DETERMINANTS OF DEPRESSION AMONGST THE CHINESE ELDERLY
IN HONG KONG: A CONTROL PROCESS VIEW

By

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The present study aims to investigate, amongst all proposed determinants for depression, the perceived physical health status and perceived filial piety as two key determinants of depression amongst the Chinese elderly people in Hong Kong. The study would try, in using depression as a dependent variable and perceived physical health status and filial piety as independent variables, to ascertain to what extent the control process model could explain the occurrence of depression amongst these elders. In order to establish these, an instrument for measuring depression was validated first, then the validated measurement was used in conjunctions with other scales measuring physical health status and filial piety to establish the validity of the proposed control process model.

The choice of a globally used instrument (i.e. the Geriatric Depression Scale GDS originally validated in the United States) instead of a locally developed or a culturally relevant measurement was guided by the belief, which was justified by an extensive review on current literature, that there is little difference in the nature and origin of the depression amongst the elderly population across cultures. All elderly suffering from depression would express similar symptoms. The results from validating the translated version
(Chinese from English) were good. A total of 461 respondents attending ten government-maintained psychiatric out-patients clinics were interviewed over a period between January 1992 to February 1993. General reliability reached a high .89 (alpha), concurrent reliability with Centre for Epidemiological Studies - Depression (CES-D) Scale was a good .96 (alpha), and the test-retest reliability with a community sample (40) was .85 over a two weeks span. Validity with psychiatrist's diagnosis as a criterion was good (.95).

However, in establishing the cut-off scores for the scale it was found that the false positives and false negatives were too high for the scale to be used as a diagnostic measure. The GDS was therefore good for measuring depressive symptoms, but not a good diagnostic instrument.

Maintaining the same theoretical stance as before, the study took that sociological and psychological factors which may lead to depression in old age in the West would equally exert the same influence on the Chinese elderly in Hong Kong. However, given that many elderly in the same adverse social or psychological conditions, not every one of them would become depressed, it requires an alternative explanation for this finer variations. The present study has proposed a control process model to explain such happenings.

The control process model explains how depression could be a result of the discrepancy between the elder's
expectation and reality, and his/her failure to combat the situation. Finer concepts were made in the study to cover four dimensions of the discrepancy: the discrepancy itself, the prolongation of the discrepancy, the elderly's sensitivity towards the discrepancy, and the elderly's specificity in confronting the discrepancy. Physical health and filial piety were proposed as two key factors, amongst the others, for determining depression amongst the Chinese elderly in Hong Kong. Hence these two determinants were quantified into different scales and subscales (dimensions) for establishing the control process.

The results of the second study have provided evidence to confirm the control process model. It was found that the depression amongst the elderly could be determined by the discrepancy between what the elderly expected and what they actually felt to have experienced in relation to physical health and filial care (sum for the two factors by multiple R square = .1205, sign F=.000). It was further established, as predicted by the control process model, that prolongation of bad health was more a determinant than discrepancy in filial piety, as indicated by their respective values in multiple R square: for prolongation of bad health .0869, sign F=.000; for discrepancy in filial piety .0669, sign F=.000. Such results would fit into the control process model that the elderly people in Hong Kong get depression via a process where the elderly's bad health was felt to last for a long time; and the elder-
ly's concern for filial care was still evident. This coincides with the earlier assertion, as proposed by the model, that though filial care has changed its forms as well as has been losing its importance in Chinese society, there is still stronger influence amongst the Chinese elderly when compared to their Western counterparts. Similarly physical ailments were felt as more of a concern than bad filial care amongst the Chinese elderly people.
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CHAPTER ONE: INTRODUCTION
Determinants for depression, like many for other mental conditions, are not singly deterministic—meaning that depression is a result of many factors rather than just one single determinant. If one could look at these determinants broadly from physiological, sociological and psychological perspectives, explanations offered are more universal than what one might have thought from individuals to individuals, and from culture to culture; though the manifestation and recognition of depression may vary according to individual's life situations.

Depression in its general sense has been said to be an inevitable reality in the aging process across culture (Weissman et al., 1982). Depression occurs in any age groups from young children to old old (age 70 and above), though certain symptoms may be manifested differently. Werry (1976) and Graham (1974) both stated that children might present depressive symptoms in a way which often 'masked' their depressive behaviour; usual examples, as described in details in Schulterbrandt and Raskin (1977), were truancy, delinquency, enuresis and eating disorders such as anorexia or over-eating. On the other hand, the elderly, especially the old old, have been considered to have their depressive symptoms 'masked' by their bodily complaints (Goldfarb, 1975; Yesavage et al., 1983) and cognitive impairment (Kiloh,
Such differences in symptoms presentation do not converge to a theoretical construct that depression exists in different forms, rather many gerontology texts including those cited above have now adopted a view which sees elderly depression as possessing the same primary features (syndrome) as adults of younger age groups. Manifestations of and responses to depression, if different, are seen as secondary responses to depression and other related factors. Based on this view, depression among the Chinese elderly in Hong Kong may present symptomatological differences or may respond differently when compared to their counterparts in the West. However, the primary features of depression shall still prevail underneath this 'mask'. The major advantage of taking this view, as proposed by Wells (1983), Yesavage et al (1983) and Kanton et al (1986), is that it allows physicians and alike to maintain a high alert to the existence of depression in all elderly patients once relevant secondary symptoms are observed; while treating the medical complaints as they are presented, preventive measures (e.g. prescribing prophylactics or psychotherapeutic groups) for depression may also be considered.

However, from an epidemiological point of view, to be able to recognize a clinical condition such as depression is not adequate until it can be explained. It is also the purpose of this study to investigate some
major determinants of depression amongst the Chinese elderly in Hong Kong. In particular family support including filial piety will be looked at in greater details, as these have been recently claimed to have a major effect towards the elderly's general well being in Hong Kong (Ngan, 1990; Yeung, 1990). This study also attempts to use a cognitive control process theory, through the empirical application of an explanatory model, to explain how a Chinese elderly person may get depressed over variations in family support variables, namely the support of children referred to as 'filial piety', and of varying degrees of health status.
Aims of the Study

Depression can be used to describe a perfectly normal mood state in reaction to a life event (e.g. death of a close relative) characterized by hypoactivity, withdrawal from daily routines, bodily discomfort and lack of confidence; and as a clinical syndrome, as the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) describes, this often includes depressive mood or loss of interest or pleasure in all or almost all activities, and other associated symptoms such as loss of appetite, loss in weight, sleep disturbance, psychomotor agitation or retardation, decreased energy, feelings of worthlessness or excessive/inappropriate guilt, difficult thinking or concentration, recurrent thoughts of death, or suicidal ideation or attempts. A clinical diagnosis is made only when there are no underlying organic causes and most of the symptoms are persistent - they occur for most of the day, nearly every day, for a duration of not less than two weeks.

The lifetime prevalence of clinical depression has been found to be 25% of the general population (Weissman and Meyers, 1978a; 1978b). This means that a rather high proportion (1 in 4) of individuals develops some degrees of depression at certain intervals of their
lives. However, prevalence of depression might vary according to the methods of diagnosis, ranging from 5% to 44% (Blazer & Williams, 1980); and for clinical depression from 5% to 15% (Gaylord & Zung, 1987). The variation in prevalence was well demonstrated in the Cross-National Project for the Study of the Mental Disorders in the United States and the United Kingdom (Cooper et al, 1972; Gurland et al, 1972). Results about depression in the Project showed that prevalence rates were correlated to different methods of diagnosis; but when age was held independent, depression occurrence reached it peak with the 40 to 60 age range, and with the elderly remained consistently high. The elderly also had a tendency to be diagnosed as having organic disorders. The situation could be worse for the elderly who are disadvantaged in our society by their low socio-economic, psychological and physical health status. Many studies have indicated that depression is a major health problem in the elderly (Peak, 1973; Vickers, 1976; Redick & Taube, 1980; Weiss, Nigel & Aronson, 1986). The existing literature indicates that depression may be symptomatically different for the aged population. For example elderly depression could present itself as psycho-physiological symptoms without prominent dysphoria or guilt. Specific symptoms of depression reported most commonly in the elderly include loss of self-esteem, feelings of helplessness, and complaints of cognitive impairment. Culturally there are also variations in their presenta-
tion of depressive symptoms. It has been said that Asians, including the Chinese elderly, are more apt to present their depressive feelings in somatic forms (Tseng, 1975; Kleinman, 1977, 1982; Rack, 1982). Studies on the Chinese in Hong Kong have also confirmed that this may still be the case (Cheung et al, 1984; Wong & Chan, 1984). And through cross-country comparisons it has been suggested that the Chinese may conceptualize depression differently and therefore express, in terms of their manifestations and responses, differently to their western counterparts (Marsella, 1973; 1980).

Whilst there are not any conclusive or indicative studies to illustrate the differences in depression so evident between the Chinese and Westerners in biological or physiological terms, explanations derived from making references to the specific cultural conditions - which serve to dominate an individual from the way he thinks (conceptualize), the way he expresses himself, to the way he reacts to a certain social phenomenon (e.g. depression) - seem at present to be more logically sound. Moreover, it has been rather convincingly argued in the premise of medicine that, with particular reference to physical and mental illness, the manifestation of, recognition of and responses to illnesses is indeed influenced by the dominant cultural values at the time (Illich, 1975; Goffman, 1968). Equally for depression, as it will be reviewed in the literature review, its manifestation, its recognition
and responses to it have varied over time in different cultural contexts.

Likewise diagnostic tools for depression, for instance the DSM III, have been formulated on western life styles which dominate the recognition of, manifestation of and responses to the illness concerned in a predominantly 'white' society. The same diagnostic tools may not be equally applicable to other societies such as Hong Kong. There is a need to develop or to modify such tools locally.

Hence providing an explanatory model for the manifestation of depression, and an instrument for the recognition of depression in the elderly in Hong Kong will not only add to the limited knowledge about depression amongst the Chinese elderly in Hong Kong, it may also:

- provide a suitable instrument to measure depression among the Chinese elderly;

- throw light on possible psychosocial determinants in the etiology of depression in the Chinese elderly;

- provide an integrative explanation of all possible psychosocial factors which cause depression in the Chinese elderly in Hong Kong.
With the above aims in mind, the study was operationalized into corresponding research questions and hypotheses.

