# CHAPTER II

## LITERATURE REVIEW

This study aimed to assess the health status and factors related to health status of elderly in rural areas of Papayom District, Patthalung Province.In this chapter, relevant theories and concepts based on a view of the literature are presented, in the following areas:

1. **Concepts/ theories of the elderly**
    - 1.1 Definition of aging
    - 1.2 The changes in the aging process
    - 1.3 Theories of aging
2. **Concepts/ theories of social support**
    - 2.1 Definition of social support
    - 2.2 Concepts and relevant theories of social support
3. **Concepts / theories of the health status**
    - 3.1 Definition of the health status
    - 3.2 Health problems of the elderly
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    - 4.1 Definition of the health behaviors
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5. **Concepts/ theories of access to health service (Medical accessibility)**
6. **Relevant research**

# 1. Concepts / Theories of the Elderly

## 1.1 Definition of aging

Aging is something that happens to all of us. It is natural and virtually inevitable process. Claudia, N. (1999) defined aging as the process of progressive change in the biological, psychological and social structure of an individual. It is a life long process, which begin before we are born and continuous through of life.

Through out this study, aging means the people whom 60 or more than 60 years old which are men or women and equivalent to older adults, older people, elderly people or aging. In addition elderly people can be divided into 3 groups as WHO recommendation as young old as 60-69, old-old as aged 70-79 years and the oldest as aged 80 years and over.

Age sixty, however, is likely to be a realistic expression of older age in developing countries among people who have not had the advantage in earlier life that leads to health old age (WHO, 2000).

## 1.2 The changes in the aging process

**Aging and change**

The passage of time made a lot of changes occurred upon the elders as follows:

**1. Physical aging**

Survival curves for human over the centuries have been interpreted to indicates that although mean survival is affected by situations such as nutrition, wars, accidents,

and other environmental factors, the maximum life span across the centuries appears to be relatively constant at approximately 100 years and can be high as 120 years (Physical aging,2003).

However, the theory may be defined as a cluster of conclusion in search of premise and provide anchors for thinking and guideline for examining data. There are a lot of changes in body function as follow:

- Hearing, which declines especially in relation to the highest pitched tones.
- The proportion of fat to muscle, which may increase by as much as 30%. Typically, the total padding of body fat directly under the skin thins out and accumulates around the stomach. The ability to excrete fats is impaired, and therefore the storage of fats increases, including cholesterol and fat-soluble nutrients.
- The amount of water in the body decreases, which therefore decreases the absorption of water-soluble nutrients. Also. There is less saliva and other lubricating fluids.
- The liver and the kidneys cannot function as efficiently, thus affecting the elimination of wastes.
- A decrease in the ease of digestion, with a decrease in stomach acid production.
- A loss of muscle strength and coordinating, with an accompanying loss of mobility, agility, and flexibility.
- A decline in sexual hormones and sexual functioning.

- A decrease in the sensations of taste and smell.
- Changes in the cardiovascular and respiratory systems, leading to decreased oxygen and nutrients throughout the body.
- Decreased functioning of the nervous system so that nerve impulses are not transmitted, as efficiently, reflexes are not as sharp, and memory and learning are diminished.
- A decrease in bone strength and density.
- Hormone levels, which gradually decline. The thyroid and sexual hormones are particularly affected.
- Declining visual abilities. Age-related changes may lead to disease such as macular degeneration.
- A compromised ability to produce vitamin D from sunlight.
- A reduction in protein formation leading to shrinkage in muscle mass and decreased bone formation, possibly leading to osteoporosis.
- Programmed senescence, or aging clock, theory. The aging of the cells of each individual is programmed into the genes, and there are a preset number of possible rejuvenations in the life of a given cell. When cells die at a rate faster than they are replaced, organs do not function property, and they are soon unable to maintain the functions necessary for life.
- Genetic theory. Human cells maintain their own seed of destruction at the level of the chromosomes.

- Connective tissue or cross-linking theory. Changes in the make-up of the connective tissue alter the stability of body structures, causing a loss of elasticity and functioning, and leading to symptoms of aging.
- Free-radical theory. The most commonly held theory of aging, it is based on the fact that ongoing chemical reactions of the cells produce free radicals. In the presence of oxygen, these free radicals cause the cells of the body to break down. As time goes on, more cells die or lose the ability to function, and the body soon ceases to function as a whole.
- Immunological theory. There are changes in the immune system as it begins to wear out, and the body is more prone to infections and tissue damage, which may finally cause death. Also, as the system breaks down, the body is more apt to have autoimmune reactions, in which the bodies own cells are mistaken for foreign material and are destroyed or damaged by the immune system.

There are several theories as to why the aging body loses functioning. It may be that several factors work together or that one particular factor is at work more than others in a given individual. (Healthy Aging, 2003)

However, the physiological aging, some of changes in old age that we think of as normal are modifiable, preventable and related to socially influenced lifestyle choices and cultural. There fore, generally, the stage of aging in each is differences at any time.

## 2. Psychological aging

Psychological aging is characterized primary by cognitive changes and personality.

### Cognitive change

Andrew E Scharlach and Barrie Robinson (Psychological aging,2003) describe on cognitive changes associated with aging as the human brain has documented dramatic decreases in brain size and efficiency throughout our lives, beginning virtually from the time of birth. Yet, in spite of these anatomical and physiological declines, studies have found evidence of only limited decrements in actual intellectual functioning associated with the aging process. There are two important topics;

### Intelligence

Intelligence generally can be thought of as including a range of abilities that allow us to make sense of our experiences: the ability to comprehend new information, the ability to think abstractly, the ability to make rational decisions, spatial ability, numerical ability, verbal fluency, etc. Some abilities (e.g., the ability to think abstractly) are heavily biologically determined and are relatively independent of particular applications, reflecting what has been called "fluid intelligence." Other intellectual abilities (e.g., verbal fluency) are more apt to reflect the knowledge and skills a person has gained through life experience, or "crystallized intelligence."

