was given to item no. 18 stating that 'I make a credibility judgment by considering whether the information itself is bias free' with the score of 4.98 (S.D. = 1.65). 66.13% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 17.74% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 8 stating that 'I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise' at the score of 4.95 (S.D. = 1.61). 61.29% of participants showed high frequency of using this authority heuristic cue. At the same time, 25.81% of participants reported using this cue at the medium frequency.

Table 19: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case C

Use of heuristics in credibility judgment $\bar{x} = 3.97$ S.D. = 0.80 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	6	7	9	19	11	7	3	62	3.89	1.60	16
%	9.68	11.29	14.52	30.65	17.74	11.29	4.84	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	11	8	8	18	10	5	2	62	3.50	1.68	19
%	17.74	12.90	12.90	29.03	16.13	8.06	3.23	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	3	14	16	13	10	62	4.89	1.55	4
%	3.23	6.45	4.84	22.58	25.81	20.97	16.13	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	8	8	15	14	10	3	62	4.11	1.60	11
%	6.45	12.90	12.90	24.19	22.58	16.13	4.84	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	8	3	20	11	11	5	62	4.27	1.65	9
%	6.45	12.90	4.84	32.26	17.74	17.74	8.06	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	5	7	14	14	18	62	5.31	1.61	1
%	3.23	3.23	8.06	11.29	22.58	22.58	29.03	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	7	5	19	14	8	4	62	4.13	1.61	10
%	8.06	11.29	8.06	30.65	22.58	12.90	6.45	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	2	3	16	15	9	14	62	4.95	1.61	3

%	4.84	3.23	4.84	25.81	24.19	14.52	22.58	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	6	5	18	14	10	5	62	4.32	1.61	8
%	6.45	9.68	8.06	29.03	22.58	16.13	8.06	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	13	6	9	9	4	3	62	3.03	1.87	24
%	29.03	20.97	9.68	14.52	14.52	6.45	4.84	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	5	8	24	15	4	2	62	3.98	1.36	13
%	6.45	8.06	12.90	38.71	24.19	6.45	3.23	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	14	8	10	16	9	4	1	62	3.23	1.64	22
%	22.58	12.90	16.13	25.81	14.52	6.45	1.61	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	13	10	11	12	4	4	62	3.55	1.74	18
%	12.90	20.97	16.13	17.74	19.35	6.45	6.45	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	7	7	17	15	5	8	62	3.69	1.64	17
%	4.84	11.29	11.29	27.42	24.19	8.06	12.90	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	6	9	18	17	5	2	62	3.95	1.48	15
%	8.06	9.68	14.52	29.03	27.42	8.06	3.23	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	1	1	11	17	17	12	62	2.79	1.48	25
%	4.84	1.61	1.61	17.74	27.42	27.42	19.35	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	7	4	5	12	10	10	14	62	4.61	1.97	7

%	11.29	6.45	8.06	19.35	16.13	16.13	22.58	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	3	4	11	15	13	13	62	4.98	1.65	2
%	4.84	4.84	6.45	17.74	24.19	20.97	20.97	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	6	14	14	6	16	62	4.87	1.69	5
%	3.23	6.45	9.68	22.58	22.58	9.68	25.81	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	11	14	6	12	13	4	2	62	3.35	1.73	20
%	17.74	22.58	9.68	19.35	20.97	6.45	3.23	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	12	4	13	13	3	1	62	3.13	1.73	23
%	25.81	19.35	6.45	20.97	20.97	4.84	1.61	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	19	13	5	16	9	0	0	62	2.73	1.50	26
%	30.64	20.97	8.06	25.81	14.52	0	0	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	6	16	21	11	4	62	4.63	1.33	6
%	3.23	3.23	9.68	25.81	33.87	17.74	6.45	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	6	11	19	20	4	0	62	3.98	1.21	13
%	3.23	9.68	17.74	30.64	32.26	6.45	0	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	6	5	20	16	7	3	62	4.11	1.54	11
%	8.06	9.68	8.06	32.26	25.81	11.29	4.84	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	9	5	15	10	3	4	62	3.31	1.87	21
%	25.81	14.52	8.06	24.19	16.13	4.84	6.45	100			

*f= frequency, #= ranking by mean score

5.2.6.5 case D (a post about Alzheimer's disease from a doctor, presented with professional written language with 20 positive reactions (like, love, laugh), 2 shares, and 20 comments)

As in the fourth case, 60 participants were randomly assigned to read a Facebook post from a doctor about Alzheimer with 20 likes and 2 shares. They reported medium frequency of using heuristics in credibility judgment of health information on Facebook. ($\bar{x} = 4.15$, S.D.= 0.90).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on source's authority, and bias-free and commercial intention message cues the most. Comparing the average mean score among items, item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' received the highest mean score of 5.42 (S.D. = 1.29). 73.34% of the participants reported that they referred to this authority heuristic cue at the high frequency, while 20% of them reported that sometimes they used this cue. 6.67 % of the participants reported that they referred to this cue less frequent.

The second highest mean score was given to item no. 18 stating that 'I make a credibility judgment by considering whether the information itself is bias free' with the score of 5.28 (S.D. = 1.37). 68.33% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 26.67% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 17 stating that 'I make a credibility judgment by considering whether the information seems to have a commercial purpose' at the score of 5.10 (S.D. = 1.68). 68.33% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 21.67% of participants reported using this cue at the medium frequency.

Table 20: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case D

Use of heuristics in credibility judgment $\bar{x} = 4.15$ S.D. = 0.90 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	7	3	10	17	13	9	1	60	3.95	1.56	16
%	11.67	5.00	16.67	28.33	21.67	15.00	1.67	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	6	5	17	11	7	1	60	3.53	1.75	20
%	21.67	10.00	8.33	28.33	18.33	11.67	1.67	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	4	19	4	12	7	60	4.75	1.43	6
%	3.33	3.33	6.67	31.67	23.33	20.00	11.67	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	3	12	16	11	8	6	60	4.25	1.61	13
%	6.67	5.00	20.00	26.67	18.33	13.33	10.00	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	3	8	15	13	12	4	60	4.33	1.62	12
%	8.33	5.00	13.33	25.00	21.67	20.00	6.67	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	1	3	12	13	16	15	60	5.42	1.29	1
%	0	1.67	5.00	20.00	21.67	26.67	25.00	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	3	7	17	17	8	6	60	4.53	1.44	9
%	3.33	5.00	11.67	28.33	28.33	13.33	10.00	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	1	2	4	16	13	15	9	60	4.98	1.41	4
%	1.67	3.33	6.67	26.67	21.67	25.00	15.00	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	6	2	21	13	9	6	60	4.43	1.57	10
%	5.00	10.00	3.33	35.00	21.67	15.00	10.00	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	7	3	16	8	5	3	60	3.27	1.91	24
%	30.00	11.67	5.00	26.67	13.33	8.33	5.00	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	9	6	4	16	12	9	4	60	3.98	1.81	15
%	15.00	10.00	6.67	26.67	20.00	15.00	6.67	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	10	4	17	11	4	2	60	3.42	1.73	22
%	20.00	16.67	6.67	28.33	18.33	6.67	3.33	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	5	1	15	15	10	2	60	3.90	1.85	17
%	20.00	8.33	1.67	25.00	25.00	16.67	3.33	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	6	2	21	12	9	8	60	3.43	1.57	21
%	3.33	10.00	3.33	35.00	20.00	15.00	13.33	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	7	9	16	13	9	4	60	4.23	1.52	14
%	3.33	11.67	15.00	26.67	21.67	15.00	6.67	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	0	2	18	15	18	7	60	2.83	1.09	26
%	0	0	3.33	30.00	25.00	30.00	11.67	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	5	0	1	13	15	11	15	60	5.10	1.68	3
%	8.33	0	1.67	21.67	25.00	18.33	25.00	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	1	1	16	13	14	14	60	5.28	1.37	2
%	1.67	1.67	1.67	26.67	21.67	23.33	23.33	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	1	0	17	13	12	11	60	4.83	1.73	5
%	10.00	1.67	0	28.33	21.67	20.00	18.33	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	14	4	5	15	16	4	2	60	3.58	1.78	19
%	23.33	6.67	8.33	25.00	26.67	6.67	3.33	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	4	7	14	12	5	2	60	3.42	1.83	22
%	26.67	6.67	11.67	23.33	20.00	8.33	3.33	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	22	8	7	7	10	4	2	60	2.92	1.89	25
%	36.67	13.33	11.67	11.67	16.67	6.67	3.33	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	4	1	22	17	7	8	60	4.72	1.38	7
%	1.67	6.67	1.67	36.67	28.33	11.67	13.33	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	9	18	18	6	5	60	4.43	1.37	10
%	3.33	3.33	15.00	30.00	30.00	10.00	8.33	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	4	4	14	17	13	5	60	4.62	1.53	8
%	5.00	6.67	6.67	23.33	28.33	21.67	8.33	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	5	6	11	14	6	5	60	3.77	1.94	18
%	21.67	8.33	10.00	18.33	23.33	10.00	8.33	100			

*f= frequency, #= ranking by mean score

5.2.6.6 case E (a post about muscle soreness from a friend, presented with informal language and some grammatical error, attached with 500 positive reactions (like, love, laugh), 300 shares, and 20 comments)

54 participants were randomly assigned to read a Facebook post from a friend about muscle soreness with 500 likes and 300 shares. They reported being 'neutral' in average of all statement reflecting their credibility judgment ($\bar{x} = 3.88$, S.D.= 0.96).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on commercial intention cue, source's authority cue and bias free message cue the most. Comparing the average mean score among items, item no.17 stating that 'I make a credibility judgment by considering whether the information seems to have a commercial purpose' received the highest mean score of 5.33 (S.D. = 1.79). 77.78% of the participants reported that they referred to this persuasive intense heuristic cue at the high frequency, while 3.70% of them reported that sometimes they used this cue. 11.11 % of the participants reported that they referred to this cue less frequent.

The second highest mean score was given to item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' at the score of 5.15 (S.D. = 1.53). 66.67% of participants showed high frequency of using this authority heuristic cue. At the same time, 20.37% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 18 stating that 'I make a credibility judgment by considering whether the information itself is bias free' with the score of 5.00 (S.D. = 1.66). 62.96% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 16.67% of participants reported using this cue at the medium frequency.

Table 21: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case E

Use of heuristics in credibility judgment $\bar{x} = 3.88$ S.D. = 0.96 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	13	12	6	15	4	4	0	54	2.94	1.57	21
%	24.07	22.22	11.11	27.78	7.41	7.41	0	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	11	11	10	5	2	3	54	3.06	1.71	20
%	22.22	20.37	20.37	18.52	9.26	3.70	5.56	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	5	4	8	16	9	8	54	4.59	1.76	7
%	7.41	9.26	7.41	14.81	29.63	16.67	14.81	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	4	4	12	19	7	4	54	4.39	1.57	10
%	7.41	7.41	7.41	22.22	35.19	12.96	7.41	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	3	8	12	12	7	8	54	4.44	1.72	8
%	7.41	5.56	14.81	22.22	22.22	12.96	14.81	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	3	3	11	9	16	11	54	5.15	1.53	2
%	1.85	5.56	5.56	20.37	16.67	29.63	20.37	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	8	4	16	14	3	3	54	3.83	1.63	14
%	11.11	14.81	7.41	29.63	25.93	5.56	5.56	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	2	2	3	14	14	12	7	54	4.85	1.47	4
%	3.70	3.70	5.56	25.93	25.93	22.22	12.96	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	3	4	16	13	9	5	54	4.44	1.60	8
%	7.41	5.56	7.41	29.63	24.07	16.67	9.26	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	21	7	4	11	3	7	1	54	2.87	1.90	22
%	38.39	12.96	7.41	20.37	5.56	12.96	1.85	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	9	7	5	15	9	7	2	54	3.69	1.76	15
%	16.67	12.96	9.26	27.78	16.67	12.96	3.70	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	8	8	12	7	4	3	54	3.33	1.81	18
%	22.22	14.81	14.81	22.22	12.96	7.41	5.56	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	6	8	11	9	7	0	54	3.33	1.75	18
%	24.07	11.11	14.81	20.37	16.67	12.96	0	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	5	5	9	12	14	4	54	3.59	1.76	16
%	9.26	9.26	9.26	16.67	22.22	25.93	7.41	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	5	6	10	13	11	1	54	3.96	1.76	13
%	14.81	9.26	11.11	18.52	24.07	20.37	1.85	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	2	5	6	7	26	7	54	2.74	1.44	24
%	1.85	3.70	9.26	11.11	12.96	48.15	12.96	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	4	1	5	2	9	17	16	54	5.33	1.79	1
%	7.41	1.85	9.26	3.70	16.67	31.48	29.63	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	7	9	8	15	11	54	5.00	1.66	3
%	3.70	3.70	12.96	16.67	14.81	27.78	20.37	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	1	8	6	9	13	12	54	4.85	1.88	4
%	9.26	1.85	14.81	11.11	16.67	24.07	22.22	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	19	8	11	9	2	4	1	54	2.69	1.67	25
%	35.19	14.81	20.37	16.67	3.70	7.41	1.85	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	19	12	4	8	4	5	2	54	2.80	1.88	23
%	35.19	22.22	7.41	14.81	7.41	9.26	3.70	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	26	11	6	6	2	2	1	54	2.20	1.56	26
%	48.15	20.37	11.11	11.11	3.70	3.70	1.85	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	3	5	12	13	10	8	54	4.69	1.65	6
%	5.56	5.56	9.26	22.22	24.07	18.52	14.81	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	6	5	11	16	8	2	54	4.06	1.68	12
%	11.11	11.11	9.26	20.37	29.63	14.81	3.70	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	3	8	14	10	9	6	54	4.37	1.67	11
%	7.41	5.56	14.81	25.93	18.52	16.67	11.11	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	5	5	11	10	8	2	54	3.59	1.91	16
%	24.07	9.26	9.26	20.37	18.52	14.81	3.70	100			

*f= frequency, #= ranking by mean score

5.2.6.7 case F (a post about muscle soreness from a friend, presented with informal language and some grammatical error, attached with 20 positive reactions (like, love, laugh), 2 shares, and 20 comments)

In the sixth case, 61 participants were randomly assigned to read a Facebook post from a friend about muscle soreness with 20 likes and 2 shares. They reported being 'neutral' in average of all statement reflecting their credibility judgment ($\bar{x} = 3.71$, S.D.= 1.04).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on bias free message cue, source's authority cue and source's expertise cue the most. Comparing the average mean score among items, item no.18 'I make a credibility judgment by considering whether the information itself is bias free' received the highest mean score of 5.07 (S.D. = 1.74). 65.57% of the participants reported that they referred to this persuasive intense heuristic cue at the high frequency, while 16.39% of them reported that sometimes they used this cue. 13.12 % of the participants reported that they referred to this cue less frequent.

The second highest mean score was given to item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' at the score of 5.02 (S.D. = 1.84). 70.49% of participants showed high frequency of using this authority heuristic cue. At the same time, 13.11% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 8 stating that 'I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise' with the score of 4.84 (S.D. = 1.80). 68.85% of participants showed high frequency of using this authority heuristic cue. At the same time, 11.47% of participants reported using this cue at the medium frequency.

Table 22: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case F

Use of heuristics in credibility judgment $\bar{x} = 3.71$ S.D. = 1.04 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	22	11	8	10	6	4	0	61	2.66	1.64	24
%	36.07	18.03	13.11	16.39	9.84	6.56	0	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	19	12	6	10	7	3	4	61	2.98	1.90	19
%	31.15	19.67	9.84	16.39	11.47	4.92	6.56	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	4	6	13	11	12	9	61	4.49	1.83	6
%	9.84	6.56	9.84	21.31	18.03	19.67	14.75	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	11	5	7	15	12	7	4	61	3.80	1.82	13
%	18.03	8.20	11.47	24.59	19.67	11.47	6.56	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	10	2	6	14	13	12	4	61	4.15	1.82	9
%	16.39	3.28	9.84	22.95	21.31	19.67	6.56	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	2	2	8	15	13	15	61	5.02	1.84	2
%	9.84	3.28	3.28	13.11	24.59	21.31	24.59	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	10	6	5	10	21	7	2	61	3.90	1.76	11
%	16.39	9.84	8.20	16.39	34.43	11.47	3.28	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	6	3	3	7	15	18	9	61	4.84	1.80	3
%	9.84	4.92	4.92	11.47	24.59	29.51	14.75	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	4	10	6	16	8	5	61	3.89	1.94	12
%	19.67	6.56	16.39	9.84	26.23	13.11	8.20	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	26	7	5	9	8	4	2	61	2.77	1.90	21
%	42.62	11.47	8.20	14.75	13.11	6.56	3.28	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	12	9	4	17	10	8	1	61	3.52	1.76	16
%	19.67	14.75	6.56	27.87	16.39	13.11	1.64	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	24	6	7	16	6	0	2	61	2.70	1.68	23
%	39.34	9.84	11.47	26.23	9.84	0	3.28	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	22	6	7	8	11	4	3	61	3.07	1.96	18
%	36.07	9.84	11.47	13.11	18.03	6.56	4.92	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	9	3	8	9	11	17	4	61	3.74	1.88	14
%	14.75	4.92	13.11	14.75	18.03	27.87	6.56	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	3	7	15	16	4	3	61	3.69	1.78	15
%	21.31	4.92	11.47	24.59	26.23	6.56	4.92	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	2	2	8	10	20	15	61	2.74	1.70	22
%	6.56	3.28	3.28	13.11	16.39	32.79	24.59	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	7	6	4	5	8	14	17	61	4.82	2.11	4
%	11.47	9.84	6.56	8.20	13.11	22.95	27.87	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	3	5	10	11	13	16	61	5.07	1.74	1
%	4.92	4.92	8.20	16.39	18.03	21.31	26.23	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	3	3	12	7	11	17	61	4.77	2.06	5
%	13.11	4.92	4.92	19.67	11.47	18.03	27.87	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	25	10	4	12	4	6	0	61	2.64	1.75	25
%	40.98	16.39	6.56	19.67	6.56	9.84	0	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	24	9	5	7	6	8	2	61	2.90	2.00	20
%	39.34	14.75	8.20	11.47	9.84	13.11	3.28	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	30	8	4	10	4	4	1	61	2.44	1.77	26
%	49.18	13.11	6.56	16.39	6.56	6.56	1.64	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	3	6	16	18	10	3	61	4.33	1.54	7
%	8.20	4.92	9.84	26.23	29.51	16.39	4.92	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	9	5	5	17	12	10	3	61	3.98	1.76	10
%	14.75	8.20	8.20	27.87	19.67	16.39	4.92	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	9	4	16	10	12	5	61	4.20	1.76	8
%	8.20	14.75	6.56	26.23	16.39	19.67	8.20	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	8	3	12	10	5	5	61	3.38	2.03	17
%	29.51	13.11	4.92	19.67	16.39	8.20	8.20	100			

*f= frequency, #= ranking by mean score

5.2.6.8 case G (a post about Alzheimer's disease from a friend, presented with informal language, some grammatical error and a tie-in product or service, attached with 500 positive reactions (like, love, laugh), 300 shares, and 20 comments)

As in the seventh case, 61 participants were randomly assigned to read a Facebook post from a friend about Alzheimer with 500 likes and 300 shares. They reported being 'neutral' in average of all statement reflecting their credibility judgment ($\bar{x} = 3.68$, S.D.= 0.89).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on bias free message cue, source's authority cue and commercial intention message cue the most. Comparing the average mean score among items, item no.18 'I make a credibility judgment by considering whether the information itself is bias free' received the highest mean score of 5.05 (S.D. = 1.53). 63.93% of the participants reported that they referred to this persuasive intense heuristic cue at the high frequency, while 18.03% of them reported that sometimes they used this cue. 16.39 % of the participants reported that they referred to this cue less frequent.

The second highest mean score was given to item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' at the score of 4.97 (S.D. = 1.67). 63.93% of participants showed high frequency of using this authority heuristic cue. At the same time, 16.39% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 17 stating that 'I make a credibility judgment by considering whether the information seems to have a commercial purpose' with the score of 4.75 (S.D. = 1.79). 57.37% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 18.03% of participants reported using this cue at the medium frequency.

Table 23: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case G

Use of heuristics in credibility judgment $\bar{x} = 3.68$ S.D. = 0.89 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	8	11	16	18	7	0	1	61	3.15	1.31	19
%	13.11	18.03	26.23	29.51	11.48	0	1.64	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	8	12	12	6	1	4	61	2.98	1.77	20
%	29.51	13.11	19.67	19.67	9.84	1.64	6.56	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	6	9	11	13	6	13	61	4.56	1.80	5
%	4.92	9.84	14.75	18.03	21.31	9.84	21.31	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	8	12	12	13	6	2	61	3.66	1.65	14
%	13.11	13.11	19.67	19.67	21.31	9.84	3.28	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	8	9	16	12	10	3	61	4.11	1.56	8
%	4.92	13.11	14.75	26.23	19.67	16.39	4.92	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	2	7	10	11	16	12	61	4.97	1.67	2
%	4.92	3.28	11.48	16.39	18.03	26.23	19.67	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	5	15	18	9	7	4	61	4.02	1.50	10
%	4.92	8.20	24.59	29.51	14.75	11.48	6.56	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	2	9	8	13	14	7	8	61	4.33	1.68	6
%	3.28	14.75	13.11	21.31	22.95	11.48	13.11	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	7	8	11	10	12	5	61	4.05	1.87	9
%	13.11	11.48	13.11	18.03	16.39	19.67	8.20	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	25	8	6	12	6	2	2	61	2.67	1.77	17
%	40.98	13.11	9.84	19.67	9.84	3.28	3.28	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	10	15	7	11	11	6	1	61	3.33	1.70	17
%	16.39	24.59	11.48	18.03	18.03	9.84	1.64	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	8	11	13	9	2	0	61	2.89	1.56	21
%	29.51	13.11	18.03	21.31	14.75	3.28	0	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	12	10	7	13	6	0	61	3.21	1.70	18
%	21.31	19.67	16.39	11.48	21.31	9.84	0	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	4	8	15	16	10	6	61	3.46	1.50	15
%	3.28	6.56	13.11	24.59	26.23	16.39	9.84	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	9	7	16	15	7	2	61	3.92	1.57	11
%	8.20	14.75	11.48	26.23	24.59	11.48	3.28	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	3	4	15	11	16	12	61	2.87	1.42	22
%	0	4.92	6.56	24.59	18.03	26.23	19.67	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	3	5	7	11	11	11	13	61	4.75	1.79	3
%	4.92	8.20	11.48	18.03	18.03	18.03	21.31	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	1	2	8	11	11	16	12	61	5.05	1.53	1
%	1.64	3.28	13.11	18.03	18.03	26.23	19.67	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	2	8	14	13	8	11	61	4.57	1.76	4
%	8.20	3.28	13.11	22.95	21.31	13.11	18.03	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	20	10	7	12	8	3	1	61	2.85	1.71	23
%	32.79	16.39	11.48	19.67	13.11	4.92	1.64	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	20	12	8	9	8	3	1	61	2.77	1.70	24
%	32.79	19.67	13.11	14.75	13.11	4.92	1.64	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	28	9	8	9	4	3	0	61	2.36	1.57	26
%	45.90	14.75	13.11	14.75	6.56	4.92	0	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	5	13	12	15	11	3	61	4.28	1.48	7
%	3.28	8.20	21.31	19.67	24.59	18.03	4.92	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	11	11	16	10	9	1	61	3.82	1.50	12
%	4.92	18.03	18.03	26.23	16.39	14.75	1.64	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	9	11	10	13	6	4	61	3.74	1.77	13
%	13.11	14.75	18.03	16.39	21.31	9.84	6.56	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	18	6	8	10	9	5	5	61	3.34	2.01	16
%	29.51	9.84	13.11	16.39	14.75	8.20	8.20	100			

*f= frequency, #= ranking by mean score

5.2.6.9 case H (a post about Alzheimer's disease from a friend, presented with informal language, some grammatical error, and a tie-in product or service, attached with 20 positive reactions (like, love, laugh), 2 shares, and 20 comments)

As in the eighth case, 61 participants were randomly assigned to read a Facebook post from a doctor about Alzheimer with 20 likes and 2 shares. They reported being 'neutral' in average of all statement reflecting their credibility judgment ($\bar{x} = 3.96$, S.D.= 0.89).

The statistic evidences revealed that when making credibility judgment of health information on Facebook participants relied on bias free message cue, source's authority cue and commercial intention message cue the most. Comparing the average mean score among items, item no.18 'I make a credibility judgment by considering whether the information itself is bias free' received the highest mean score of 5.36 (S.D. = 1.34). 62.29% of the participants reported that they referred to this persuasive intense heuristic cue at the high frequency, while 32.79% of them reported that sometimes they used this cue. 4.92 % of the participants reported that they referred to this cue less frequent.

The second highest mean score was given to item no.6 stating that 'I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health' at the score of 5.21 (S.D. = 1.64). 70.49% of participants showed high frequency of using this authority heuristic cue. At the same time, 18.03% of participants reported using this cue at the medium frequency.

The third highest mean score was given to item no. 17 stating that 'I make a credibility judgment by considering whether the information seems to have a commercial purpose' with the score of 5.20 (S.D. = 1.72). 67.21% of participants showed high frequency of using this persuasive intense heuristic cue. At the same time, 22.95% of participants reported using this cue at the medium frequency.