Research Questions and Hypotheses

Having reviewed the relevant concepts in the following chapters to describe and explain depression, it has been argued that a control process view may be the best to explain depression among the elderly in Hong Kong. Though the theoretical constructs used to explain the outcome of depression amongst the elderly seem to be convincing at face value, in order to ascertain their validity empirically, we need, first of all, to ask certain questions:

i) in order to ascertain the causal relationships between independent variables (i.e. sociodemographic variables, perceived physical health status and filial piety) and the dependent variable (i.e. depression), one needs to have a valid instrument to measure depression amongst the Chinese elderly in Hong Kong, is there a ready-made scale? Or a new version to be made? To answer these questions involve a comprehensive review of existing depression screening instruments and a separate study to
ii) What are the relationships between physical health, filial piety and depression in respect to the different constructs of the control process:

- discrepancy?
- prolonged discrepancy?
- sensitivity?
- specificity?

To answer these questions, an analysis of correlations between relevant variables should suffice. But in order to ascertain the control process, it is expected that:

a) If expectancy is high, depression will be high
b) If specificity is low, depression will be high
c) If sensitivity is high, depression will be high
d) If discrepancy is prolonged, depression will be high
e) If there are any interactive effects amongst these variables which may contribute to depression?

iii) What are the relationships between physical health and filial piety in relation to depression?

To answer these question empirically, it is hypothesized that:

a) At low physical health status with low filial piety,
depression is high

b) At low physical health status but with high filial piety, depression is lower than at (a). This implies that filial piety has a moderating effect.

c) At high physical health status and with high filial piety, depression is low.

d) At high physical health status but with low filial piety, depression is higher than at (c).

Methods of the Investigation:

As the present study attempted to find a suitable scale for detecting depression and then to validate this for community use, it is necessary to review all existing scales, especially those claimed to be suitable for the elderly. Then the same scale would be used for the second part of the study as a dependent variable i.e., for establishing the presence of depression.

Hence, question (i) and other questions were dealt with separately. The issues and methods for validating a screening instrument are obviously different from what we are primarily concerned with in other research questions. For these reasons the methodological sections of this study needed to be presented in two
parts:

Part one was essentially concerned with the search for a suitable screening scale for the Chinese elderly in Hong Kong. This would inevitably involve an appraisal of using such psychometric measurement, and a review of several depression screening scales currently in use would help to find one suitable for the Chinese elderly in Hong Kong.

Part two would explore the relationships between perceived health status, spouse support, filial support and depression, in the hope that the process of becoming depressed, as experienced by elderly Chinese in Hong Kong, can be explained via the control theory proposed.

Ethical Issues

It is always a matter of concern for studies involving human behavior that confidentiality of the respondents' data should be ensured at all costs. This is not too difficult technically in this study, as names, addresses and other information are held only with professionals involved in the study. Written records will be destroyed as soon as the data are entered into the computer for analysis. From then on only authorized persons have access to this stored information.
It is also a worry for some, that by stepping into the human need domain one is either sensitizing the respondents or discovering unmet needs which the research team cannot do anything about. It is therefore the present study's intention to incorporate a mechanism whereby unmet needs will be followed up. In the clinical validation part, nurses were briefed for such possibilities and as trained professionals they were well aware of the need of follow-up actions. In part two of the study the centre-in-charges, who were trained social workers, were well briefed for the study and would closely observe any irregularities amongst the elderly members after the interviews. Only final year social work students were employed to conduct the interviews, as they needed to be both sensitive and competent enough to handle crises on the spot, as well as to make appropriate referrals.

A Note on Practical Arrangement for the Study

Although, according to the previous records of these clinics 60 (12%) diagnosed depressives (out off a total of about 500 affective disorders cases for those aged 60 and over) was the usual number over a year; our study has identified 43.7%. The study might have 'sensitized' psychiatrists involved to be more aware of the presence of depression when making the diagnosis. Hence the actual prevalence might well exceed the present's. Our intention was to use a year as the scheduled time for
clinical data collection, as a larger number of cases would make the analysis more accurate.

This study employs a fairly large out-patient sample (compared to studies of a similar kind) for the following practical arrangements:

1) The research was meant to be a Hong Kong wide study, to cover all Government maintained psychiatric clinics, so that a large pool of normative data could be established for future research amongst medical and allied professionals. This was not my original intention but that of the two psychiatrists' who collaborated in this study. Practically speaking, I was obliged to make the study equally meaningful to them as well as to myself.

2) Part of the intention of the study was to generate a valid screening instrument for community samples to aid further investigations into the elderly population. It was therefore sensible to think of the validation as a continuum from community samples (social centres members), to private patients (Dr Lau's surgery) then to the clinical population (psychiatric out patient clinics). This thinking inevitably involved a sample larger than what it was designed, for clinical validation.

3) As the study had already involved large resources, it
would make more sense to enlarge the sample size and yet this would not require many more resources. A larger sample size in our case should also make future publications more plausible.
LITERATURE REVIEW

The purpose of the review is to provide an overview on what depression is, and how it is seen under different perspectives.
CHAPTER TWO : ORIGIN AND DEVELOPMENT OF DEPRESSION
Origin and Development in the West

The conditions or meanings conveyed by the term depression were once expressed by the word 'melancholia'. According to Gray (Gray, 1978) melancholia was first coined in Hippocrates' writings in the 4th Century B.C. He attributed the condition to an imbalance of 'black bile and phlegm'. Then Galen in the 2nd Century described the same condition as being caused either by excessive black bile in the brain or the thick black bile in the blood being exhaled to the brain (Gray, 1978:173). Melancholia was also thought to manifest itself in body-builds and personalities. The person was supposed to be swarthy, miserable and slow-moving, and might also suffer from somatic disturbances such as sleep disturbances. This belief dominated the medieval periods until other explanations began to appear in the seventeenth Century (Beck & Brady, 1977). Thomas Willis (1621-1675), the father of neurological study, thought of the condition as a result of an 'animal spirit' which flowed from the blood to the brain (Maden, 1966), giving a clear indication that melancholia was associated with the functions of the brain. However, Robert Burton (1577-1640), gave a even more exhaustive account on the condition in his book 'Anatomy of Melancholy' (later edition edited by Dell and
Jordan-Smith, 1948). The causes, according to Burton, were due to a wide range of factors from supernatural forces, such as good and evil, to physical, psychological and social orientations such as bad food in-takes, self-love and loss, and poverty. This, though crude, represents a similar understanding on the causes of depression today. In fact, in a study comparing this set of thoughts with a more recent study of depression, it was found that little had been learned about the aetiology of depression (Lindsay, 1963).

In the eighteen century there was a change in focus as the condition was seen more as an illness rather than just a human condition. George Cheyne began to differentiate the different experience of English men and women, and came up with the term the 'English malady' - meaning men were much more prone to the melancholic illness because of their richness, heaviness of food, inactivity and sedentary occupations (Gray, 1978). In the late eighteenth century further attempts were made in delineating melancholia. Philip Pinel, a psychiatrist, regarded the disease as mainly mood disorders which became incompatible with normal social functioning. Thus dejection, preoccupied, gloomy were terms used to characterize the illness (Lewis, 1934). The focus on disease or illness entities carried on into the nineteenth century when evidently efforts were spent largely in classification issues. By this time melancholia was widely accepted
as an illness with multiple causes including the classical belief of the disturbances of the bile, abnormality of the soul, a dysfunction of the brain, a mental or a mood disorder (Lewis, 1934). Pinel and Esquirol, the two famous psychiatrists at the time, observed the recurrent swings of mood within what they called melancholia, and therefore suggested that there were different states of melancholia: mania, monomania (fixed delusion) and idiocy; Esquirol later used 'lypemania' to substitute the depressive states (Lewis, 1934). Kahbaum, another famous German psychiatrist, noted the same mood swing and first coined the term 'cyclothymia' to describe the recycling stages of the illness (Gray, 1978). Kraepelin in the later nineteen century and early twentieth century attempted to further delineate the condition and first introduced the term 'manic-depressive' to include periodic, circular, simple manias, manic-depressive insanity and mixed forms; he believed all the states were part of a single morbid process which passed from one form to the next. But melancholia was still retained to include all the manic-depressive states (Gray, 1978). Meyer discarded the term 'melancholia' and used 'depression' for the first time in American psychiatry (Gray, 1978). A more systematic approach to depression then began. Causes of depression, up until this time, were beginning to indicate their multidimensional character, were attributed to physiological (e.g. genetic), psychological (e.g. personality) and sociological (e.g. environment) factors. Thus
various conceptions of depression are possible. Depending on the perspective used, depression may take different forms. This may mean a totally normal reaction to grief, or a psychotic condition secondary to a complicated psychiatric illness such as schizophrenia.
Origin and Development in China

Manifestation of depressive behavior among the Chinese is greatly similar to that of their western counterparts, though variations in some socio-cultural aspects have been noted. One common findings was that the Chinese tended to report more somatic symptoms to their clinicians (e.g. Cheung & Lau, 1982; Kleinman, 1986; Cheung, 1987). Such variations have been mainly attributed to socio-cultural factors such as the Chinese lifestyle, their social organization or their ways of perceiving things, and the explanations historically attributed to the condition. Kleinman & Lin, withstanding that the basic biological nature of depression is universal, reduced the possibilities of the differences to simply being caused by different life traditions (Kleinman & Lin, 1981): the West held the Northern European Protestant tradition which emphasized practicality and individual-centred philosophies, hence making people more direct in expressing themselves (Gaines, 1982 also made this claim); while Chinese tended to take on a hormonal view of everything in nature, thus making them more 'relational' in expressing feelings and emotions. Take for example Cheung's studies (Cheung, 1987; Cheung & Lau, 1982), which she suggested that the disproportional somatic symptoms noted among the Chinese seeking psychi-
atric help might be in fact due to a situation where the patient was trying to report what she/he thought the psychiatrist would like to know - a want to establish a good relationship with the psychiatrist, rather than directly seeking help for the problem. Such a theoretical assertion, if valid, obviously would have affected the whole sphere of mental illness, and not just depression alone. A historical review of how the Chinese attempt to manifest or recognize mental illness over the years would seem valuable to our understanding about their manifestation and recognition of depression today.

Tseng, in one of his articles gave an excellent historical comparison of psychiatric concepts between the East and the West from 2800 BC (Tseng, 1973). Liu (1981) also made great contributions to this subject area. The following paragraphs are largely based on their work.