Intelligence tests have demonstrated a pattern of age-related changes in intellectual functioning typically beginning after the age of 60. This "classic aging

pattern" involves somewhat poorer performance on tests of fluid intelligence, but little or no difference on tests of crystallized intelligence. It should be noted, however, that there is a great deal of variability in the test scores of older adults, with some older persons actually doing better than some younger persons. Moreover, older adult'intellectual functioning can be improved significantly with training and practice, although improvements generally are less than those experienced by younger persons with the same amount of training.

The fact that older persons seem to perform more poorly on tests of fluid intelligence is due in part to reduced efficiency of nerve transmission in the brain, resulting in slower information processing and greater loss of information during transmission. However, performance decrements may also be to a variety of non-cognitive factors, including impairments in motor ability and sensation. Slower motor performance can significantly reduce an older person's ability to respond on tests thst require fine hand movements (e.g., filling in the proper rectangle on an answer sheet). Sensory deficits associated with aging, for example, can result in perceptual inaccuracies, requiring the aging mind to commit more attention and cognitive effort to comprehending sensory input and reducing its capacity to quickly process new information.

Other factors affecting cognitive performance in older adults are only indirectly related to the aging process itself. For example, older persons typically have fewer years of education. They also are likely not to have as much experience taking intelligence tests as do younger persons who up in an era of widespread intelligence

testing. When making decision, older persons have been found to sacrifice speed for accuracy, rejecting quick, simplistic solutions to problems and preferring to work slower, examining issues from a variety of perspectives before selecting a response. Finally, many of the health problems which are more common in later life (e.g., cardiovascular problems) can significantly affect cognitive functioning as well as test-taking ability.

Not all cognitive changes in later life are negative, however. Older persons typically exhibit greater experience-based knowledge, increased, accuracy, better judgment, and generally improved ability to handle familiar tasks than younger persons. Such applied knowledge, or wisdom, may in fact be considerably more important to one's ability to accomplish most tasks of day-to-day life than are the abstract abilities tapped by intelligence tests.

Even when physical or cognitive competencies are affected by the aging process, older adults often are able to develop strategies for compensating partially or totally. For example, older typists have been found to type as quickly and as accurately as younger typists even though they are unable to move their fingers as fast, because they have developed a better ability to anticipate words and locate the proper keys on the typewriter. In general, older adults can perform about as well as younger persons on tasks, which provide sufficient opportunity to compensate for slower physical and cognitive functioning.

**Learning and Memory**

Andrew E Scharlach and Barrie Robinson(Psychological aging,2003) reveals that most persons experience a modest increase in memory problems as they get older, particularly with regard to the ability to remember relatively recent experiences. Decrements are found both in the ability to accumulate new information and in the ability to retrieve existing information from memory storage, although there is little decline in the ability to store new information once it is learned.

The process of learning new information and encoding it for storage requires more time as individuals get older, because of the reduced efficiency of neural transmission and because of sensory deficits that limit one's ability to quickly and accurately perceive information to be learned (as discussed above). In fast-moving day-to-day experiences, this may prevent individual experiences (e.g., the name of someone to whom one is introduced) from receiving the attention needed for complete encoding into secondary memory. In addition, the extensive life experience of older persons makes it more likely that new information will not adequately be distinguishable from previous learning (e.g., the names of other similar people one has over the years), making it difficult to establish unique cues and linkages for new experiences.

Older persons also experience decrements in their ability to retreive information once it is stored. In part, this is because of the difficulty identifying just the right piece of information from the vast store of information they have accumulated over a lifetime of experiences. This can be particularly difficult when the new information resembles previously learned information (e.g., when one is trying to recall a phone number from

the thousands of phone numbers that have been learned over a lifetime). Consequently, older persons tend to do considerably worse than younger persons on tests of free recall, where they are asked to retrieve learned information but given only minimal cues. However, few decrements are found when older adults are given sufficient orienting parameters to limit the scope of the search, or are asked to select the correct answer from among a small number of options (e.g.,on a multiple choice test).

Older persons seem to have better memory for certain events that occurred in the distant past than for recent experiences. To a large extent, this is because the distant events that are remembered are those, which either have special personal significance (e.g., the birth of a children, the end of World War II) or are so unique that they are not affected by subsequent experiences (e.g., children occurrences) Such experiences are apt to have been rehearsed mentally numerous times throughout one's life, increasing their familiarity and making them easier to recall than are mundane aspects of one's day-to-day life. In addition, it is considerably more difficult to validate the accuracy of information from the distant past than it is to validate more recent information, so that errors in remembering recent events usually are more obvious than are errors regarding distant events.

Finally. It is important to note that cognitive processes such as learning, memory, and intellectual functioning are extremely responsive to a person's physical and psychological state. Physical illnesses and medications can affect neuronal function and also reduce the energy available for cognitive processes. Depression and other emotional conditions that involve impaired self-esteem and reduced confidence in one's

own abilities can significantly impair one's motivation for learning and remembering new information. Among depressed older adults, for example, memory complaints can increase and memory performance can decline even in persons who do not have any actual impairment in cognitive functioning or learning ability. Moreover, older adults who have adopted the popular stereotype that forgetfulness is inevitable in old age may experience increased anxiety and reduced self-confidence when confronted with normal memory tasks, resulting in memory problems they would not otherwise have had.