Table 24: Frequency, percentage distribution, and average mean score of all participants' use of heuristics in credibility judgment by item of case H

Use of heuristics in credibility judgment $\bar{x} = 3.96$ S.D. = 0.89 (medium level of use of heuristics in credibility judgment)											
Item 1: I think the information is credible											
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	Total	\bar{x}	S.D.	#
f	10	10	9	19	9	1	3	61	3.36	1.60	19
%	16.39	16.39	14.75	31.15	14.75	1.64	4.92	100			
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	10	8	13	11	1	2	61	3.07	1.69	22
%	26.23	16.39	13.11	21.31	18.03	1.64	3.28	100			
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	2	7	13	17	7	11	61	4.67	1.67	6
%	6.56	3.28	11.48	21.31	27.87	11.48	18.03	100			
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	5	6	19	9	11	6	61	4.30	1.70	14
%	8.20	8.20	9.84	31.15	14.75	18.03	9.84	100			
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	7	5	14	13	9	9	61	4.44	1.77	10
%	6.56	11.48	8.20	22.95	21.31	14.75	14.75	100			
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in the field of health.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	3	1	11	10	19	14	61	5.21	1.64	2
%	4.92	4.92	1.64	18.03	16.39	31.15	22.95	100			
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	4	5	20	13	8	6	61	4.31	1.63	12
%	8.20	6.56	8.20	32.79	21.31	13.11	9.84	100			
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#

f	3	3	3	12	16	14	10	61	4.92	1.59	5
%	4.92	4.92	4.92	19.67	26.23	22.95	16.39	100			
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	4	5	5	19	15	8	5	61	4.31	1.57	12
%	6.56	8.20	8.20	31.15	24.59	13.11	8.20	100			
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	15	12	11	15	5	1	2	61	2.90	1.57	25
%	24.59	19.67	18.03	24.59	8.20	1.64	3.28	100			
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	10	9	8	22	7	2	3	61	3.41	1.61	18
%	16.39	14.75	13.11	36.07	11.48	3.28	4.92	100			
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	8	10	17	5	4	1	61	3.05	1.64	23
%	26.23	13.11	16.39	27.87	8.20	6.56	1.64	100			
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	13	5	14	12	13	2	2	61	3.34	1.65	20
%	21.31	8.20	22.95	19.67	21.31	3.28	3.28	100			
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	7	3	5	13	12	14	7	61	3.52	1.81	17
%	11.48	4.92	8.20	21.31	19.67	22.95	11.48	100			
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	8	2	11	20	10	7	3	61	3.90	1.61	15
%	13.11	3.28	18.03	32.79	16.39	11.48	4.92	100			
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	2	2	2	14	14	15	12	61	2.89	1.50	26
%	3.28	3.28	3.28	22.95	22.95	24.59	19.67	100			
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.											

	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	5	0	1	14	10	14	17	61	5.20	1.72	3
%	8.20	0	1.64	22.95	16.39	22.95	27.87	100			
Item 18: I make a credibility judgment by considering whether the information itself is bias free.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	0	0	3	20	8	12	18	61	5.36	1.34	1
%	0	0	4.92	32.79	13.11	19.67	29.51	100			
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	1	3	16	12	11	15	61	5.07	1.61	4
%	4.92	1.64	4.92	26.23	19.67	18.03	24.59	100			
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	16	6	4	22	6	4	3	61	3.33	1.80	21
%	26.23	9.84	6.56	36.07	9.84	6.56	4.92	100			
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	17	11	9	16	3	1	4	61	2.93	1.73	24
%	27.87	18.03	14.75	26.23	4.92	1.64	6.56	100			
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	25	12	6	13	1	2	2	61	2.46	1.64	9
%	40.98	19.67	9.84	21.31	1.64	3.28	3.28	100			
Item 23: I make a credibility judgment based on what I have already learned in school.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	2	3	24	10	12	7	61	4.64	1.49	7
%	4.92	3.28	4.92	39.34	16.39	19.67	11.48	100			
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	6	2	6	19	14	8	6	61	4.33	1.64	11
%	9.84	3.28	9.84	31.15	22.95	13.11	9.84	100			
Item 25: I make a credibility judgment by considering whether it is presented professionally.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	3	3	3	24	14	9	5	61	4.48	1.43	8
%	4.92	4.92	4.92	39.34	22.95	14.75	8.20	100			
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspelling or wrong grammar.											
	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	Total	\bar{x}	S.D.	#
f	14	6	5	15	10	7	4	61	3.62	1.92	16
%	22.95	9.84	8.20	24.59	16.39	11.48	6.56	100			

*f= frequency, #= ranking by mean score

5.2.6.9 comparing mean and S.D. by case

The statistic figures revealed that participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) relied on the heuristic cues the most when making credibility judgment of that post ($\bar{x} = 4.15$, S.D.=0.90), followed by those who read a Facebook post about a less serious health issue by a doctor with less number of interaction ($\bar{x} = 4.09$, S.D.=0.89), those who read a Facebook post about a more serious health issue by a doctor with more number of interaction ($\bar{x} = 3.97$, S.D.=0.80), respectively.

When asking about the credibility of health information they read (item 1), regardless of different cases participants were assigned, participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) rated the highest mean score ($\bar{x} = 3.95$, S.D.=1.56), followed by those who read a Facebook post about a more serious health issue by a doctor with more number of interaction (case C) with the score of $\bar{x} = 3.89$ (S.D.=1.60), those who read a Facebook post about a less serious health issue by a doctor with less number of interaction (case B) with the score of $\bar{x} = 3.79$ (S.D.=1.54), and those who read a Facebook post about a less serious health issue by a doctor with more number of interaction (case A) with the score of $\bar{x} = 3.53$ (S.D.=1.65), respectively. It came to the conclusion that participants read a Facebook post from a doctor found the post more credible than the post from a friend.

If comparing all items concerning source of the information (item 2-9), the statement saying ‘I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health’ (item 6), representing authority heuristic cue, received the highest mean score ($\bar{x} = 5.12$, S.D.=1.60).

Participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) rated the highest mean score at 5.42 (S.D.=1.29), followed by those who read a Facebook post about a more serious health issue by a doctor with more number of interaction (case C) with the score of $\bar{x} = 5.31$

(S.D.=1.61), those who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) with the score of $\bar{x} = 5.21$ (S.D.=1.64), and those who read a Facebook post about a less serious health issue by a friend with more number of interaction (case E) with the score of $\bar{x} = 5.15$ (S.D.=1.53), respectively.

The second highest mean score of these questions was item 8, which stated that 'I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise' with the score of 4.80 (S.D. = 1.61). Participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) rated the highest mean score at 4.98 (S.D.=1.41), followed by those who read a Facebook post about a more serious health issue by a doctor with more number of interaction (case C) at the score of 4.95 (S.D.=1.61), those who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) at the score of 4.92 (S.D.=1.59), and those who read a Facebook post about a less serious health issue by a friend with more number of interaction (case E) at the score of 4.85 (S.D.=1.47), respectively.

If comparing all items concerning peer's feedback, reaction and interaction toward the information on the post (item 10-12 and 15), the statement saying that 'I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing' (item 15) received the highest mean score at 3.97 (S.D.=1.58). However, it was interpreted that participants 'sometimes' performed this action. Participants who read a Facebook post about a less serious health issue by a doctor with less number of interaction (case B) rated the highest mean score at 4.30 (S.D.=1.42), followed by those who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) at the score of 4.23 (S.D.=1.52), those who read a Facebook post about a less serious health issue by a friend with more number of interaction (case E) at the score of 3.96 (S.D.=1.76), and those who read a Facebook post about a more serious health issue by a doctor with more number of interaction (case C) at the score of 3.95 (S.D.=1.48), respectively.

The second highest mean score of these questions was item 11 stating that ‘I wish I could read the comments on this post. Agreeing comments will help confirm the post’s credibility’. The item received the score of 3.70 (S.D. = 1.65). Participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) rated the highest mean score at 3.98 (S.D.=1.81), which was the same as those who read a Facebook post about a more serious health issue by a doctor with more number of interaction (case C) (S.D.=1.36), followed by those who read a Facebook post about a less serious health issue by a doctor with less number of interaction (case B) at the score of 3.93 (S.D.=1.49), and those who read a Facebook post about a less serious health issue by a doctor with more number of interaction (case A) at the score of 3.72 (S.D.=1.63), respectively.

If comparing all items concerning message’s intention (item 17-19), the statement saying that ‘I make a credibility judgment by considering whether the information itself is bias free’ (item 18) received the highest mean score at 5.11 (S.D.=1.48). Participants who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) rated the highest mean score at 5.36 (S.D.=1.34), followed by those who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) at the score of 5.28 (S.D.=1.37), those who read a Facebook post about a less serious health issue by a doctor with more number of interaction (case A) at the score of 5.15 (S.D.=1.34), and those who read a Facebook post about a less serious health issue by a friend with less number of interaction (case F) at the score of 5.07 (S.D.=1.74), respectively.

The second highest mean score was item 17 stating that ‘I make a credibility judgment by considering whether the information seems to have a commercial purpose’. The mean score was 4.93 (S.D.=1.81). Participants who read a Facebook post about a less serious health issue by a friend with more number of interaction (case E) rated this item the highest mean score at 5.33 (S.D.=1.79), followed by those who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) at the score of 5.20 (S.D.=1.72), those who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) at the score of 5.10 (S.D.=1.68), and those who read a

Facebook post about a less serious health issue by a doctor with more number of interaction (case A) at the score of 5.00 (S.D.=1.56), respectively.

If comparing all items concerning message's presentation and language use (item 25 and 26), the statement saying that 'I make a credibility judgment by considering whether it is presented professionally' (item 25) received the highest mean score at 4.28 (S.D.=1.59). Participants who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) rated the highest mean score at 4.62 (S.D.=1.53), followed by those who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) at the score of 4.48 (S.D.=1.43), those who read a Facebook post about a less serious health issue by a doctor with more number of interaction (case A) at the score of 4.42 (S.D.=1.66), and those who read a Facebook post about a less serious health issue by a friend with more number of interaction (case E) at the score of 4.37 (S.D.= 1.67).

In the meantime, the statement saying that 'I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspellings or wrong grammar' (item 26) received the mean score at 3.62 (S.D.= 1.91). Participants who read a Facebook post about a less serious health issue by a doctor with less number of interaction (case B) rated the highest mean score at 4.26 (S.D.=1.54), followed by those who encountered a Facebook post about a more serious health issue by a doctor with less number of interaction (case D) at the score of 3.77 (S.D.=1.94), those who read a Facebook post about a less serious health issue by a doctor with more number of interaction (case A) at the score of 3.68 (S.D.=1.99), and those who encountered a Facebook post about a more serious health issue by a friend with less number of interaction (case H) at the score of 3.62 (S.D.=1.92), respectively.

Table 25: Comparison of mean scores by items and by cases

Uses of heuristics in credibility judgment									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.95	4.09	3.97	4.15	3.88	3.71	3.68	3.96	3.92
S.D.	0.87	0.89	0.80	0.90	0.96	1.04	0.89	0.89	0.91
Item 1: I think the information is credible.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.53	3.79	3.89	3.95	2.94	2.66	3.15	3.36	3.41
S.D.	1.65	1.54	1.60	1.56	1.57	1.64	1.31	0.60	1.61
Ranking	19	18	16	16	21	24	19	18	19
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.62	3.64	3.50	3.53	3.06	2.98	2.98	3.07	3.30
S.D.	1.70	1.65	1.68	1.75	1.71	1.90	1.77	1.69	1.74
Ranking	20	19	19	20	20	19	20	21	20
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.62	4.84	4.89	4.75	4.59	4.49	4.56	4.67	4.68
S.D.	1.72	1.54	1.55	1.43	1.76	1.83	1.80	1.67	1.66
Ranking	5	2	4	6	7	6	5	6	6
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.38	4.07	4.11	4.25	4.39	3.80	3.66	4.30	4.11
S.D.	1.69	1.65	1.60	1.61	1.57	1.82	1.65	1.70	1.67
Ranking	10	15	11	13	10	13	14	13	13

Item 5: I make a credibility judgment by considering that the source is a renowned media organization.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.35	4.21	4.27	4.33	4.44	4.15	4.11	4.44	4.29
S.D.	1.74	1.62	1.65	1.62	1.72	1.82	1.56	1.77	1.68
Ranking	11	13	9	12	8	9	8	9	8
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	5.12	4.80	5.31	5.42	5.15	5.02	4.97	5.21	5.12
S.D.	1.53	1.63	1.61	1.29	1.53	1.84	1.67	1.64	1.60
Ranking	2	3	1	1	2	2	2	2	1
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.17	4.31	4.13	4.53	3.83	3.90	4.02	4.31	4.15
S.D.	1.72	1.52	1.61	1.44	1.63	1.76	1.50	1.63	1.61
Ranking	12	9	10	9	14	11	10	11	11
Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.75	4.79	4.95	4.98	4.85	4.84	4.33	4.92	4.80
S.D.	1.68	1.56	1.61	1.41	1.47	1.80	1.68	1.59	1.61
Ranking	4	4	3	4	4	3	6	5	4
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.43	4.11	4.32	4.43	4.44	3.89	4.05	4.31	4.25
S.D.	1.69	1.50	1.61	1.57	1.60	1.94	1.87	1.57	1.67

Ranking	8	14	8	10	8	12	9	11	10
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	2.87	3.31	3.03	3.27	2.87	2.77	2.67	2.90	2.96
S.D.	1.68	1.81	1.87	1.91	1.90	1.90	1.77	1.57	1.80
Ranking	25	24	24	24	22	21	25	24	24
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.72	3.93	3.98	3.98	3.69	3.52	3.33	3.41	3.70
S.D.	1.63	1.49	1.36	1.81	1.76	1.76	1.70	1.61	1.65
Ranking	15	16	13	15	15	16	17	17	15
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.20	3.49	3.23	3.42	3.33	2.70	2.89	3.05	3.16
S.D.	1.74	1.71	1.64	1.73	1.81	1.68	1.56	1.64	1.70
Ranking	21	21	22	22	18	23	21	22	21
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.63	3.87	3.55	3.90	3.33	3.07	3.21	3.34	3.49
S.D.	1.58	1.60	1.74	1.85	1.75	1.96	1.70	1.65	1.74
Ranking	17	17	18	17	18	18	18	19	18
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.35	3.42	3.69	3.43	3.59	3.74	3.46	3.52	3.53

S.D.	1.54	1.44	1.64	1.56	1.76	1.88	1.50	1.81	1.64
Ranking	20	23	17	21	16	14	15	16	17
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.83	4.30	3.95	4.23	3.96	3.69	3.92	3.90	3.97
S.D.	1.52	1.42	1.48	1.52	1.76	1.78	1.57	1.61	1.58
Ranking	14	10	15	14	13	15	11	14	14
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.10	3.08	2.79	2.83	2.74	2.74	2.87	2.89	2.88
S.D.	1.40	1.51	1.48	1.09	1.44	1.70	1.42	1.50	1.45
Ranking	22	26	25	26	24	22	22	25	25
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	5.00	4.69	4.61	5.10	5.33	4.82	4.75	5.20	4.93
S.D.	1.56	1.73	1.97	1.68	1.79	2.11	1.79	1.72	1.81
Ranking	3	6	7	3	1	4	3	3	3
Item 18: I make a credibility judgment by considering whether the information itself is bias free.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	5.15	4.97	4.98	5.28	5.00	5.07	5.05	5.36	5.11
S.D.	1.34	1.14	1.65	1.37	1.66	1.74	1.53	1.34	1.48
Ranking	1	1	2	2	3	1	1	1	2
Item 19: I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.62	4.70	4.87	4.83	4.85	4.77	4.57	5.07	4.79

S.D.	1.60	1.55	1.69	1.73	1.88	2.06	1.76	1.61	1.73
Ranking	5	5	5	5	4	5	4	4	5
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.08	3.59	3.35	3.58	2.69	2.64	2.85	3.32	3.15
S.D.	1.78	1.72	1.73	1.78	1.67	1.75	1.71	1.80	1.77
Ranking	24	20	20	19	25	25	23	20	22
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.10	3.44	3.13	3.42	2.80	2.90	2.77	2.93	3.06
S.D.	1.69	1.74	1.73	1.83	1.88	2.00	1.70	1.73	1.79
Ranking	22	22	23	22	23	20	24	23	23
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	2.38	3.15	2.73	2.92	2.20	2.44	2.36	2.46	2.59
S.D.	1.57	1.86	1.50	1.89	1.56	1.77	1.57	1.64	1.69
Ranking	26	25	26	25	26	26	26	26	26
Item 23: I make a credibility judgment based on what I have already learned in school.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.55	4.61	4.63	4.72	4.69	4.33	4.28	4.64	4.55
S.D.	1.31	1.43	1.33	1.38	1.65	1.54	1.48	1.49	1.45
Ranking	7	7	6	7	6	7	7	7	7
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.15	4.39	3.98	4.43	4.06	3.98	3.82	4.33	4.14

S.D.	1.49	1.40	1.21	1.37	1.68	1.76	1.50	1.64	1.51
Ranking	13	8	13	10	12	10	12	10	12
Item 25: I make a credibility judgment by considering whether it is presented professionally.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	4.42	4.30	4.11	4.62	4.37	4.20	3.74	4.48	4.28
S.D.	1.66	1.24	1.54	1.53	1.67	1.76	1.77	1.43	1.59
Ranking	9	10	11	8	11	8	13	8	9
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspellings or wrong grammar.									
	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H	Total
\bar{x}	3.68	4.26	3.31	3.77	3.59	3.38	3.34	3.62	3.62
S.D.	1.99	1.54	1.87	1.94	1.91	2.03	2.00	1.92	1.91
Ranking	16	12	21	18	16	17	16	15	16

5.2.6.10 comparing mean and S.D. by source and message manipulation

The empirical evidences suggested that participants who encountered a Facebook post by a doctor, regardless the health issues, relied on heuristic cues more than those who read a Facebook post from a friend. In the cases concerning muscle soreness, participants who read a Facebook post from a doctor rated their uses of heuristics in credibility judgment at the score of 4.02 (S.D. = 0.88), while those who read the post from a friend rated their uses of heuristics at the score of 3.79 (S.D. = 1.01). In the cases concerning Alzheimer's disease, participants who read a Facebook post from a doctor rated their uses of heuristics in credibility judgment at the score of 4.06 (S.D. = 0.85), while those who read the post from a friend rated their uses of heuristics at the score of 3.82 (S.D. = 0.90).

When asking to rate the post's credibility, regardless the health issues, participants rated the post from a doctor more credible than a post from a friend. In the cases concerning muscle soreness, participants who read a Facebook post from a doctor rated the post's credibility at the score of 3.66 (S.D. = 1.59), while those who read a post from a friend rated the credibility at the score of 2.79 (S.D. = 1.61). In the cases concerning Alzheimer's disease, participants who read a Facebook post from a

doctor rated the post's credibility at the score of 3.92 (S.D. = 1.57), while those who read the post from a friend rated the credibility at the score of 3.25 (S.D. = 1.46).

Comparing mean score in each item, the statistic figures presented that participants who read a health-related Facebook post, regardless of sources and message presentation, relied on many heuristic cues when making credibility judgment of that post almost similarly. For example, participants in all cases reported relying on *authority heuristic cue* (item 6), *persuasive intense heuristic cue* (item 18) as their top three heuristic cues. Additionally, participants in all cases rated their uses of *persuasive intense heuristic cues* (item 17, 19) as their top six heuristic cues. In term of *reputation heuristic cues*, they all relied on source's reputation in the health-related field (item 3) more than the renown media organization (item 5), and the reputation of source in non-health-related field (item 2). For *bandwagon heuristic cues*, participants in all cases reported triggering by comments they expected to read (item 11) more than previously seen the post shared by peers (item 12), and number of likes and shares (item 10). In term of other *expectancy violation heuristic cues*, they all rated the conformity with their prior knowledge from school (item 23) over the professional presentation (item 25), the conformity with their belief (item 24), and typographical and grammatical error (item 26), respectively.

Table 26: Comparison of mean scores by items and by source and message manipulations

Use of heuristics in credibility judgment	muscle soreness		Alzheimer's disease		Overall (n=480)
	doctor (n=121)	friend (n=115)	doctor (n=122)	friend (n=122)	
\bar{x}	4.02	3.79	4.06	3.82	3.92
S.D.	0.88	1.01	0.85	0.90	0.91
Item 1: I think the information is credible	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.66	2.79	3.92	3.25	3.41
S.D.	1.59	1.61	1.57	1.46	1.61
Ranking	18	23	16	19	19
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	

or organization is in a non-health-related field.					
\bar{x}	3.63	3.02	3.52	3.02	3.30
S.D.	1.67	1.81	1.71	1.73	1.74
Ranking	19	19	20	21	20
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.73	4.54	4.82	4.61	4.68
S.D.	1.63	1.79	1.49	1.73	1.66
Ranking	5	6	6	6	6
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.22	4.08	4.18	3.97	4.11
S.D.	1.67	1.73	1.60	1.70	1.67
Ranking	13	11	13	13	13
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.28	4.29	4.30	4.28	4.29
S.D.	1.67	1.78	1.63	1.67	1.68
Ranking	9	8	11	8	8
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.96	5.08	5.36	5.09	5.12
S.D.	1.58	1.70	1.45	1.66	1.60
Ranking	2	1	1	2	1
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.24	3.87	4.33	4.16	4.15
S.D.	1.62	1.69	1.54	1.57	1.61
Ranking	12	13	10	10	11

Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.77	4.84	4.97	4.62	4.80
S.D.	1.62	1.65	1.51	1.66	1.61
Ranking	4	4	3	5	4
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.27	4.15	4.38	4.18	4.25
S.D.	1.60	1.80	1.58	1.72	1.67
Ranking	10	10	8	9	10
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.09	2.82	3.15	2.79	2.96
S.D.	1.76	1.89	1.89	1.67	1.80
Ranking	24	22	24	25	24
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.83	3.60	3.98	3.37	3.70
S.D.	1.56	1.75	1.59	1.65	1.65
Ranking	16	16	15	17	15
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.35	3.00	3.32	2.97	3.16
S.D.	1.73	1.76	1.68	1.60	1.70
Ranking	21	20	22	22	21
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	

\bar{x}	3.75	3.19	3.72	3.28	3.49
S.D.	1.59	1.86	1.80	1.67	1.74
Ranking	17	18	17	18	18
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.39	3.67	3.57	3.50	3.53
S.D.	1.49	1.82	1.60	1.66	1.64
Ranking	20	15	18	15	17
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.07	3.82	4.09	3.91	3.97
S.D.	1.48	1.77	1.50	1.59	1.58
Ranking	14	14	14	14	14
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.09	2.74	2.81	2.88	2.88
S.D.	1.45	1.58	1.30	1.45	1.45
Ranking	24	24	26	23	25
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.84	5.06	4.85	4.98	4.93
S.D.	1.65	1.97	1.84	1.76	1.81
Ranking	3	2	4	3	3
Item 18: I make a credibility judgment by considering whether the information itself is bias free.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	5.06	5.03	5.13	5.20	5.11
S.D.	1.24	1.70	1.52	1.44	1.48
Ranking	1	3	2	1	2
Item 19: I make a credibility judgment by considering whether the information clearly	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	

shows products or services related to the topic discussed.					
\bar{x}	4.66	4.81	4.85	4.82	4.79
S.D.	1.57	1.97	1.70	1.70	1.73
Ranking	6	5	4	4	5
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.34	2.66	3.47	3.09	3.15
S.D.	1.76	1.71	1.75	1.76	1.77
Ranking	22	25	21	20	22
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.27	2.85	3.27	2.85	3.06
S.D.	1.72	1.93	1.78	1.71	1.79
Ranking	23	21	23	24	23
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	2.77	2.33	2.82	2.41	2.59
S.D.	1.76	1.67	1.70	1.60	1.69
Ranking	26	26	25	26	26
Item 23: I make a credibility judgment based on what I have already learned in school.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.58	4.50	4.67	4.46	4.55
S.D.	1.36	1.59	1.35	1.50	1.45
Ranking	7	7	7	7	7
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	4.27	4.02	4.20	4.07	4.14
S.D.	1.44	1.71	1.30	1.59	1.51
Ranking	10	12	12	12	12
Item 25: I make a credibility judgment by considering whether it is presented	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	

professionally.					
\bar{x}	4.36	4.28	4.36	4.11	4.28
S.D.	1.46	1.71	1.55	1.65	1.59
Ranking	8	9	9	11	9
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspellings or wrong grammar.	muscle soreness		Alzheimer's disease		Overall
	doctor	friend	doctor	friend	
\bar{x}	3.98	3.48	3.53	3.48	3.62
S.D.	1.79	1.97	1.91	1.96	1.91
Ranking	15	17	19	16	16

5.2.6.11 comparing mean and S.D. by number of interactivity manipulation

The empirical evidences suggested that number of interactivities did not show much difference in participants' uses of heuristic cues in credibility judgment. In the case of muscle soreness, participants who encountered a Facebook post with more number of interactivity rated their uses of heuristic cues in credibility judgment at the mean score of 3.92 (S.D. = 0.91), which was almost the same as those who read the post with less number of interactivity ($\bar{x} = 3.90$, S.D.=0.98). On the contrary, in the case of Alzheimer's disease, participants who read the post with more number of interactivity rated their uses of heuristic cues in credibility judgment at the mean score of 3.83 (S.D. = 0.86), which was slightly lower than those who read the post with lower number of interactivity ($\bar{x} = 4.06$, S.D.=0.89).