Chinese medicine has taken a more 'holistic' approach to investigate the human body than the West, it is therefore more difficult to consider psychiatric problems as different or separate from physical problems. The discovery of medicine in China may be traced back to 2780 BC according to a legendary medical book 'Materia Medica', which was supposedly written by the second emperor Shen Nung. More accurate bone inscriptions revealed that by the Chou Dynasty (1030–722 BC) herbal medicine was well established and was separated categori-
cally from other grocery items. Some of the medical remedies were documented and replica are still made available today. The two classics of these times were 'Nei Ching' (Classic of Internal Medicine) and 'Nan Ching' (Classic of Difficult Problems). Medical theories formed in these periods have remained almost unchanged today. As for noting specific psychiatric conditions, words with psychiatric meanings were first found in 'Shangshu' (The Book of Historical Documents, 1100 BC): Kuang - mania like condition with excitation; then in 781-771 BC in 'Shi' (The Book of Songs): Dian - psychotic or epileptic like condition without excitation. Case descriptions though were easily found in literature of these times, there were not still any systematic medical theories developed. The conceptualization of abnormal human conditions was largely a philosophical one.

In Chinese Medicine, the overall conceptual emphasis is on human balance and equilibrium in relation to nature, manipulated to its optimal state by Ying (negative forces) and Yang (positive forces). With these forces are the Five Elements (metal, wood, water, fire and earth) which classify everything known on earth and in the human body into one of these five elements. The following gives some examples:
The belief that everything happens inside the human body is in fact similar to that of nature allows interpretations of human conditions (e.g. illness) to be made in a way similar to climatic changes. It is assumed that the five visceral organs communicate with nature through corresponding spirits (e.g. spirit of the sky with the lungs), and these spirits are affected by natural changes. Hence disequilibrium of natural changes (e.g. excess heat), or imbalance internal functions (e.g. overjoy), or both, are attributed as causes for human abnormalities. The five organs are also responsible for specific functions: the heart is for the mind, the liver for the spiritual soul, spleen for the intelligence, lung for the body soul and kidney for vitality and will. Emotions are said to be results of the concentration of a 'vital air' in the corresponding organs. For examples when it is in the heart - joy is created, when in the liver - anger is seen. It is within this conceptual frame that illnesses are explained and treated.

Reports of mental signs and symptoms were evident even in these early days. 'Nei Ching' and 'Nan Ching' both
recorded numerous cases of what could be known as mental disturbances nowadays. For example, when talking about fevers, 'Nei Ching' notes that when the liver gets hot (inflammation of the liver) as a result of being invaded by the evil spirit, the liver spirit fights against the evil spirit, and the 'crazy talkings' (conversation between the two spirits), fear and irritability come as a result (a state of delirium). This explanation marks the traditional explanatory model where mental illness can be considered as part of a physical illness.

The Ch'ng Han periods (220 BC to 265 AD) were for experimental medicine where previous concepts of physical and mental illnesses had an added dimension of clinical observations and treatments. Based on his experience, Chan Chung Ching wrote the two medical classics 'Shang-Han Lun' (Treatise on Fevers) and 'Chin-Kwei Yao-Lio' (Golden Box Summary) around 200 AD. Both books have records of mental illnesses. Treatments for these illnesses were based on practical experience as well as being influenced by the Ying Yang and Five Elements equilibrium philosophy. For example, whilst still upholding the heart as responsible for the mind, deficiency of positive forces in the heart was said to cause fear, drowsiness, and a split between mind and soul; on the other hand, if overwhelmed by the positive forces, irritability and excited insanity would result. Treatment for excited insanity, based on practical experience and
being influenced by the philosophy, was to assist (not to suppress, say allowing the person to do what he wishes) the release of excessive forces (emotions), so that when the excess forces were discharged, the person would become well again. It is remarkable that though the medical theories were still undeveloped, the philosophy did allow extremely humane treatments for the mentally ill at the time.

The Chin Tang and Five Dynasties periods (265 to 960 AD) marked another development of medicine in general and psychiatry as a whole. Chao Yuanfang's book 'Etiology and Symptomatology of Diseases' written around 700 AD was an attempt to theorize medical knowledge systematically. He observed 1739 symptoms of various diseases, and grouped them into 64 categories under presumed causes. Over 40 psychiatric symptoms (e.g. schizophrenic-like states) were grouped under syndrome categories such as infection, nutritional deficiency, food intoxication, somatic illnesses, congenital factors and 'devil winds' etc.. However, the ultimate reasons for illnesses are attributed to these 'devil winds' entering the body in the 'wrong' way. Note that the term 'evil' or 'devil' used in these times had a very strong supernatural undertone, whilst 'evil forces' used before were merely referring to negative forces which are still within nature. This characteristic may be the result of a strong religious influence (Taoism and Buddhism) in these periods.
Psychiatric symptoms were interpreted as ghosts (devil winds) wrongly entering the body system, and were the results of the disrupted bodily equilibrium.

The Sung, Yuen, Ming and Ch'ing Dynasties (960 to 1911 AD) saw little change in medical theorizing but noted a slow progress in mental illness classifications. Alongside this was a broadening view to include psychological aspects of psychiatric signs and symptoms, and treatments.

Following Chao's attempt to put the 1739 symptoms into some systematic senses, Wang Kentang from 1602 to 1607 developed a crude classification system to include (Liu, 1981:430-1):

Dian, Kuang and Xian
Dian (psychoses without excitation)
Kuang (psychoses with excitation)
Xian (epilepsy)

Fanzao (restlessness)
Fan (fidgetiness)
Zao (agitation)
Delirium
Confusion
Persistent elation and laughing
Anger
Frequent sighing
Grief
Jing, Ji and Kong

Jing (panic)
Ji (uneasiness)
Kong (phobia)
Forgetfulness
Sleeplessness

This classification was obviously an advance at that time and was comparable to the early Western model proposed by Felix Plater in the 17th Century. However, whilst the Western model was modified and developed, the Chinese classification system remained basically unchanged till this date.

Today, many Chinese still believe in the value of traditional medicine and accept its uses in psychiatric illnesses. Chinese herbalists are still very much relying on the four traditional methods of diagnoses, i.e. a) observing, b) hearing, c) inquiring and d) feeling the pulse. Signs and symptoms gained from these methods, for example appearance of the tongue, are fitted to the eight outlines (on four dichotomies of Ying & Yan, Exterior & Interior, Cold & Hot, and Weak & Full) for diagnoses and selection of treatment (Liu, 1981). Explanatory models for the process of illness are often based on concepts of 'gas' or 'blood'. Occurrence of psychiatric conditions are referred to as 'the gas or blood being blocked' or 'these vital forces are disturbed by fire or heat' or
nerve exhaustion etc. as they were like a thousand years ago. Hence treatments used are for clearing of blockages (e.g. laxatives or pushers for blood circulation such as ginseng) or to suppress 'fire or heat'; naturally acupuncture has also been a popular choice of treatment. In addition to these, Gigong ('gas' or 'air' martial art) and Taijiquan (Tai Chi Boxing) recently have been gaining momentum in treating neurotic conditions in Hong Kong as is the case for yoga in the West.

The historical development of psychiatric medicine and recognition of mental illness in China and in the West, again seems loosely similar. Whilst Western psychiatry develops and flourishes, the Chinese have virtually stood still for over a thousand years. This could have been due to the Chinese's emphasis on natural and supernatural forces for causes in mental illness. As for the recognition of depression as a medical diagnosis, China was almost 14 centuries behind as depression was not acknowledged as a psychiatric condition until the Ming Dynasty (15th Century) (Tseng, 1973).

Tseng (1973), in reviewing the recognition of depression in Chinese history, proposed three possibilities which might explain the late recognition: 1) depression was less significant due to a low incidence among the Chinese, 2) depression was accepted as a daily phenomenon, and 3) depression was manifested in an equiva-
lent form such as psychosomatic illnesses. Upon findings in recent years (as cited in this paper), the first two are certainly not the case – the Chinese have experienced depression to more or less the same prevalence and the same intensity. The third hypothesis seems better fitted into the evidence that Chinese are more somatic in expressing its effects such as headaches and hypomanic (including restlessness and agitation) states.

All in all, the Chinese concepts of psychiatric illness (hence for depression as well) share all primary symptoms, though there are differences in how these symptoms are expressed and emphasized. Differences amongst the similarities are noted largely in three areas (Tseng, 1973):

1) Historically medicine was separated from sorcery right from the early days and therefore developed independently of its influence, thus leaving it relatively free of religious influence. This also allowed a relatively humane approach to treating mental illness in its early days in China.

2) It has been well recognized in China that emotions have an effect on the physical states. Optimal states of emotion and physique (i.e. 'gas', 'blood' etc.) have been considered to be mutually supportive. Uses of psychotherapy to treat mental illness or somatic illness were
documented in the Chinese medical books well before those in the West (Tseng, 1973; Liu, 1980). Equally seen as important for the 'whole' health is the maintenance of an optimal physical state - which always leads to the prescription of herbal medication. This herb-oriented culture lasts till this very day too when a Chinese goes to the doctor in Hong Kong, she/he expects to get something for her/his condition; and the doctor often does so to meet this expectation. This habitual arrangement as it gradually roots deeper into daily life undermines the acceptance of a non-medicated prescription such as counseling or group therapy.

3) The focus on visceral organs as an explanation for the occurrence of an illness has a direct influence on the Chinese in verbalizing their symptoms. Expression of different types of emotion is often referred to as 'full of liver fire' (anger or agitation), 'covered heart' (feeling low), 'heart big, heart small' (indecisive), 'hot blood' (enthusiastic), 'weak kidney' (feeling impotent), 'loss of a gallbladder' (fearful) etc..

The different conception of mental illness provides the basis for us to understand the ways through which a Chinese person may manifest psychological symptoms. So it is important for relevant professionals to recognize this tradition when trying to diagnose depression.
Other cultural differences worth considering directly relate to relationships within the Chinese family hierarchy system with particular focus on the senior members, and therefore are best discussed in the section 'sociological aspects of aging'.

In the following chapters, different theories and determinants of depression will be explored in greater details.
CHAPTER THREE: PHYSIOLOGICAL DETERMINANTS OF DEPRESSION
Unfortunately studies on the linkages between genetics and depression have only indicative results which have made a cause-effect conclusion very difficult. Studies of twins and families have been the most popular tools to establish the genetic determinants of affective disorders. Amongst these work, Tsuang and Vandermeys (1980) found a striking tendency in their study on bipolar patients (manic-depressives) this was that bipolar patients came from bipolar families, and unipolar patients (depressives) came from unipolar families. This was similar to a previous finding reported by Winokur (1979). These studies only indicated that the tendency for known depressive parents to have depressive children was high, but could not conclude this as evidence for genetic dominance or family influence (i.e. environmental).

