CHAPTER III
METHODOLOGY

3.1 Study design

The study design of this research was a cross-sectional survey research.

3.1.1 Population

Populations in this study were the current CLA 600 and CLA Advance users. CLA 600 and CLA Advance are the registered brands of CLA products owned by Mega Lifesciences Pty., Ltd., a prominent DS company in Thailand who play a major role in the DS industry.

3.1.2 Sample

Samples in this study were those who were randomly drawn from company database (current CLA 600 and CLA Advance users) and gave consent to respond and fill out the questionnaire.

3.1.2.1 Sampling method

The samples were selected from the company customer database, the current users of CLA 600 and CLA Advance from Mega Lifesciences Co., Ltd. This data base, as the sampling frame, was used twice i.e. for pilot scale testing and the final survey work, however, the set of names randomly selected were different. The pilot scale testing was conducted during the month of October 2005. We selected the names out by systemic random (1 out of every 25), then the marketing service staff of the company phoned the selected candidates in person, explained the concept of this research work and asked for their consent to response to the questionnaire. After we got the consent to answer the questionnaire we then sent it out to these users. We received 38 questionnaires back within one month.

For the main study, again, we had drawn the sample by systematic random i.e. 1 out of every 25. Then the marketing service staff of the company phoned the selected candidates in person, explained the concept of this research work and asked for their consent to response to the questionnaire. After we get the consent to answer we then sent the questionnaire out. We did send 400 mails out to these agreed to response samples. However, we received 208 questionnaires back only within 38 days. The response rate, therefore, was 52%. Sampling method was depicted in Figure 3.1.
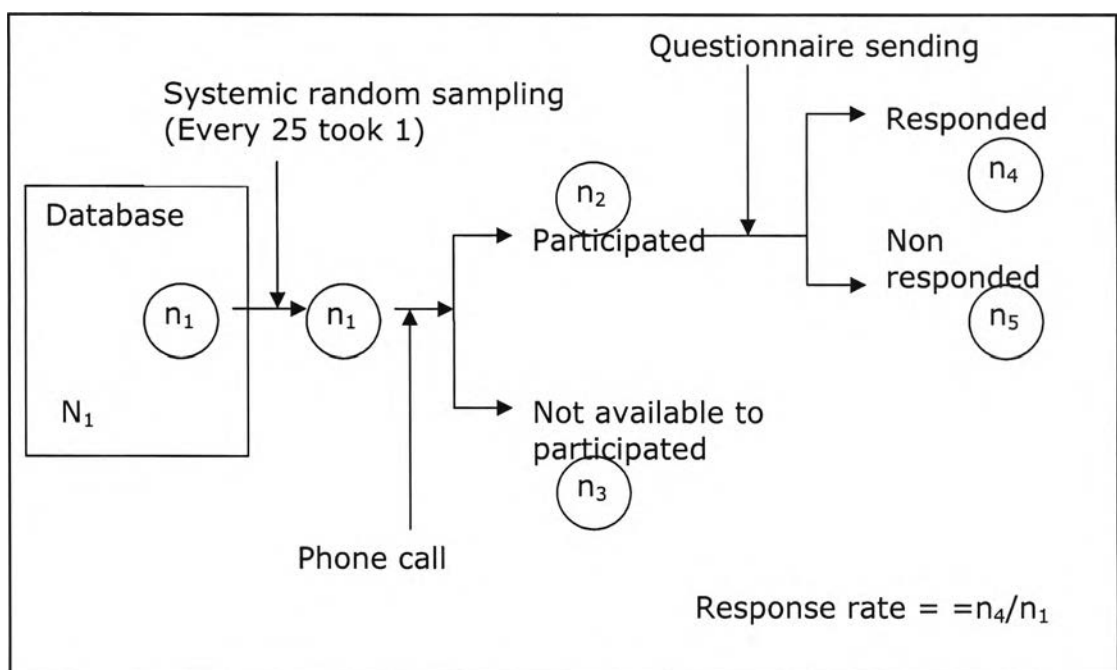

Figure 3.1: Sampling method

3.1.2.2 Sample size calculation

For the actual survey work, we needed at least 200 respondents, the sample size recommended by Hair (1998) for Structural Equation Modeling analysis and by using the rule of thump (10-20 samples for one variable) from Schumacker and Lomax (1996). Since the way we communicated with the CLA users was quite effective (by talking with them over the phone and receiving the consent to answer the questionnaire before we mailed them out, therefore, the responded rate was rather high. An experience from the pilot scale testing

showed that we got 38 mails back out of 50 sent out or 76%. Therefore, to get 200 respondents for the analysis, we inflated the mail number to 400 so to be assured of the sufficient responses for analysis.