When asking to rate the post's credibility, different number of interactivities did not reveal any difference as well. In the cases concerning muscle soreness, participants who read a Facebook post with a greater number of interactivities rated the post's credibility at the score of 3.25 (S.D. = 1.63), while those who read a post with lower number of interactivities rated the credibility at the score of 3.22 (S.D. = 1.68). In the cases concerning Alzheimer's disease, participants who read a Facebook post with a greater number of interactivity rated the post's credibility at the score of 3.52 (S.D. = 1.51), which was slightly lower than those who read the post with less number of interactivity at the score of 3.65 (S.D. = 1.60).

According to the empirical figure revelation, the difference in number of interactivities did not yield much different results in participants' uses of heuristics in credibility judgment of health information on Facebook. Participants reported using reputation heuristic cue (item 3), authority heuristic cues (item 6 and 8), persuasive intense heuristic cues (item 17-19) as their top six heuristic cues in credibility judgment.

Additionally, when looking at each group of heuristics, the difference in number of interactivities did not show a sign of difference in participants' uses of heuristic cues as well. Surprisingly, the statistic figure showed the same results as those of source and message manipulation. In a group of *reputation heuristic*, they all relied on source's reputation in the health-related field (item 3) more than the renown media organization (item 5), and the reputation of source in non-health-related field (item 2). For *bandwagon heuristic cues*, participants in all cases reported triggering by comments they expected to read (item 11) more than previously seen the post shared by peers (item 12), and number of likes and shares (item 10). In term of other *expectancy violation heuristic cues*, they all rated the conformity with their prior knowledge from school (item 23) over the professional presentation (item 25), the conformity with their belief (item 24), and typographical and grammatical error (item 26), respectively.

Table 27: Comparison of mean scores by items and by interactivity manipulations

Use of heuristics in credibility judgment	muscle soreness		Alzheimer's disease		Overall (n=480)
	more (n=114)	less (n=122)	more (n=123)	less (n=121)	
\bar{x}	3.92	3.90	3.83	4.06	3.92
S.D.	0.91	0.98	0.86	0.89	0.91
Item 1: I think the information is credible	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.25	3.22	3.52	3.65	3.41
S.D.	1.63	1.68	1.51	1.60	1.61
Ranking	21	20	17	17	19
Item 2: I make a credibility judgment by considering that the source is a renowned person or organization even though the person	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	

or organization is in a non-health-related field.					
\bar{x}	3.35	3.31	3.24	3.30	3.30
S.D.	1.72	1.80	1.74	1.73	1.74
Ranking	19	19	20	21	20
Item 3: I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.61	4.66	4.72	4.71	4.68
S.D.	1.73	1.69	1.68	1.55	1.66
Ranking	6	6	3	6	6
Item 4: I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.39	3.93	3.89	4.27	4.11
S.D.	1.63	1.74	1.64	1.65	1.67
Ranking	9	14	14	13	13
Item 5: I make a credibility judgment by considering that the source is a renowned media organization.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.39	4.18	4.20	4.39	4.29
S.D.	1.72	1.72	1.60	1.69	1.68
Ranking	9	10	8	10	8
Item 6: I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	5.13	4.91	5.14	5.31	5.12
S.D.	1.53	1.73	1.64	1.48	1.60
Ranking	2	2	1	2	1
Item 7: I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.01	4.11	4.07	4.42	4.15
S.D.	1.68	1.65	1.55	1.54	1.61
Ranking	13	11	10	9	11

Item 8: I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.80	4.81	4.64	4.95	4.80
S.D.	1.58	1.68	1.67	1.50	1.61
Ranking	4	3	6	4	4
Item 9: I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.44	4.00	4.19	4.37	4.25
S.D.	1.64	1.73	1.74	1.56	1.67
Ranking	8	12	9	12	10
Item 10: I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	2.87	3.04	2.85	3.08	2.96
S.D.	1.78	1.87	1.82	1.75	1.80
Ranking	25	24	24	24	24
Item 11: I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.70	3.73	3.66	3.69	3.70
S.D.	1.68	1.64	1.57	1.73	1.65
Ranking	15	16	15	15	15
Item 12: I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.26	3.10	3.06	3.23	3.16
S.D.	1.77	1.73	1.61	1.69	1.70
Ranking	20	23	22	22	21
Item 13: I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	

\bar{x}	3.49	3.47	3.38	3.62	3.49
S.D.	1.66	1.82	1.73	1.77	1.74
Ranking	17	18	18	18	18
Item 14: I make a credibility judgment by considering that I have checked with other sources and found the same information.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.46	3.58	3.59	3.48	3.53
S.D.	1.65	1.67	1.57	1.69	1.64
Ranking	18	17	16	19	17
Item 15: I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.89	3.99	3.94	4.07	3.97
S.D.	1.63	1.63	1.52	1.57	1.58
Ranking	14	13	11	14	14
Item 16: I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	2.93	2.91	2.83	2.86	2.88
S.D.	1.42	1.61	1.45	1.31	1.45
Ranking	23	25	25	25	25
Item 17: I make a credibility judgment by considering whether the information seems to have a commercial purpose.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	5.16	4.75	4.68	5.15	4.93
S.D.	1.68	1.92	1.87	1.70	1.81
Ranking	1	4	5	3	3
Item 18: I make a credibility judgment by considering whether the information itself is bias free.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	5.08	5.02	5.02	5.32	5.11
S.D.	1.49	1.47	1.59	1.35	1.48
Ranking	3	1	2	1	2
Item 19: I make a credibility judgment by considering whether the information clearly	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	

shows products or services related to the topic discussed.					
\bar{x}	4.73	4.74	4.72	4.95	4.79
S.D.	1.73	1.82	1.72	1.67	1.73
Ranking	5	5	3	4	5
Item 20: I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	2.89	3.11	3.11	3.45	3.15
S.D.	1.73	1.79	1.73	1.78	1.77
Ranking	24	22	21	20	22
Item 21: I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	2.96	3.17	2.95	3.17	3.06
S.D.	1.78	1.88	1.72	1.79	1.79
Ranking	22	21	23	23	23
Item 22: I make a credibility judgment by considering that the computer system is smart and will not tell a lie.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	2.30	2.80	2.54	2.69	2.59
S.D.	1.56	1.84	1.54	1.77	1.69
Ranking	26	26	26	26	26
Item 23: I make a credibility judgment based on what I have already learned in school.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.61	4.47	4.46	4.68	4.55
S.D.	1.47	1.48	1.42	1.43	1.45
Ranking	6	7	7	7	7
Item 24: I make a credibility judgment by considering whether the information conforms to my beliefs.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	4.11	4.19	3.90	4.38	4.14
S.D.	1.58	1.59	1.36	1.51	1.51
Ranking	12	9	13	11	12
Item 25: I make a credibility judgment by considering whether it is presented	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	

professionally.					
\bar{x}	4.39	4.25	3.93	4.55	4.28
S.D.	1.66	1.52	1.66	1.48	1.59
Ranking	9	8	12	8	9
Item 26: I make a credibility judgment by considering whether the information is grammatical and error free. Only false information contains misspellings or wrong grammar.	muscle soreness		Alzheimer's disease		Overall
	more	less	more	less	
\bar{x}	3.64	3.82	3.33	3.69	3.62
S.D.	1.94	1.85	1.93	1.92	1.91
Ranking	16	15	19	15	16

5.3 Research questions and hypothetical test

RQ1: To what extent individuals applied heuristics when making credibility judgment of health information on Facebook? And what are cues and heuristics individuals use to assess credibility judgment of health information on Facebook?

The empirical evidence showed that Facebook users participating in the current study used heuristics in credibility judgment of health information differently as the results were determined by repeated measures ANOVA at the significant level of 0.05 [$F = 197.174$, $p = .000$]. A pairwise comparison revealed that participants were found using persuasive intense heuristics the most ($\bar{x} = 4.94$, S.D. = 1.45), followed by authority heuristic ($\bar{x} = 4.58$, S.D. = 1.32). These two groups of heuristics were used more than reputation heuristic ($\bar{x} = 4.09$, S.D. = 1.35), expectancy violation heuristic ($\bar{x} = 4.02$, S.D. = 1.35), and bandwagon heuristic ($\bar{x} = 3.27$, S.D. = 1.54), respectively, while there was not significantly different between uses of reputation heuristic and expectancy violation heuristic.

Table 28: Results of repeated measure ANOVA and pairwise comparison on uses of heuristics in credibility judgment of health information on Facebook by heuristic groups.

Type of heuristic	\bar{x}	S.D.	F	p	Pairwise comparison
Reputation heuristic (1)	4.09	1.35	197.174	.000*	4>2>1,3,5 1,3>5
Authority heuristic (2)	4.58	1.32			
Expectancy heuristic (3)	4.02	1.21			
Persuasive intense heuristic (4)	4.94	1.45			
Bandwagon heuristic (5)	3.27	1.54			

*p < 0.05

RQ3: what is relationship among independent variables (health motivation, perceived seriousness of health issues, health literacy, health e-mavens, and holistic/analytical worldview) and uses of heuristics in credibility judgment of health information on Facebook?

H1: Low health-motivated people use heuristics in credibility judgment of health information on Facebook more than high health-motivated people.

H1a: Low health-motivated people use reputation heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was rejected.

According the empirical findings, the statistically significant difference in the reputation heuristic use between groups of participants with different levels of health motivation as determined by one-way ANOVA was not found at the significant level of 0.05. The results suggested that there was no difference in the level of reputation heuristic use between each level of health motivation group.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health motivation in using reputation

heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 2.346, p = .049$]. As a Scheffe post hoc test did not identify a pair of difference, a Least Significant Difference post hoc test then was used. The test revealed two pairs of difference between the group of low level (represented as 'a') and high level (represented as 'c') of health motivation. That was, the overall mean score of the group 'a' ($\bar{x} = 4.28, S.D. = 1.29$) was higher than that of group 'c' ($\bar{x} = 3.90, S.D. = 1.36$). The results suggested that the lower level of health motivation they were, the more participants used reputation heuristic in credibility judgment of health information on Facebook.

Table 29: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation

Health motivation level	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.28	1.29	2.346	.049	a>c
Medium (b)	4.09	1.36			
High (c)	3.90	1.36			
Total	4.09	1.35			

H1b: Low health-motivated people use authority heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was rejected.

According to the empirical findings, the statistically significant difference in the authority heuristic use between groups of participants with different levels of health motivation as determined by one-way ANOVA was not found at the significant level of 0.05 [$F(2,477) = 0.331, p = .718$]. The results suggested that there was no difference in the level of authority heuristic use between each level of health motivation group.

Table 30: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.

Health motivation level	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.66	1.32	.331	.718	-
Medium (b)	4.55	1.33			
High (c)	4.56	1.33			
Total	4.58	1.32			

H1c: Low health-motivated people use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was accepted.

According the empirical findings, there was a statistically significant difference in expectancy violation heuristic between groups of participants with different levels of health motivation as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 5.117, p = .006$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a') and high level (represented as 'c') of health motivation. That was the overall mean score of the group 'a' ($\bar{x} = 4.27, S.D. = 1.26$) was higher than that of group 'c' ($\bar{x} = 3.78, S.D. = 1.18$). The results suggested that participants with low level of health motivation used expectancy violation heuristic in credibility judgment of health information on Facebook more than those with high level of health motivation.

Table 31: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.

Health motivation level	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.27	1.26	5.117	.006*	a>c
Medium (b)	3.99	1.18			
High (c)	3.78	1.18			
Total	4.02	1.21			

*p< 0.05

H1d: Low health-motivated people use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was rejected.

According to the empirical findings, the statistically significant difference in the persuasive intense heuristic use between groups of participants with different levels of health motivation as determined by one-way ANOVA was not found at the significant level of 0.05 [$F(2,477) = 0.661, p = .517$]. The results suggested that there was no difference in the level of authority heuristic use between each level of health motivation group.

Table 32: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.

Health motivation level	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	5.03	1.48	.661	.517	-
Medium (b)	4.87	1.41			
High (c)	5.01	1.52			
Total	4.94	1.45			

H1e: Low health-motivated people use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was accepted.

According to the empirical findings, there was a statistically significant difference in bandwagon heuristic between groups of participants with different levels of health motivation as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 3.405, p = .034$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a') and high level (represented as 'c') of health motivation. That was the overall mean score of the group 'a' ($\bar{x} = 3.49, S.D. = 1.59$) was higher than that of group 'c' ($\bar{x} = 2.98, S.D. = 1.55$). The results suggested that participants with low level of health motivation used bandwagon heuristic in credibility judgment of health information on Facebook more than those with high level of health motivation.

Table 33: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health motivation.

Health motivation level	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.49	1.59	3.405	.034*	a>c
Medium (b)	3.29	1.48			
High (c)	2.98	1.55			
Total	3.27	1.54			

* $p < 0.05$

H2: Individuals who perceived low seriousness of health issue use heuristics in credibility judgment more than those who perceived high seriousness of health issue.

H2a: Individuals who perceived low seriousness of health issue use reputation heuristic in credibility judgment more than those who perceived high seriousness of health issue. The hypothesis was rejected.

On the Facebook post providing information about muscle soreness, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using reputation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,233) = 16.919$, $p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and perceived high level (represented as 'c') of seriousness of health issue. That was the overall mean score of the group 'c' ($\bar{x} = 4.92$, S.D. = 1.38) was higher than that of group 'b' ($\bar{x} = 4.04$, S.D. = 1.12) and that of group 'a' ($\bar{x} = 3.52$, S.D. = 1.50), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used reputation heuristic in credibility judgment of health information on Facebook.

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Table 34: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.52	1.50	16.919	.000*	a<b<c
Medium (b)	4.04	1.12			
High (c)	4.92	1.38			
Total	4.10	1.37			

* $p < 0.05$

On the Facebook post providing information about Alzheimer, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using reputation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,241) = 17.184, p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and the group of perceived high level (represented as 'c') of seriousness of health issue. That was the overall mean score of the group 'c' ($\bar{x} = 4.84, S.D. = 1.33$) was higher than that of group 'b' ($\bar{x} = 4.05, S.D. = 1.14$) and that of group 'a' ($\bar{x} = 3.53, S.D. = 1.34$), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used reputation heuristic in credibility judgment of health information on Facebook.

Table 35: Results of ANOVA and post hoc test on uses of reputation heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.53	1.34	17.184	.000*	a<b<c
Medium (b)	4.05	1.14			
High (c)	4.84	1.33			
Total	4.09	1.32			

* $p < 0.05$

H2b: Individuals who perceived low seriousness of health issue use authority heuristic in credibility judgment more than those who perceived high seriousness of health issue. The hypothesis was rejected.

On the Facebook post providing information about muscle soreness, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using authority heuristic in credibility judgment of health information on Facebook as

determined by one-way ANOVA at the significant level of 0.05 [$F(2,233) = 10.812, p = .000$]. A Scheffe post hoc test revealed the two pairs of difference between the group of participants who perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and perceived high level (represented as 'c') of seriousness of health issue. Those were the overall mean score of the group 'c' ($\bar{x} = 4.92, S.D. = 1.38$) was higher than that of group 'b' ($\bar{x} = 4.04, S.D. = 1.12$), and the overall mean score of the group 'c' ($\bar{x} = 4.92, S.D. = 1.38$) was higher than that of group 'a' ($\bar{x} = 3.52, S.D. = 1.50$). The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used authority heuristic in credibility judgment of health information on Facebook.

Table 36: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.16	1.55	10.812	.000*	a<c
Medium (b)	4.41	1.13			b<c
High (c)	5.21	1.23			
Total	4.52	1.32			

* $p < 0.05$

On the Facebook post providing information about Alzheimer, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using authority heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,241) = 11.196, p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and the group of perceived high level (represented as 'c') of seriousness of health issue. That was the overall mean score of the group 'c' ($\bar{x} = 5.21, S.D. = 1.23$) was higher than

that of group 'b' ($\bar{x} = 4.65$, S.D. = 1.20) and that of group 'a' ($\bar{x} = 4.12$, S.D. = 1.43), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used authority heuristic in credibility judgment of health information on Facebook.

Table 37: Results of ANOVA and post hoc test on uses of authority heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.12	1.43	11.196	.000*	a<b<c
Medium (b)	4.65	1.20			
High (c)	5.21	1.23			
Total	4.64	1.32			

*p< 0.05

H2c: Individuals who perceived low seriousness of health issue use expectancy violation heuristic in credibility judgment more than those who perceived high seriousness of health issue. The hypothesis was rejected.

On the Facebook post providing information about muscle soreness, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,233) = 13.938$, $p = .000$]. A Scheffe post hoc test revealed the two pairs of difference between the group of participants who perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and perceived high level (represented as 'c') of seriousness of health issue. Those were the overall mean score of the group 'c' ($\bar{x} = 4.73$, S.D. = 1.10) was higher than that of group 'b' ($\bar{x} = 3.97$, S.D. = 1.15), and the overall mean score of the group 'c' ($\bar{x} = 4.73$, S.D. = 1.10)

was higher than that of group ‘a’ ($\bar{x} = 3.60$, S.D. = 1.24). The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used expectancy violation heuristic in credibility judgment of health information on Facebook.

Table 38: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.60	1.24	13.938	.000*	a<c
Medium (b)	3.97	1.15			b<c
High (c)	4.73	1.10			
Total	4.04	1.23			

*p< 0.05

On the Facebook post providing information about Alzheimer, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,241) = 14.391$, $p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as ‘a’), the group of perceived medium level (represented as ‘b’) and the group of perceived high level (represented as ‘c’) of seriousness of health issue. That was the overall mean score of the group ‘c’ ($\bar{x} = 4.61$, S.D. = 1.20) was higher than that of group ‘b’ ($\bar{x} = 3.97$, S.D. = 1.11) and that of group ‘a’ ($\bar{x} = 3.50$, S.D. = 1.12), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used expectancy violation heuristic in credibility judgment of health information on Facebook.

Table 39: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.50	1.12	14.391	.000*	a<b<c
Medium (b)	3.97	1.11			
High (c)	4.61	1.20			
Total	3.99	1.20			

*p< 0.05

H2d: Individuals who perceived low seriousness of health issue use persuasive intense heuristic in credibility judgment more than those who perceived high seriousness of health issue. The hypothesis was rejected.

On the Facebook post providing information about muscle soreness, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using persuasive intense heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,233) = 4.859$, $p = .009$]. A Scheffe post hoc test revealed the two pairs of difference between the group of participants who perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and perceived high level (represented as 'c') of seriousness of health issue. Those were the overall mean score of the group 'c' ($\bar{x} = 5.46$, S.D. = 1.19) was higher than that of group 'b' ($\bar{x} = 4.75$, S.D. = 1.45), and the overall mean score of the group 'c' ($\bar{x} = 5.46$, S.D. = 1.19) was higher than that of group 'a' ($\bar{x} = 4.76$, S.D. = 1.66). The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used

persuasive intense heuristic in credibility judgment of health information on Facebook.

Table 40: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.76	1.66	4.859	.009*	a<c
Medium (b)	4.75	1.45			b<c
High (c)	5.46	1.19			
Total	4.91	1.48			

*p< 0.05

On the Facebook post providing information about Alzheimer, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA was not found at the significant level of 0.05 [$F(2,477) = 0.661, p = .517$]. The results suggested that there was no difference in the level of persuasive intense heuristic use between each level of perceived seriousness of health issue group.

Table 41: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.80	1.57	1.963	0.143	-
Medium (b)	4.92	1.36			
High (c)	5.29	1.38			
Total	4.97	1.42			

H2e: Individuals who perceived low seriousness of health issue use bandwagon heuristic in credibility judgment more than those who perceived high seriousness of health issue. The hypothesis was rejected.

On the Facebook post providing information about muscle soreness, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using bandwagon heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,233) = 13.945$, $p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and perceived high level (represented as 'c') of seriousness of health issue. That was the overall mean score of the group 'c' ($\bar{x} = 4.07$, S.D. = 1.74) was higher than that of group 'b' ($\bar{x} = 3.29$, S.D. = 1.36) and that of group 'a' ($\bar{x} = 2.60$, S.D. = 1.49), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used bandwagon heuristic in credibility judgment of health information on Facebook.

Table 42: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (muscle soreness)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	2.60	1.49	13.945	.000*	a<b<c
Medium (b)	3.29	1.36			
High (c)	4.07	1.74			
Total	3.28	1.56			

* $p < 0.05$

On the Facebook post providing information about Alzheimer, the empirical findings revealed a statistically significant difference between groups of participants with different levels of perceived seriousness of health issues in using bandwagon

heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,241) = 12.767, p = .000$]. A Scheffe post hoc test revealed the difference between the group of perceived low level (represented as 'a'), the group of perceived medium level (represented as 'b') and the group of perceived high level (represented as 'c') of seriousness of health issue. That was the overall mean score of the group 'c' ($\bar{x} = 3.92, S.D. = 1.74$) was higher than that of group 'b' ($\bar{x} = 3.31, S.D. = 1.39$) and that of group 'a' ($\bar{x} = 2.61, S.D. = 1.26$), respectively. The results suggested that the higher level participants perceived seriousness of the health issue, the more participants used bandwagon heuristic in credibility judgment of health information on Facebook.

Table 43: Results of ANOVA and post hoc test on uses of bandwagon heuristics in credibility judgment of health information on Facebook between groups of participants with different level of perceived seriousness of health issue (Alzheimer's disease)

Level of perceived seriousness	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	2.61	1.26	12.767	.000*	a<b<c
Medium (b)	3.31	1.39			
High (c)	3.92	1.74			
Total	3.26	1.51			

* $p < 0.05$

H3: Low health-literate individuals use heuristics in credibility judgment of health information on Facebook more than high health-literate individuals.

H3a: Low health-literate individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health literacy in using reputation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 17.788, p = .000$]. A

Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and high level (represented as 'c') of health literacy. That was the overall mean score of the group 'a' ($\bar{x} = 4.60$, S.D. = 1.14) was higher than that of group 'b' ($\bar{x} = 4.06$, S.D. = 1.31) and that of group 'c' ($\bar{x} = 3.57$, S.D. = 1.44), respectively. The results suggested that the lower level of health literacy they were, the more participants used reputation heuristic in credibility judgment of health information on Facebook.

Table 44: Results of ANOVA and post hoc test on reputation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy

Level of health literacy	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.60	1.14	17.788	.000*	a>b>c
Medium (b)	4.06	1.31			
High (c)	3.57	1.44			
Total	4.09	1.35			

*p< 0.05

H3b: Low health-literate individuals use authority heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health literacy in using authority heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 17.788$, $p = .000$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and high level (represented as 'c') of health literacy. That was the overall mean score of the group 'a' ($\bar{x} = 4.88$, S.D. = 1.14) was higher than that of group 'c' ($\bar{x} = 4.28$, S.D. = 1.42), respectively. The results suggested that the lower level of health literacy they were, the more participants used authority heuristic in credibility judgment of health information on Facebook.

Table 45: Results of ANOVA and post hoc test on authority heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy

Level of health literacy	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.88	1.14	5.980	.003*	a>c
Medium (b)	4.56	1.35			
High (c)	4.28	1.42			
Total	4.58	1.32			

*p< 0.05

H3c: Low health-literate individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health literacy in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 13.098$, $p = .000$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and high level (represented as 'c') of health literacy. That was the overall mean score of the group 'a' ($\bar{x} = 4.43$, S.D. = 1.10) was higher than that of group 'b' ($\bar{x} = 3.97$, S.D. = 1.18) and that of group 'c' ($\bar{x} = 3.64$, S.D. = 1.26), respectively. The results suggested that the lower level of health literacy they were, the more participants used expectancy violation heuristic in credibility judgment of health information on Facebook.

Table 46: Results of ANOVA and post hoc test on expectancy violation heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy

Level of health literacy	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.43	1.10	13.098	.000*	a>b>c
Medium (b)	3.97	1.18			
High (c)	3.64	1.26			
Total	4.01	1.21			

*p< 0.05

H3d: Low health-literate individuals use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was rejected.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health literacy in using persuasive intense heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 17.788$, $p = .000$]. As a Scheffe post hoc test did not identify a pair of difference, a Least Significant Difference post hoc test then was used. The test revealed two pairs of difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and high level (represented as 'c') of health literacy. Those were the overall mean score of the group 'a' ($\bar{x} = 4.68$, S.D. = 1.20) was lower than that of group 'b' ($\bar{x} = 4.99$, S.D. = 1.49), and the overall mean score of the group 'a' ($\bar{x} = 4.68$, S.D. = 1.20) was lower than that of group 'c' ($\bar{x} = 5.14$, S.D. = 1.60). The results suggested that the lower level of health literacy they were, the less participants used persuasive intense heuristic in credibility judgment of health information on Facebook.

Table 47: Results of ANOVA and post hoc test on persuasive intense heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy

Level of health literacy	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.68	1.20	3.161	0.04*	a<b
Medium (b)	4.99	1.49			a<c
High (c)	5.14	1.60			
Total	4.94	1.45			

*p< 0.05

H3e: Low health-literate individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

The empirical findings revealed a statistically significant difference between groups of participants with different levels of health literacy in using bandwagon heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 55.501, p = .000$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and high level (represented as 'c') of health literacy. That was, the overall mean score of the group 'a' ($\bar{x} = 4.29, S.D. = 1.28$) was higher than that of group 'b' ($\bar{x} = 3.13, S.D. = 1.39$) and that of group 'c' ($\bar{x} = 2.40, S.D. = 1.49$), respectively. The results suggested that the lower level of health literacy they were, the more participants used bandwagon heuristic in credibility judgment of health information on Facebook.