To isolate the environmental influence, 'twin' studies have employed monozygotic (MZ) and dizygotic (DZ) twins. As MZ twins share all genetic factors in common, they should show pretty constant behavioral patterns regardless of environmental factors if certain behavioural patterns are under test for inheritance. DZ twins share only 50% of the genetic factors, therefore greater
variation would be expected. High resemblance (or concordance) can be attributed to the genome, variations in behaviour or to environmental factors. Within-pair results and intra-pair results are compared statistically. High resemblance between MZ twins than between DZ twins then indicate, but not proof of, the influence of genetic factors. In the studies of affective disorders, many twins studies did indicate genetic influence on affects (Allen, 1976; Bertelsen, Harvald, & Hauge, 1977; Tsuang & Vandermey, 1980). The reported sample percentage ranges from 57% to 76% for MZ twins, and for DZ twins, 11% to 19%. Modes of genetic transmission, these are dominant and recessive characteristics and sex-linked characteristics, however, are not possible to be taken into account for these studies. As for family studies, the methods have been that both maternal and foster or adoption families have been taken for within-pair and intra-pair comparison. High resemblance in the maternal group with lower resemblance in the adoption group should indicate the genetic influence to a certain extent. Studies of this kind though have been few and based on very small samples, they have however come up with very similar findings. About 40% in the case resembled the affective condition of their maternal parents (either parent), and only 16% in that of the adoption cases (Mendlewicz and Rainer, 1977). It was also found that, through control group studies, incidence of inheriting affective disorders was 43% with both parents affected with the same
condition, 23% with only one parent affected, and 12% with none of the parents being affected at all (Winokur and Clayton, 1967), indicating that there might be some connection with hereditary norm. Davis, Segal and Spring (in Breslau and Haug, 1983) summarized these findings (Page 97):
(1) There appears to be an equal distribution of the illness on both the maternal and paternal sides of the family.

(2) Affective disorders are subject to modification by environmental influences. This would explain the observed discordance within some MZ pairs who, given their genetic identity, would be predicted to display similar behaviours.

(3) The probability that an individual will become affected increases with the number of affected siblings.

(4) The familial incidence of bipolar illness increases with the severity of the disorder in the proband.

Furthermore, there were some studies which, by using the adoption method, had found that biological parents (who suffered from affective disorders) tended to produce affective disordered children, despite the fact that their children were raised in totally different environments (Mendlewicz and Rainer, 1977; Cadoret, 1978). Recently there were also studies employing newly developed X-chromosome linked techniques which claimed the validity of the inheritance theory of depression (Egeland et al, 1987; Biron, 1987).
However, the major defect of these studies is that their findings are also likely to be attributed to environmental influences, and therefore the interpretations so far could be problematic. In addition, these findings were based on small, unrepresentative samples, and therefore might be difficult for a population-wide application. Thus, until a genetic factor can be isolated for its cause-effect, the genetic link with depression cannot be conclusively established.

Bio-chemical Effects on Depression

The bio-chemical perspective of depression primarily assumes that emotions such as depression are controlled by the brain; and the brain is considered to be a communication system composed of massive networking cells called neurons, which in turn can be thought of as small pieces of wiring cells joining together (see Figure 1). The transmission of a message from reception to response is through a series of bio-chemical reactions at the synapses (joins) of the neurons, resultant chemicals which enable this continuous transmission are referred to as neuro-transmitters. Transmission within one cell is by electrical impulses traveling through the axon - the wire. So disturbances to the normal bio-chemical reactions, or to the electrical impulses, in the brain area responsible for emotions (the limbic system) will trigger off emotional disturbances.
There are chemicals both inherent to or injected into the human body which can cause depressive symptoms. This leads to an argument that depression can be biochemically and electrically induced or reduced either through an imbalance body bio-chemical functioning or by ingesting substances which will have effects on the neuro-chemistry of depression. Bio-chemicals inside the human body which can create such effects are neuron transmitters including serotonin and norepinephrine, and some endocrine secretion or hormones. Drugs taken which can bring or reduce symptoms of depression commonly include Monoamine Oxidase Inhibitors (MAOI), tricyclic anti-depressants, alcohol and central nervous depressants (Tipton & Youdim, 1989).

Schildkraut (1965) and Bunney & Davis (1965) through their observations first suggested that depression was due to lower levels of primarily norepinephrine and other monoamines belonging to the group of catecholamine (later known as the Catecholamine Hypothesis). While others at about the same time also proposed that lower levels of serotonin, another monoamine belonging to the group indoleamine, were also responsible for depression (later known as the Indoleamine Hypothesis; Coppen, 1967; Lapin & Oxenkrug, 1969). The bio-chemical mechanisms of the two hypotheses proposed were basically the same: the breakdown process from raw cerebral amines responsible for
depression, namely tyrosine (a catecholamine) and tryptophan (a indoleamine), to norepinephrine and serotonin respectively accounts for levels of depression. A brief process is indicated in Figure (2):
Figure (1): A Neuron

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Insert Figure (1) about here

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Figure (2): The Catecholamines Breakdown
(Adapted from Davison & Neale, 1990:151)

[*] Tyrosine ---> Dopa ---> Dopamine ---> Norepinephrine
[**] ---> Epinephrine

The Indoleamines Breakdown:

[*] Tryptophan ---> 5-Hydroxytryptophan ---> Serotonin

* requires a specific catalytic agent
So when present chemicals available do not enable the direct increase of norepinephrine and serotonin in and between the neurons, substances which inhibit the breakdown of serotonin and norepinephrine can increase the levels of these chemicals indirectly. MAOI, an inhibitor which inhibits the action of monoamine oxidase - a catalyst for both chemicals, and tricyclics serve to increase the levels of norepinephrine and serotonin through this process. Similarly chemicals or drugs inhibiting actions of the catalytic agents in the production process of norepinephrine and serotonin would produce depression; such drugs include chlorpromazine (an antipsychotic drug) and reserpin (a hypotensive agent).

Evidences which suggest possible linkages of hormones with depression are plenty. For instance, under production of thyroid hormone would lead to a condition called hypothyroidism (mysoedema) whose many features resemble depression. The mechanism involved in those biochemical paths is a complex one and is beyond the scope of this study. A detailed theoretical overview on this subject was provided by Willner (1985). However, it is worth mentioning that existing topologies focus on the bio-feedback loops between the hypothalamus-pituitary and other endocrine glands such as the thyroid, the adrenal and the growth hormones. Studies carried out were mainly in three path loops (axes): the hypothalamic-pituitary-adrenal (HPA) axis, the hypothalamic-pituitary-thyroid
(HPT) axis, and the hypothalamic-pituitary-growth hormone (HPGH) axis. Direct causation of depression as a result of disturbances occurred along these loops could not be concluded, explanations including one that the disturbed balance of these hormones might interfere with the degradation of monoamines to norepinephrine and serotonin are to be verified (Schildkraut et al, 1985).

Based on the above information, it is perhaps not surprising to see some postulations on depression being an adverse drug reaction (ADR) as a result of drug-brain interactions. Zelnik (1987), in his review of studies about depressive effects of drugs, gave a list of over 100 commonly prescribed drugs which were found to have caused depression, and these include central nervous stimulants and depressants, oral hormones tablets such as contraceptive pills, diuretics, corticosteroids, antihypertensives, anticonvulsants, antipsychotics, and other common compounds such as digitalis used in cardiac complaints and alcohol. Amongst these, some were frequently prescribed to the elderly as a long term maintenance agent, such as diuretics and antihypertensives.

To say that the body chemistry has direct consequences on human emotions such as depression is to state the obvious. There are naturally numerous evidences to show possible linkages between some chemicals which act on the limbic region of the brain and depression. However,
studies so far have been based on indirect approaches to understanding human brain chemistry (because experiments are dangerous on live brains) or inferences made from live animal studies which might not the same. All these conclusions are therefore still awaiting further verification by more directive techniques on the human brain. Moreover, inferences made from drugs or brain chemicals studies are limited by the fact that no one chemical could be isolated for a single and direct effect on the bio-chemistry of depression, and very often each drug has multiple impacts on the body systems which may hinder a clearer cause-effect explanation of depression.

Neurological Illness as a Cause of Depression

A point to clarify here is that depression is often thought of as a reaction to illnesses which are fatal (e.g. cancer) or involve chronic pain. This line of thinking is more a psychological response to somatic disorders rather than that depression is caused by physiological disorders which have a direct bearing on the bio-chemistry of depression in the brain.

Degenerative disorders in the brain affecting the synthesis of norepinephrine or serotonin essentially include Parkinson's disease and Huntington's cholera. Dementia of the Alzheimer's type was said to have caused depression via a loss of neurons in and around the basil
ganglions region (Nakano & Hirano, 1983) which was believed to have close associations with affective behaviour. Many neurological disorders seem to be highly associated with depression as well – multiple sclerosis, normal pressure hydroencephalus, temporal lobe epilepsy and strokes have been reported to have such an effect respectively by Kellner et al (1984), Price & Tucker (1977), Tucker et al (1986), and Robinson et al (1985).

There are a lot of clinical evidences to show that neurological disorders can cause affective changes such as depression. However, the physiological mechanism leading specifically to depression, be it related to cerebral amines metabolism or else, is not yet identified. So far depression in these studies has been reported as part of a massive effect caused by impacts of disorders on the brain. It is therefore only right for clinicians not to assume the natural occurrence of depression in these neurological disorders, rather they are faced with the challenge of distinguishing treatable depression from that caused by a neurological disorder.

Depression and other Physical Conditions

The close association of depression with different types of physical illness has been well established; for example with chronic pain (Blumer and Heibronn, 1987), and with cardiovascular disease (Clifford, 1987). It
cannot be concluded at this time that depression is a psychological reaction to somatic disorders or that it is caused by the biochemical changes as a result of the physical disorders. Likewise depression recently has been found to be closely correlated with immune-related disorders (Kronfol, 1987), but it is not certain whether one is the cause of the other.

Many studies on stress have suggested that stress, in particular those perceived to have a negative meaning, increases human susceptibility to infection, allergy, autoimmune disorders and even cancers (e.g. Weiner, 1977; Paykel 1979; Locke et al, 1984; Linn et al, 1984; Baker et al, 1985). Depression has been studied in the same context and results were similar (e.g. Weiner, 1977; Bahnson, 1980).