3.1.3 Measurements in the Study

3.1.3.1 Variables

3.1.3.1.1 Independent variables:

There were 6 independent variables in this study, comprising of 5 marketing activities and 1 non-marketing activity, listed below:

1. Marketing activities

    1.1 The perception of product attributes.
    1.2 The perception of perceived reasonableness of price.
    1.3 The perception of convenience in buying.
    1.4 The perception of effectiveness of marketing communication.
    1.5 The perception of effectiveness of sales promotion.

2. Non-marketing activity

    2.1 The perception of past experience/ satisfaction

3.1.3.1.2 Dependent variables:

There were two dependent variables in this study i.e.

1. The attitude toward the Brand.
2. The intention to continue to use the brand.

3.1.4 Study instruments

Data were obtained from method of data collection. The questionnaire was developed according to the objectives and conceptual framework as the following steps:

1. Group interview qualitative research
2. Operationalization of the constructs
3. Creating the item statements for each variables
4. Reviewing and assessing the content validity by the experts
5. Pre-testing (Pilot scale testing) with 30 current users
6. Reviewing the questionnaire

3.1.4.1 Group Interview qualitative research and the result

The group interview qualitative research was conducted so to check and confirm the existence of our conceptual framework and the variables in the model. This interview was conducted with the current users of CLA in two groups, each group comprised of the 8-10 users. The result from the interview would then be used to design further detail in the study. The result of this group interview was as below.

We had conducted the group interview during mid March 2005 for these below objectives:

1. To investigate the CLA product awareness
2. To understand the consumption behavior of CLA on:
   - Reasons to use the product
   - Duration on usage
   - Other brands of weight management DS ever used and the reasons for change

3. To understand the buying behavior for CLA
   - Place to buy the product
   - Factors influencing the buying choice of CLA

- Significant others for selecting CLA
- Product satisfaction
- Characteristics of the preferred weight management DS

4. To investigate the communication and advertisement that work in term of awareness and decision making
   - Effective weight management Advertisements that work
   - Influence of the presenter in the advertisement

5. To investigate the effective promotional campaigns that could influence the awareness and consumption

6. To understand the consumer need and suggestion towards the product profile

In short, the main overall objective besides these knowledge and understanding on consumer behavior was to use the information we got to draft an effective questionnaire to serve our framework on the later stage of research.

3.1.4.1.1 Group Interview Methodology

We had conducted the focus group interview by recruiting 2 groups of CLA current users, 8 members in each group, a well trained group leader asked the questions and let the samples answered, each group interview took 2 hours.

The qualifications of our samples were as follows:

- Female of 20-40 years of ages (Group 1: 20-29 = 8, Group 2: 30-40 = 8)
- Undergraduate/Graduate
- Were the current users of CLA 600/ CLA Advance
- Consume the products continuously for at least 3 months
- Were concerned on weight gaining and/or bellying

- Personal income of 15000 baht/month or household income of 40000 baht/month upwards
- No family members or closely related work in the weight management DS industry, medical science areas, marketer, mass media, market research and life insurance
- Confined the area of sampling in greater Bangkok and perimeter

3.1.4.1.2 Research finding

Attitude and awareness of desired figure, weight management program and the influences of marketing and non-marketing activities on the Attitude toward Slimming Dietary Supplements focusing on CLA were as follows:

1. Desired figure of nowadays female comprised of no belly, smooth skin, curving and no surplus portion along the body.
2. Weight management programs awareness and their opinions toward these programs:

Table 3.1: Weight management programs and the users' opinions

Method	Opinion
Exercise	Feeling so thirsty, the more exhaustion the more intake
Dinner skipping	Weight had been reduced obviously
Weight reduction medicine	Nervous tension, yoyo effect after cessation
Weight management DS	Least time spending, easy to do, side effect had been noticed
Acupuncture	Recommended by friend
Slimming belt	Feeling pressured
Yoga	Too expensive
Hot sauna	Too hot, exhaustive, thirsty, dry skin, weight was intact

3. CLA awareness:

- Group 1 awareness was from advertisement, TV female program, brochure and also from pharmacist introduction, as well, this group felt that applying for a job was an important reason to control their weight
- Group 2 awareness was from significant others' suggestion (closed friends, sisters, colleagues, lovers, children and parents) and comment on their figures. Half of this group also used other weight controlling methods such as exercise and diet controlling

4. Mentioned CLA profile were from sunflower seed extraction, combined and digested the fat, created muscle, replaced the fat layer