Table 48: Results of ANOVA and post hoc test on bandwagon heuristic use in credibility judgment of health information on Facebook between groups of participants with different level of health literacy

Level of health literacy	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.29	1.28	55.501	.000*	a>b>c
Medium (b)	3.13	1.39			
High (c)	2.40	1.49			
Total	3.27	1.54			

*p< 0.05

H4: Low health e-maven individuals use heuristics in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4a: Low health e-maven individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

According to the empirical findings, there was a statistically significant difference between groups of participants with different levels of being health e-maven in using reputation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 20.244, p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), medium level (represented as 'b') and high level (represented as 'c') of being health e-maven. Those were, the overall mean score of group 'a' ($\bar{x} = 3.68, S.D. = 0.85$) was lower than that of group 'c' ($\bar{x} = 4.72, S.D. = 1.13$), and the overall mean score of 'b' ($\bar{x} = 3.99, S.D. = 1.24$), was lower than that of group 'c' ($\bar{x} = 4.72, S.D. = 1.13$). The results suggested that the lower level of being health e-maven participants were, the less they used reputation heuristic in credibility judgment of health information on Facebook.

Table 49: Results of ANOVA and post hoc test on uses of reputation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven

Level of being health e-maven	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.68	1.56	20.244	.000*	a<c
Medium (b)	3.99	1.24			b<c
High (c)	4.72	1.13			
Total	4.09	1.35			

*p< 0.05

H4b: Low health e-maven individuals use authority heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

According to the empirical findings, there was a statistically significant difference between groups of participants with different levels of being health e-maven in using authority heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 13.052, p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), medium level (represented as 'b') and high level (represented as 'c') of being health e-maven. Those were, the overall mean score of group 'a' ($\bar{x} = 3.68, S.D. = 1.56$) was lower than that of group 'c' ($\bar{x} = 4.72, S.D. = 1.13$), and the overall mean score of group 'b' ($\bar{x} = 3.99, S.D. = 1.24$) was lower than that of group 'c' ($\bar{x} = 4.72, S.D. = 1.13$). The results suggested that the lower level of being health e-maven participants were, the less they used authority heuristic in credibility judgment of health information on Facebook.

Table 50: Results of ANOVA and post hoc test on uses of authority heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven

Level of being health e-maven	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.28	1.49	13.052	.000*	a<c
Medium (b)	4.48	1.28			b<c
High (c)	5.09	1.10			
Total	4.58	1.32			

*p< 0.05

H4c: Low health e-maven individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

According the empirical findings, there was a statistically significant difference between groups of participants with different levels of being health e-maven in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 24.872, p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), medium level (represented as 'b') and high level (represented as 'c') of being health e-maven. Those were, the overall mean score of group 'a' ($\bar{x} = 3.62, S.D. = 1.31$) was lower than that of group 'c' ($\bar{x} = 4.64, S.D. = 0.98$), and the overall mean score of group 'b' ($\bar{x} = 3.91, S.D. = 1.51$) was lower than that of group 'c' ($\bar{x} = 4.64, S.D. = 0.98$). The results suggested that the lower level of being health e-maven participants were, the less they used expectancy violation heuristic in credibility judgment of health information on Facebook.

Table 51: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven

Level of being health e-maven	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.62	1.31	24.872	.000*	a<c
Medium (b)	3.91	1.51			b<c
High (c)	4.64	0.98			
Total	4.58	1.75			

*p< 0.05

H4d: Low health e-maven individuals use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

According the empirical findings, there was a statistically significant difference between groups of participants with different levels of being health e-maven in using persuasive intense heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 5.483, p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), medium level (represented as 'b') and high level (represented as 'c') of being health e-maven. Those were, the overall mean score of group 'a' ($\bar{x} = 4.58, S.D. = 1.75$) was lower than that of group 'b' ($\bar{x} = 4.99, S.D. = 1.39$), and the overall mean score of group 'a' ($\bar{x} = 4.58, S.D. = 1.75$) was lower than that of group 'c' ($\bar{x} = 5.20, S.D. = 1.18$). The results suggested that the lower level of being health e-maven participants were, the less they used persuasive intense heuristic in credibility judgment of health information on Facebook.

Table 52: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven

Level of being health e-maven	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.58	1.75	5.483	.004*	a<b
Medium (b)	4.99	1.39			a<c
High (c)	5.20	1.18			
Total	4.94	1.45			

*p< 0.05

H4e: Low health e-maven individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

According to the empirical findings, there was a statistically significant difference between groups of participants with different levels of being health e-maven in using bandwagon heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 38.481, p = .000$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), medium level (represented as 'b') and high level (represented as 'c') of being health e-maven. That was the overall mean score of group 'a' ($\bar{x} = 2.68, S.D. = 1.50$) was lower than that of group 'b' ($\bar{x} = 3.09, S.D. = 1.42$), and that of group 'c' ($\bar{x} = 4.24, S.D. = 1.36$). The results suggested that the lower level of being health e-maven participants were, the less they used bandwagon heuristic in credibility judgment of health information on Facebook.

Table 53: Results of ANOVA and post hoc test on uses of bandwagon heuristic in credibility judgment of health information on Facebook between groups of participants with different level of being health e-maven

Level of being health e-maven	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	2.68	1.50	38.481	.000*	a<b<c
Medium (b)	3.09	1.42			
High (c)	4.24	1.36			
Total	3.27	1.54			

*p< 0.05

H5: Individuals with low level of holistic worldview use heuristics in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview.

H5a: Individuals with low level of holistic worldview use reputation heuristic in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview. The hypothesis was accepted.

According to the empirical findings, there was a statistically significant difference between groups of participants with different levels of holistic worldview in using reputation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 10.572, p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and the group of high level (represented as 'c') of having holistic worldview. Those were, the overall mean score of group 'a' ($\bar{x} = 3.80, S.D. = 1.17$) was lower than that of group 'c' ($\bar{x} = 4.60, S.D. = 1.43$), and that of group 'b' ($\bar{x} = 4.07, S.D. = 1.36$) was lower than that of group 'c' ($\bar{x} = 4.60, S.D. = 1.43$). The results suggested that the lower level of having holistic worldview participants were, the less they used reputation heuristic in credibility judgment of health information on Facebook.

Table 54: Results of ANOVA and post hoc test on uses of reputation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview

Level of holistic worldview	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.80	1.17	10.572	.000*	a<c
Medium (b)	4.07	1.36			b<c
High (c)	4.60	1.43			
Total	4.09	1.35			

*p< 0.05

H5b: Individuals with low level of holistic worldview use authority heuristic in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview. The hypothesis was accepted.

According the empirical findings, there was a statistically significant difference between groups of participants with different levels of holistic worldview in using authority heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 8.748$, $p = .000$]. A Scheffe post hoc test revealed two pairs of difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and the group of high level (represented as 'c') of having holistic worldview. Those were, the overall mean score of group 'a' ($\bar{x} = 4.44$, S.D. = 1.23) was lower than that of group 'c' ($\bar{x} = 5.08$, S.D. = 1.32), and that of group 'b' ($\bar{x} = 4.46$, S.D. = 1.34) was lower than that of group 'c' ($\bar{x} = 5.08$, S.D. = 1.32). The results suggested that the lower level of having holistic worldview participants were, the less they used authority heuristic in credibility judgment of health information on Facebook.

Table 55: Results of ANOVA and post hoc test on uses of authority heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview

Level of holistic worldview	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.44	1.23	8.748	.000*	a<c
Medium (b)	4.46	1.34			b<c
High (c)	5.08	1.32			
Total	4.58	1.32			

*p< 0.05

H5c: Individuals with low level of holistic worldview use expectancy violation heuristic in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview. The hypothesis was accepted.

According the empirical findings, there was a statistically significant difference between groups of participants with different levels of holistic worldview in using expectancy violation heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [F(2,477) = 4.826, p = .008]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and the group of high level (represented as 'c') of having holistic worldview. That was, the overall mean score of group 'a' (\bar{x} = 3.80, S.D. = 1.10) was lower than that of group 'c' (\bar{x} = 4.29, S.D. = 1.48). The results suggested that the lower level of having holistic worldview participants were, the less they used expectancy violation heuristic in credibility judgment of health information on Facebook.

Table 56: Results of ANOVA and post hoc test on uses of expectancy violation heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview

Level of holistic worldview	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	3.80	1.10	4.826	.008*	a<c
Medium (b)	4.03	1.13			
High (c)	4.29	1.48			
Total	4.02	1.21			

* $p < 0.05$

H5d: Individuals with low level of holistic worldview use persuasive intense heuristic in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview. The hypothesis was rejected.

According the empirical findings, a statistically significant difference between groups of participants with different levels of holistic worldview in using persuasive intense heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA was not found at the significant level of 0.05 [$F(2,477) = 1.534, p = .217$]. The results suggested that there was no difference in the level of persuasive intense heuristic use between each level of having holistic worldview group.

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Table 57: Results of ANOVA and post hoc test on uses of persuasive intense heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview

Level of holistic worldview	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	4.80	1.53	1.534	.217	-
Medium (b)	4.94	1.38			
High (c)	5.14	1.52			
Total	4.94	1.45			

H5e: Individuals with low level of holistic worldview use bandwagon heuristic in credibility judgment of health information on Facebook less than individuals with high level of holistic worldview. The hypothesis was accepted.

According to the empirical findings, there was a statistically significant difference between groups of participants with different levels of holistic worldview in using bandwagon heuristic in credibility judgment of health information on Facebook as determined by one-way ANOVA at the significant level of 0.05 [$F(2,477) = 11.985, p = .000$]. A Scheffe post hoc test revealed the difference between the group of low level (represented as 'a'), the group of medium level (represented as 'b') and the group of high level (represented as 'c') of having holistic worldview. That was, the overall mean score of group 'a' ($\bar{x} = 2.85, S.D. = 1.25$) was lower than that of group 'b' ($\bar{x} = 3.30, S.D. = 1.48$) and that of group 'c' ($\bar{x} = 3.82, S.D. = 1.86$). The results suggested that the lower level of having holistic worldview participants were, the less they used bandwagon heuristic in credibility judgment of health information on Facebook.

Table 58: Results of ANOVA and post hoc test on uses of bandwagon heuristic in credibility judgment of health information on Facebook between groups of participants with different level of holistic worldview

Level of holistic worldview	\bar{x}	S.D.	F	p	Post Hoc Test
Low (a)	2.85	1.25	11.985	.000*	a<b<c
Medium (b)	3.30	1.48			
High (c)	3.82	1.86			
Total	3.27	1.54			

* $p < 0.05$

5.4. Path analysis

Running path analysis on a free downloaded statistic software called 'JASP' with regardless of health issue, the results showed that four independent variables, namely, perceived seriousness of health issue, health literacy, health e-mavens, and holistic worldview influenced Thai Facebook users in applied reputation heuristic in

credibility judgment of health information on Facebook at the statistical significance level less than 0.05. Among these four independent variables, health literacy (std = -0.165) was the only one factor that showed a negative influence toward uses of reputation heuristic in credibility judgment of health information on Facebook. That meant Thai Facebook users who had lower level of health literacy would use reputation heuristic more than those who had higher level of health literacy. In the meantime, three other independent variables; perceived seriousness of health issue (std = 0.284), health e-mavens (std = 0.128), and holistic worldview (std = 0.157), had a positive influence toward Thai Facebook users in using reputation heuristic in credibility judgment of health information on Facebook. On the contrary, the result showed that health motivation showed no influence toward uses of reputation heuristic in credibility judgment of health information on Facebook.

In term of authority heuristic, the empirical evidence showed the same result as in reputation heuristic. There were four independent variables; perceived seriousness of health issue, health literacy, health e-mavens, and holistic worldview, influenced Thai Facebook users in using authority heuristic when making credibility judgment of health information on Facebook at the statistical significance level less than 0.05. Health literacy (std = -0.108), among these four independent variables, was the only one variable that showed a negative influence. That meant Thai Facebook users with lower level of health literacy would use authority heuristic less than those who had higher level of health literacy. On the contrary, three other independent variables, namely, perceived seriousness of health issue (std = 0.244), health e-mavens (std = 0.096), and holistic worldview (std = 0.133) had a positive influence toward Thai Facebook users in using authority heuristic in credibility judgment on health information on Facebook. Moreover, the statistical figure revealed that health motivation had no influence toward Thai Facebook users' uses of authority heuristic in credibility judgment on health information on Facebook.

For the third group of heuristic, expectancy violation heuristic, the statistic figures revealed that there were four independent variables, namely, perceived seriousness of health issue, health literacy, health e-mavens, and holistic worldview that influenced Thai Facebook users in using expectancy violation heuristic when making credibility judgment of health information on Facebook at the statistical

significance level less than 0.05. This was the same as occurred in the two previous groups of heuristic. Among four independent variables, health literacy (std = -0.127) was the only factor that had a negative influence on Thai Facebook users' using expectancy violation heuristic when making credibility judgment of health information on Facebook, while the other three independent variables; perceived seriousness of health issue (std = 0.238), health e-mavens (std = 0.196), and holistic worldview (std = 0.106) had a positive influence. Additionally, the result showed that health motion had no influence on Thai Facebook users' uses of expectancy violation heuristic when making credibility judgment of health information on Facebook.

When looking at the fourth group of heuristic, persuasive intense heuristic, the empirical evidence revealed that there were three independent variables; perceived seriousness of health issue, health literacy, and health e-mavens, that influenced Thai Facebook users' uses of this group of heuristic when making credibility judgment of health information on Facebook at the statistical significance level less than 0.05. All three of them had a positive influence [perceived seriousness of health issue (std = 0.151), health literacy (std = 0.200), health e-mavens (std = 0.139)]. On the contrary, health motivation and holistic worldview had no influence on Thai Facebook users' uses of persuasive intense heuristic.

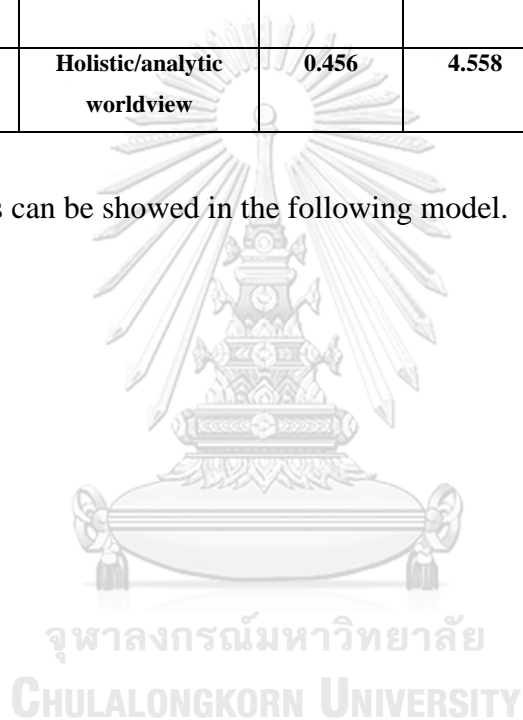
For bandwagon heuristic which was the last group of heuristic in the current study, the statistic figures yielded the same results as in reputation heuristic, authority heuristic, and expectancy violation heuristic. Those were, four independent variables, namely, perceived seriousness of health issue, health literacy, health e-mavens, and holistic worldview were found having influence on Thai Facebook users' uses of bandwagon heuristic when making credibility judgment of health information on Facebook at the statistical significance level less than 0.05. Among these four independent variables, health literacy was found having a negative influence (std = -0.345). In the meantime, perceived seriousness of health issue (std = 0.198), health e-mavens (std = 0.215), and holistic worldview (std = 0.169) were found having a positive influence when Thai Facebook users applied bandwagon heuristic when making credibility judgment of health information on Facebook. Additionally, health motivation was also found having influence on Thai Facebook users' uses of bandwagon heuristic as well.

Table 59: Results of path analysis of factors influencing uses of heuristics in credibility judgment of health information on Facebook

Heuristics	Factors	est	z	p	std (all)
Reputation heuristic	Health motivation	-0.062	-1.115	0.265	-0.045
Reputation heuristic	Perceived seriousness of health issue	0.297	6.711	< 0.001	0.284
Reputation heuristic	Health literacy	-0.270	-3.787	< 0.001	-0.165
Reputation heuristic	Health e-mavens	0.140	2.832	0.005	0.128
Reputation heuristic	Holistic/analytic worldview	0.370	3.800	< 0.001	0.157
Authority heuristic	Health motivation	0.042	0.726	0.468	0.031
Authority heuristic	Perceived seriousness of health issue	0.251	5.463	< 0.001	0.244
Authority heuristic	Health literacy	-0.174	-2.344	0.019	-0.108
Authority heuristic	Health e-mavens	0.103	2.008	0.045	0.096
Authority heuristic	Holistic/analytic worldview	0.310	3.061	0.002	0.133
Expectancy violation heuristic	Health motivation	-0.089	-1.763	0.078	-0.073
Expectancy violation heuristic	Perceived seriousness of health issue	0.224	5.549	< 0.001	0.238
Expectancy violation heuristic	Health literacy	-0.186	-2.865	0.004	-0.127
Expectancy violation heuristic	Health e-mavens	0.192	4.270	< 0.001	0.196
Expectancy violation heuristic	Holistic/analytic worldview	0.225	2.531	0.011	0.106
Persuasive intense heuristic	Health motivation	-0.016	-0.242	0.809	-0.011
Persuasive intense heuristic	Perceived seriousness of health issue	0.171	3.248	0.001	0.151
Persuasive intense heuristic	Health literacy	0.355	4.182	< 0.001	0.200

Persuasive intense heuristic	Health e-mavens	0.164	2.784	0.005	0.139
Persuasive intense heuristic	Holistic/analytic worldview	0.121	1.045	0.296	0.047
Bandwagon heuristic	Health motivation	-0.070	-1.224	0.221	-0.045
Bandwagon heuristic	Perceived seriousness of health issue	0.237	5.201	< 0.001	0.198
Bandwagon heuristic	Health literacy	-0.646	-8.804	< 0.001	-0.345
Bandwagon heuristic	Health e-mavens	0.267	5.262	< 0.001	0.215
Bandwagon heuristic	Holistic/analytic worldview	0.456	4.558	< 0.001	0.169

These results can be showed in the following model.



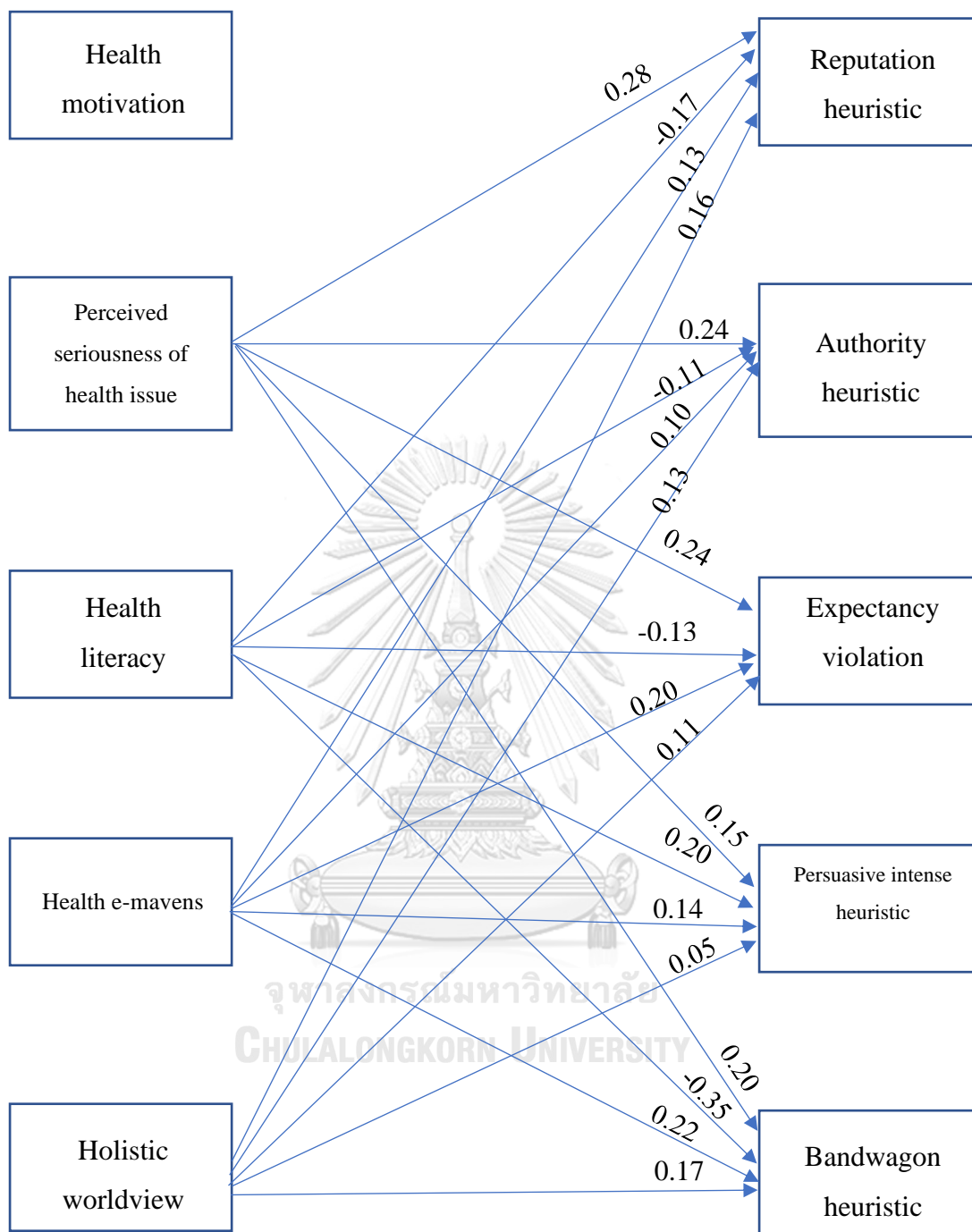


Figure 5 : A path analysis model of factors influencing uses of heuristics in credibility judgment of health information on Facebook

Chapter 6

Conclusion, discussion, and recommendation

6.1 Conclusion

6.1.1. RQ1: To what extent individuals applied heuristics when making credibility judgment of health information on Facebook? And what are cues and heuristics individuals use to assess credibility judgment of health information on Facebook?

Participants reported applied heuristics not only while making credibility judgment of health information, but also when making decision to follow any health-related Facebook pages as well. These participants chose to followed certain Facebook pages based on five following reasons; page owners or administrator, contents, significant others' influence, pages' popularity, and interactivity of the pages.

As for page owners or administrator of the asking pages, Facebook users looked for those who had educational background in health science or equivalent area, or those who worked in health professional organizations. Additionally, a page owner or administrator who had a direct experience in discussed health topics was preferable as well. Participants believed that these people can be trusted to deliver credible health information.

As for contents of the asking pages, participants expected the following pages to provide contents that matched with their preference or personal need. The information were also expected to enclosed with solid reference. Participants often mentioned research as a preferred reference.

Significant others' influence also took part in participants' decision-making process. If they saw that the asking pages was liked, shared, or followed by their significant others, they thought those pages were credible enough to like, share, and follow as well. The more frequent they saw contents from the asking pages were liked and shared, the more possibility they will do the same and follow those pages.

Participants also checked the asking pages' popularity before following them. This popularity was said to be checked from number of positive reaction and shares. However, there was no unanimous agree on which number is a golden number to be

used as an indicator for credibility. To some participants, number of comments indicated credibility of contents as well.

The last, but not least, reason participants chose to follow the asking pages was interactivity between page owners and respondents. There were some expectation participants wished to see before following any health-related Facebook pages. Participants expected the pages to be attentive, consistent, responsive. They also expected the interaction was conducted in a good manner.

These five reasons reflected heuristics responding to source, content, and reactions of the asking post. These heuristics were not only used when deciding to follow any health-related Facebook pages, but also when deciding whether the health information posted was credible or not.

In summary, there were five groups of heuristics being used when participants making credibility judgment of health information on Facebook; reputation heuristics, authority heuristics, expectancy violation heuristics, persuasive intense heuristics, and bandwagon heuristics.

Firstly, reputation heuristics consisted of cues that indicated how well known the source was to participants. Some sources were very well known to public so participants could tell by seeing the account name or the page's name. Some sources were not recognized immediately by name, but participants can check the reputation by looking number of likes and followers the source, as a person or as a Facebook page, received.

Secondly, authority heuristics consisted of cues indicating source's expertise and officiality in an area of discussion. Those cues included account identification implying the person was a doctor or worked in healthcare organization, information in 'about' section telling that the source had educational background in an area of discussion.

Expectancy violation heuristics, the third group of heuristics participants used, consisted of cues that triggered participants when they found anything violated their expectation. This included the overall message that didn't conform with participants' belief, misspelling, and grammatical error.

Fourthly, persuasive heuristics consisted of cues that showed commercial intention. Brand name of product or service, a tag line of a company, and a tie-in product were included.

Lastly, bandwagon heuristics consisted of cues showing that other people liked the content, agreed with the content, and shared the content. As such, number of positive reactions, number of shares, numbers of comments, and comments themselves were included. Also, if participants saw account name from their friend list reacted positively toward the asking post, it was counted as a cue under bandwagon heuristics as well.