As for the suspicion that depression may be a result of the disturbed immune mechanism, recent studies on post-viral infections suggested that depression is more likely a result of psychological reaction than biological changes. For instance, Sinanan and Hillary (1981) found that there was not any connection between influenza antibody titres and depression; and Dilley et al (1985) suggested that adjustment problems were the most frequent stated condition associated with depression amongst AIDS (Acquired Immune Deficiency Syndrome) patients.
Precisely how and why these findings are so have remained to be a subject of controversy.

**Biological Aspects of Aging and Depression**

A number of biological factors associated with aging are pertinent to the topic of depression since biological phenomena associated with aging may influence the development of affective illness.

Studies of enzymes involved in metabolism of neurotransmitters demonstrate that levels of monoamine oxidase (MAO) increase with age in human brain, platelets, and plasma (Robinson et al., 1972), with women having higher average platelet and plasma MAO activity than men. Since estrogen serves as a partial MAO inhibitor, this may account for rising MAO activity in postmenopausal women, causing women to be more inclined to depressive episodes.

Endocrine changes associated with aging may be important. Women experience dramatic changes in endocrine function, primarily related to ovarian estrogen and progesterone with the menopause. To what extent these changes contribute to susceptibility to depression is not known, but they may at least partially account for the increase in MAO activity in the elderly. In men, advanced
Age is associated with declining function of testicular Ledig cells which produce testosterone in response to gonadotropin stimulation. Furthermore, hyperphysiologic levels of cortisol can induce depression in patients with hyperadrenalism or by estrogenic steroid replacement.

Older persons are less able to adapt to physiological stress and are more vulnerable to infections. This can be explained by the deteriorating functioning of cells and organs which begins in adulthood and continue throughout life (Kart et al, 1978; Hikey, 1980; Fries & Crapo, 1981). This process is reflected in many physical changes: wrinkled skin, reduced muscular strength, stiff joints increased vulnerability to infection. Fries and Crapo (1981) note that normal, healthy organisms maintain an excess organ reserve that is needed only when under exceptional stress, so this reserve can diminish without affecting normal functioning. But the ability to maintain homeostasis to regulate bodily functions within precise limits—declines as organ reserve is diminished, and the average person at age 85 has less than half of original reserve capacity.

When comparing an elderly person with a young adult in other physical aspects, it is almost true every time that the old does not function as well physiologically as the young. Medical findings and common sense observations inform us that body systems age with our chrono-
logical age. With this functional deterioration, the aged perform worse than others in abilities such as perception and sensation, motor skills, and naturally in general health. Naturally the elderly in such a situation will not be at all happy. In fact there are numerous studies confirming that deteriorating health status is related to depression amongst the elderly.

The progressive decline of the efficiency of various functions within the body brings various adjustment problems to old people. The slowing down of the response to environmental stimuli due to the functional deterioration point to the key aspect of aging: health. Kart (1985) claims that old people are the group utilizing medical services most frequently. The common physical health problems old people encounter include loss of muscle strength, shortness of breath, pain, dizziness, insomnia and constipation, etc. These physical changes, together with mental changes, such as poor memory, and difficulty in learning new things all suggest that one's pace and style of living needed readjustment. However, if old people cannot accept the limitations imposed by the aging process, and/or lack the needed resource or help to tackle the problems raised from readjustment, mental health will be harmed. Though it must be made explicit here that there may not be a biochemical link between poor health and depression, poor health certainly is a crucial factor for elderly depression.
Health as a concept therefore extends to cover more than the biochemistry of the body. According to the World Health Organization's (1958) definition, is not merely the absence of disease or illness, but "a state of complete physical, mental and social well-being" (p.459). The health status of old people is influenced by these three variables, physical, mental and social well-being, interactively rather than independently. Many studies do confirmed that the relation between health and morals is strongly correlated (George & Landerman, 1984; Okun et al., 1984; Zautra & Hempel, 1984). While old people with more social support and family care also have better mental health and physical health (Chi & Lee, 1989, Yeung, 1989). It seems clear that the pain and uneasiness due to poor physical health will influence one's mood, but negative cognition or emotions may also lead one to rate his or her health negatively. So to assess old people's health status, both subjective self-perceived health status and objective clinical evaluation are important.

The source of depression for old people is varied. But physical health as mentioned above is highly related to old people's morale; the pain suffered from chronic illness and restriction of movement and activities may decrease the old people's probability of life enjoyment. There are plenty of studies which reveal the

In all, the biological view of depression possesses ample evidence that the physiological functioning of the body, in particular the brain, can invoke depression. However, the major limitation of such a view lies with a general lack of knowledge on the precise mechanism through which depression is generated, thus allowing many possible explanations. Apart from those already discussed, even chronic pain (especially that of an idiopathic or psychological nature) has been conceived as a variant of depression by Blumer & Heilbronn (1987). As the brain bio-chemistry changes chronic pain (termed dysthymic pain) resembled that of a depressive one. Blumer & Heilbronn (1987) postulated that pain was manifested instead of depression via a genetic trait. Whilst the search for a biological cause of depression remains worthwhile, the understanding of other psychological or social causes of depression is vital until depression can be precisely accounted for biologically.
CHAPTER FOUR: SOCIOLOGICAL DETERMINANTS OF DEPRESSION
Sociological Views of Depression

Social scientists look at personal problems often as consequences of social problems such as class inequalities. Explanation for a personal problem such as depression is accounted for if it fits in with the three basic criteria: association, non-spuriousness and causal order (Mirowsky & Ross, 1989). Association refers to the presence of a relationship between the social condition and the personal problem, and that they do not just happen to relate to each other by chance. Non-spuriousness refers to the truthfulness of the association between the two whilst making all other possible attributes constant. Causal order points out how the social cause actually gives rise to a personal consequence, or vice versa. For example suppose depression is associated with levels of income; the lower the income, the higher the depression. This supposition is proven generally true in different age groups, sexes, races and ethnicities, and thus is taken as non-spurious. All other related correlations between depression, other social factors and income levels indicate that depression is caused by low income (for example, housewife with no income is more depressed than their husband with income, the retired elderly are more depressed than their working counterparts, etc.), and it is not that depression causes a drop in income.
Views of social causes of depression are therefore largely based on established patterns between certain social conditions and depression. Hence statements about social causes of depression are statements of probability. They refer to a generally true causal relationship.

Since the 1960s, various surveys have confirmed that depression is related to sex, marital status, undesirable events and socio-economic status.

a) Sex and depression

Gender differences in depression may be due to biological differences such as hormones and sex-typed genes. However, it is particularly evident in sex stereotyped behaviour that men and women have learned to behave differently. Perhaps it is also true in emotions. Much of the work done in comparing women's and men's distress or depression levels were in areas of household duties and paid employment (Gove & Tudor, 1973; Weissman & Klerman, 1977; Gove & Geerken, 1977; Brown & Harris, 1978; Rosenfield, 1980; Ross, Mirowsky & Ulbrich, 1983; Kessler & McRae, 1982). In looking at these literature on sociological aspects, it is necessary to be reminded that depression, stress and distress have been commonly used as having exchangeable meanings.
Women are exclusively housewives and men are the breadwinners and job holders. Based on this, Gove and Tudor (1973) reasoned that women are more distressed than men because of this primary difference and proposed further that women who were employed would be less distressed than women who were exclusively housewives. This is exactly what they found with their sample of 2248 respondents (chosen by stratified random sampling) throughout the U.S. A number of follow up studies replicated the finding (Gove & Geerken 1977b; Richman, 1979; Resonfield 1980; Ross, Mirowsky & Ulbrich 1983b, Kessler & McRae 1982). All the employed women in the sample were found less distressed than housewives, and employed women are more distressed than employed men.

Another study carried out by Kessler and McRae (1982), further delineates these findings. Using data from 2440 randomly sampled American adults they found that employment was associated with less distress among women whose husbands helped with housework and child care, but that there was little advantage to employment among women whose husbands did not help. They also found that the housework and child care contributed by husbands of employed women does not increase the husband's distress. Distress was measured by a modified form of the Centre for Epidemiological Studies' Depression Scale (CES-D).
So on the whole, as Gove and Tudor (1973) concluded, the difference of distress between men and women does not appear to be innate. The difference is there because men and women lead different lives, and as their lives converge the difference begins to disappear.

b) Marriage and depression

Common sense may dictate that married people are less distressed than unmarried ones, and that adults who are single are almost as distressed as those who are divorced or separated. This is based on the logic of social support where living alone means just one single person struggling with life, whilst marriage means another adult for social and economic ties, security, belonging, and direction support.

Hughes and Gove (1981), however found a different picture when carrying out a comparative study between the married and the public, and between the unmarried (i.e. never married, separated, divorced or widowed) and the public. It was found that unmarried people were not distressed or more distressed if they lived alone. Another survey done by Goves, Hughes and Style (1983) showed that 62% who reported being very happy with their marriage were less distressed than the unmarried, but the 34% who only said they were 'pretty happy' with their mar-
riage were more distressed than the unmarried of all types. This study concluded that a good marriage gave a sense of being cared for, loved, esteemed and valued as a person. The same was supported by Pearlin's studies (1972, 1976). Pearlin et al interviewed 2300 Chicago-area adults. He asked them if they could talk to their wives (or husbands) about things they felt were inpatient to them, and count on their spouses for understanding and advice. Those who said 'yes' were much less distressed by job disruptions such as being laid off, fired, or sick than those who said 'no'. On the contrary, in situations when a spouse expected more than he or she was willing to give back, acted like the only important person of the family, and could not be counted on for esteem and advice, both men and women felt demoralized, tense, worried, neglected, unhappy, and frustrated. Thus it is better to live alone than in a marriage characterized by a lack of consideration, caring and equity. Pearlin (1972) also found that each spouse was least depressed if, to some extent, decisions were shared. However, the balance of influence associated with the lowest average depression was different for husbands and wives; each was least depressed having somewhat more influence than the other. Major decisions shared were typically closer to the balance that would minimize the husband's depression than it was to the balance that would minimize his wife's depression. This was one reason wives tended to be more depressed than their husbands. In one out of ten mar-
riages, the wives were so far from their ideal balance of influence that they were about 50% more depressed than would otherwise be the case.

c) Socio-economic situation

It is difficult to generalize that people from a specific social stratum would be more vulnerable to depression or stress. Nonetheless, it is generally believed that high socioeconomic status improves psychological well-being and low status increases the vulnerability for psychological distress (Mirowsky & Ross, 1989). The typical 'successful' person is well educated, well-to-do, active, inquisitive, open and self-assured. Putting this into a structural context, lower class people begin with fewer advantages, resources, and opportunities. This makes them less able to achieve and more likely to fail. Failure in the face of effort increases cognitive and motivational deficits, which in turn, produce more failure and distress leading to depression. Evidences were numerous (e.g. Kohn, 1972; Kohn & Schooler, 1982; Pearlin & Schooler, 1978; Pearlin et al, 1981; Wheaton, 1978; 1980; 1983; Mirowsky & Ross, 1983; 1984).