## 1.3 Theories of aging

***Psycho sociological Theories***

**Psychosocial Perspectives on Aging**

Vicki Notes (Theories of aging, 2003) stated that:

- Psychosocial aging can be described as a result of the disuse of previously acquired skills, random wear & tear, a change in the ability to adapt due environmental variables, loss of internal & external resources, genetic influences over the life span.
- Social scientists agree that genetics (heredity) is a major factor in determining the length of human life, although environment plays an important role in modifying the expected life span.
- The bottom line of Psychosocial Theory: As people grow older, their behavior changes, their social interactions change, and the activities in which they engage change.

The four Psychosocial Theories we will discuss are: Vicki Notes (Theories of aging, 2003)

- Disengagement theory
- Activity theory
- Life-course theories
- Continuity theory

**Disengagement Theory**

- Refers to an inevitable process in which many of the relationships between a person and other members of society are severed & those remaining are altered in quality.
- Withdrawal may be initiated by the aging person or by society, and may be partial or total.
- It was observed that older people are less involved with life than they were as younger adults.
- As people age they experience greater distance from society & they develop new types of relationships with society.
- In America there is evidence that society forces withdrawal on older people whether or not they want it.
- Some suggest that this theory does not consider the large number of older people who do not withdraw from society.
- This theory is recognized as the 1st formal theory that attempted to explain the process of growing older.

**Activity Theory**

- Activity theory emphasizes the importance of ongoing social activity.
- This theory suggests that a person's self-concept is related to the roles held by that person i.e. retiring may not be so harmful if the person actively maintains other roles, such as familial roles, recreational roles, volunteer & community roles.
- To maintain a positive sense of self the person must substitute new roles for those that are lost because of age. And studies show that the type of activity does matter, just as it does with younger people.

The Activity Theory makes the following certain assumptions:

- There is an abrupt beginning of old age.
- The process of aging leaves people alone & cut-off.
- People should be encouraged to remain active & develop own friends.
- Standards & expectations of middle age should be projected to older age.
- Aging persons should be encouraged to expand & be involved.

**Life-Course Theories**

One theory we are all very familiar with is Erikson's developmental stages, which here approaches maturity as a process. Within each stage the person faces a crisis or dilemma that the person must resolve to move forward to the next stage, or not resolve which results in incomplete development.

Hanighurst (in Vicki Notes, 2003) (Theories of aging, 2003). Stated that for older people to progress they must meet the following tasks:

- Adjust to declining health & physical strength.
- Adjust to retirement & reduced income.
- Adjust to the death of a spouse or family members.
- Adjust to living arrangements different from what they are accustomed.
- Adjust to pleasures of aging i.e. increased leisure & playing with grandchildren.

**Continuity Theory**

- States that older adults try to preserve & maintain internal & external structures by using strategies that maintain continuity. Meaning that older people may seek to use familiar strategies in familiar areas of life.
- In later life, adults tend to use continuity as an adaptive strategy to deal with changes that occur during normal aging. Continuity theory has excellent potential for explaining how people adapt to their own aging.
- Changes come about as a result of the aging person's reflecting upon past experience & setting goals for the future.

In sum, aging is the maturation and senescence of biology system. With each additional decade of life, adults will see a number of changes as mentioned earlier. With the physical, psychological and social change made the elderly people prone to be a susceptible group and increased risk of disability. Therefore, the elderly themselves need to be adapted and adopted their life to live in the changing world. To better living

in later life, not only the elderly themselves who care but also the family, neighborhood, community and other related organization have to done supportive activities.

## 2. Concepts/ Theories of Social Support

### 2.1 Definition of social support

Kaplan,R., et al. (1993) stated that social support has been defined in several different ways. In some epidemiological studies, social support is defined as the number of social contact maintained by a person or the extensiveness of a social network. Cobb, S., (1976) in Kaplan et al. (1993) defined social support as the perceived belonging to a social network of communication and mutual obligation.

There are two categories of social support definition; the one that emphasizing function aspects of social support and the other stressing the cognitive appraisal (perception) of social support (Turner,1983)

**a). Functional definitions**

Kaplan, R., (1974) defined social support as attachments, which promote mastery, offer guidance and practice identity- validating feedback about behavior.

Barrera, A., (1983) identified six function attributed to social support in the literature;

1). Directive guidance such as providing information, instruction and advice.

2). Intimate interaction such as expressing, intimacy, esteem, physical affirmation and trust.

3). Positive social interaction such as discussing interest, involving in recreational activities, joking.

4). Material aid such as loaning money.

5). Behavior assistance such as sharing task

6). Feedback

Tolsdolf, F., (1976) conceived social support as the product of all social bonds that provide an individual with;

1). Goods and services such as financial aid or help with housework.

2). Information and guidance such as suggestion about where and how to consult for help.

3). Psychosocial backing such as encouragement, emotional comfort and intimacy.

**b). Perceptional Definitions**

Some researchers have stress respondents' evaluation of their social interaction. Cobb, S., (1976) viewed social support as the experience of belonging esteemed and valued, cared for and loved, and being part of network of mutual obligation.

Procidano, M.E., & Heller, K., (1983) differentiated between support and actual support describing perceived as " the extent to which an individual believes that his/her needs for support, information and feedback are fulfilled.

Hellerm, S., (1986) stated that a social activity involves social support if it is perceived by it's recipients as stress reducing or esteem enhance. Therefore, social support is viewed as a subjective and personal experience.

In sum, social support is multidimensional construct that has been conceptualized and measured in a variety way. Most measures of social support fall into one to two categories: the functional definitions that is, the support that is indicate what people has actually received or report to have received. The second one is perceptional definitions, which is capture an individual's beliefs about the available support.

The previous research has shown the measures of perceptions about social support and social networks are as importants as (if not more important than) measures of actual support received in predicting various health outcomes (Jennifer C. Corman et al 2001). Currently, the positive effects of social support proceed more from what individual believes that they has received from a support relationship than the actual supportive behaviors of the relationship (Cobb,S.,1976 in Jennifer C.Corman et al 2001).