The empirical figures revealed that, when making a credibility judgment on health information on Facebook, participants used persuasive intense heuristic the most, followed by authority heuristic, reputation and expectancy violation heuristic, and bandwagon heuristic, respectively.

6.1.2. RQ2: How did individuals applied heuristic processing into credibility judgment of health information on Facebook?

As mentioned earlier, when encountering health information posted on Facebook, participants reported using heuristics in making credibility judgment on that asking post. There were three different processes that participants referred to when making the judgment. All three processes consisted of same elements; elements concerning source of the information, elements concerning the message, and elements concerning interactions toward the asking post. However, all three processes followed the different steps.

The first process was the one that participants started at the source of the information. In this process, participants firstly looked at who the source was and how credible the source was. To participants, credible sources were those who had educational background in health science, those who worked in healthcare organization, and those who had direct experience on discussed topics. Secondly, they expected to see solid rationale in the message. Scientific evidences were preferable. Lastly, they checked the reactions toward the post. Number of positive emoticons, number of shares were used as their credibility indicators.

The second process was the process that participants started at the content. In this process, participants claimed that content was their first priority. Reading the

content helped them decided whether they should stay with the post or scroll away. If they stayed on, the same as participants who used the first process, participants who used this process anticipated the content of health information posted on Facebook to be attached with solid rationale and back up with scientific evidences. The message must be presented with proper language and had no commercial intention attached. Participants, then, checked on either source or reaction of the asking post.

The last process was the process that participants started at the interaction toward the asking post. Participants reported using number of positive reaction, number of shares, and number of comments as credibility indicators of health information on Facebook. The higher number were shown, the more credible the asking post was. If participants saw their satisfied number of reactions, then they checked on other two areas of heuristics; sources and contents.

6.1.3. RQ3: what are relationships among independent variables (health motivation, perceived seriousness of health issues, health literacy, health e-mavens, and holistic/analytical worldview) and uses of heuristics in credibility judgment of health information on Facebook?

Hypothetical test

H1: Low health-motivated people use heuristics in credibility judgment of health information on Facebook more than high health-motivated people.

H1a: Low health-motivated people use reputation heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was accepted.

H1b: Low health-motivated people use authority heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was rejected.

H1c: Low health-motivated people use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was accepted.

H1d: Low health-motivated people use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was rejected.

H1e: Low health-motivated people use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-motivated people. The hypothesis was accepted.

H2: Individuals who perceived low seriousness of health issue use heuristics in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue.

H2a: Individuals who perceived low seriousness of health issue use reputation heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue. The hypothesis was rejected.

H2b: Individuals who perceived low seriousness of health issue use authority heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue. The hypothesis was rejected.

H2c: Individuals who perceived low seriousness of health issue use expectancy violation heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue. The hypothesis was rejected.

H2d: Individuals who perceived low seriousness of health issue use persuasive intense heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue. The hypothesis was rejected.

H2e: Individuals who perceived low seriousness of health issue use bandwagon heuristic in credibility judgment of health information on Facebook more than those who perceived high seriousness of health issue. The hypothesis was rejected.

H3: Low health-literate individuals use heuristics in credibility judgment of health information on Facebook more than high health-literate individuals.

H3a: Low health-literate individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

H3b: Low health-literate individuals use authority heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

H3c: Low health-literate individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

H3d: Low health-literate individuals use persuasive intense heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was rejected.

H3e: Low health-literate individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health-literate individuals. The hypothesis was accepted.

H4: Low health e-maven individuals use heuristics in credibility judgment of health information on Facebook more than high health e-maven individuals.

H4a: Low health e-maven individuals use reputation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

H4b: Low health e-maven individuals use authority heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

H4c: Low health e-maven individuals use expectancy violation heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

H4d: Low health e-maven individuals use persuasive heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

H4e: Low health e-maven individuals use bandwagon heuristic in credibility judgment of health information on Facebook more than high health e-maven individuals. The hypothesis was rejected.

H5: Individuals who have low holistic worldview use heuristics in credibility judgment of health information on Facebook less than individuals with high holistic worldview.

H5a: Individuals who have low holistic worldview use reputation heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview. The hypothesis was accepted.

H5b: Individuals who have low holistic worldview use authority heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview. The hypothesis was accepted.

H5c: Individuals who have low holistic worldview use expectancy violation heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview. The hypothesis was accepted.

H5d: Individuals who have low holistic worldview use persuasive intense heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview. The hypothesis was rejected.

H5e: Individuals who have low holistic worldview use bandwagon heuristic in credibility judgment of health information on Facebook less than individuals with high holistic worldview. The hypothesis was accepted.

The summary of hypothetical test was shown in the following table.

Table 60: Results of hypothetical test by variables

	Health motivation	Perceived seriousness of health issues	Health literacy	Health e-mavens	Holistic worldview
Reputation heuristic	0.049*	×	0.000*	×	0.000*
Authority heuristic	×	×	0.003*	×	0.000*
Expectancy violation heuristic	0.006*	×	0.000*	×	0.008*
Persuasive intense heuristic	×	×	×	×	×
Bandwagon heuristic	0.034*	×	0.000*	×	0.000*

*p < 0.05

6.2 Discussion

As heuristics was used as a core concept of the current study, it is worth to be reminded that, according to Caroline Webb (2017), human brain has two different systems; the deliberate system, and the automatic system, that run in parallel to keep our body functioned. The deliberate system, or Daniel Kahneman's the 'slow system' (Kahnemann, 2012) is the system that is in charge of reasoning, self-control, and forward thinking. The deliberate system depends immensely on human's 'working memory.' The working memory has limited space. The limited space of working memory means limited capacity of the deliberate system. As such, the deliberate system gets burned-out easily. Additionally, human body cannot survive a day by depending solely on the deliberate system. This is why the automatic system pitches in.

The automatic system, as called by Daniel Kahneman as 'the fast system', is the system that is in charge of routine or familiar tasks. To succeed those tasks and to lighten the deliberate system's heavy duty, the automatic system relies on numerous shortcuts, in which behavioral scientists called '*heuristics*.' Heuristics would channel human's conscious attention into something that are easy to comprehend and degrade something that are more complicated or difficult to perceive.

For those who did not use Facebook as their working space, using the application was more at leisure. It can be assumable that the automatic system was on

whenever people scrolled up and down their Facebook feed. While scrolling up and down their screens, Thai Facebook users would find many kinds of information. Health information is supposedly to be one among them.

What made this topic worth to be studied was that health information mattered to everyone's life. Encountering both solicited and unsolicited health information on Facebook assumedly activated Thai Facebook users' credibility judgment inevitably.

To the researcher's knowledge, there was no prior study on Thai Facebook users' uses of heuristics in credibility judgment of health information on Facebook. As such, the results from the current study was not only to reaffirm several existing and related literature, but to further understanding on uses of heuristics in credibility judgment of health information on Facebook in Thai context . Considering that the current study shed some lights on the extents to which Thai Facebook users relied on heuristics in their credibility judgment, which groups of heuristics triggered their judgment, and the relationship between some qualifications of Thai Facebook and their uses of heuristics in credibility judgment of health information, there are some interpretation and implication on how people incorporate heuristics into their credibility judgment of health information presented on Facebook.

6.2.1 Heuristics were used in credibility judgment of health information on Facebook differently.

Clearly, applying heuristics into decision-making process cannot guarantee the best or perfect choice. Heuristics could only give a satisfied choice under time and cognitive ability constraints. When the current study revealed that Thai Facebook users used every groups of heuristics, namely, reputation heuristic, authority heuristic, expectation violation heuristic, persuasive intense heuristic, and bandwagon heuristic, in credibility judgment of health information they found on Facebook, the results did not tell that those Facebook users made a right or wrong credibility judgment on health information they found. However, it portrayed a picture of the extent to which Thai Facebook users applied heuristics into their credibility judgment process and also sent signals to all parties to take proper action regarding some issues that may be arise.

The results from the current study reaffirmed the prior works of Flanagin and Metzger (Flanagin & Metzger, 2007; Metzger et al., 2010) that found these five groups of heuristics in credibility judgment of online information. Moreover, the current study also showed new findings into this area by presenting the intensity of heuristic uses which were discussed as following.

6.2.1.1 Bias and commercial intention ruin the information credibility

Among five groups of heuristics, persuasive heuristic was used the most in credibility judgment of health information on Facebook. The results supported the work of Diviani et al. (2016) in which participants pointed that the information must show no sign of commercial nature. As one participants mentioned in that study by Diviani and colleagues (2016, p. 1020), *'if there are no economic gains [for its authors] a website looks more reliable to me'*. The results also reaffirmed the prior work by Fogg et al. (2003) and Metzger et al. (2010) that seeing an advertisement attached with the information activated participants negative feeling toward the credibility of the presented information (Fogg, 2003; Metzger et al., 2010). It could be explained that individuals thought all information presented in that post was used to support the commercial intention of the sender.

Taken into this result into account, it suggested that to create a credible health information post on Facebook, one must avoid enclosing bias message especially commercial one into the post. Whenever, individuals considered the Facebook post they were reading as advertising, individuals tend to disbelief and be more critical on that Facebook post (Boerman, Willemsen, & Van Der Aa, 2017).

In the meantime, what should be taken into consideration from this result was that what would happen if the content was not obviously shown their commercial intention. Will Thai Facebook users be able to make a credibility judgment if the commercial intention is unclear? Will they fall into any Facebook influencers' traps when Facebook (2018b) claimed that the application was the best place for business across industries that provide direct communication to target audiences with flexible set of publishing tools such as text, photos, and videos, etc.

The results from the current study are sending signals that it is about time to educate and to prepare Thai Facebook users to be aware that they should not take their heuristic-based credibility judgment for granted.

6.2.1.2 Expertise plays as a key qualification of source on Facebook when discussing health information

The second most-used heuristic was authority heuristic. Expertise undoubtedly is always a key qualification of credible source of information. According to the literature, it was one of two dimension that people perceived of credibility (Fogg & Tseng, 1999; Hovland et al., 1953; Hovland & Weiss, 1951; Olaisen, 1990; Self, 2009; Tseng & Fogg, 1999). Expertise was defined by several terms such as ‘knowledgeable, experienced, competent’ (Fogg & Tseng, 1999, p. 80).

Doctors and health professionals clearly possessed this key qualification. Number of years in a medical school and in practice made them qualified in all of those terms. Hence, it was undeniable that health professionals were among the first choice that any people, either they were direct users or lay information mediary, could consider as a source of health information. The results of several scholarly works before the Internet era revealed that people discussed their health issues with doctors, nurses, or other health professionals (Aaronson et al., 1988; Kassulke et al., 1993; O'Malley et al., 1999). Only that they removed themselves temporarily from face-to-face communication channels and entered into computer-mediated communication channels, it does not mean that people would disregard doctors and their recommendation. Health information credibility was revisited in online context and found the same results that people rated personal doctor, medical university, and federal government as trusted online source of health information (Dutta-Bergman, 2003). Still, as the results of the current study revealed, Facebook users often mentioned that health information from doctors’ personal accounts, or Facebook pages that were run by doctors were credible.

However, doctors was not solely source of credible health information. Participants in the current study stated that those who had direct experiences was credible sources as well. Clearly, participants saw that this group of source developed their expertise from their direct experiences. Health information from sources with

direct experience was credible enough to them. Participants learned about their expertise because they had known the source in person. Also, they noticed sources' expertise from their consistency of the information provided on accounts or Facebook pages.

The findings from this study implied that some Thai Facebook users could possibly believe any health information that is posted or shared by a Facebook account or a Facebook page that could show their expertise, either by an account name, a profile picture, content presentation, content consistency and content recency. This can be dangerous especially in health context which the information mattered to everyone's life. Even though, Facebook has a verification system that gave a blue check mark at any verified accounts, it was rarely found in any health-related institutions in Thailand. Some were found with accounts of politicians and celebrities. That means Thai Facebook users need to establish their own tools to verify Facebook accounts and to check on their expertise.

6.2.1.3 Popularity did not equate but secure credibility.

Reputation heuristic was ranked the third in term of the intensity of heuristic use. The results from the current study suggested that, to participants, accounts or Facebook pages that have a great number of likes or followers signaled some degrees of credibility to the health information the accounts or pages posted or shared. The results resonated with a work of Diviani et al. (2016) revealing that people trusted health information from popular websites. One respondent in the aforementioned study even stated *'if a website has a lot of visitors, it is necessarily reliable'*.

Although participants realized that popularity or reputation did not equate credibility, they still trusted the popular or well-known source by pointing out that accounts or pages owners would not risk losing their popularity by posting or sharing false health information. That explained why reputation heuristics, as in account of someone or some organization that were well-known to the public, number of likes and number of followers, were triggered when coming to credibility judgment of health information on Facebook.

Similar to trusting an expert, it is quite risky for Thai Facebook users to trusts someone because of their popularity. Being well-known does not mean that person

will be right. Well-known may be hired to endorse some products or services on Facebook the same way as they were hired to be a spokesperson or presenters or brand ambassador of products or services and made appearances in public or on mass media.

6.2.1.4 Proper language was not a must, but preferable.

There was no difference between the use of expectancy violation heuristic and reputation heuristic. The results from the current study clearly showed that participants relied on expectancy violation heuristic, but not as strong as persuasive intense heuristic and authority heuristic. The results suggested that individuals had some expectation on how the information was presented, especially in term of language use. Participants preferred the grammatically flawless and error-free contents. They reasoned that if senders cannot write it correctly, how can one trust that the presented information was credible. However, Informal language was acceptable if it was from general Facebook pages or friends, but not from doctors or governmental health organization.

The empirical results both from qualitative and quantitative data resonated with the work of Diviani et al. (2016) that participants checked use of grammar of health information presented online. One participants stated in the work by Diviani and colleagues (2016, p. 1020) that 'I interpret the use of grammar and syntax and the orthography as indication of the care that has been devoted to the preparation of information'. The current study also affirmed the work by Metzger et al. (2010) that conducted credibility evaluation on website context and revealed several forms of expectancy violation heuristic. The presence of typographic error and grammatical error were prevalent ones.

As the results from the current study suggested that individuals were less likely to use this group of heuristic, it could be because Facebook users considered Facebook as a platform of user-generated content that everyone can join. Casual conversation was regularly seen throughout their newsfeed. The more people used this platform, the more familiar they were with those casual expression. As such, grammatical and typographic error were acceptable and didn't bother them much.

6.2.1.5 High number of interaction and repetition slightly helped indicating credibility of the information

The results of the current study revealed that positive reactions toward Facebook posts were used in assessing information credibility. The results resonated with a prior work of Borah & Xiao (2018) revealing that Facebook users referred to number of likes when making credibility judgment on health information. However, the current study found that participants used bandwagon heuristic the least.

It must be noted that bandwagon heuristic was not only about high number of reactions towards the asking post. The current study also extensively identified others empirical cues in Facebook context that can be categorized in bandwagon heuristics. Participants indicated that other than number of likes, number of shares, number of comments, positive comments were regarded as indicators of the post's credibility. Additionally, noticing that the asking post had been repeatedly shared by their friends on both Facebook and other platforms intensified its credibility.

Clearly, the current study reaffirmed theoretical literature (Flanagin & Metzger, 2007; Metzger et al., 2010; Sundar, 2008; Sundar & Nass, 2001) about bandwagon heuristic that when people assumed that when other people reach a consensus about certain information, that information was believed to be credible.

However, while the prior work (Borah & Xiao, 2018) found that the number of like made a Facebook post from a credible source became more credible, the current study revealed the opposite results. Number of like showed no difference of credibility between posts from credible source and non-credible source. It was possible that participants were aware that Facebook allowed any Facebook pages to boost their posts which meant the page paid Facebook to have their posts seen by more people. There were a possibility that boosted post would get more number of interaction than non-boosted post. As such, cues such as number of likes, shares, and comments in bandwagon heuristic would not have much impact on credibility judgment of health information on Facebook. This also suggested that financial investment in Facebook post would probably get more people to see the post, but could not boost the post's credibility.

6.2.2 Facebook users with different level of health motivation use heuristics differently

The current study revealed that those who were high health motivated put more effort into their credibility judgment. It reaffirmed the literature that ‘motivated consumers devoted more attention to and exert greater cognitive effort toward the processing of relevant information’ (Moorman & Matulich, 1993).

Statistically, the significant difference was found in using of reputation heuristic, expectancy violation heuristic and bandwagon heuristic. This results suggested that, regardless the level of health motivation, Facebook users expected credible health information to be bias free and commercial free, sent from authorized and/or well-known sender.

Low health motivated Facebook users, as they wanted to put less effort in their decision making process, would further look at expectancy heuristics and bandwagon heuristics. Health information that did not conform with their prior belief and knowledge made them doubt its credibility. At the same time, health information that did not presented with proper language and grammar signaled that sender was careless. Then, the information could not be trusted. Also, health information with commercial intention showed those information may not be true as the sender had a hidden agenda. On the contrary, high health motivated Facebook users probably ignore these two heuristics as they did not make much different in their credibility judgment.

6.2.3 High health literate participants paid more attention to health information on Facebook

The results of the current study supported the hypothesis that low health-literate individuals used more heuristics in credibility judgment of health information on Facebook than those who were high health-literate.

The results supported the findings by Neter & Brianin (2012) presenting that high e-health literate person reported searching for health information with caution. These people also evaluated health information they encountered with a careful scrutiny. This clearly implied that those with higher level of health literacy would rely on heuristic cues less than those with low level of health literacy. The current study

also yielded results extended the findings of Diviani et al. (2016) that high health literate people used rigorous health information searching process. It implied that, in online setting, high health literate people were not only paid more attention and applied more rigorous process of health information acquisition, but also relied less on heuristic approach than low health literate people.

People with different level of health literacy were found using heuristics in credibility judgment of health information on Facebook significantly different in almost all heuristic groups, except persuasive intense violation. That was probably because bias especially in term of commercial was very obvious to Facebook users, regardless their level of health literacy, that the sender expected to persuade its audience and they must gain something from it.

6.3 Research contribution

6.3.1 Theoretical contribution

The current study not only confirmed but also extended the existing literature on uses of heuristics in credibility judgment of online information, health information on Facebook in particular. The results presented the differences in uses of each heuristic group. That was, persuasive intense heuristic was used the most, followed by authority heuristic, reputation and expectancy violation heuristic, and bandwagon heuristic, respectively. These novel findings could lead to future studies both in the similar and different contexts.

6.3.2 Practical contribution

Findings from the current study can be applied as following;

6.3.2.1 Source-related dimension

To create a credible Facebook post about health information, the current study suggested that source's expertise should be presented or detectable. If one is a doctor who has been practicing in a healthcare organization, one must provide that information to potential viewers or followers. It should be a clear and concise information in one's profile, a professional profile photo, a unmistakable account name, contact information, etc. If one is not a doctor or health professionals, but is a person with direct experience, that person needs more than a unmistakable account name. His or her background on that health issue must be provided. It could be

appeared on his or her profile information. Also, he or she could be consistent on feeding information on that health topic.

This is also an opportunity for any health professionals and organizations to reach out and to provide accurate and useful health information to the public.

Moreover, for Facebook page administrators in particular, spending on boosting posts may not worth as expected. The findings from the current study revealed that bandwagon heuristic was used the least among five groups of heuristics. They should pay attention on other heuristic cues could confirm source's expertise or reputation and create a bias-free message.

6.3.2.2 Message-related dimension

The findings from the current study suggested that Facebook users expected a credible health information post consisted of several qualifications. Importantly, credible health information on Facebook must be to be commercial and bias free regardless of how serious the health issue was. Bias and commercial intention attached with the message will dilute the information credibility. Secondly, it should be noticeably that the message is sent by authorized and/or experienced sources. Health information on Facebook sending from doctors or official health organization would have an advantage over other personal accounts or general Facebook pages. Thirdly, the message should be presented with proper language and grammar. Even though Facebook users did not expect health information to be presented with formal or professional language all the time, typographical and grammatical error free message would show how professional and responsible the sender is.

6.3.2.3 Audience-related dimension

Findings from the current study showed some concerns to audiences who received health information on Facebook. First of all, the results revealed that Facebook users used authority heuristic only second to persuasive intense heuristic. Clearly, Facebook was a platform that anyone can use, as such there is a possibility that people would mistakenly believe that some Facebook accounts belonged to doctors, health professionals, or experts in the asking health topic. Similarly to other social networking sites, Twitter and Instagram in particular, Facebook had a verification system that gave a blue check mark after an account name to guarantee its authentication, however, in Thailand this authentication was mostly found in accounts

of politicians and celebrities. As such, it is a calling task to policy makers to initiate plans and implement strategies that tackle this issue and protect people from account frauds and false information. Groups of audience that should be taken care of are such as low health-literate people and elders.

Second of all, findings revealed that people who were highly engaged in health information inquisition and transmission on Facebook were found using heuristics more than those who were lowly engaged. That meant those who were considered to be highly health e-maven may not put much effort in health information inquisition and transmission. Probably, they performed those tasks in a limited time. As such, perceiving that people who consistently posted and shared health information as an expertise is possibly a pitfall that policy makers and educators should address and take action.

6.4 Limitation and Flaws of the study

As this study has shed a light on Facebook users' credibility judgment of health information on Facebook, it must be noted there are some limitation and flaws to be addressed.

6.4.1 In-depth interview

Even though this data collection method seem to provide more comprehensive, deeper, and insight information than other methods, collecting data from 50 Facebook users considered to be small samples. Generalization, as such, cannot be made.

6.4.2 Online survey

Although conducting online survey was convenient, cost and time saving, it came with some disadvantages as well. In this study, even though there was no age limit for respondents, aging Facebook users were less likely to participate in the survey.

6.5 Recommendation for future research

In the technology driven era where new information emerge every seconds, making credibility judgment of health information on Facebook that we encountered daily is not an easy task. While this study tried to shed some lights on how Facebook users in general uses heuristics as part of their credibility judgment on health information, it is worth to take a closer look at Facebook users in different age groups in particular. Teenagers, although they were born in technological environment, possess limited life experience to use as an essential tool to handle the complicated world. In the meantime, elders possess numerous life experience, but they were considered to be 'late majority' or even 'laggard' in technology adoption life cycle. As such they may not fully catch on with online fraud and encounter life challenge and risk at the same time.

Information credibility matters to everyone regardless of cultural background. Although the finding in this study showed that cultural background significant correlated with participants' uses of heuristics in credibility judgment of health information, this study only tested with Thai participants. Future studies on Facebook population in other cultural backgrounds would definitely give a better understanding about users in those communities. Policy makers, educators can use those results in creating and encouraging information credibility awareness among users.

Moreover, challenges in information credibility did not solely occurred in Facebook. Incorporating other social networking sites (SNS) in future studies will yield more insights on credibility judgment of information on SNS context.

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Appendix

Appendix A

Consent Form

Identification of Project	Heuristics used in credibility judgment of health information on Facebook
Statement of Age of subject	I state that I am over 18 years of age and wish to participate in a program of research being conducted by Yaninee Petcharanan of Chulalongkorn University, Faculty of Communication Arts.
Purpose	The purpose of the research is to assess how people perceive and make credibility judgment of health information on Facebook.
Procedures	The procedures involve completing a brief questionnaire which will require approximately 30 minutes.
Confidentiality	I understand that all information collected in the study is confidential, and my name will not be identified at any time in reporting the results of the research.
Risks	I understand that there are no risks associated with my participation in this study.
Benefits	I understand that the research is not designed to help me personally, but that the investigator wishes to learn more about individuals' perception and decision making processes in credibility judgment of health information on Facebook.
Freedom to Ask Questions or Withdraw	I understand that I am free to ask questions of the investigator and/or to withdraw from participation in the research at any time. Upon withdrawal any record of my participation will be destroyed.
Name, Address, Phone number of Principal Investigator	Yaninee Petcharanan yaninee.p@gmail.com

Signature of Subject:

Date:

Part I: Health Motivation

Direction: Below are a number of questions regarding health behaviors. Please indicate to what extent you to agree or disagree with each statement.

Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I try to prevent health problems before I detect any symptoms.							
2. I try to protect myself against health hazards I hear about.							
3. I don't worry about health hazards until they become a problem for me or someone close to me.							
4. There are so many things that can hurt you these days, but I'm not going to worry about them.							
5. I worry about the health hazards I hear about, but I don't do anything about them.							
6. I don't take any action against health hazards I hear about until I know I have a problem.							
7. I'd rather enjoy life than try to make sure I'm not exposing myself to a health hazard.							
8. If I am concerned about health hazards, I would try to take action to prevent them.							

Part II: Health literacy on Facebook

Direction: Below are a number of questions regarding health literacy on Facebook. Please indicate to what extent you to agree or disagree with each statement.

Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. To find credible health information, I should go to the official pages of accredited hospitals or health facilities.							
2. To find credible health information, I should go to a Facebook account of doctors whom I have known in person.							
3. Not all 'seem to be' doctors on Facebook are actually doctors who professionally practice in hospitals.							

Question	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
	4. I will not hesitate to share any health-related posts on my wall if those posts already get more than 200 shares or at least 500 likes.						
5. Anecdotes concerning health symptoms or treatments that are shared on Facebook can be applied to anyone. They are very useful.							
6. If health information shared on Facebook worked for others, it will work with me as well.							
7. If the health information shared on Facebook received a lot of agreeing comments, that means the information is reliable.							
8. Facebook users must be aware of 'doctored' photos that attached to health information. Those photos may be used to deceive others.							
9. Not all health information posted on Facebook can be applied to others.							
10. Not all health information posted on Facebook should be shared with others.							