Though it is clear that socio-economic status determines one's life chances in the modern world and hence has an intervening effect on psychological well-being, life satisfaction, stress, depression, etc., the
components used to constitute this status when considered alone are not as clear in having the same determining effect. Amongst the three aspects usually taken for socio-economic status (i.e. income, education level and occupation), income and education seem to be better correlates with depression amongst all adult groups - across sex, age, and ethnicity (Mirowsky & Ross, 1989; Rozzini et al, 1991; Bianchetti et al, 1990; McLeod & Kessler, 1990; Ross & Mirowsky, 1989; Brown & Gary, 1985; Zvonkovic, 1988; Hunter, Linn & Harris, 1981; Nijhof, 1981; Bianchetti et al, 1990; Wilhelm & Ridley, 1988; Ross & Huber, 1985; Keith & Schafer, 1982). The explanation offered in these studies is similar to one that Mirowsky and Ross (1989) propose - that high income (or wealth) allows more resources in support of a comfortable life and a feeling of security, and higher problem-solving skills come with better education.

Socioeconomic structure has its consequences on human socialization and behaviour patterns as well. Hence depression and guilt could be seen either as a result of failure to conform to the successful identity expected by society or as an expected behaviour from the individual to conform to their failures.

Sennett and Cobb (1972), in their study on the American economic structure, concluded that the myth of America being a fair and open society for any individual
to compete in has served to maintain the stability of the society. They went on to explain that it was a deliberate intention to make people feel guilty about failures - so that they were pressurized to improve; or to blame themselves, not society, for their own failures.

Some sociologists such as Parsons (1951), Goffman (1963) and Twaddle (1981) held the view that illnesses (mental illness in particular) could be the result of a medicalization process whereby both the society and the individual are happy to become ill. Society defines certain deviant behaviour as 'sick' and therefore requires medical control. Privileges also exist for those accepting this 'sick role', e.g. legitimate time off work, others sympathy. Moral judgments, more so in mental illness, were the essential reference for defining what is 'sick' and 'good patient' behaviour - as conforming to societal norms.

Thus depression can be seen as a social condition through which society defines and control social deviants.

Such views have gained some popularity, especially during the 1970s, but are not taken seriously in general in Hong Kong.

d) Undesirable Life Events
There are ample evidences that undesirable life events produce distress. Medical researches, particularly in the sixties noticed that a person's life stress seemed to increase with susceptibility to disease, and the hypothesis that people used their medical and physical energy to adapt (to cope) then became very popular. Holmes and Rahe's study on stressful life events (1967) was the most popular at the time. They asked a group of people to judge the amount of change produced by each of a number of events. Each event was assigned a value, called a life-change unit. The researchers then asked another group to name the changes that had happened in their lives in the past year, counted up the life-change units for each person; and they found that people with more units of change suffered more illness and psychological distress including depression. However, Holmes and Rahe and others conducting researches in these periods never did separate the effects of desirable and undesirable events. Until the early seventies, when finer distinctions were then made to undesirable events.

Undesirable events in general are still found to have caused distress (Gersten et al, 1974; Mueller, Edwards, & Yarvis, 1977; Myers, Lindenthal, & Pepper, 1971; Vinokur and Selzer, 1975; Ross & Mirowsky 1979; Williams, Ware, & Donald, 1981). In studies on 720 adults carried out between 1967 to 1969, Myers, Linden-
than and Pepper (1971, 1974) reported that the more negative events people experienced the greater their distress. However, positive events did NOT increase distress - change per se was found to be not distressing. After these studies researches took on the implied direction that cognitive control played a very important role in the impact of life events. For example, McFarlane et al (1983) suggested that undesirable events over which a person had no control were detrimental to psychological well-being, whilst controllable events - those in which the person had played some part and shared some responsibility - were less distressing; the conclusion simply was that uncontrollable negative events increased feelings of helplessness and powerlessness, leading to depression or distress. Taking the same view, Kobassa, Maddi and Courrington (1981) concluded that people who viewed change as a challenge, who were instrumental, who set new goals and struggled to achieve them, had LOW levels of psychological distress.

e) Life Style Considerations

Cultural differences or similarities are also foci for studies in depression. However, as there are difficulties and confusion in defining culture in empirical studies, this study takes the position that different cultures in their explicit forms mean life style differences. Thus it is not our focal concern to give an ex-
haustive review on culture, but rather just to outline its importance in relation to depression.

If one defines culture as the way of life which members of a particular society share and follow (Kluckhohn, 1961; Hodges, 1971), then its value obviously lies in being used as a theoretical construct to make comparative analysis between two different societies.

Culture for these anthropological writers means 'the way of acting, the body of traditions, ritual and beliefs which people have learned as members of a society' (Hodges, 1971:35). In day to day living this includes almost every aspect of life: symbolic communication (e.g. language), race and ethnicity, social and family organization, values and traditions, rituals and beliefs, traits, behaviour and living patterns etc. Amongst these cultural elements one can always find between two different societies many similarities and differences - some are vividly distinguishable e.g. languages and race, others may share more common features than differences e.g. facial expression of depression (i.e. sad looks). Nonetheless it is such a conception of culture which guides a thorough comparative investigation of a specific human behaviour such as depression.

The most obvious element for comparative analysis between countries is race or ethnicity. It has been
rather well established that Asians including the Chinese are disproportionately disadvantaged in all aspects in a predominantly white society (Cheetham, 1981), this is also true for depression - blacks have a higher prevalence rate in these countries (Rack, 1982). On average, blacks have lower levels of education and income than whites, in a larger part due to a long history of discrimination. Thus, blacks have higher levels of psychological distress than whites because they tend to have low socioeconomic status (Mirowsky & Ross, 1980). Even at the same income level, blacks are worse off than whites: recent evidence indicates that poor blacks have higher levels of distress than poor whites (Kessler & Neighbors, 1986). This may be because of discrimination and blocked opportunities for the upward mobility of this group. Perceptions of blocked goals are especially likely to make a person feel helpless, powerless, and unable to control life.

In theory the same situation should not be as prevalent for a Chinese person in Hong Kong, as the population is predominantly Chinese. However, as Hong Kong is still under colonial rule, feelings of being discriminated against and/or being blocked from opportunities may exist. But there are no studies relating to this issue, and one would guess this to be a non-significant factor for depression amongst the local elderly.
Other Chinese cultural elements such as language and dialects, religion, rituals, diets, political systems etc. so far seem not to have shown any direct implications for depression. No study has been conducted on any of these areas. However, history of conception of medicine (especially on depression: Tseng, 1973; 1975; Kleinman, 1986; Bond, 1990) and perceived family support (Ngan, 1991), in particular the care from the children, termed loosely as filial piety (Lee, in press; Yeung, 1989), are said to be crucial determinants for the general well-being and life satisfaction of the Chinese elderly. These elements are hence worth further exploration.
Sociological Variables of Depression and Aging

The aged person, with reference to other social attributes of depression, will go through more or less the same experience as others in the same society. The only difference is their age and all the secondary attributes as a result of aging. This one may refer to as similar to cultural differences sometimes referred to as 'sub-cultural differences'. These differences originated from the social norms of the society concerned, which shape the attitudes of the general public in perceiving old age. Such attitudes can be positive or negative towards the elderly, depending on the predominant values at the time.

Hong Kong at this moment cannot be said to have a positive attitude, as the Chinese used to have, towards the old. People in Hong Kong, both elderly and the young, very often have a negative image of the elderly. Numerous surveys have attempted to measure public attitudes towards aging and old people in the West (McTavish, 1971; Bennett & Eckman, 1973; Branco & Williamson, 1982) and it was found that largely negative perceptions are held by the public. Stereotypes include "views that old people are generally ill, tired, not sexually interested, mentally slower, forgetful, and less able to learn new things, withdrawn, feeling sorry for themselves, less
likely to participate in activities (except, perhaps religion) isolated, in the least happy or fortunate time of life, unproductive, and defensive in various combinations and with varying emphases" (McTavish, 1971) Especially due to the retirement system, many elderly consider themselves no longer 'useful'. This may create discrepancy to their references, say, 'being useful', and other negative aspects perceived by them may also cause other mismatch to references e.g., mentally slow as perceived reality versus mentally active as reference. Situations are similar in Hong Kong (Law, 1982). All these are bound to affect the quality of life and the needed care for the elderly, and thus affecting their general outlook on life. Several aspects are particularly relevant for the Chinese elderly in Hong Kong.

a) Socioeconomic Status: Meanings of Low Education, Low Income and Retirement in Old Age

In general the elderly have been found to have a low socioeconomic status both overseas and in Hong Kong (Rozzini et al, 1991; Bianchetti, 1990; Johnson & Mullins, 1989; O'Higgins & LeGrand, 1985; Chow & Kwan, 1984; Chi & Lee, 1989; Yeung, 1989), and therefore they suffer as other adult age groups in similar socioeconomic situations that have poorer access to resources and lower ability in problem-solving. In a study by Bianchetti (1990), it has been asserted that low income and/or poor
knowledge in maintaining a balanced diet may also lead to nutritional problems, ill health and finally to depression.

Retirement is another life event that elderly people are very likely to face. When people are doing paid work, they are purposeful and resourceful. For example to 'be a financially self-sufficient person', 'to get job satisfaction', or 'be socially active with peers', etc., all these may not be possible after retirement due to a sudden loss of income and other factors. In addition, in a capitalist society where power and security is realized only through one's purchasing power, a loss of income will certainly make the elderly feel very powerless and insecure.

There are, in fact, two theories in social gerontology which are relevant to the discussion of this area. They are the disengagement theory and the activity theory.