5. Reasons for CLA selection:
- Worked well with friends with no side effect
- Convincing information from brochure, natural component
- Recommended by pharmacist
- TV ad impact, used by celebrities
- Established in the market for a long time
- Number one in term of sales
- Good value for money (weight reduction by one kg per month)
- Effectively firming up the body
- Help burning the calories
- Help moisturizing the skin

6. Duration of CLA consumption
- Majority of the samples consumed CLA for a period of 3-6 months, certain side effect such as nausea and dizziness were observed by half of Group 1
- Efficacy could be observed within 4-6 months, mainly on body firming up
- Efficacy perceived by Group 1 was half a kilo reduction for a month while it should be 1-2 kilo for Group 2

- Group 1 might change the brand when weight reduction was stopped since they could see more new products arriving the market and they also worried about the accumulation of the ingredient adverse reaction
- Group 2, in contrary, would maintain the consumption even though they were satisfied with the result, however, they could reduced the dosage consumed and they were not shy to let other know they took the product. This was contrary to Group 1 members

7. Reasons for brand switching (from others to CLA)

Table 3.2: Other weight management DS used and the reasons to change to CLA

Previous brand used	Reasons to change to CLA
Brands chili & green tea extract	Stomach irritating
Conjucky	Hungriness and weight were intact
Amway garlic	Slimming happened with arm/leg, not belly
Fitne	Visiting the toilet too often like having diarrhea
Slimming pill	Yoyo effect
Slimming clinic	Nervous tension/stress , blurred

8. Place to buy CLA and buying habit
- The most mentioned place to buy CLA was Watsons (modern drug store), mainly because of convenience, competitive price and fresh stock. Drug store was the second in the range, mainly because of pharmacist presence, thus more reliable.
- Internet or direct mailing buying method was yet to be in consideration since they felt that these methods were too comparatively complicated. They also worried for getting the fake goods.

- For buying habit, a few might look for other brands so to compare the ingredients listed and pricing while most of them would direct their buying to CLA. Normally, they would buy one box (good for two weeks or a month) unless the promotional campaign offering at that period was attractive enough for them to buy more.

9. Factors affecting the brand selection were as follows:
- Ingredients list focusing on safety, no or least side effect and were from natural origin
- Endorsed by reliable institute such as Thai FDA
- Efficacy i.e. reduce excessive fat, firming the body
- Recommended by pharmacist
- Recommended by friends
- Advertisement (must be reliable and contained the true information)
- Branding (reliable, well established, famous)
- Competitive price (threshold was 1300-1500 baht/month)
- Convenient to consume (small capsule, no smell and attractive color)

10. Packaging was not so important for Group 1 but somewhat important for Group 2 (should be attractive and comply with the product specification (e.g. sunflower posed yellow color).

11. Significant others that might influence the buying decision were friends who currently use the product without issues, pharmacist and good figured celebrities

12. CLA satisfaction: Group 1 was somewhat satisfied since the weight controlling didn't perfectly meet their target, Group 2 who used CLA Advance was more satisfied with the outcome compare to CLA 600.

13. What they needed more from the product qualifications comprised of skin nurturing, to add vitamin E to help promoting the skin health, to add green tea extract and to give the consumer a guarantee of weight reduction (such as 1-2 kg in a

month). Some members of Group 2 would like to have a product of once daily usage such as one capsule daily before retiring.

14. Important characteristics for weight management DS decision making were:

- Safety with no side effect
- Enhanced the current fat burning process and dissolve the excessive fat
- Firming up the body within 1-2 month
- Muscle building so to get the firm and slimming body plus preventing the yoyo effect
- Burned the carbohydrate and sugar to calories, no fat accumulation
- Preventing cancer and the new fat intake accumulation (Group 2)

15. Advertisement that the groups could remember for CLA were those of being the top sales and the sunflower image. However, since there were so many DS advertisement exposed to them every now and then, they did mix up the advertisements residual information. The other point was that skin health DS ads were relatively prevalent than weight management DS. Ranking of media frequency that they were exposed to were TV, magazines and radios respectively. Presenters in the ad should be reliable such as the experienced users. As well, pharmacist or nutritionist was more reliable.