Therefore, this study will focus in the perceived social support that defines as perceptions or subjective evaluation of the elderly people in transactions of their social network that either transpired or that might take place in the future.

## 2.2 Concepts and relevant theories of social support

### Living arrangement and social support of Thai elderly

#### 1). Patterns and trends of elderly living arrangement

Kanchanakijsakul,M., et al (2002) describes that, through the 1970-2000- time period, co-residence with at least one child has remained the important with at least one child is just one from of familial assistance, it can be an important indicator of changes the family support for older people. Previous research found that co-resident with at least one child is a central feather of the family support system for Thai elderly (Knodel,J., Chayovan, N., & Siriboon,S., 1992a, in Kanchanakijsakul,M., et al, 2002). Nevertheless, the share of the elderly living with their children has declined remark since 1980. This is, perhaps, because the improved economic situation recently has facilitated construction of separate dwelling for married adult children next to their aging parents (Knodel,J., 1997a; Chayovan,N., 1997b), Note that it can be concluded that the increases proportion of elderly living with children from 1970 to 1980 is accurate. This is because a large proportion (over 18%) of the elderly live in household headed by others who are not children of spouse, and it can be determined whether these elderly co-reside with their children, as state earlier.

It is worth nothing that the proportion of the elderly living with a spouse only has greatly increased. This may be due largely to modernization leading to a decline in mortality and altering lifestyles. Modernization accompanying industrial growth may also create greater physical separation between generations. A study by Knodel,J. and Chayovan,N. (1997b) shows that among Thai elderly with a living child but not co

residing with a child, almost 40 percent lived adjacent to a child. As mentioned, the improved economic situation in recent years has facilitated construction of separate dwelling units for married children near their old-age parents. Such arrangements may be seen as providing greater privacy for both parties. Indeed, focus group discussions have revealed that some elderly prefer this type arrangement, especially if they are in good health (Knodel, J., Saengtienchai, J., & Sittitrai, W., 1995). With improvement in mortality and socio-economic developments, therefore, it is largely possible for an increasing proportion of living with a spouse only among Thai elderly to exist.

Despite the small proportion of elderly living alone to elderly living other circumstances, there is a notable increase in the proportion of elderly living alone during period of the studied. The reasons for this increase may include socio-economic medernization increasing the ratio of single elderly as describe previously.

**2). Social support of Thai elderly**

As mentioned, if using income as indicator of the life satisfaction of Thai elderly, the elderly are such as poverty group in Thailand. The major source of financial support is their child, spouse and closely relatives. Not only financial support, Thai elderly perceived the information support, material support also. That youth have a higher positive to gratitude for their parent, it is a duty of the good child to do. The major duty of child are give all support that their parent needs such as finance, food, cloth and care when their parent be ailing. However, in general Thai children look after their mother much more than and daughter pay attention than son. In addition, the elderly who co – reside with the child, perceived much more support that those who live with spouse or living alone (Sritanyarat, W., 2002).

Indeed, the most of care individual need of the elderly is the care that provided by themselves or their informal caregivers (WHO, 2002). Thai elderly, therefore, need to do self-support for their own. In addition, Thai elderly provided some kind of support to their child. Thai female elderly act as a giver to their family than male (Sritanyarat, W., 2002). However, Thai elderly satisfied with their perceived financial and material support from their children. But for emotion support, almost Thai elderly received from their friends (Knodel, J., & Chayovan, N., 1997b).

### 3). Thai elderly social network

Thai elderly is the one group that the young people keep respect and take care all those of them as the great wisdom people. However, as the socio- economic change, some of the elderly still a leadership of family, the owner of the land, male elderly become stronger situation than female elderly. In the other hand their power decline as their aged. The numbers of important network member of Thai elderly are 2 or 3 persons . The importance individual people that Thai elderly do rely on were their family, friends, neighborhood, and their relatives (Sritanyarat, W., et al., 2002).

### Social support and quality of life among Thai elderly

There are several literatures that explore the relationship among social support and quality of life. The association is positive one. However, there is a little study about the rural elderly people in Thailand.

Keokum S. (Social support, 2000) reveals that the elderly had social support and the QOL was high. Social support for the elderly studied showed moderate positive

correlate with life quality level at the significant ($p<0.01$ $r=0.493$) but some of the elderly had not received social support and the overall quality of life was still low. Results from qualitative study through focus group and in-dept interview showed that social support from family, community, elderly club, government and private sectors were not evenly distributed. Those poor elderly were the elderly who did not have permanent residence, who did not receive the occupational promotion, who had mental health problem and who did not receive living subsidy from the government.

The study suggested that the elderly club should take into the promotion to the elderly occupation, grouping for the mental development, useful information feeding, support needs of living, especially to the poor. Meanwhile, the co-operation from the family. Community, government, and private sectors are needed in more social support in improving QOL in at last.

**Conclusion**

Thai elderly is the one group that continues increased. Thai elderly characteristics were female larger than male, low education, less modern occupation and a larger majority of Thai elderly live in rural areas and also majority was in the Northeast region.

Thai elderly health status, the non-communicable diseases become the problems in the nearly future. This burden of diseases becomes the disability and dependency in the later life. In addition, the accessibility of the elderly to health service system was unequal. In the rural areas, there were no the elderly clinic and get only a few doctor

who responsible for all population in one district. Then, improve the Thai elderly health, it need to be co-operate with all member who related.

However, Thai culture admire at the children who being gratitude to their parent and the elderly. At this mean time, Thai socio-economic change, the western country influenced, the successful of the family planning project and the public and Medicine accomplishment, the elderly can not easily to adapted themselves, the size of the family become smaller, the children searching the job in the city, the women entering to the workforce. The consequence of this change made a large number of the elderly living with their spouse. Only a few times the Thai elderly receive the financial support, material support from the children in Songkran Festival and The New Year Festival. Thai is, still questions that does social support enough for Thai elderly.