The elderly have a tendency to disengage from society whereas the present social system also causes the elderly's disengagement. There is a negative correlation between age and social participation (Atchley, 1987; Kalish, 1982; Lee, 1985; Ward, 1984). This theory describes the elderly's disengagement from their roles, which are established when they were younger, due to
various factors like health deterioration, children's leaving home, retirement and loss of spouse. On the other hand, the retirement/social security system of present society expects the elderly to disengage from their social position, so that their vacancy is replaced by the younger generation. Thus there is a mutual expectation between the social norm and the elderly that disengagement can be a smooth part of life, and the elderly will be considered to have undergone successful aging. However, when a person is being forced to disengage by the retirement system, that person will experience certain amount of stress and will take considerable time to adjust, as evidently for him/her there is a specific intention to carry on his/her present employment, which in reality may not be possible. The elderly are well aware of this discrepancy and that the situation is likely to get progressively worse as they age.

On the other hand, activity theory suggests that successful aging and high morale can be achieved only when the person remains to have an active social life (Bengtson & Haber, 1975; Kart, 1985). Havighurst emphasizes that elderly people need to be socially active (Barrow & Smith, 1983). When they retire, they lose their roles in occupation and thus need to take up other social activity as compensation. It is found in these studies that life satisfaction is positively correlated to social participation. If the life after retirement is not
what the elderly person originally expects, s/he will undergo the same process as those assumed under the disengagement theory.

Indeed, work carries a number of important functions so retirement from work can have a number of impacts on the elderly. There are five major functions of work according to Friedmann and Havighurst (1954). First, it gives persons income with which to maintain their living. Secondly, it occupies a major part of their time, therefore work can regulate people's life activity. Thirdly, it gives a person a sense of identity as most people identify themselves by their occupation. And along with identity, the person carry the status that society has given to their particular job. However, the person may lose her/his identity and status when he retires. Fourth, work serves as a base for people building up their social relationship, and finally it enables the worker to acquire meaningful life experiences, e.g. he receives new ideas, expresses his own ideas, and modifies his conception of work and of himself in relation to it.

Some people may consider retirement the realization of a lifelong goal and it may give them the chance to begin a new life. But for many, it is an unhappy experience with serious financial, social, and psychological problems. To them, it is a beginning of diminishing roles and the end of self-worth and power (Harris, 1990).
The Hong Kong elderly, and particularly for the male, many are wishing for a relaxing but still domineering mode of family life after retirement. However the reality is that they have become financially dependent on their children and hence feel dispensable, let alone the expected role to make family decisions. In the few recent studies, despite the fact that all have documented that major responsibility for caring for the elderly, including financial support, is still from the adult children, a high percentage (above 40%) of the elderly after losing their regular work has to rely on an income on or below the Public Assistance (PA) level. For those who are conscious about what they should ideally get from their families and keep hanging on the ever-lasting provider image of the old days, they will find it hard to reconcile this with reality; and if they are aware that the ideal goals are almost impossible in reality; and this will be so for the rest of their time to come; they inevitably will become depressed.

From the above, it is obvious that retirement and losing regular employment can induce a number of reference-perceived reality discrepancies in the elderly, and eventually may lead to depression.

b) Death and Bereavement

Death is faced by everyone but perhaps more often
by the elderly who have been witnessing many deaths of their close ones and themselves are getting near to this inevitable life event. Death of the loved one has been documented as the most stressful single life event for all ages (Brown, 1984; Shaffer, 1983; Schwartz, 1982). Nonetheless there are suggestions that the elderly may suffer less stress as death is more acceptable to them (Marshall, 1980; Kalish, 1985).

Bereavement is traditionally seen just as the loss of the loved one by death, it does not incorporate the usual reaction, often called grief, to this loss. Nowadays the term is often used to include both. Studies have showed that bereavement often is closely associated with depression (Jacobs & Liberman, 1987). In other studies, it was found that 35% of those in bereavement were suffering major depressive episodes (DSM-III criteria) (Bornstein et al, 1973); and Parkes (1972) found that about 15% of these bereaved cases would fail to carry through depression.

How the elderly take their own death and deaths of the others mainly depends on how prepared they themselves are and how others help them in the process.

It is evident that in modern industrial society death is a subject to be avoided in day to day conversation, it is almost a taboo. Even many medical profession-
als are uncomfortable in talking about it, and many go as far as to avoid their presence during the deaths of their close ones (Vianello & Lucamante, 1988; Aiken, 1982). This social norm has made death a much feared and mystical subject which has to be faced by the individual alone. The worst is that every one represses the topic, and no one is adequately prepared for it until it comes. As a result death has become a private and hidden affair, no one has full understanding of it and thus no one is given a chance to confront it psychologically (Nisbet, 1984).

In reaction to this, Kubler-Ross proposes that there is a dying and grieving process whereby the people concerned must be allowed and encouraged to go through different stages - i.e. denial, anger, bargaining, depression and finally acceptance (Kubler-Ross, 1969; 1982; Kubler-Ross & Magno, 1983). Although there are criticisms about the assumptions and step-order of these stages (Shneidman, 1978; 1980; 1984; Pattison, 1977), it is generally agreed among these authorities that feelings and emotions in these stages must be handled openly and naturally, allowing each stage to take its natural course irrespective of time. This has been supported by many literatures in different countries that dying patients want to know about their own situation, prognosis as well as to discuss their future in detail (Leming & Dickinson, 1990; Kalish, 1985; Stephenson, 1985; Nusberg, 1984;
So given the right attitude and support, the elderly may cope as well, or even better than, the younger adults in facing their own death. However, it is suggested that depression strikes harder on the elderly when the spouse dies unexpectedly and in the event of facing their own children's deaths (Murphy, 1986). This is logical as the deaths of these people virtually mean loneliness and isolation in old age which most elderly fear (Marshall, 1980; Gray, 1984). It is also commonly believed that females cope better than their male partners when they are widowed. This is based on the logic that women, rather than men, are usually responsible for the household tasks and are the ones maintaining family and neighborhood contacts, thus the social impact is less on a female than would have been for a male.

The Chinese elderly in Hong Kong do not differ a great deal from the above discussion. What may be a point to consider is that impact of death and bereavement is helped by certain customs and ritual practices.

When preparing for their own death, the Chinese elderly, like their Western counterparts seldom talk about death openly; but they often channel part of their acceptance by joining some credit unions specifically set up for funeral arrangements (i.e. Pak Kam Wui) after
their deaths. As for the bereavement process, customary practices for relatives and friends are that they should rush in to help with practical things such as arranging the funeral and to contribute financially. The bereaved family is encouraged to cry and mourn whilst others are expected to leave them alone till they ask for company.

In any case death and bereavement are inevitable life events which the elderly have to come to terms with. And most of the time, given the right attitude and support, the elderly will get over it as time is the best healer in the circumstances.

c) Social Support: Formal and Informal Care

Social support has been conceived as a global factor for depression where lower support is expected to associate with higher levels of depression. However, as a concept one needs to understand the relationship between formal and informal support, and to investigate in depth about each in relation to the local situations.

i) Formal Versus Informal Support

Social support in terms of services, especially health care services, can be rendered through formal and informal networks. Informal care is largely provided for
by family members. According to Pinker (1979), formal care is 'the institutional activities which are entirely or largely governed by statute'; whereas informal care is 'spontaneous activities entirely or largely provide by ordinary citizens individually or in group.' In formal practice, caring activities are largely organized, and rendered by professionals in statutory and voluntary welfare organizations, whereas informal caring is spontaneous and unorganized and provided by informal groups which have a personal relationship with the care receiver, such as family members.

To decide which type of care is more important in relation to old people's health care, we must first ask what are the care needs of the old people with deteriorated bodily functions and various psychological adjustment problems. As health care is not simply taking care of one's physical health, mental health and a sense of social well-being are also important ingredients of health care. So apart from medical care, old people need social support, emotional support and various tangible aids (money, assistance in daily household chores) (Young, 1989; Chi & Lee, 1989). It seems clear that both the concrete service element and the intangible sentiment element are important in the health care of old people. Many foreign scholars believe that informal care can provide the care receiver with both tangible help and intangible emotional and social support (Cobb, 1982;
Whittaker, 1983; Weiss, 1975; Caplan, 1974).

ii) Formal Support Services

Nowadays, the elderly who lack informal support are usually provided with minimal care by the Government in Hong Kong, through a subvention system mainly on grant aids to charitable organizations is administered by the Social Welfare Department (SWD). The service philosophy of the Hong Kong Government is to see public services as an aid or a support to family care. Services specially designed for the elderly are:

1) Medical and Health Support

General health deteriorates as one grows older, common sense as well as many local studies remind us often that the elderly have to rely more and more on medical and health services as they grow older. However, there are general inadequacies in primary, secondary and tertiary preventive measures:

i) Primary Prevention of Illness

A great majority of illness can in fact be prevented though some may be inevitable with senility. Whilst a 'healthy' environment must be provided for all, the elderly themselves should take up healthy
habits such as a balanced diet, regular exercises etc. But the low literacy level of the elderly hinders their understanding on the importance of health habits. In addition, health education in Hong Kong is usually targeted at children, youth and young parents, seldom is it specially designed for the elderly - and yet there could be more health hazards for them e.g. living in damp accommodation.

ii) Secondary Prevention

When an illness cannot be prevented, then early detection is crucial for its recovery. Generally early recovery can be achieved if there is early detection. Secondary preventive measures therefore includes readily available diagnostic services such as community based clinics and regular physical screenings. However, these services are not provided as standard services for the elderly by the Government. Some recent public housing developments allocate shop units as private medical practitioners' surgeries, but the medical charges for normal consultation and physical checks are beyond the financial ability of most elderly people. This together with other factors, for instance the elderly's preference for not seeing a doctor unless it is absolutely necessary, people make it a usual picture that by the time the elderly goes to the doctor, s/he is in need of acute nursing or hospital care.
iii) Tertiary Prevention

When disability and hospitalization is inevitable, recovery and rehabilitation should not be any longer than the condition necessitates. The elderly person concerned should be encouraged to return to his own home and community as soon as he possibly can, with formal support services if required – such as day hospitals, community nursing, physiotherapy and occupational therapy. Services of this nature are extremely limited at present due to shortages of staff as well as finance.

In some cases (e.g. amputation of limbs) reallocation of residence may be required. But there is no formal linkage between the Housing Authority or other support agencies and the hospitals to make the return as smooth as possible. The medical social services' responsibility usually ceases at the point when elderly are discharged from the hospital, further liaison with other support services (e.g. adaptation measures to enable the elderly to live in their existing/reallocated public housing unit after his return) to enable the elderly's full recovery to community life is not being done at present.

2) Services Administered by the Social Welfare Department
i) Income Support

As stated, informal income support mainly comes from their children (Chi & Lee, 1989). So formal income support (e.g. state pension, PA) is expected to take up a more important role in the years to come for the elderly population.