Part III. Health e-mavens

Direction: Below are a number of questions regarding the activity and engagement of individuals in online health information seeking and sharing activities. Please indicate how often you do each of the following statement.

Question	never	rarely	occasionally	sometimes	frequently	usually	always
	How often do you do the following?						
Tracking							
1. Sign up to receive email updates or alerts about health or medical issues.							
2. Follow or like personal accounts or Facebook pages that provide health-related information on Facebook.							
3. Read someone else's commentary or experience about health or medical issues on an online news group, website, blog.							
4. Read someone else's commentary or experience about health or medical issues on Facebook.							
5. Watch video clips about health or medical issues posted or shared on Facebook.							

Question							
	never	almost never	occasionally	neutral	often	very often	always
How often do you do the following?							
6. Watch video clips about health or medical issues on non-Facebook platform such as YouTube, or other websites.							
7. Go to Facebook to find information that responds to your personal health concerns.							
8. Go to Facebook to find information that responds to your close ones' health concerns.							
9. Go to Facebook to find information that responds to health concerns in the society.							
Consulting							
1. Consult high ranking or highly reviewed doctors or other health provider on Facebook about your health concerns.							
2. Consult high ranking or highly reviewed doctors or other health provider on non-Facebook online platform about your health concerns.							
3. Consult high ranking or highly reviewed doctors or other health providers on non-online platform about your health concerns.							
4. Contact high ranking or highly review hospitals or other medical facilities on their Facebook account/page.							
5. Consult reviews on Facebook before using or applying drugs or medical treatments you have never known of.							
6. Consult reviews on non-Facebook platform before using or applying drugs or medical treatments you have never known of.							
Posting and sharing							
1. Post a review of your good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on your Facebook wall.							
2. Post a review of your good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on non-Facebook online platform.							

Question							
	never	almost never	occasionally	neutral	often	very often	always
How often do you do the following?							
3. Post a review of your bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on your Facebook wall.							
4. Post a review of your bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on non-Facebook online platform							
5. Post a story about good experience with medical treatment, and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on your Facebook wall.							
6. Post a story of good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.							
7. Post a story of bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that my family members, friends, or colleagues have on your Facebook wall.							
8. Post a story of bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.							
9. Share any health-related posts on your Facebook wall so your Facebook friends could see and read the information.							
10. Share any health-related posts from your Facebook news feed with your family and friends on non-Facebook platform.							

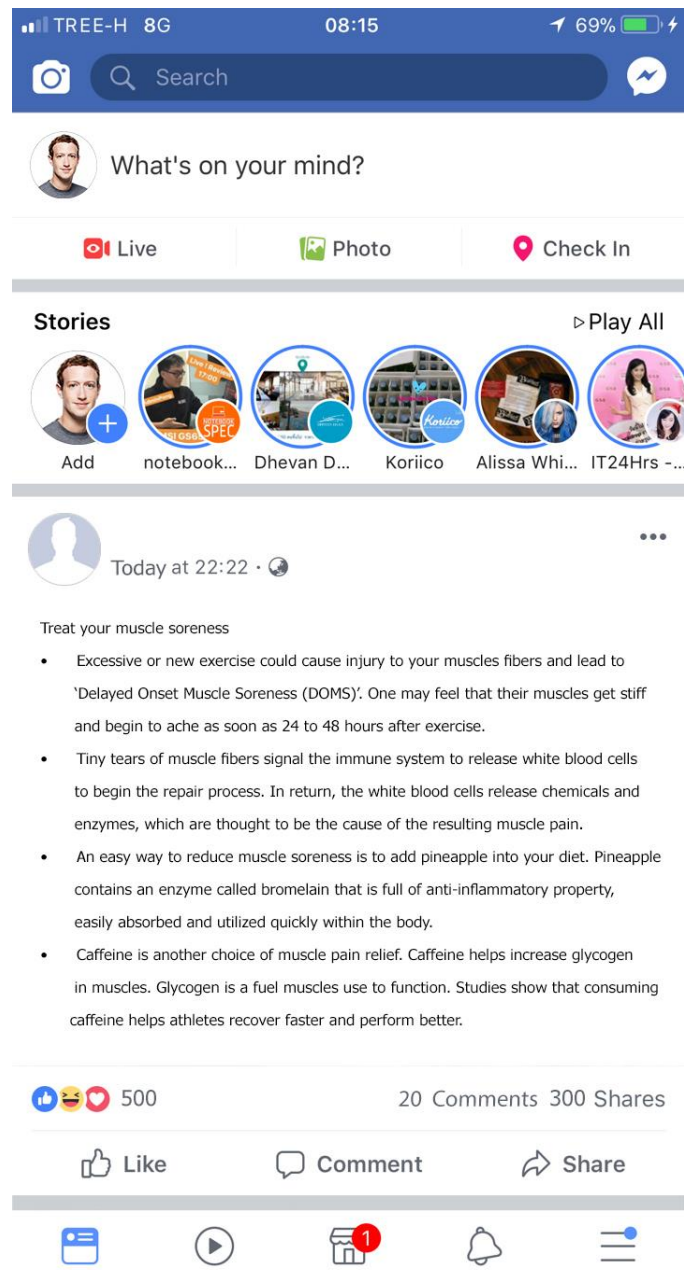
Part IV. Holistic vs. Analytic worldview

Below are numbers of questions regarding the way you think about the world around you. Please read and indicate to what extent you to agree or disagree on each statement.

Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. The whole, rather than its parts, should be considered in order to understand a phenomenon.							
2. It is more important to pay attention to the whole than its parts							
3. The whole is greater than the sum of its parts.							
4. It is more important to pay attention to the whole context rather than the details.							
5. It is not possible to understand the parts without considering the whole picture.							
6. We should consider the situation a person is faced with, as well as his/her personality, in order to understand one's behavior.							
7. I examine the specific information before I make decisions.							
8. I dissect the arguments into their component parts to make decisions.							
9. I weigh the merit of each argument and piece of information before I make a decision.							
10. I compromise between different possible solutions when I make decisions.							
11. I consider the whole "scene" when I make a decisions.							

Part V. Perceived seriousness of health topics

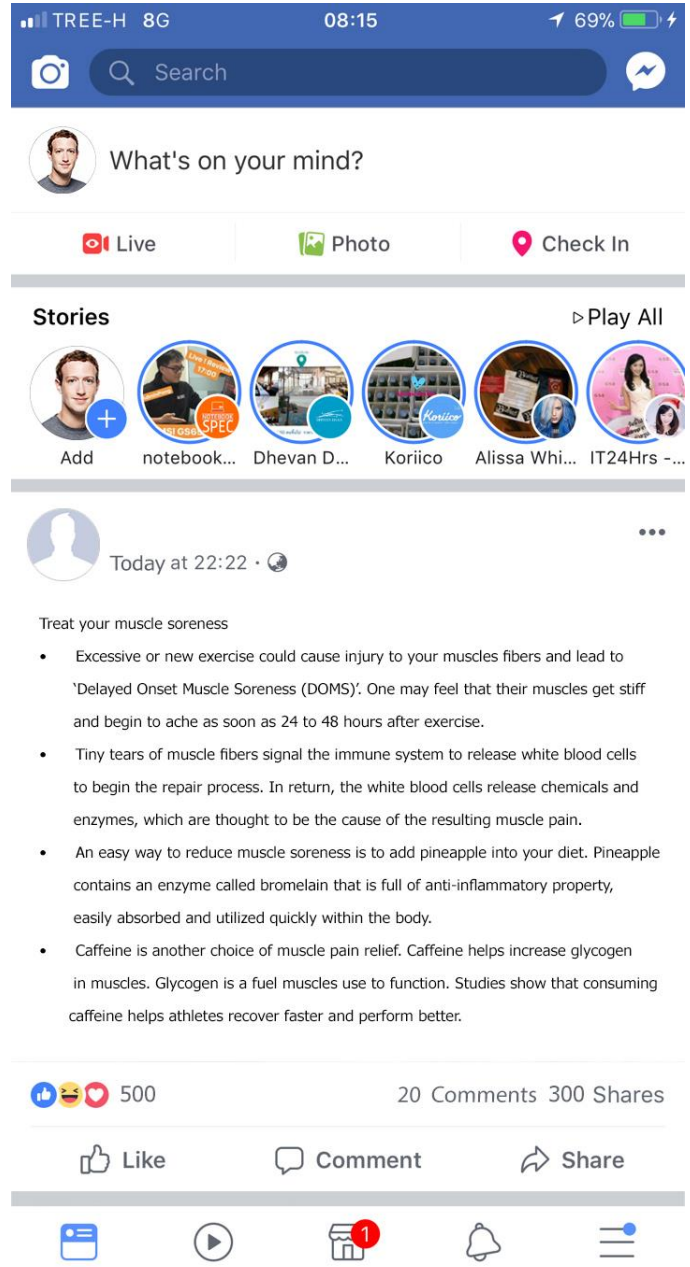
Direction: Below are a number of questions regarding your perceived seriousness of a health topic in the following picture. Please read and indicate to what extent you to agree or disagree with each statement.



Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I consider a health topic of 'muscle soreness' a serious health issue.							
2. I make a judgment on seriousness of this health issue based on how 'muscle soreness' has been widely discussed recently.							
3. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is a life threatening health issue.							
4. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' impedes a person from regular daily routine, prevents the person from working, or strongly affects the person physically and mentally.							
5. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is incurable.							

Part VI. Credibility Assessment

Direction: Imagine that the information was posted by a doctor whom you have known in person and this post was shown on your Facebook news feed. Please read the following statements regarding your credibility judgment below and indicate to what extent you agree or disagree with each statement.



Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I think the information is credible.							
2. I make a credibility judgment by considering that the source is a renowned person or organization even though the person or organization is in a non-health-related field.							
3. I make a credibility judgment by considering that the source is a renowned person or organization in a field of health.							
4. I make a credibility judgment by considering that the source is a person or organization that I'm familiar with.							
5. I make a credibility judgment by considering that the source is a renowned media organization.							
6. I make a credibility judgment by considering that the source is a person or organization that is authorized in a field of health.							
7. I make a credibility judgment by considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.							
8. I make a credibility judgment by considering that the topic presented here is related to the source's area of expertise							
9. I make a credibility judgment by considering that I trust the person or organization who posted or shared the information.							
10. I make a credibility judgment by considering the number of likes and shares which proof to me that the information is credible.							
11. I wish I could read the comments on this post. Agreeing comments will help confirm the post's credibility.							
12. I make a credibility judgment by considering whether I have seen my peers or significant others share this information before.							
13. I make a credibility judgment by considering whether I have found the same information has been shared on other social networking sites or media channels.							

Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
14. I make a credibility judgment by considering that I have checked with other sources and found the same information.							
15. I make a credibility judgment by considering that I used to discuss this topic offline with my peers and they were saying the same thing.							
16. I make a credibility judgment by considering that I used to consult doctors or experts on this topic offline, and they were saying the same thing.							
17. I make a credibility judgment by considering whether the information seems to have a commercial purpose							
18. I make a credibility judgment by considering whether the information itself is bias free.							
19. I make a credibility judgment by considering whether the information clearly shows products or services related to the topic discussed.							
20. I make a credibility judgment by considering that the information is selected to be shown on my wall by the computer must be free from bias.							
21. I make a credibility judgment by considering that the information is selected by the computer, so it must be suitable for me.							
22. I make a credibility judgment by considering that the computer system is smart and will not tell a lie.							
23. I make a credibility judgment based on what I have already learned in school.							
24. I make a credibility judgment by considering whether the information conforms to my beliefs.							
25. I make a credibility judgment by considering whether it is presented professionally.							

Question							
	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
26. I make a credibility judgment by considering whether the information is grammatical and error free.							
Please provide other reasons supporting your credibility judgment:							
Imagine there are 20 comments on this post, but you cannot read them. Will those comments make the content more or less credible? <input type="checkbox"/> Yes <input type="checkbox"/> No because.....							
What number of 'Likes' responding to the health information posted on Facebook would make you consider the information credible?							
Because.....							
What number of comments responding to the health information posted on Facebook would make you consider the information credible, even though you cannot read them?							
Because.....							
What number of 'Shares' responding to the health information posted on Facebook would make you consider the information credible?							
Because.....							

Part VII. Background questions

1. Gender

- (1) male (2) female
 (3) prefer not to answer (4) other, please specify _____

2. Age

- (1) under 20 years old (2) 20-34 years old
 (3) 35-44 years old (4) 45-54 years old
 (5) 55-64 years old (6) 65 years old and over

3. Completed education

- (1) primary school (2) secondary school
 (3) completed undergraduate degree (4) some graduate school

(5) Master's degree(6) Ph.D, Ed.D or equivalent

4. How long have you had active an account(s) on Facebook? year(s)

5. Frequency of Facebook use

(1) more than once a day(2) once a day(3) once every couple of days(4) once a week(5) less than once a week(6) once a month

6. Average time spend on Facebook each time you use it:

(1) shorter than 10 minutes(2) 11-30 minutes(3) 31-60 minutes(4) longer than one hour

7. Devices you use to access Facebook: (choose all that apply)

(1) PC(2) portable computer

(laptop)

(3) tablet(4) mobile phone(5) other (please specify.....)**Part VIII. Health status**

Below is a statement regarding your health status. Please read and indicate a responding level.

Statement							
	1	2	3	4	5	6	7
What is your current overall health (1=poor 7=excellent)							

ใบยินยอมเข้าร่วมการวิจัย

หัวข้อโครงการวิจัย	การใช้แนวคิดแบบรวบรัดเพื่อตัดสินความน่าเชื่อถือของข้อมูลสุขภาพที่ปรากฏบนเฟซบุ๊ก
คำรับรองว่าด้วยอายุ	ข้าพเจ้ารับรองว่าข้าพเจ้ามีอายุเกิน 18 ปีและประสงค์ที่จะเข้าร่วมในงานวิจัยของนิสิตปริญญาเอก สาขานิเทศศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
วัตถุประสงค์การวิจัย	งานวิจัยนี้มีวัตถุประสงค์เพื่อประเมินการรับรู้และการตัดสินความน่าเชื่อถือที่ผู้ใช้เฟซบุ๊กมีต่อข้อมูลสุขภาพที่ปรากฏบนเฟซบุ๊ก
ระเบียบวิธีวิจัย	การตอบแบบสอบถาม โดยใช้เวลาประมาณ 30 นาที
การรักษาความลับ	ข้าพเจ้าตระหนักว่าข้อมูลทั้งหมดที่เก็บรวบรวมในการวิจัยครั้งนี้จะถูกรักษาเป็นความลับ และจะไม่มีการเปิดเผยข้อมูลที่ระบุความเป็นตัวตนของข้าพเจ้าในการรายงานผลการวิจัย
ความเสี่ยง	ข้าพเจ้าตระหนักว่าการเข้าร่วมการวิจัยครั้งนี้ปราศจากความเสี่ยงทุกประการ
ประโยชน์	ข้าพเจ้าตระหนักว่าการวิจัยนี้มีได้ออกแบบเพื่อประโยชน์ของข้าพเจ้าแต่เพียงผู้เดียว หากผู้วิจัยปรารถนาที่จะศึกษาการรับรู้และกระบวนการตัดสินใจในการตัดสินความน่าเชื่อถือของข้อมูลสุขภาพที่ปรากฏบนเฟซบุ๊กของผู้ใช้งานแต่ละบุคคล
เสรีภาพในการตั้งคำถามและสิทธิ์ในการถอนตัว	ข้าพเจ้าตระหนักว่าข้าพเจ้ามีสิทธิ์ในการตั้งคำถามผู้วิจัย และ/หรือถอนตัวจากการเข้าร่วมงานวิจัยเมื่อใดก็ได้ ในกรณีที่ถอนตัว ข้อมูลที่เกี่ยวข้องกับข้าพเจ้าทุกประการจะถูกทำลายทันที

ชื่อและช่องทางติดต่อ

ญาณินี เพชรานันท์

หัวหน้าโครงการวิจัย

yaninee.p@gmail.com

ลายมือชื่อผู้เข้าร่วมวิจัย

วันที่:

ขอพระคุณอย่างยิ่งที่ท่านยินดีตอบแบบสอบถาม

ส่วนที่ 1: แร่งจูงใจด้านสุขภาพ

คำสั่ง: กรุณาระบุว่าท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความที่เกี่ยวข้องกับพฤติกรรมด้านสุขภาพ ดังต่อไปนี้

คำถาม							
	ไม่เห็น ด้วยอย่าง ยิ่ง	ไม่เห็น ด้วย	ไม่เห็น ด้วย เล็กน้อย	ปาน กลาง	เห็นด้วย เล็กน้อย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
1. ข้าพเจ้ายามป้องกันโรคร้ายต่างๆ ก่อนที่จะรอให้ ตรวจพบว่ามีอาการของโรคเหล่านั้น							
2. ข้าพเจ้ายามป้องกันตัวเองจากอันตรายด้านสุขภาพ ที่ได้รับข้อมูลมา							
3. ข้าพเจ้าไม่เคยกังวลเกี่ยวกับอันตรายด้านสุขภาพ จนกระทั่งข้าพเจ้าหรือคนใกล้ชิดประสบกับปัญหาเหล่านั้น							
4. ถึงแม้ในปัจจุบันนี้มีหลายสาเหตุที่อาจทำร้ายสุขภาพ คนเราได้ แต่ข้าพเจ้าไม่ได้กังวลแต่อย่างใด							
5. ข้าพเจ้ามักกังวลเกี่ยวกับอันตรายด้านสุขภาพที่ได้รับรู้ แต่ข้าพเจ้าก็ไม่เคยทำอะไรมาเกินไปกว่าแสดงความกังวล							
6. ข้าพเจ้าไม่ได้ป้องกันตัวเองจากอันตรายด้านสุขภาพที่ ได้รับรู้ จนกระทั่งข้าพเจ้าประสบปัญหาโรคร้ายนั่นเอง							
7. ข้าพเจ้าเลือกที่จะมีความสุขกับชีวิตมากกว่าจะคอย ระวังตัวไม่ให้เสี่ยงต่ออันตรายด้านสุขภาพ							
8. ข้าพเจ้าตระหนักถึงอันตรายด้านสุขภาพและพยายาม ปฏิบัติตัวเพื่อป้องกันและหลีกเลี่ยงอันตรายด้านสุขภาพ เหล่านั้น							

ส่วนที่ 2: ความตระหนักรู้เกี่ยวกับสุขภาพที่พบในเฟซบุ๊ก

คำสั่ง: กรุณาระบุว่าท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความที่เกี่ยวข้องกับความตระหนักรู้เกี่ยวกับสุขภาพบนเฟซบุ๊ก ดังต่อไปนี้

คำถาม							
	ไม่เห็น ด้วยอย่าง ยิ่ง	ไม่เห็น ด้วย	ไม่เห็น ด้วย เล็กน้อย	ปาน กลาง	เห็นด้วย เล็กน้อย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
1. ข้าพเจ้าควรค้นหาข้อมูลสุขภาพที่น่าเชื่อถือบน เฟซบุ๊กจากเพจทางการ (official page) ของโรงพยาบาล หรือสถานบริการด้านสุขภาพที่ได้รับการรับรองมาตรฐาน คุณภาพ							
2. ข้าพเจ้าควรค้นหาข้อมูลสุขภาพที่น่าเชื่อถือบน เฟซบุ๊กจากหน้าวอลล์ของแพทย์ที่รู้จักเป็นการส่วนตัว							
3. คนที่สร้างโปรไฟล์และ/หรือสื่อสารบนเฟซบุ๊ก จนทำให้ คนอื่นเข้าใจว่าเป็น “แพทย์” อาจจะได้มีอาชีพเป็น แพทย์ที่ปฏิบัติงานในโรงพยาบาลจริงๆ ทุกคน							
4. ข้าพเจ้าจะไม่สั่งเลที่จะแชร์โพสต์ที่เกี่ยวข้องกับสุขภาพเลย หากโพสต์เหล่านั้นถูกแชร์ไปแล้วกว่า 200 ครั้ง หรือได้รับ การกดไลค์อย่างน้อย 500 ครั้ง							
5. เรื่องเล่าเกี่ยวกับอาการของโรคตลอดจนวิธีการรักษาที่							

ถูกแชร์บนเฟซบุ๊กสามารถนำมาประยุกต์ใช้ได้กับใครก็ได้ เพราะเรื่องเล่าเหล่านี้มีประโยชน์มาก							
6. ถ้าหากข้อมูลทางด้านสุขภาพที่แชร์กันบนเฟซบุ๊กใช้ ได้ผลกับคนอื่น ก็น่าจะใช้ได้ผลกับข้าพเจ้าเช่นกัน							
7. ถ้าหากข้อมูลทางด้านสุขภาพที่แชร์กันบนเฟซบุ๊กได้รับความคิดเห็นในเชิงบวก นั่นหมายความว่าข้อมูลเหล่านั้น เชื่อถือได้							
8. ผู้ใช้เฟซบุ๊กควรระมัดระวัง“ ภาพตัดต่อ ”ที่แนบมา กับ ข้อมูลสุขภาพที่พบบนเฟซบุ๊ก เพราะภาพเหล่านั้นอาจเป็น การหลอกลวง							
9. ข้อมูลทางด้านสุขภาพทั้งหมดที่โพสต์บนเฟซบุ๊ก ใ้ว่า จะสามารถนำมาประยุกต์ใช้ได้กับทุกคน							
10. ข้อมูลทางด้านสุขภาพทั้งหมดที่โพสต์ในเฟซบุ๊ก ใ้ว่า จะสามารถนำไปแชร์ต่อกับบุคคลอื่นๆ ได้							

ส่วนที่ 3: ความสม่ำเสมอในการใช้งานอินเทอร์เน็ตเพื่อค้นหาและเผยแพร่ข้อมูลสุขภาพ

คำสั่ง: กรุณาระบุความถี่ในการแสดงพฤติกรรมที่เกี่ยวข้องกับกิจกรรมหรือการมีส่วนร่วมในการสืบค้นหรือแชร์ข้อมูลสุขภาพออนไลน์ในแต่ละข้อความ ดังต่อไปนี้

คำถาม	คำถาม						
	ไม่เคย (0%)	แทบจะ ไม่เคย (10%)	ทำบ้าง เล็กน้อย (20-30%)	บางครั้ง (40-50%)	ค่อนข้าง บ่อย (60-70%)	เป็นประจำ (80-90%)	เสมอ (100%)
ท่านทำสิ่งเหล่านี้บ่อยแค่ไหน?							
พฤติกรรมด้านการติดตามข้อมูลสุขภาพ							
1. ลงทะเบียนเพื่อรับข้อมูลล่าสุดหรือการแจ้งเตือนเกี่ยวกับปัญหาสุขภาพหรือการแพทย์ผ่านทางอีเมลล์							
2. ติดตามหรือกดไลค์บัญชีส่วนตัวหรือเพจที่ให้ข้อมูลเกี่ยวกับสุขภาพในเฟซบุ๊ก							
3. อ่านความคิดเห็นหรือประสบการณ์ด้านสุขภาพหรือประเด็นต่างๆทางการแพทย์ของคนอื่นๆ จากกลุ่มข่าวสารออนไลน์ เว็บไซต์ หรือบล็อก							
4. อ่านความคิดเห็นหรือประสบการณ์ด้านสุขภาพหรือประเด็นต่างๆ ทางทางการแพทย์ของคนอื่นที่โพสต์บนเฟซบุ๊ก							
5. ดูคลิปต่างๆที่เกี่ยวข้องกับประเด็นด้านสุขภาพหรือด้านการแพทย์ที่ถูกโพสต์หรือแชร์บนเฟซบุ๊ก							
6. ดูคลิปต่างๆที่เกี่ยวข้องกับประเด็นด้านสุขภาพหรือด้านการแพทย์ที่ถูกโพสต์หรือแชร์บนช่องทางออนไลน์อื่นๆ เช่น ยูทูบหรือเว็บไซต์ต่างๆ							
7. เข้าเฟซบุ๊กเพื่อค้นหาข้อมูลสุขภาพที่ตอบสนองต่อความกังวลเกี่ยวกับสุขภาพของตัวเอง							
8. เข้าเฟซบุ๊กเพื่อค้นหาข้อมูลสุขภาพที่ตอบสนองต่อความกังวลเกี่ยวกับสุขภาพของคนใกล้ชิด							
9. เข้าเฟซบุ๊กเพื่อค้นหาข้อมูลสุขภาพที่ตอบสนองต่อความกังวลเกี่ยวกับสุขภาพของคนในสังคม							