16. Promotional campaigns that work were:

- Duo packs
- Gimmicks such as umbrella, gap, shirt, doll, weight scaling, weight management equipment or manual
- Smaller pack size (10-20 capsules) available in convenience store
- Lucky draw by carton mailing
- Membership for further discount (also by carton mailing)

- Price discount could send a negative feeling to consumers (Group 2) and might raise the quality question

17. Comments and suggestions from the groups

17.1 Product

- Safety with no side effect
- Natural ingredients
- Should add more efficacies such as skin and hair health promotion
- Reliable significant others were important
- Needed the one daily regimen
- Easy to consume, small size capsule
- Line extension of CLA was needed such as for the health of skin, hair, nail and breast

17.2 Place to buy

- Easy and convenient to buy
- Goods must be fresh

17.3 Communication and advertisement

- Advertisement should be periodically so to remind the consumer
- Advertisement must be reliable
- Presenters should be real users since they were more convincing

17.4 Promotional campaign

- Gimmicks as mentioned before were highly recommended
- Discount might create question in consumer perception
- Lucky draw from carton mailing was attractive
- Membership for special discount together with coupon
- Call center for counseling was also needed
- Consumer meeting so to answer the questions, problems and issues

From the focus group conducted on the actual users, we had drawn a lot of relevant information to explain and confirm our

framework and to draft a better pertinent questionnaire for the next step of this research.

3.1.4.2 Operationalization of the constructs

Altogether, there were eight constructs in the revised conceptual model, including perceived product attributes, perceived reasonableness of price, perceived convenience in accessibility, perceived effectiveness of company communication, perceived effectiveness of promotional program, perceived past experience, attitude toward the weight management DS (CLA 600 and CLA Advance) and intention to continue to use the brand of this weight management DS (CLA 600 and CLA Advance). The generation and selection of questionnaire items for this study were based on the responses from the group interview conducted in March 2005 together with the information extracted from the review. Thirty four questionnaire items were generated to measure various perceptions toward the brand and three items each for attitude toward the brand and intention to continue to use the brand. The opertionalization of the constructs was discussed below:

The perception of product attributes. The perception of product attributes was measured by a 10 items; 5 points Likert scale anchored at strongly disagree to strongly agree. An example item was "the Slimming Dietary Supplement I am now using is very safe".

The perception of perceived reasonableness of price. The perception of perceived reasonableness of price was measured by a 4 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "The price of Slimming Dietary Supplement I am now using is very reasonable comparing to my disposable income".

The perception of convenience in buying. The perception of convenience in buying was measured by a 3 items, 5 points Likert

scale anchored at strongly disagree to strongly agree. An example item is "It is convenient to buy Slimming Dietary Supplement that I am now using".

The perception of effectiveness of marketing communication. The perception of effectiveness of marketing communication was measured by a 5 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "The advertisement of Slimming Dietary Supplement that I am now using is very attractive".

The perception of effectiveness of sales promotion. The perception of effectiveness of sales promotion was measured by a 3 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "The sales promotion of Slimming Dietary Supplement that I am now using is very attractive".

The perception of past experience. The perception of past experiences was measured by a 3 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "From the experience of using this slimming Dietary Supplement, I can control my weight up to my need".

The attitude toward the brand. The attitude toward the Slimming Dietary Supplement was measured by a 3 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "Overall, I think I like this Slimming Dietary Supplement very much".

The intention to continue to use the brand. The intention to continue to use the brand was measured by a 3 items, 5 points Likert scale anchored at strongly disagree to strongly agree. An example item is "I think, I will continue to use this Slimming Dietary Supplement definitely".

3.1.4.3 Creating the item statements for each variables

We had developed the questionnaire covering all the related item statements for each variable and covered 3 sections as follows:

Pre-Section 1: the covering letter which explaining the objectives of this questionnaire, the way to fill in for each section, telephone numbers to contact in case of any query arisen.

Section 1: the first section covered items on knowledge, understanding, general information and consumption of CLA 600 and CLA Advance. This included the perception of current respondent shape by themselves together with those of their friends/ surrounding, the consumption pattern of CLA both 600 and Advance, the expense used for the product, the other weight controlling measures pursued by the CLA users together with the frequency of usage, the other types of DS usage and frequency, place to buy CLA, medias exposure and the influence of these medias, sales promotional programs and their favorableness to these programs and ending by the influential persons so to have a decision making on CLA and how strong these reference others were.