There for, Thai senior citizen, who are the great wisdom of community and their child, will be the importance group that need to be much more concern. For better QOL in their later year, all members related have to joint the activities to improve their QOL. In addition, role of social support role and community participation, which is in line with Thai culture, law cost and sustainable, will be the one possible choice of activities in improving QOL of Thai elderly in at last.

# 3. Concepts / Theories of the Health Status

## 3.1 Definition of the health status

Unipan, J. (2000). Defined health as a state or condition that enables the individual to adapt to the environment.

Orem, D.E. (1991). Defined health as a term, which has considerable general utility in describing the state of wholeness or integrity of the individual human being, his parts and his modes of functioning.

The World Health Organization (Prawad, V., 2000). Defined health as a state of complete physical, mental and social well being, and not merely the absence of disease and infirmity.

Newman (Pender, R., 1996) defined the health status as a condition in which all subsystems physiological, psychological and socio-cultural are in balance and in harmony with the whole man.

Brvess & Richardson (Syllapasuwan, P., et al, 1998) defined the health status as not limited only to health in its physical and mental, or even social, aspects but rather incorporates these facets into the total picture.

In conclusion, health or one's health status was defined as the physical, mental, emotional, social, and spiritual balance of an individual that enables them to take care of themselves. In this study, it refers only to physical health.

### 3.2 Health problems of the elderly

The most common problems found in the elderly are health problems, both physical and psychological. Physical health problems are the results of degenerative processes in the elderly. As age increases, the proportion of people with health problems increases steadily. According to resent statistics about the aged, each month almost half (43.6%) of the elderly has an illness from many causes, Chayovan,N. & knodel,J. (1997) and the majority were woman and rural residents. The most common illness of the elderly, namely heart disease, hypertension, rhinitis, osteoarthritis, diabetes mellitus, eye disease, back pain and mental problems (MOPH, 2001).

Most of the research in the elderly (Titaphunkul,S., 1992) found that more than half the elderly had chronic disease and many diseases at the same time. A survey of the welfare of the elderly in Thailand in 1994 (Chayovan,N. & knodel,J., 1997)found that among the elderly, the most common illness was back pain, followed by arthritis, hypertension, peptic ulcer, heart problem, cataracts and pterigium, respectively. This is in accord with a survey of the health status of the elderly in 1995 (Juprapawan,J., 1996), which found that the majority of illness was back pain, followed by hypertension, arthritis, peptic ulcer and health disease, respectively. This is similar to the survey of the health status in the elderly in the northern districts in 1998 (Yupayotin,P., et al, 1998), which found that the most common illness was of the respiratory system, followed by muscle aches and pains, arthritis and digestive system illness, respectively.

In conclusion, the majority of health problems in the elderly are related to the rate of physical deterioration. The most common illness are back/ waist pain, arthritis, hypertension and peptic ulcer, respectively.

### 3.3 Assessment of the health status

The scope of assessment of the elderly health status was health evaluation and other conditions, such as physical health, functional ability, psychological health, and social functioning. The methods used in assessing this status may be different and different tools or tests may be used. However, the tests that may be used should be examined or developed appropriately (Chayovan, N., 1999).

General quantitative physical health measurement is difficult to achieve because there are many diseases and abnormalities, and even if there were the same types of diseases and abnormalities, the characteristics and severity of symptoms might be different. Therefore, most physical health status assessment may be done (Juprapavan,J., 2000) by having the elderly evaluation how good their health status are themselves, comparing one's health with another in the same age group, interviewing about sudden illness, injuries, and severe diseases in health reports, asking about problems with the activities of daily living from reduced health effectiveness, and studying using instruments or measurements, including health check ups, in order to evaluate illness status, which that the elderly may not know or be able to evaluate themselves.

**Thai elderly health status**

Titapunkul,S., et al(1999) states that the real health problem of the Thai elderly is disability and dependency. In 1996-1997, National Health Examination Survey 2(NHES2); elderly population revealed that 25 percent of the older have been got total disability. One-fifth of them have got long-term disability and 6 percent of the elderly dependent in ADLs. There were significant to note that the more age the more independent and female elderly were high rate and severity than male (Jitapunkul S. and Bunnag, S., 1999)

**Acute diseases**

Two-third of Thai elderly perceived their health status as moderate up to strong. In last two weeks, there were 38 percent of the elderly have got acute diseases (such as common cold, headache, arthritis, back-pain, hypertension and fever). The high proportion occurred among the female elderly and the proportion were high in rural area than urban area (Sritanyarat, W., 2002).

**Chronic diseases**

The chronic diseases that occurred among Thai elderly were hypertension, DM, cardiovascular diseases, stroke and dementia (Titapunkul, S., 1999). The prevalence of chronic diseases depends on age. It is rare for any adult to have a single health problem. The NHES-2 (1998) found that the maximum chronic diseases that the Thai elderly got were 6 diseases at the same time.

Chronic diseases are significant and costly causes of disability and reduce QOL (WHO,2001). The Thai elderly, there for, in risk of disability that make it difficult to carry out the basics ADLs and finally dependent.

**Mortality of Thai elderly**

The major causes of death of Thai elderly were the cumulative diseases that occurred in the middle life aged. There were cardiovascular diseases (stroke and hypertension), cancer, and COPD (The Bureau of Health and Planning, MOPH, 1999)

The mortality rate was decline form 1999 and 2000. In 2001, the specific mortality rate of the elderly for cancer was 216.7 per 100,000 populations and for heart diseases were 175 per 100,000 population (Thailand Health Profile, 2002), 2003.

***Behavioral health of Thai elderly***

**Medical intake**

There were 47.3 percent of the elderly regularly using medical intake. Almost of the elderly, prefer to prescript themselves (Sritanyarat, W., et al, 2002).