คำถาม ท่านทำสิ่งเหล่านี้บ่อยแค่ไหน?							
	ไม่เคย (0%)	แทบจะไม่ เคย (10%)	ทำบ้าง เล็กน้อย (20-30%)	บางครั้ง (40-50%)	ค่อนข้าง บ่อย (60-70%)	เป็น ประจำ (80- 90%)	เสมอ (100%)
การปรึกษาด้านสุขภาพ							
1. ปรึกษาเรื่องสุขภาพที่ข้าพเจ้ากังวลกับแพทย์หรือผู้เชี่ยวชาญที่ได้รับการจัดอันดับสูงสุดหรือได้รับการรีวิวถึงมากที่สุดบนเฟซบุ๊ก							
2. ปรึกษาเรื่องสุขภาพที่ข้าพเจ้ากังวลกับแพทย์หรือผู้เชี่ยวชาญที่ได้รับการจัดอันดับสูงสุดหรือได้รับการรีวิวถึงมากที่สุดในช่องทางออนไลน์อื่นๆ นอกเหนือจากเฟซบุ๊ก							
3. ปรึกษาเรื่องสุขภาพที่ข้าพเจ้ากังวลกับแพทย์หรือผู้เชี่ยวชาญที่ได้รับการจัดอันดับสูงสุดหรือได้รับการรีวิวถึงมากที่สุดในช่องทางอื่นที่ไม่ใช่ช่องทางออนไลน์							
4. ติดต่อกับโรงพยาบาลหรือสถานบริการทางการแพทย์ที่ได้รับการจัดอันดับสูงสุดหรือได้รับการรีวิวถึงมากที่สุดผ่านทางบัญชีส่วนตัวหรือเพจของหน่วยงานนั้นๆ บนเฟซบุ๊ก							
5. ศึกษาข้อมูลจากการรีวิวบนเฟซบุ๊กก่อนตัดสินใจรับโรคยาหรือใช้วิธีการรักษาพยาบาลอื่นๆ ที่ข้าพเจ้าไม่เคยรู้มาก่อน							
6. ศึกษาข้อมูลจากการรีวิวในช่องทางอื่นที่ไม่ใช่เฟซบุ๊กก่อนตัดสินใจรับโรคยาหรือใช้วิธีการรักษาพยาบาลอื่นๆ ที่ข้าพเจ้าไม่เคยรู้มาก่อน							
การโพสต์และแชร์ข้อมูลสุขภาพ							
1. โปสต์หรือแชร์เกี่ยวกับประสบการณ์ที่ดีที่ข้าพเจ้าได้รับการรักษาและบริการทางการแพทย์โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ลงบนหน้าเฟซบุ๊กของข้าพเจ้าเอง							
2. โปสต์หรือแชร์เกี่ยวกับประสบการณ์ที่ดีที่ข้าพเจ้าได้รับการรักษาและบริการทางการแพทย์โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ผ่านช่องทางออนไลน์อื่นๆ ที่ไม่ใช่เฟซบุ๊ก							
3. โปสต์หรือแชร์เกี่ยวกับประสบการณ์ที่ไม่ดีที่ข้าพเจ้าได้รับการรักษาและบริการทางการแพทย์โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ลงบนหน้าเฟซบุ๊กของข้าพเจ้าเอง							
4. โปสต์หรือแชร์เกี่ยวกับประสบการณ์ที่ไม่ดีที่ตนเองได้รับการรักษาและบริการทางการแพทย์โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ผ่านช่องทางออนไลน์อื่นๆ ที่ไม่ใช่เฟซบุ๊ก							
5. โปสต์เรื่องราวประสบการณ์ที่ดีที่สมาชิกในครอบครัว เพื่อนหรือเพื่อนร่วมงาน ได้รับจากการรักษาและบริการทางการแพทย์ โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ลงบนหน้าเฟซบุ๊กของข้าพเจ้าเอง							
6. โปสต์เรื่องราวประสบการณ์ที่ดีที่สมาชิกในครอบครัว เพื่อนหรือเพื่อนร่วมงาน ได้รับจากการรักษาและบริการทางการแพทย์ โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือสถานบริการทางการแพทย์ผ่านช่องทางออนไลน์อื่นๆ ที่ไม่ใช่เฟซบุ๊ก							

คำถาม ท่านทำสิ่งเหล่านี้บ่อยแค่ไหน?							
	ไม่เคย (0%)	แทบจะ ไม่เคย (10%)	ทำบ้าง เล็กน้อย (20- 30%)	บางครั้ง (40- 50%)	ค่อนข้าง บ่อย (60- 70%)	เป็น ประจำ (80- 90%)	เสมอ (100%)
7. โพลสเตอร์รวบรวมประสบการณ์ที่ไม่ดีที่สมาชิกในครอบครัว เพื่อน หรือเพื่อนร่วมงาน ได้รับจากการรักษาและบริการทางการแพทย์ โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือ สถานบริการทางการแพทย์ลงบนหน้าเฟซบุ๊กของตัวเอง							
8. โพลสเตอร์รวบรวมประสบการณ์ที่ไม่ดีที่สมาชิกในครอบครัว เพื่อน หรือเพื่อนร่วมงาน ได้รับจากการรักษาและบริการทางการแพทย์ โดยแพทย์ ผู้เชี่ยวชาญ โรงพยาบาล หรือ สถานบริการทางการแพทย์ผ่านช่องทางออนไลน์อื่นๆ ที่ไม่ใช่เฟซบุ๊ก							
9. แคริโพลสเตอร์เกี่ยวกับสุขภาพบนเฟซบุ๊กของตัวเอง เพื่อให้เพื่อนบนเฟซบุ๊กได้เห็นและอ่านข้อมูลเหล่านั้น							
10. แคริโพลสเตอร์เกี่ยวกับสุขภาพที่เจอจากเฟซบุ๊กเพื่อให้สมาชิกครอบครัวและเพื่อนของท่านได้รับทราบผ่านช่องทางอื่นๆ ที่ไม่ใช่เฟซบุ๊ก							

ส่วนที่ 4: วิธีคิดแบบองค์รวมและวิธีคิดแบบแยกแยะ

คำสั่ง: กรุณาระบุว่าท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความเกี่ยวกับวิธีคิดแบบองค์รวมและวิธีคิดแบบแยกแยะ ดังต่อไปนี้

คำถาม							
	ไม่เห็น ด้วยอย่าง ยิ่ง	ไม่เห็น ด้วย	ไม่เห็น ด้วย เล็กน้อย	ปาน กลาง	เห็นด้วย เล็กน้อย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
1. เราควรที่จะพิจารณาปรากฏการณ์ต่างๆ แบบองค์รวมมากกว่าพิจารณาแบบแยกส่วนเพื่อที่จะทำความเข้าใจปรากฏการณ์ต่างๆ นั้น							
2. การใส่ใจต่อภาพรวมมีความสำคัญมากกว่าการใส่ใจแบบแยกแยะแต่ละส่วน							
3. สิ่งที่อยู่รวมกันเป็นหนึ่งย่อมทรงคุณค่าน่ามากกว่าเมื่อแยกกัน							
4. การใส่ใจในบริบทโดยรวมมีความสำคัญมากกว่าการใส่ใจรายละเอียด							
5. มันเป็นไปได้ที่เราจะสามารถเข้าใจส่วนต่างๆ โดยปราศจากการพิจารณาภาพรวม							
6. เราควรพิจารณาสถานการณ์ที่คนๆ หนึ่งกำลังเผชิญตลอดจนบุคลิกภาพของเขาเพื่อให้เข้าใจพฤติกรรมของบุคคลนั้น							
7. ข้าพเจ้าพิจารณาข้อมูลเฉพาะก่อนที่จะตัดสินใจในแต่ละสถานการณ์							
8. ข้าพเจ้าแยกแยะข้อโต้แย้งออกเป็นเรื่องๆ ก่อนที่จะตัดสินใจในแต่ละสถานการณ์							

9. ข้าพเจ้าพิจารณาข้อดีของข้อโต้แย้งแต่ละข้อ รวมถึงข้อมูลอื่นๆ ก่อนที่จะตัดสินใจเรื่องต่างๆ							
10. ข้าพเจ้าพิจารณาความเป็นไปได้แต่ละอย่างที่มีความแตกต่างกัน แล้วจึงเลือกตัดสินใจอย่างใดอย่างหนึ่งในแต่ละเรื่องหรือแต่ละสถานการณ์ที่ต้องเผชิญ							
11. ข้าพเจ้าพิจารณา “สถานการณ์” โดยรวมเสมอเมื่อต้องตัดสินใจในแต่ละเรื่องหรือแต่ละสถานการณ์							

ส่วนที่ 5: การรับรู้ถึงความรุนแรงของประเด็นด้านสุขภาพ

คำสั่ง: กรุณาระบุว่าท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความเกี่ยวกับการรับรู้ถึงความรุนแรงของประเด็นด้านสุขภาพดังภาพประกอบ ต่อไปนี้

คำถาม	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่เห็นด้วยเล็กน้อย	ปานกลาง	เห็นด้วยเล็กน้อย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
	1. ข้าพเจ้าคิดว่าข้อมูลที่แสดงในภาพประกอบที่เกี่ยวกับอาการปวดกล้ามเนื้อเป็นประเด็นด้านสุขภาพที่มีความรุนแรง						
2. ข้าพเจ้าคิดว่าข้อมูลที่แสดงในภาพประกอบที่เกี่ยวกับอาการปวดกล้ามเนื้อเป็นประเด็นด้านสุขภาพที่มีความรุนแรงเนื่องจากได้รับการกล่าวถึงอย่างแพร่หลายในระยะนี้							
3. ข้าพเจ้าคิดว่าข้อมูลที่แสดงในภาพประกอบที่เกี่ยวกับอาการปวดกล้ามเนื้อเป็นประเด็นด้านสุขภาพที่รุนแรงเนื่องจากมีคนรู้จักเสียชีวิตอันมาจากเหตุดังกล่าว							
4. ข้าพเจ้าคิดว่าข้อมูลที่แสดงในภาพประกอบที่เกี่ยวกับอาการปวดกล้ามเนื้อเป็นประเด็นด้านสุขภาพที่มีความรุนแรงเนื่องจากส่งผลอันเป็นอุปสรรคต่อการใช้ชีวิตประจำวัน ทำให้ไม่สามารถทำงานได้ หรือส่งผลกระทบต่อบุคคลทางร่างกายและจิตใจ							
5. ข้าพเจ้าคิดว่าข้อมูลที่แสดงในภาพประกอบที่เกี่ยวกับอาการปวดกล้ามเนื้อเป็นประเด็นด้านสุขภาพที่มีความรุนแรงเพราะไม่สามารถรักษาให้หายขาดได้							

ส่วนที่ 6: การประเมินความน่าเชื่อถือ

คำสั่ง: สมมติว่าภาพที่ปรากฏข้างล่างนี้เป็นข้อความซึ่งแพทย์ที่ท่านรู้จักเป็นการส่วนตัวได้โพสต์และปรากฏให้ท่านเห็นเมื่อท่านเข้าใช้เฟซบุ๊ก ท่านโปรดอ่านข้อความในภาพ และข้อความเกี่ยวกับการตัดสินใจความน่าเชื่อถือทำข้อความในภาพและกรุณาระบุว่าท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความเหล่านั้น

คำถาม							
	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่เห็นด้วยเล็กน้อย	ปานกลาง	เห็นด้วยเล็กน้อย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1. ข้าพเจ้าคิดว่าข้อมูลดังกล่าวมีความน่าเชื่อถือ							
2. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นบุคคลหรือองค์กรที่มีชื่อเสียง ถึงแม้ว่าบุคคลหรือองค์กรนั้นไม่ได้เกี่ยวข้องกับด้านสุขภาพก็ตาม							
3. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นบุคคลหรือองค์กรที่มีชื่อเสียง และเกี่ยวข้องกับงานด้านสุขภาพ							
4. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นบุคคลหรือองค์กรที่ข้าพเจ้ารู้จักคุ้นเคย							
5. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นสื่อหรือองค์กรที่มีชื่อเสียง							
6. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นบุคคลหรือองค์กรที่มีอำนาจหน้าที่โดยตรงในสาขาวิชาด้านสุขภาพ							
7. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากแหล่งข้อมูลเป็นบุคคลที่มีวุฒิการศึกษาเกี่ยวกับด้านสุขภาพ ถึงแม้ในปัจจุบันจะไม่ได้เป็นแพทย์หรือประกอบอาชีพที่เกี่ยวข้องกับสุขภาพก็ตาม							
8. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากหัวข้อที่กล่าวถึงมีความเกี่ยวข้องกับความเชี่ยวชาญของแหล่งข้อมูล							
9. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากการที่ข้าพเจ้าเชื่อมั่นในบุคคลหรือองค์กรที่โพสต์หรือแชร์ข้อมูลนั้น ถ้าพวกเขาเชื่อว่าเป็นความจริง ข้าพเจ้าก็เชื่อเช่นเดียวกัน							
10. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากจำนวนการกดถูกใจและการแชร์เป็นข้อพิสูจน์ได้ชัดว่าข้อมูลเหล่านั้นน่าเชื่อถือจริงๆ							
11. ข้าพเจ้าหวังว่าข้าพเจ้าจะสามารถอ่านความคิดเห็นเกี่ยวกับโพสต์นี้ได้ เนื่องจากความคิดเห็นในเชิงเห็นด้วยจะช่วยให้ยืนยันความน่าเชื่อถือของโพสต์นี้ได้							
12. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากคนรอบตัวหรือคนสำคัญของข้าพเจ้าได้แชร์ข้อมูลนี้มาก่อนแล้ว							

คำถาม							
	ไม่เห็น ตัวอย่าง ยิ่ง	ไม่เห็น ด้วย	ไม่เห็น ด้วย เล็กน้อย	ปาน กลาง	เห็นด้วย เล็กน้อย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
13. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้าพเจ้าพบข้อมูลเดียวกันถูกนำเสนอในโซเชียลมีเดียหรือสื่ออื่นๆ มาก่อนแล้ว							
14. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้าพเจ้าได้ตรวจสอบจากแหล่งข้อมูลอื่นและพบข้อมูลเดียวกัน							
15. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้าพเจ้าเคยสนทนาเป็นการส่วนตัวกับคนรอบข้างถึงเรื่องเดียวกันนี้และพวกเขาต่างกล่าวในทิศทางเดียวกัน							
16. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้าพเจ้าเคยปรึกษาแพทย์หรือผู้เชี่ยวชาญเป็นการส่วนตัวถึงเรื่องเดียวกันนี้และพวกเขาต่างกล่าวในทิศทางเดียวกัน							
17. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาว่าข้อมูลนั้นมีการโฆษณาแอบแฝงหรือไม่							
18. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากเนื้อหาข้อมูลนำเสนออย่างปราศจากอคติ							
19. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากมีการนำเสนอผลิตภัณฑ์หรือบริการที่เกี่ยวข้องแนบอยู่ด้วย							
20. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้อมูลดังกล่าวถูกเลือกให้แสดงในหน้าเฟซบุ๊กของข้าพเจ้าด้วยระบบคอมพิวเตอร์ ซึ่งย่อมเป็นการกระทำโดยปราศจากอคติแน่นอน							
21. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้อมูลดังกล่าวถูกเลือกด้วยระบบคอมพิวเตอร์ ดังนั้นจึงเหมาะสมกับข้าพเจ้า							
22. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากความเชื่อของข้าพเจ้าที่ว่าคอมพิวเตอร์ฉลาดและจะไม่โกหก							
23. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาว่าข้อมูลนี้สอดคล้องกับที่ข้าพเจ้าเคยเรียนมา							
24. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาว่าข้อมูลนี้ไม่ได้เป็นไปตามความเชื่อเดิมของข้าพเจ้าหรือไม่							
25. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากการนำเสนอข้อมูลมีความเป็นมืออาชีพ							
26. ข้าพเจ้าตัดสินใจความน่าเชื่อถือของข้อมูลดังกล่าวโดยพิจารณาจากข้อมูลดังกล่าวเขียนถูกหลักไวยากรณ์และไม่มีที่ผิด จะมีเพียงข้อมูลลวงเท่านั้นที่ถูกเขียนขึ้นด้วยการสะกดคำหรือไวยากรณ์ที่ผิด							

คำถาม
เหตุผลอื่นๆที่ข้าพเจ้าใช้ในการตัดสินใจตัดสินใจได้แก่.....
สมมติว่าการแสดงความคิดเห็น 20 ครั้งต่อโพสต์นี้ แต่ท่านไม่สามารถอ่านได้ ความคิดเห็นเหล่านั้นช่วยเพิ่มความน่าเชื่อถือให้เนื้อหาได้หรือไม่? ได้ ไม่ได้ เพราะ.....
ท่านคิดว่าควรมีจำนวนการกดถูกใจในแต่ละโพสต์ที่เกี่ยวข้องกับข้อมูลด้านสุขภาพบนเฟซบุ๊กเป็นจำนวนเท่าใด จึงจะทำให้ท่านพิจารณาว่าข้อมูลดังกล่าวมีความน่าเชื่อถือ?..... เพราะ.....
ท่านคิดว่าควรมีจำนวนการแสดงความคิดเห็นในแต่ละโพสต์ที่เกี่ยวข้องกับข้อมูลด้านสุขภาพบนเฟซบุ๊กเป็นจำนวนเท่าใด จึงจะทำให้ท่านพิจารณาว่าข้อมูลดังกล่าวมีความน่าเชื่อถือ ถึงแม้ท่านไม่อาจอ่านความคิดเห็นเหล่านั้นได้?..... เพราะ.....
ท่านคิดว่าควรมีจำนวนการแชร์แต่ละโพสต์ที่เกี่ยวข้องกับข้อมูลด้านสุขภาพบนเฟซบุ๊กเป็นจำนวนเท่าใด จึงจะทำให้ท่านพิจารณาว่าข้อมูลดังกล่าวมีความน่าเชื่อถือ?..... เพราะ.....

ส่วนที่ 7: ข้อมูลเบื้องต้น

1. เพศ

- (1) ชาย (2) หญิง
(3) ไม่ประสงค์จะเปิดเผย (4) อื่นๆ โปรดระบุ.....

2. อายุ

- (1) ต่ำกว่า 20 ปี (2) 20-34 ปี
(3) 35-44 ปี (4) 45-54 ปี
(5) 55-64 ปี (6) 65 ปีหรือมากกว่า

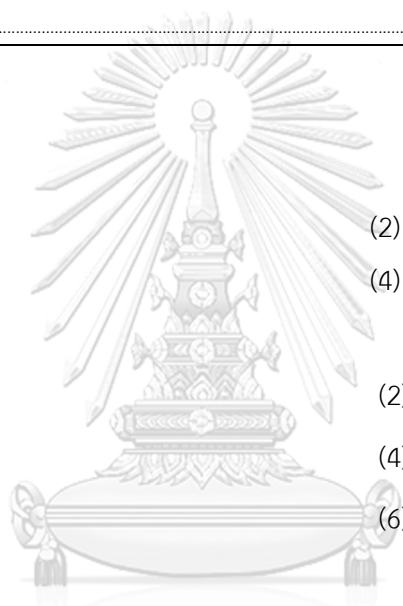
3. ระดับการศึกษา

- (1) ประถมศึกษา (2) มัธยมศึกษา
(3) กำลังศึกษาระดับปริญญาตรี (4) สำเร็จการศึกษาระดับปริญญาตรี
(5) กำลังศึกษาระดับบัณฑิตศึกษา (6) สำเร็จการศึกษาระดับปริญญาโท
(7) สำเร็จการศึกษาระดับปริญญาเอก

4. ท่านมีบัญชีผู้ใช้เฟซบุ๊กมาเป็นเวลานานเท่าไร? ปี

5. ความถี่ในการเข้าใช้เฟซบุ๊ก

- (1) มากกว่า 1 ครั้งต่อวัน (2) วันละครั้ง
(3) 2-3 วันครั้ง (4) สัปดาห์ละครั้ง
(5) น้อยกว่าสัปดาห์ละครั้ง (6) เดือนละครั้ง



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

6. ระยะเวลาในการเล่นเฟซบุ๊กต่อครั้ง

(1) น้อยกว่า 10 นาที

(2) 11-30 นาที

(3) 31-60 นาที

(4) นานกว่า 1 ชั่วโมง

7. อุปกรณ์ที่ใช้ในการเข้าเล่นเฟซบุ๊ก (สามารถเลือกได้มากกว่าหนึ่ง)

(1) คอมพิวเตอร์ส่วนตัวแบบตั้งโต๊ะ

(2) คอมพิวเตอร์พกพา (โน้ตบุ๊ก)

(3) แท็บเล็ต

(4) โทรศัพท์มือถือ

(5) อื่นๆ (โปรดระบุ.....)

ส่วนที่ 8: สุขภาพ

กรุณาอ่านและตอบคำถามที่เกี่ยวข้องกับสถานะของสุขภาพต่อไปนี้ โดยระบุระดับตามที่ได้แนะนำไว้

ข้อความ							
	1	2	3	4	5	6	7
1. สุขภาพโดยรวมของข้าพเจ้า ณ ปัจจุบัน)1 เท่ากับ เย่มาก 7 เท่ากับ ยอดเยี่ยม(

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วิธีรับมือกับการปวดเมื่อยกล้ามเนื้อหลังออกกำลังกาย

- การเริ่มต้นออกกำลังกายใหม่หรือการออกกำลังกายมากเกินไปอาจส่งผลให้เกิดอาการบาดเจ็บของกล้ามเนื้อ และนำไปสู่อาการปวดเมื่อยกล้ามเนื้อหลังออกกำลังกายไปแล้วประมาณ 24-48 ชั่วโมง ในทางการแพทย์เรียกว่า "อาการปวดเมื่อยหลังการออกกำลังกาย หรือ Delayed Onset Muscle Soreness (DOMS)"
- เนื้อเยื่อของกล้ามเนื้อที่ฉีกขาดแม้เพียงเล็กน้อยจะส่งสัญญาณไปยังระบบภูมิคุ้มกันในร่างกายของเรา ให้ผลิตเซลล์เม็ดเลือดขาวเพื่อเริ่มต้นกระบวนการซ่อมแซม ในขณะที่เดียวกันเซลล์เม็ดเลือดขาวจะหลั่งเคมีและเอนไซม์ที่ส่งผลให้เกิดอาการปวดกล้ามเนื้อด้วย
- วิธีการต่างๆ ที่จะช่วยบรรเทาอาการปวดเมื่อยกล้ามเนื้อคือ การทานสัปปะรด เพราะสัปปะรดมีเอนไซม์ที่เรียกว่า "บรอมเมลัน (Bromelain)" ซึ่งมีคุณสมบัติลดอาการอักเสบ สามารถดูดซึมได้ง่ายและใช้ประโยชน์ได้รวดเร็ว
- นอกจากสัปปะรดแล้ว คาเฟอีนก็สามารถบรรเทาอาการปวดเมื่อยกล้ามเนื้อได้เช่นกัน เนื่องจากการบริโภคคาเฟอีนจะช่วยเพิ่มปริมาณของ "ไกลโคเจน (Glycogen)" ซึ่งเป็นพลังงานที่สะสมในกล้ามเนื้อ จากการศึกษาวิจัยหลายชิ้นพบว่า การบริโภคคาเฟอีนจะช่วยให้นักกีฬาฟื้นตัวได้เร็วขึ้นและออกกำลังกายได้ดีขึ้นในวันถัดไป

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วิธีรับมือกับอาการปวดเมื่อยกล้ามเนื้อหลังออกกำลังกาย

- การเริ่มต้นออกกำลังกายใหม่หรือการออกกำลังกายมากเกินไปอาจส่งผลให้เกิดอาการบาดเจ็บของกล้ามเนื้อ และนำไปสู่อาการปวดเมื่อยกล้ามเนื้อภายหลังจากออกกำลังกายไปแล้วประมาณ 24-48 ชั่วโมง ในทางการแพทย์เรียกว่า "อาการปวดเมื่อยหลังการออกกำลังกาย หรือ Delayed Onset Muscle Soreness (DOMS)"
- เนื้อเยื่อของกล้ามเนื้อที่ฉีกขาดแม้เพียงเล็กน้อยจะส่งสัญญาณไปยังระบบภูมิคุ้มกันในร่างกายของเรา ให้ผลิตเซลล์เม็ดเลือดขาวเพื่อเริ่มต้นกระบวนการซ่อมแซม ในขณะที่เดียวกันเซลล์เม็ดเลือดขาวจะหลั่งเคมีและเอนไซม์ที่ส่งผลให้เกิดอาการปวดกล้ามเนื้อด้วย
- วิธีการต่างๆ ที่จะช่วยบรรเทาอาการปวดเมื่อยกล้ามเนื้อคือ การทานสับปะรด เพราะสับปะรดมีเอนไซม์ที่เรียกว่า "บรอมเมลัน (Bromelain)" ซึ่งมีคุณสมบัติลดอาการอักเสบ สามารถดูดซึมได้ง่ายและใช้ประโยชน์ได้รวดเร็ว
- นอกจากสับปะรดแล้ว คาเฟอีนก็สามารถบรรเทาอาการปวดเมื่อยกล้ามเนื้อได้เช่นกัน เนื่องจาก การบริโภคคาเฟอีนจะช่วยให้ปริมาณของ "ไกลโคเจน (Glycogen)" ซึ่งเป็นพลังงานที่สะสมในกล้ามเนื้อ จากการศึกษาวิจัยหลายชิ้นพบว่า การบริโภคคาเฟอีนจะช่วยให้หนักกีฬาที่ฟื้นตัวได้เร็วขึ้นและออกกำลังกายได้ดีขึ้นในวันถัดไป

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น้ำมันมะพร้าวช่วยต้านทานภาวะสมองเสื่อมหรืออัลไซเมอร์