Section 2: this section covered opinion on CLA 600 / CLA Advance in various aspects, in fact this section was the main part for our study since it covered all independent and dependent variables. The total items were shown in 34 questions, details were as follows:

1. Question 1-10 , represented by Q1-Q10,were for the perception of product quality in various aspects such as safety, efficacy and image.
2. Question 11-14, represented by P1-P4, are for the perception of reasonableness of price
3. Question 15-17, represented by D1-D3, were for the perception of accessibility of the product

4. Question 18-22, represented by AD1-AD4, were for the perception of advertising of the product

5. Question 23-25, represented by SP1-SP3, were for the perception of sales promotion program

6. Question 26-28, represented by E2-E4, were for the perception of positive experience/ satisfaction

7. Question 29-31, represented by Y1-Y3, were for the attitude toward the brand

8. Question 32-34, represented by Y4-Y6, were for the intention toward the brand

However, some independent latent variables might be multi-dimensional and as such, exploratory factors analysis (EFA) would be used with the measurement items for each construct (10 items for perceived quality, 4 items for perceived value for money, 3 items for perceived accessibility, 5 items for perceived effectiveness of advertising, 3 items for perceived effectiveness of sales promotion, 3 items for positive experience), one construct at a time, to check if the construct was uni-dimensional or multi-dimensional. If a construct was a multi-dimensional construct, it would be represented by multiple constructs in the structural equation modeling analysis.

Section 3: this last section was meant for the general information of the respondent, covering the socio-demographic data. This section covered gender, age, education, marital status, lover status, occupation, monthly income, family monthly income, height and weight and other comments if any. The reason why we asked for height and weight was that we could then calculate the Body Mass Index or BMI so to see whether these respondents were overweighed or not.

3.1.4.4 Reviewing and assessing the content validity by the experts

We had checked the content validity by reviewing the questionnaire with the advisor, some experts in the questionnaire design area. After that, we took this questionnaire to discuss with a few of current users of CLA products so to check whether they understood the same meaning as what we actually needed. Therefore, the clarity and understanding of the same information were ensured. The easiness for the completion of the questionnaire was also confirmed in this stage.

3.1.4.5 Pre-testing (Pilot scale testing) and the results

We conducted the pilot scale testing by sending 50 mails out using the procedure explained in the sampling method. After getting the responses back, we checked the reliability of the questionnaire by using reference indicator i.e. Cronbach's alpha.

After we received 38 questionnaires back within one month, we conducted the reliability test by using the SPSS program version 10.0 generating the .sav file and computed for the Cronbach's alpha. The outcome of Cronbach's alpha for each constructs were listed below:

Table 3.3: Reliability of the Pilot test using Cronbach's alpha as indicators

Construct	Number of items	Cronbach's alpha
Product attributes	10	0.8292
Price	4	0.8570
Distribution channel	3	0.8790
Advertising campaign	5	0.7685
Promotional program	3	0.9161
Experiences	3	0.6571
Attitude towards the brand	3	0.9170
Intention to continue to use brand	3	0.9421

Nearly all of the Cronbach's alpha exceeded 0.70 except Experiences (ranging from 0.6571-0.9421), the threshold recommended by Nunnally (1978). Therefore, we could conclude that the reliability levels for the constructs were marginally high to high. We could then move to the main study questionnaire survey process.

3.1.4.6 Reviewing the questionnaire

After reliability test of the questionnaire, we had a minor review for certain detail inside so to make the questionnaire better for the final study regarding the response rate and also to increase the reliability outcome.

3.1.5 Data collection for Main Study

The main study survey was conducted during the month of December 2005 up to the mid of January 2006, nearly two months time was required because of the numbers of needed respondents was over 200. By randomly selected the names out from the data base, the marketing service staff of the company then phoned the selected candidates in person, explained the concept of this research work and asked for their consent to response to the questionnaire. After we got

the consent to answer, the questionnaires were then sent out to the users. We received 208 questionnaires back within 5 weeks.

3.1.6 Data analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 10.0, Prelis and Lisrel programs (version 8.54), as the following:

1. Descriptive statistics such as the frequency table, mean, standard deviation and percentage were used to describe socio-demographic data of the respondents.
2. To test the hypothesized relationships among the constructs specified in the conceptual model, a structural equation modeling approach was employed. This approach was selected because a Structural Equation Model or SEM could be used to specify and test the phenomenon under study in terms of hypothesized cause-and-effect constructs and their indicators (Bagozzi, 1981; Bagozzi, 1982; Bentler, 1979; Ryan, 1982). The data from .sav file created from SPSS were then input into PRELIS 2, which generated the covariance matrices to be used as input for structural equation modeling analysis by LISREL 8 (Joreskog, 1988; Joreskog, 1993). Generally, a structural equation model such as the LISREL model consisted of two parts: the measurement model and the structural model. The measurement model specified how the latent variables or hypothetical constructs were measured in terms of the observed variables, and it describes the measurement properties (validities and reliabilities) of the observed variables. The structural equation model specified the causal relationships among the latent variables and described the causal effects and the amount of unexplained variance (Joreskog, 1989). A structural equation analysis was performed in this study.