**Health seeking behaviors**

Around 50.6 percent, the elderly like to prescript at the drug store. Health center, hospital and private clinic were the priority choice later (Chuprapavan, J., 2000).

**Hospital admission**

Titapunkul, S. (1999) stated that in the last year, there were 30.7 percent of the elderly were admitted in the hospital and more than 60 percent admitted for one week. The government hospital is the most population place that the elders are admitted. One-third of the elder get free of charge. Their child or the elderly themselves and / or spouse or were the responsibility person for the elderly who have to pay in case of the elderly who have no insurance or any other social welfare.

At this moment, the elderly used around 38 percent of the total hospital bed. That is, one-third of the hospital bed used by the elderly people.

**Social dimensions of Thai Elderly**

Life style and Thai culture affected the Thai elderly wellbeing (Boonthai, N., 1996). The main problems about psychosocial dimension were loneliness and depression (Chayovan, N., & Knodel, J., 1997). The more age the more loneliness, especially female much more loneliness than male, the elderly in rural area much more loneliness than urban. The previous study revealed that factors affected psychology problem of the elderly who live in social welfare centre were inadequate income, loss of social network, number of the family, health status, social support and marital status (Chayovan,N.,& Knodel,J., 1997 ; Kanjanawong,S., et al. 1999; Kanjanawong,S., et al. 1997& Mudtigo,M.,2000).

**Thai Elderly health service system**

There are three main responsibility ministries for the elderly in Thailand.That is, Ministry of Public Health (MOPH). Ministry of Education and Culture (MEC) and Ministry of Social and human development. In the practice way not only the government action for elderly but non-government organization still action for the elderly also.

**1). Health services from government**

The health services that government set for the elderly can be divided into two levels. There are the health service in institutional (Hospital, nursing home, adult day care centre) and health service in community.

There are inadequate special clinics for the elder in hospital. Only 44 percent of the hospital in responsible for MOPH done the elderly clinic (Kumnualsilpa,P., 2000). However, even through the hospital have been done and service for the elderly, it does not guarantee for quality of the services. Booncharaksee,W. (2000) reveals that 30 percent of the elderly cannot access and using the services form the elderly clinic in the hospital. Titapunkul, S., et al., (1999) found that the care of illnesses with out the need for hospitalization in Thai elders was high with just over half using health services. Children had an important role in taking care of their parents. Despite the Thai government's wish to provide health care for the elderly people the rate of not using health services by elderly people has increased from 39.6% in 1988 to 47.2 % in the present study. The one of the reason why is the elderly people may inappropriate or

inadequate caring if they use the free health care program. Moreover, many prefer buying drugs to the counter for the sake of convenience.

In addition, there are uncovered the nursing home care and adult day care centre in each province of Thailand.

At the community level, the primary care unit of community hospital and health centre is the responsible units that provide the services for the elder. The activities are home visit, health education, health promotion, prevention and diseases control, and rehabilitation. In order to the 30 Bath policy, the elderly is the one of target population that benefits the project free of charge.

**2). Health services from non-government organizations (NGOs)**

Source services that NGOs provide for the elderly are private hospital, private institutional support for elderly, private health services center, private adult day care center and so on. At this moment, the settings of services are expanding in urban areas (Sritanyarat, W., 2002).

***Thai elderly social services***

**Government services**

There are four areas of social services that provide for the Thai elderly. The services that provide for the elderly are the elderly home care, the elderly social services centre, and social welfare for the elderly fund.

**Non- government**

There are a few organization that working for the elderly in Thailand. With well in co-operation, some project work together between NGO and GO such as the elderly club in the hospital. The institute that working for the elderly people are the elderly club, Senior Citizens Council of Thailand. The senior citizens association of Thailand. Foundation for older people development FOPDEW, HelpAge International, (Sritanyarat, W., 2002).

**Thai elderly Quality of life**

In Thailand, Pliannbumroong, D. (1997) assessed the QOL of the elderly in Southern Border Provinces of Thailand. The sample of the study were the elderly people in Ampoe Muang, Yala province. The study revealed that most of sample group had a high level quality of life. The study of the relationships between basic factors and level of the quality of life of the elderly showed that there were significant differences between level of the quality of life by religion, marital status, understanding and use of Thai language, occupation and income.

Sudsawat, K. (1998) study on QOL of the elderly in Nakhon Si Thammarat province, indicated that personal ailments, economically active working, household economic status, level of education, membership of any community group/club and hobby also have the similar statically significant effects on QOL of the elderly. Sudsawat concluded that groups of elderly who have never been suffering from any personal ailments and who are economically stable are generally considered to have high level of QOL than others.

Furthermore, Sirisawang, Tawichasri and Patumanond (2000) using WHOQOL-BREF explore the elderly's quality of life in Chiang Mai. They found that most of the elderly resided in their house, had good relationship with and were taken care by the families. Their livings depend on their sibling (86.4%). Their income was considered adequate (77.8%) and most was spent on charities (87.0%). They were able to perform daily activities without any assistance (92.6%), spent their time mostly on resting (90.7%), participated in religious activities (90.1%) and were able to go places alone (67.9%). The average quality of life was high, especially on psychosocial domain. Elderly males had better quality of life than females. The average quality of life was higher in elderly who had high income, those who were able to perform daily activities without any assistance and those who had some body to take care of when they were ill. They need fulfillment in life (9.99%), being accepted and reported by the family (9.3%). Their needs pertaining social, physical and safety were reportedly limited (4.9%, 4.3% and 1.8% respectively).

## 4. Concepts/ Theories of Health Behaviors

### 4.1 Definition of the health behaviors

1. **Meaning;** this word was given its meaning by many people, namely:

Health behavior, in the opinions of J.L Steel. And C. Boom WHO (Cited in Mekhmok, S., 2000) is an activity concerning the sustaining of health or health behavior with the objective of preventing and avoiding the disease.