- มะพร้าวอุดมไปด้วยใยอาหาร วิตามิน และเกลือแร่ ที่มีประโยชน์ต่อการรักษาโรคอ้วน โรคไขมันในเลือดสูง ปรับระดับไขมันเลว รักษาภาวะดื้อต่ออินซูลิน และโรคความดันโลหิตสูง ที่ล้วนแต่เป็นปัจจัยก่อให้เกิดโรคหลอดเลือดหัวใจ เบาหวานชนิดที่ 2 และภาวะสมองเสื่อมหรืออัลไซเมอร์
- สารประกอบฟีนอลและไซโตคีนินที่พบในมะพร้าวอาจช่วยป้องกันการรวมตัวของอะมีลอยด์บีเพปไทด์ (Amyloid-b peptide) ที่มักพบในสมองของผู้ป่วยที่มีอาการภาวะสมองเสื่อมและเป็นปัจจัยหลักที่ก่อให้เกิดภาวะสมองเสื่อมหรืออัลไซเมอร์
- น้ำมันมะพร้าวประกอบด้วยกรดไขมันสายกลาง (Medium-Chain Fatty Acid : MCFA) หรือที่ง่ายต่อการดูดซึมและเผาผลาญโดยตับ โดยกรดไขมันชนิดนี้สามารถแปรเปลี่ยนเป็นสารคีโตนที่เผาผลาญไขมันให้กลายเป็นน้ำตาล
- สารคีโตนคือแหล่งพลังงานทางเลือกที่สำคัญต่อสมอง ทั้งนี้เนื่องจากเซลล์ประสาทในบางบริเวณของสมองไม่สามารถที่จะรับเอากลูโคสเพราะมีภาวะที่ดื้อต่ออินซูลินและจะค่อยๆเสื่อมลงไปเอง หากเซลล์เหล่านี้ได้รับคีโตน ก็มีความเป็นไปได้ที่จะมีชีวิตอยู่ต่อและสามารถทำหน้าที่ได้ต่อไป

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น้ำมันมะพร้าวช่วยต้านทานภาวะสมองเสื่อมหรืออัลไซเมอร์

- มะพร้าวอุดมไปด้วยใยอาหาร วิตามิน และเกลือแร่ ที่มีประโยชน์ต่อการรักษาโรคอ้วน โรคไขมันในเลือดสูง ปรับระดับไขมันเลว รักษาภาวะดื้ออินซูลิน และโรคความดันโลหิตสูง ที่ล้วนแต่เป็นปัจจัยก่อให้เกิดโรคหลอดเลือดหัวใจ เบาหวานชนิดที่ 2 และภาวะสมองเสื่อมหรืออัลไซเมอร์
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ปวดเมื่อยหลังออกกำลังกาย...จัดการได้ ง่ายนิดเดียว
 ใครหลายคนอาจจะเคยปวดตามเนื้อตัวเป็นวันๆ หลังจากออกกำลังกาย จนอดสงสัยในใจ
 ไม่ได้ว่า เฮ้ย! หรือจริงๆ แล้วเราจะไม่เหมาะกับการออกกำลังกายอะป่าวว้าาาาา
 ใจเจ้าอาการปวดตึงตามกล้ามเนื้อหลังออกกำลังกายใหม่ๆ เนี่ยเป็นเพราะเซลล์เม็ดเลือดขาว
 กำลังซ่อมแซมเนื้อเยื่อกล้ามเนื้อที่ฉีกขาดหลังออกกำลังกายของเราอยู่ ทีนี้ระหว่างที่ซ่อมแซม
 เซลล์เม็ดเลือดขาวก็จะปล่อยเคมีและเอ็มไซม์ออกมา ตรงนี้แหละที่ทำให้เราเกิดอาการปวด
 กล้ามเนื้อ
 แล้วเราจะทำยังไงกันดี!!!!
 บอกเลยว่าง่ายมากกกกกกกกก ลองทานสัปรดดูดี ข้อดีของมันคือ ดูดซึมง่าย ช่วยลดอาการ
 อักเสบของกล้ามเนื้อได้นะ แต่ถ้าใครที่เป็นสายตี๋ม คอกาแฟละก็อ ยิงสบายเลย เพราะคาเฟอีนเนี่ย
 จะช่วยเพิ่มพลังงานให้กล้ามเนื้อที่อ่อนล้า ทำให้เราฟื้นตัวเร็ว พรุ่่นนี้ตี๋มมากก็ออกกำลังกายต่อ
 ได้สบายยยยยย แต่ถ้าจะให้ดีทีสุด ง่ายสุดๆ เลยก็ ออกกำลังสม่ำเสมอจร้า ร่างกายเราจะมี
 ความยืดหยุ่น ฟีตๆ เฟิร์มๆ ไม่ปวด ไม่เมื่อย แน่นวลลลล
 ลองมาออกกำลังกายด้วยกันปะสิ้า.....เจอกันที่นี้เลยยยย... HOH- Hype Over Health Gym

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ปวดเมื่อยหลังออกกำลังกาย...จัดการได้ ง่ายนิดเดียว
 ใครหลายคนอาจจะเคยปวดตามเนื้อตัวเป็นวันๆ หลังจากออกกำลังกาย จนอดสงสัยในใจ
 ไม่ได้ว่า เฮ้ย! หรือจริงๆ แล้วเราจะไม่เหมาะกับการออกกำลังกายอะป่าวว้าาาาา
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 กำลังซ่อมแซมเนื้อเยื่อกล้ามเนื้อที่ฉีกขาดหลังออกกำลังกายของเราอยู่ ทีนี้ระหว่างที่ซ่อมแซม
 เซลล์เม็ดเลือดขาวก็จะปล่อยเคมีและเอ็มไซม์ออกมา ตรงนี้แหละที่ทำให้เราเกิดอาการปวด
 กล้ามเนื้อ
 แล้วเราจะทำยังไงกันดี!!!!
 บอกละง่ายมากกกกกกกกกก ลองทานสัปรดดูดี ข้อดีของมันคือ ดูดซึมง่าย ช่วยลดอาการ
 อักเสบของกล้ามเนื้อได้นะ แต่ถ้าใครที่เป็นสายตี๋ม คอกาแฟล่ะก็ ยิ่งสบายเลย เพราะคาเฟอีนเนี่ย
 จะช่วยเพิ่มพลังงานให้กล้ามเนื้อที่อ่อนล้า ทำให้เราฟื้นตัวเร็ว พรงี้ตื่นมาก็ออกกำลังกายต่อ
 ได้สบายยยยย แต่ถ้าจะให้ดีที่สุด ง่ายสุดๆ เลยก็ ออกกำลังสม่ำเสมอจ้ะ ร่างกายเราจะมี
 ความยืดหยุ่น ทีเด็ดๆ เวิร์มๆ ไม่ปวด ไม่เมื่อย แนนवलลล
 ลองมาออกกำลังกายด้วยกันปะล้า....เจอกันทีนี้เลยยยย... HOH- Hype Over Health Gym

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น้ำมันมะพร้าว.....ตัวช่วยโคตรจะงายสู้อัลไซเมอร์

มะพร้าว..ในความคิดของใครหลายคนคงจะนึกถึงเมนูอร่อยๆ ที่มะพร้าวไปเป็นส่วนประกอบ แต่รู้ไหมว่ามะพร้าวมีข้อดีอีกเยอะมากกกก ที่จะทำให้คุณรักมะพร้าวยิ่งกว่าเดิม

ในมะพร้าวมีคุณค่าทางสารอาหาร ใยอาหาร วิตามิน และแร่ธาตุ จึงเป็นความอร่อยที่มีดีต่อสุขภาพ ช่วยรักษาได้ทั้งโรคเบาหวาน โรคหัวใจ และโรคอัลไซเมอร์

ถ้าความจำไม่ดี เริ่มหลงลืม คมน้ำมันมะพร้าวไว้ มันจะเป็นเพื่อนร่วมรบกับโรคอัลไซเมอร์ ได้ดีแบบสุดๆมีการค้นพบกันมาแล้วว่าจากเดิมที่สมองกำลังจะตายเพราะไม่สามารถดูดซึม กลูโคสมาเป็นพลังงาน ในการทำงานเพราะร่างกายด้านทานอินซูลิน แต่ถ้าคุณลองทาน น้ำมันมะพร้าวเข้าไปปึบ ร่างกายก็สามารถดูดซึมคีโตน หรือพลังงานทางเลือกที่ได้จาก กรดไขมันในน้ำมันมะพร้าวปึบ แค่นี้แหละ สมองก็จะค่อยๆ กลับมาทำงานได้ดีขึ้น

อ๊ะ อ๊ะ..... แต่จะทานน้ำมันมะพร้าวแบบสุ่มสี่สุ่มห้าไม่ได้เด็ดขาดนะจ๊ะ จะต้องดู ตามความเหมาะสมด้วย เพราะถึงมันจะมีประโยชน์แต่ถ้าทานในปริมาณมากเกินไป อาจส่งผล ร้ายต่อสุขภาพด้านอื่นได้ ปรีक्षाคุณหมอก่อนทานนะ ขอบอกกกก

ตัวช่วยจากกจากจ๊ัย ผลิตภัณฑ์อาหารเสริมเพื่อสุขภาพ FAB-N-FIT

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น้ำมันมะพร้าว.....ตัวช่วยโคตรจะง่ายสู้อัลไซเมอร์

มะพร้าว..ในความคิดของใครหลายคนคงจะนึกถึงเมนูอร่อยๆ ที่มะพร้าวไปเป็นส่วนประกอบ แต่รู้ไหมว่ามะพร้าวมีข้อดีอีกเยอะมว้ากกกกก ที่จะทำให้คุณรักมะพร้าวยิ่งกว่าเดิม

ในมะพร้าวมีคุณค่าทางสารอาหาร โยอาหาร วิตามิน และแร่ธาตุ จึงเป็นความอร่อยที่มีดีต่อสุขภาพ ช่วยรักษาได้ทั้งโรคเบาหวาน โรคหัวใจ และโรคอัลไซเมอร์

ถ้าความจำไม่ดี เริ่มหลงลืม คมน้ำมันมะพร้าวไว้ มันจะเป็นเพื่อนร่วมรบกับโรคอัลไซเมอร์ ได้ดีแบบสุดๆมีการค้นพบกันมาแล้วว่าจากเดิมที่สมองกำลังจะตายเพราะไม่สามารถดูดซึม กลูโคสมาเป็นพลังงาน ในการทำงานเพราะร่างกายด้านทานอินซูลิน แต่ถ้าคุณลองทาน น้ำมันมะพร้าวเข้าไปปึบ ร่างกายก็สามารถดูดซึมคีโตน หรือพลังงานทางเลือกที่ได้จาก กรดไขมันในน้ำมันมะพร้าวปึบ แค่นี้แหละ สมองก็จะค่อยๆ กลับมาทำงานได้ดีขึ้น

อ๊ะ อ๊ะ อ๊ะ..... แต่จะทานน้ำมันมะพร้าวแบบสุ่มสี่สุ่มห้าไม่ได้เด็ดขาดนะจะ จะต้องดู ตามความเหมาะสมด้วย เพราะถึงมันจะมีประโยชน์แต่ถ้าทานในปริมาณมากเกินไป อาจส่งผล ร้ายต่อสุขภาพด้านอื่นได้ ปรึกษาคุณหมอก่อนทานนะ ขอบอกกกกกกก

ด้วยรักกจากกักจัย ผลิตภัณฑ์อาหารเสริมเพื่อสุขภาพ FAB-N-FIT

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Appendix B

Validity and reliability of the instrument
'Heuristics used in credibility judgment of health information on Facebook'

(Congruent: +1 Questionable: 0 Incongruent: -1)

Part I: Health Motivation ($\alpha = 0.741$)

Question	Score			Total	IOC	result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
1. I try to prevent health problems before I detect any symptoms.	1	1	1	3	1	✓
2. I try to protect myself against health hazards I hear about.	1	1	1	3	1	✓
3. I don't worry about health hazards until they become a problem for me or someone close to me.	1	1	1	3	1	✓
4. There are so many things that can hurt you these days, but I'm not going to worry about them.	1	1	1	3	1	✓
5. I often worry about the health hazards I hear about, but I don't do anything about them.	0	1	1	2	0.67	✓
6. I don't take any action against health hazards I hear about until I know I have a problem.	1	1	1	3	1	✓
7. I'd rather enjoy life than try to make sure I'm not exposing myself to a health hazard.	1	1	1	3	1	✓
8. I am concerned about health hazards and try to take action to prevent them.	0	1	1	2	0.67	✓

Part II: Health literacy on Facebook ($\alpha = 0.811$)

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
1. To find credible health information, I should go to the official pages of accredited hospitals or health facilities.	1	1	0	2/3	0.67	✓
2. To find credible health information, I should go to a Facebook account of doctors whom I have known in person.	1	1	0	2/3	0.67	✓
3. Not all 'seem to be' doctors on Facebook are actually doctors who professionally practice in hospitals.	1	1	0	2/3	0.67	✓
4. Health information shared by someone close to me is always correct.	1	1	-1	1/3	0.33*	✗
5. I will not hesitate to share any health-related posts on my wall if those posts already get more than 200 shares or at least 500 likes.	1	1	0	2/3	0.67	✓

Question	Score	Total	IOC	Result
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To what extent you to agree or disagree with each statement?	#1	#2	#3			
6. Anecdotes concerning health symptoms or treatments that are shared on Facebook can be applied to anyone. They are very useful.	1	1	1	3/3	1	✓
7. If health information shared on Facebook worked for others, it will work with me as well.	1	1	0	2/3	0.67	✓
8. If the health information shared on Facebook received a lot of agreeing comments, that means the information is reliable.	1	1	0	2/3	0.67	✓
9. Facebook users must be aware of 'doctored' photos that attached to health information. Those photos may be used to deceive others.	1	1	0	2/3	0.67	✓
10. Not all health information posted on Facebook can be applied to others.	1	1	0	2/3	0.67	✓
11. Not all health information posted on Facebook should be shared with others.	1	1	0	2/3	0.67	✓

* cronbach's alpha shown was calculated after deleted item no. 4

Part III. Health e-mavens ($\alpha = 0.939$)

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
Tracking						
1. Sign up to receive email updates or alerts about health or medical issues.	1	1	1	3/3	1	✓
2. Follow or like personal accounts or Facebook pages that provide health-related information on Facebook.	1	1	1	3/3	1	✓
3. Read someone else's commentary or experience about health or medical issues on an online news group, website, blog.	1	1	1	3/3	1	✓
4. Read someone else's commentary or experience about health or medical issues on Facebook.	1	1	1	3/3	1	✓
5. Watch video clips about health or medical issues posted or shared on Facebook.	1	1	1	3/3	1	✓
6. Watch video clips about health or medical issues on non-Facebook platform such as YouTube, or other websites.	1	1	1	3/3	1	✓

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
7. Go to Facebook to find information that responds to your personal health concerns.	1	1	1	3/3	1	✓
8. Go to Facebook to find information that responds to your close ones' health concerns.	1	1	1	3/3	1	✓
9. Go to Facebook to find information that responds to health concerns in the society.	1	1	1	3/3	1	✓
Consulting						
1. Consult high ranking or highly reviewed doctors or other health provider about your health concerns on Facebook.	0	1	1	2/3	0.67	✓
2. Consult high ranking or highly reviewed doctors or other health provider about your health concerns on non-Facebook online platform.	0	1	1	2/3	0.67	✓
3. Consult high ranking or highly reviewed doctors or other health providers about your health concerns on non-online platform.	0	1	1	2/3	0.67	✓
4. Contact high ranking or highly review hospitals or other medical facilities on their Facebook account/page.	1	1	1	3/3	1	✓
5. Consult reviews on Facebook before using or applying drugs or medical treatments you have never known of.	1	1	1	3/3	1	✓
6. Consult reviews on non-Facebook platform before using or applying drugs or medical treatments you have never known of.	1	1	1	3/3	1	✓
Posting and sharing						
1. Post a review of your good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on your Facebook wall.	1	1	1	3/3	1	✓
2. Post a review of your good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on non-Facebook online platform.	1	1	1	3/3	1	✓

Question To what extent you to agree or disagree with each statement?	Score			Total	IOC	Result
	#1	#2	#3			
3. Post a review of your bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on your Facebook wall.	1	1	1	3/3	1	✓
4. Post a review of your bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities on non-Facebook online platform.	1	1	1	3/3	1	✓
5. Post a story about good experience with medical treatment, and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on your Facebook wall.	1	1	1	3/3	1	✓
6. Post a story of good experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.	1	1	1	3/3	1	✓
7. Post a story of bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that my family members, friends, or colleagues have on your Facebook wall.	1	1	1	3/3	1	✓
8. Post a story of bad experience with medical treatment and service from doctors, health care providers, hospitals, or medical facilities that your family members, friends, or colleagues have on non-Facebook online platform.	1	1	1	3/3	1	✓
9. Share any health-related posts on your Facebook wall so your Facebook friends could see and read the information.	1	1	1	3/3	1	✓
10. Share any health-related posts from your Facebook news feed with your family and friends on non-Facebook platform.	1	1	1	3/3	1	✓

Part IV. Holistic vs. Analytic worldview ($\alpha = 0.824$)

Question To what extent you to agree or disagree with each statement?	Score			Total	IOC	Result
	#1	#2	#3			
1. The whole, rather than its parts, should be considered in order to understand a phenomenon.	1	1	1	3/3	1	✓
2. It is more important to pay attention to the whole than its parts.	1	1	1	3/3	1	✓
3. The whole is greater than the sum of its parts.	1	1	1	3/3	1	✓
4. It is more important to pay attention to the whole context rather than the details.	1	1	1	3/3	1	✓
5. It is not possible to understand the parts without considering the whole picture.	1	1	1	3/3	1	✓
6. We should consider the situation a person is faced with, as well as his/her personality, in order to under one's behavior.	1	1	1	3/3	1	✓
7. I examine the specific information before I make decisions.	1	1	0	2/3	0.67	✓
8. I dissect the arguments into their component parts to make decisions.	1	1	1	3/3	1	✓
9. I use abstract, hypothetical situations to make decisions.	-1	1	0	0/3	0	✗
10. I use guiding principles or philosophies to make decisions.	-1	1	1	1/3	0.33	✗
11. I weight the merit of each argument and piece of information before I make a decision.	1	1	1	3/3	1	✓
12. I compromise between different possible solutions as I make decisions.	0	1	1	2/3	0.67	✓
13. I consider the whole "scene" when I make a decisions.	1	1	1	3/3	1	✓

* cronbach's alpha shown was calculated after deleted item no. 9 and 10

Part V. Perceived seriousness of health topics ($\alpha = 0.847$)

Question To what extent you to agree or disagree with each statement?	Score			Total	IOC	Result
	#1	#2	#3			
1. I consider a health topic of 'muscle soreness' a serious health issue.	1	1	1	3/3	1	✓
2. I make a judgment on seriousness of this health issue based on how 'muscle soreness' is widely discussed recently.	1	1	1	3/3	1	✓
3. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is a life threatening health issue.	1	1	1	3/3	1	✓

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
4. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' impedes ones from regular daily routine, prevents the person from working, or strongly affects the person physically and mentally.	1	1	1	3/3	1	✓
5. I make a judgment on seriousness of this health issue based on the fact that 'muscle soreness' is incurable.	1	1	1	3/3	1	✓

Part VI. Credibility Assessment ($\alpha = 0.920$)

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
1. I think the information is credible.	1	1	1	3/3	1	✓
2. I make a credibility judgment considering that the source is a person or organization renowned even though the person or organization is in a non-health-related field.	0	1	1	2/3	0.67	✓
3. I make a credibility judgment considering that the source is a person or organization renowned in a field of health.	0	1	1	2/3	0.67	✓
4. I make a credibility judgment considering that the source is a person or organization that I'm familiar with.	0	1	1	2/3	0.67	✓
5. I make a credibility judgment considering that the source is a renowned media organization.	0	1	1	2/3	0.67	✓
6. I make a credibility judgment considering that the source is a person or organization that is authorized in a field of health.	0	1	1	2/3	0.67	✓
7. I make a credibility judgment considering that the source is a person who possesses an educational background in the field of health, even though he or she is not a doctor or health professional.	1	1	1	3/3	1	✓
8. I make a credibility judgment considering that a topic presented here is related to the source's area of expertise.	1	1	1	3/3	1	✓

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
9. I make a credibility judgment considering that I trust the person or organization who posted or shared the information. If they think it is true, then I think it is true.	1	1	1	3/3	1	✓
10. I make a credibility judgment considering the number of likes and shares are clearly proof to me that the information is credible.	1	1	1	3/3	1	✓
11. I wish I could read the comments on this post. Agreeing comments will help confirming the post's credibility.	1	1	1	3/3	1	✓
12. I make a credibility judgment considering I have seen my peers or significant others share this information before.	1	1	1	3/3	1	✓
13. I make a credibility judgment considering I have found the same information shared on other social networking sites or media channels.	1	1	1	3/3	1	✓
14. I make a credibility judgment considering I have checked with other sources and found the same information.	1	1	1	3/3	1	✓
15. I make a credibility judgment considering I used to discuss this topic offline with my peers and they were saying the same thing.	1	1	1	3/3	1	✓
16. I make a credibility judgment considering I used to consult doctors or experts on this topic offline, and they were saying the same thing.	1	1	1	3/3	1	✓
17. I make a credibility judgment considering whether the information seem to have a commercial purpose.	1	1	1	3/3	1	✓
18. I make a credibility judgment considering whether the information itself is bias free.	1	1	1	3/3	1	✓
19. I make a credibility judgment considering whether the information clearly shows products or services related to the topic discussed.	1	1	1	3/3	1	✓
20. I make a credibility judgment considering the information is selected to be shown on my wall by the computer, so it must be free from bias.	1	1	1	3/3	1	✓
21. I make a credibility judgment considering the information is selected by the computer, so it must be suitable for me.	1	1	1	3/3	1	✓

Question	Score			Total	IOC	Result
	#1	#2	#3			
To what extent you to agree or disagree with each statement?						
22. I make a credibility judgment considering the computer system is smart and will not tell a lie.	1	1	1	3/3	1	✓
23. I make a credibility judgment based on what I already learned in school.	1	1	1	3/3	1	✓
24. I make a credibility judgment considering whether the information conform to my beliefs.	1	1	1	3/3	1	✓
25. I make a credibility judgment considering whether it is professionally presented.	1	1	1	3/3	1	✓
26. I make a credibility judgment considering whether the information is grammatical and error free. Only false information contains misspellings or wrong grammar.	1	1	1	3/3	1	✓

All items (n=78, $\alpha =0.908$)

Open-end questions

Question	Score			Total	IOC	Result
	#1	#2	#3			
27. Other reasons supporting your credibility judgment	1	1	1	3/3	1	✓
28. Imagine that there are 20 comments on this post, but you cannot read them. Will those comments make the content more credible? Why?	1	1	1	3/3	1	✓
29. What is a number of likes responding to the health information posted on Facebook would make you consider the information is credible? Why?	1	1	1	3/3	1	✓
30. What is a number of comments responding to the health information posted on Facebook would make you consider the information is credible, even though you cannot read them? Why?	1	1	1	3/3	1	✓
31. What is a number of shares responding to the health information posted on Facebook would make you consider the information is credible? Why?	1	1	1	3/3	1	✓

Part VII. Background questions

Question	Score			Total	IOC	Result
	#1	#2	#3			
1. Gender (1) <input type="checkbox"/> male (2) <input type="checkbox"/> female (3) <input type="checkbox"/> preferred not to answer (4) <input type="checkbox"/> other, please specify	1	1	1	3/3	1	✓
2. Age (1) <input type="checkbox"/> under 20 years old (2) <input type="checkbox"/> 20-34 years old (3) <input type="checkbox"/> 35-44 years old (4) <input type="checkbox"/> 45-54 years old (5) <input type="checkbox"/> 55-64 years old (6) <input type="checkbox"/> 65 years old and over	1	1	1	3/3	1	✓
3. Completed education (1) <input type="checkbox"/> primary school (2) <input type="checkbox"/> secondary school (3) <input type="checkbox"/> some undergraduate degree (4) <input type="checkbox"/> completed undergraduate degree (5) <input type="checkbox"/> some graduate school (6) <input type="checkbox"/> Master's degree (7) <input type="checkbox"/> Ph.D, Ed.D or equivalent	1	1	1	3/3	1	✓
4. How long have you had active account(s) on Facebook?..... year(s)	1	1	1	3/3	1	✓
5. Frequency of Facebook use (1) <input type="checkbox"/> more than once a day (2) <input type="checkbox"/> once a day (3) <input type="checkbox"/> once every couple of days (4) <input type="checkbox"/> once a week (5) <input type="checkbox"/> less than once a week (6) <input type="checkbox"/> once a month	1	1	1	3/3	1	✓
6. Time spent on Facebook each time (1) <input type="checkbox"/> shorter than 10 minutes (2) <input type="checkbox"/> 11-30 minutes (3) <input type="checkbox"/> 31-60 minutes (4) <input type="checkbox"/> longer than one hour	1	1	1	3/3	1	✓
7. Devices used to access Facebook (choose all that apply) (1) <input type="checkbox"/> PC (2) <input type="checkbox"/> portable computer (laptop) (3) <input type="checkbox"/> tablet (4) <input type="checkbox"/> mobile phone (5) <input type="checkbox"/> other (please specify.....)	1	1	1	3/3	1	✓

Part VIII. Health status

Question	Score			Total	IOC	Result
	#1	#2	#3			
1. Your overall current health (1=poor 7=excellent)	1	1	1	3/3	1	✓
2. How serious have your health issues been? (1= very serious 7= not at all serious)	-1	1	1	1/3	0.33*	✗



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