In aspect of Suwan, P. (1991), health behaviors the same as general behaviors that focus on health only, such as good hygiene practice, eating healthy food, and

brushing the teeth. To study and complete the meaning of health behavior, the concept of the disease and it occurrences or unhealthy conditions of people will be relevant and often includes preventive behavior and the behavior when they get sick. This is different depending on their beliefs, experience, knowledge, social habits, environment, and other factors.

2. **An individual's health behavior** can be divided into the following characteristics:
    1). Health promoting behavior is an individual practice to improve the health of an individual or family member.
    2). Preventive behavior of the disease is an individual practice that benefits oneself, ones family, and community to prevent themselves from sickness from either communicable or non- communicable diseases.
    3). Illness behavior is an action or practice of an individual when they become sick.
    4). Treatment and nursing care behavior is an action or practice of an individual to follow medical instructions or the specifications of treatment and care when people get sick.
    5). Participating behavior is an action or practice to prevent or improve public health, the community and their collective problems.
    6). Self-care behavior is an action or practice to health persons or families in the aspect of prevention and health promotion potential of self-care.

**3. Component of behavior consists of 3 aspects:**

1). Cognitive aspect; this relies on knowledge and understanding the meaning of other things including abilities and intelligence skills.

2). Affective aspect; these are the feelings, attitudes, ideas, likes or dislikes, that give value to things that occur in people's minds.

3). Psychomotor aspect; this is the behavior of physical expression by intention or intend to do something in the future.

## 4.2 Concepts and relevant theories of health behaviors

**Characteristics of health beliefs**

Beliefs about health (Kanchana, S., 1943) are as follows:

1). Health is formed by the interaction between the human and the environment, which depends on personal factors and their environments. The personal factors are the genetics, structure, physical functions, and characteristics of a specific person. It was believed that a person' s health depends greatly on that person's behavior; for example, a person with good health behavior will not be exposed to illnesses as much as a person with bad health behavior.

2). Wellness is the condition of a person with balance or normality in that person's physical, mental, and society. Each part can function normally with a feeling of comfort, without illness, and can conduct daily life in order to achieve society's, and one's own, purposes successfully.

Wellness in the health condition can be divided into levels, as follows: (Kanchanawong, S., 1993)

1). Excellent health is a condition in which the physical and mental are as complete as it is possible to be. A person with this level of health can do daily duties with 100% effectiveness.

2). Good health is the condition in which a person is balanced but may have small unclear abnormalities that have no effect on the duties under that person's responsibility.

3). Illness is a condition in which the body is off-balance, no matter what the cause; thus, it affects the functional structure of the physical and mental condition to change. When there is illness or imbalance in any part of the body, it will affect the whole person in general.

Illness can be divided into different levels, as follows:

1). Mild illness: for example, symptoms of headaches, body pains, abdominal pains, which can cause discomfort and start to temporarily affect the ability of performing daily activities.

2). Moderate illness is the illness that has abnormal structure and activities. This type of illness causes distinct disequilibrium of physical, mental and role in society: for example, infection of the gastrointestinal tract, which causes loss of liquid and sodium that must be substituted vie the veins. This levels of abnormality does affect a person's ability to perform their tasks and is considered a disability, but the person is still capable of some part of the responsibility given.

3). Severe illness is a condition when a person is severely out of equilibrium. All functions of the physical, mental, and society have been severely affected and may be the cause of losing all responsibilities and perhaps even life: for example, a person in shock whose circulatory system has failed.

4). Health has the characteristics of being dynamic and continuous. Even though there is division of different health level, the health status of a person is continuous and changes may be difficult to distinguish, especially between good health status and mild illness. The health status of a person changes all the time; it is dynamic. The changes in the physical or mental condition and even a change in the environment can effect a change in heath. A person may be a strong health condition but can be ill a few hours later.

In order for a person to retain good health status and to achieve this condition of good health, help from another person may be needed, for each specific ability needed to retain and adjust to the good health situation. The needs for health vary according to the basic physical and mental capabilities of each person.

It can be concluded that the health of a person can be divided into 2 conditions: good health situation and the condition of illness. The health situation of a person changes all the time or is dynamic.

## 5. Concepts/ Theories of Access to Health service (Medical accessibility)

The following four issues influence accessibility and directly or indirectly and affect health care service: 1) The nation' health, 2) Characteristics of the health care delivery system; including the service system of each health care unit, sufficiency and distribution of health care unit and coverage of service, 3) Characteristics of population; such as age, gender, race, religion, value of health and illness. ; supporting factors, income, health insurance, community health care units and distance; health perception, illness evaluation. These factors will affect health service satisfaction, and 4) Utilization of health care services, including convenience of traveling to the health care unit or community hospitals will be relevant factors in choosing an appropriate health care unit (Sinlapabutr,T., 1993 & Na Nakhon,S., et al 1993).

### 1. Distance from home to health care services

The study of Saisampahan Rapkhan, 1986, found that patients who live near health centers will not leap to other health units. But those living further away from health centers or hospitals will change their designated health care units to non-contracting units. This is in agreement with Saengthong Haem-ngarm, 1990, who found that utilizes who live less than 2 km. From the local health service unit will increasingly prefer to receive health services at this health unit. The study contradicts the study of Na Nakhon, S., et al. (1993) which found that the distance from village to health units is not a determinant in deciding to seek or to seek health care services.

The above study shows that distance is still an interesting factor to be studied concerning health service seeking behavior. But generally it was found that health care

consumers choose to seek services from nearby health units, because illness is a serious matter for them. The fastest health care seeking behavior is for those people who are ill. But some studies found that distance from home is not a determining factor for seeking health care, but convenience of traveling is. For example, if there is no car or bus passing the health care station or it is inconvenient for driving, especially during the rainy season, people may choose to seek health care from a more convenient site ( Na Nakhon,S., et al., 1993). So distance of health unit is still a problem to be studied in greater detail.

**2. Time of traveling**

It was found that patients, or people, feel convenient traveling about 5.1 minutes and if travel time is greater than 10 minutes, health consumers will decrease their practice (Jaronsri, T., 1993). People tend to use the drug – store or quack remedies because they spend less time going there, and also it is easy and quicker to obtain this type of health care.

Most patients choose to visit providers who live nearby and take less time traveling from health station, and if comparing the local health center and hospital, the health center is usually closer involves less traveling time.

**3. Satisfaction (Qualitative Service Factor)**

Satisfaction of service consumers is an important indicator, by evaluating people's perception because most people cannot assess quality in terms of treatment, so that service quality in the eyes of people is very important with their overall satisfaction

of the service. Prompt servicing, a presentable facility, and information provided about illness from doctors after the service, including manners of the service providers are important factors in determining the quality of services (Sriwanithakorn, S., 1996). Most people are satisfied with the treatment and quality of the services of the health care unit. When consumers feel pleased with convenience, hospitality, care taking of service providers and information from the health unit, (Na Nakhon,S., et., 1993) they will choose the health care unit with knowledge and confidence, as well as also recommend it to other people they know.

A literature review and related documents found that important factors influencing health service behavior are as follows: 1) demographic factors such as; gender, age, education level, income, 2) Illness factors such as characteristics of illness and severity of illness, 3) Health service access; communication, distance, and time spent traveling from home to the heath care unit, and 4) Quality of services including satisfaction of services from the government health care units designated on the Gold Cards; which selects health care units by administrative area and not by distance or time spent traveling. This is another interesting factor to be studied in depth. Thus if Gold Card holders go to non – designated health units where they have to pay for services, it probably means that they are satisfied at these government heath care units.

## 6. Relevant Research

Wongboonsin, K. (1998). Growing Concern for Aging Population in Thailand. Journal of Demography 14, 87- 105.

This article emphasizes on current trends towards an increasing number and proportion of the elderly and impact of a structure change of population in Thailand. This article deals with topics such as; demographic aspects, economically active aging population, the aging population, the aging population and their families, social insurance and social welfare and finally scenarios to consider. At the end of this article, the author stated the problem and directions for improvement.

Sudsawat, K. (1998). Quality of Life of the elderly in Na Khon Si Thammarat Province.(Master's thesis): Chulalongkorn University.

The thesis is aimed to determine factors influencing quality of life of the elderly in Na Khon Si Thammarat Province. The thesis found that a group of the elderly who have never been suffering from any personal ailments and who are economically stable are general considered to have a higher level of quality of life than the others.

Vilailert.S (1993). The relationship between health behavior and health status of elderly in Chonburi Province. (Master's thesis): Chiangmai University.

The result of the study revealed that:

1). Health behavior of the elderly was in the middle level and health status was in good level.

2). The positive relationship between health behavior and health status scale was .4821, statistically significant at the level of .001

3). Health behaviors about sleep, exercise and eating were significant health status predictors. The variance account for health status was 26.17 percent, statistically significant at the level of .0001, .01 and .05 respectively.

Wongkasant, S. (2000). Factors related to health promotion behavior of the elderly in Phra-Puttabat municipality, Saraburi Province. (Master's thesis). Bangkok: Mahidol University.

The results were as follows:

1). The overall mean scores of health perceptions in the elderly were at a low level.

2). The overall mean scores of health promotion behavior in the elderly were at a moderate level.

3). Health perceptions in the elderly had a positive correlation with health promotion behavior at the statistically significant level of 0.01.

4). Health motivation in the elderly had a positive correlation with health promotion behavior at the statistically significant level of 0.01.

Wivatvanit, S. (2002). The relationship between the duration of health behavior and quality of life of the elderly. Faculty of graduate studies. Mahidol University, Thailand.

The results of the analysis of health behavior and general characteristics show that sex, age, education, work status and occupation, sufficiency of income and residential area are associated with the health behavior of the elderly.

Metawekulchai, R. (2002). Health situation and health seeking behavior of the elderly in rural areas of Kamphangphet. (Master's thesis). Bangkok: Mahidol University. .

The results of the study showed that, from the assessment of the capacity to do the activities of daily living by using the Barthel ADL index, most elderly had mildly severe dependence (98.9%). In the period of 3 months prior to the interview, more than half of the elderly were ill (88%). The illnesses most commonly found were backpain, waist pain and knee pain (39.3%). Regarding health seeking behavior, it was found that most elderly who become ill went to government hospitals (41.2%), followed by buying their own medicines (18.5%), and going to private clinics (16.2%).

Panprom, T. (2001). The factors affecting health promoting behaviors among elderly in Srisaket Province.Faculty of public health Mahidol University, Thailand.

It was found that the majority of the elderly (53.8%) had a moderate level of health promoting behavior, and about 34% had a low level of health promoting behavior.

The socio-demographic factors such as sex, age, marital status, residental area, illness conditions were significantly related to health promoting behaviors. ($P<0.001$, $P=0.049$, $P=0.002$, $P=0.015$,$P<0.001$ respectively)

The predisposing factors such as perceived health status and health beliefs were found to have a significant relationships with health promoting behaviors. ($P<0.001$)

The enabling factors such as the accessibility to clubs for the elderly, and the satisfaction of health services were found to have an effect on health promoting behaviors ($P<0.001$and $P=0.006$).

Additionally, reinforcing factors such as social support from family members, neighbors, public health personnel and perception of health promoting information were significant related to health promoting behaviors ($P<0.001$).