All the cash benefits administered by the Social Welfare Department (SWD) are means-tested except the old age allowance (OAA). By and large most of the elderly are aware of the OAA, and have termed it as the 'fruit money'. However, a much lesser number are aware of other benefits such as the public assistance (PA). Application for all of these benefits is not easy to comprehend for some one with a normal secondary school education, let alone with the elderly who are usually illiterate.

The amount of PA are paid according to the basic minimum set by the SWD, which does not usually allow for 'leisure' activities such as visiting distant relatives. The amount of basic PA is about 15-20% of average earnings in Hong Kong. There are various suggestions that it should be in the form of an adequate pension for the elderly, and that for those who had
worked before their retirement, a contributory pension scheme should be financed by the Government e.g. the Central Provident Fund.

ii) Social and Recreational Support

Informal social and recreational supports are provided by the immediate families, neighbours and friends. Recent public housing allocation policies in fact try to promote and strengthen the informal support network by offering 2-p and 3-p units for the single elderly, larger size units to families living with elderly members, and separate units for those elderly with other family members in the same block or estate. Whilst the desired effect of these policies for good informal support is still to be seen, formal support services are provided on a 'shared-care' basis - both the Government and the immediate families share the responsibility of caring for the elderly. Specific formal services for the elderly are primarily subvented by the Social Welfare Department, and can again be thought of as preventive measures to avoid admission into institutional care and to enable family and community care for the elderly.

Drop-in centres including SEs essentially cater for those elderly members who are capable of looking after themselves. Activities include occasional mass
functions and those programmes aimed at groups (e.g. volunteers group) rather than individuals. Nonetheless the service plans to provide primarily recreational activities for an average elderly membership of 250 per SE. The sole function of SEs is therefore to occupy the spare time of the elderly and to reduce their social isolation.

SEs are planned by the SWD according to a ratio of 1 for every 30,000 population. Most recently built public housing estates should have at least one such centre.

iii) Counseling (Casework) Service

The general caseload for a caseworker is considered to be very heavy, being 107 cases and 76 cases per worker in statutory and voluntary agencies (SWD, 1989:51) respectively. It is generally recognized that the services provided by caseworkers are no more than crisis-interventions. There is also a priority list of clientele for intervention, being statutory cases such as probationers and those under statutory protection, children at risk and general child care etc., casework services for the elderly and their families are certainly not the priority for concern. This low priority is also reflected in the standard provision of one counseling worker in a ME catering for over 250,000
people in a district, an equivalent of 30,000 elderly per worker (taking 12% as those age 60 and over, assuming an even population distribution, there are 30,000 elderly in a district of 250,000.)

It can be argued that not all the 30,000 and their families are in need of such services, however, considering the fact that a majority of these population lives in PHEs, comes from a relatively lower social status (Chow, 1988; Chu, 1984) with limited education (Chi & Lee, 1989; Chow, 1988, Young Women Christian Association, 1985), and is in receipt of PAs (SWD, 1986), these elderly and their families are likely to experience multiple social problems.

iv) Home Help Services

Home help as its name suggests mobilizes help to the elderly's own home. Services include delivery of hot meals or cooking at their homes. Other services, depending on the extent of the elderly's mobility, can be provided in their own homes. These services are bathing, cleaning, laundry as well as simple personal care. The function of home help in the case of its elderly clients is essentially to care for those with mobility problems and yet with help are able to live in their own homes.
Home help and related services are currently funded by the SWD, with a planned ratio of 54 teams for the whole population (SWD, 1989). There is some indication that home help teams might have been over-provided and the ratio is subject to review. Nonetheless all the elderly in need of such services should have been or will be catered for.

v) Family Life Education (FLE) Services

Family life education is usually centrally coordinated by the SWD in the forms of publicity campaigns. There are also 13 agencies granted with 56 Assistant Social Work Officers (ASWO, degree holders) to carry out family life and community education locally at district level. It is difficult to evaluate to what extent the elderly can benefit by such a service, but some programmes organized are definitely positive in uplifting the image of the elderly as a whole, for example the 'the Elderly Volunteers' Seminar held at the Hong Kong Convention and Exhibition Centre last year. Other locally conducted programmes include those provided by SEs which might also have served to educate the public as well as the elderly that aging could be a happy and productive experience after all.

vi) Multi-service Centre for the Elderly (ME)

For those elderly who require a more comprehen-
sive range of services, the ME provide SE activities, counseling, canteen service, home help, laundry, and bathing facilities all under one roof. SWD has planned to subvent at least one ME in each district of the whole 19 districts, an additional ME could be funded in densely populated areas according to the ratio of one ME to 250,000 people (SWD, 1989).

evii) Day Care Centre for the Elderly (DE)

Day care centres are provided essentially for those elderly in need of day care, especially physical care, who otherwise would have no one to care for them during day time. Door to door transportation is provided, a maximum of up to three meals (i.e. breakfast, lunch and supper) can be arranged. Nursing care of not more than 2 1/2 hours a week for each elderly member is administered by qualified nurses, this includes assisted baths, wound dressings, a limited amount of laundry and physical care. The capacity is 40 members at any one time.

Ironically whilst the establishment is clinically oriented - nursing staff in charge where no social work trained staff are provided - the service is funded by the SWD with increasing inclination towards the model of a day hospital (e.g. providing physiotherapists and occupational therapists on site), and the social and psychological support functions have been
rarely discussed. However, the service does provide relief during the day for those families who are committed to looking after their own elderly and yet would find it too much of a strain to do so without help.

The SWD has planned to provide at least one DE in each urban and new town district, with additional DEs in densely populated areas, as it would have done for MEs. This provision is incorporated into the new town developments, for the large public housing estates being built or planned, DEs will be taken as a standard provision (SWD, 1989).

vii) Residential Homes

The SWD provides different types of homes according to the level of physical disability of the residents.

Hostels were for those who do not have a home but are still capable of looking after themselves in routine personal care. This type of residential provision has been stopped recently as the SWD claims that there is no longer such need.

Aged homes are for those who require help in routine personal care such as meals, laundry etc. However, residents are generally considered to be in good health and should not need regular nursing care.
Care and attention homes (C&A homes) are for those who require regular nursing care to a maximum of not more than two and a half hours per week. It has also been assumed that in almost all other personal care aspects, the residents need constant supervision or care.

Infirmaries are for all ages who require longer term hospitalization and rehabilitation. But as the number of elderly residents has been large (over 60%), there are special geriatric units assigned and built for the elderly. Those elderly who are considered to be medically unfit for other SWD responsible homes will be referred to infirmaries (responsible to the Hospital Authority).

All standard services subvented by the SWD, including homes, maintain a fairly good standard of service for the service recipients. However, the major criticism of these services is the long waiting lists and the large shortfalls - reflecting a large number of elderly who are in need of the service and yet are not able to get it (see Table 1).
### Table (1): Estimated Provision, Demand and Shortfall of SWD Services

<table>
<thead>
<tr>
<th></th>
<th>89/90</th>
<th>90/91</th>
<th>91/92</th>
<th>92/93</th>
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<td>24</td>
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<tr>
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<tr>
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<td>15</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
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<td>11</td>
<td>9</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td><em><em>SE</em> Demand</em>*</td>
<td>144</td>
<td>147</td>
<td>149</td>
<td>150</td>
<td>152</td>
</tr>
<tr>
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<td>126</td>
<td>139</td>
<td>150</td>
<td>158</td>
</tr>
<tr>
<td>Shortfall</td>
<td>26</td>
<td>21</td>
<td>10</td>
<td>0</td>
<td>-6</td>
</tr>
<tr>
<td><strong>Homes</strong> Demand</td>
<td>7216</td>
<td>7487</td>
<td>7760</td>
<td>8026</td>
<td>8291</td>
</tr>
<tr>
<td>Places Provision</td>
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<td>7449</td>
<td>7687</td>
<td>8087</td>
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<tr>
<td>Shortfall</td>
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<td>73</td>
<td>-61</td>
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<tr>
<td><strong>C&amp;A</strong> Demand</td>
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<td>6208</td>
<td>6421</td>
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<tr>
<td>Places Provision</td>
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<tr>
<td>Shortfall</td>
<td>3463</td>
<td>2450</td>
<td>1313</td>
<td>201</td>
<td>18</td>
</tr>
</tbody>
</table>

*excludes SEs inside MEs

Source: (SWD, 1989: 79-80)

viii) Outreaching Service

The SWD has piloted two outreaching service projects for the elderly in 1990/91 financial year. The rationales being mainly that a fair number of the elderly, who are submissive and reserved, has not yet been using the services provided, and that an 'outreaching' approach may in the end encourage them to use mainstream services. The primary functions and effect of this approach are yet to be seen.

3) Housing Provision

From the secondary data sources in Hong Kong i.e.
researches, literature etc., the major housing problems of the elderly and their families are overcrowding and social isolation as a result of being housed in high-rise flats. It is difficult to compare the housing standard with that of other countries, but if the British standards of allowing a minimum of 35 square feet house unit space per adult person, and of having all toilet and cooking facilities under one roof exclusively for the use of household members are used for comparison, older estates (pre-1970s) can all be considered as overcrowded, as most of them allowed 20 to 25 square feet per adult, with shared facilities. However, recent PHE developments drastically improved the situation to allowing 35 to even 50 square feet per adult. There are also efforts to modify old flats to more habitable spacious housing units.

A point to note, however, is that newer units' rents are proportionally dearer. Some are in fact approaching 25% of average earnings i.e. around $1000 per month. In the case of those elderly who are not in receipt of PAs and rely on limited income from their children, such high rents are indeed a large burden for them.

As mentioned earlier, the policies to provide 2-p and 3-p units, as well as the move towards grouping the elderly residents into lower floors of the blocks such as
in the case of sheltered accommodation, are partly intended to promote communal living and a good social support network, thereby alleviating social isolation. However, these trends are criticized by the media which depicts isolated incidents of elderly aggression in these units that such provision seriously undermines the potential conflicts between the elderly residents. Whilst there are no evidence to show that such accommodation arrangements for the elderly would inflict more aggression amongst the elderly than what they originally have, the sensational contents obtained from largely non-representative samples which the media and some organizations have chosen to report on might at the end damage a possible effective strategy to promote mutual support.

The planning of new public housing estates is based on a 'self-contained community' model which has adopted a 'life-cycle' approach towards the growth of its residents over the years. This means that there all the basic facilities (e.g. shops, markets, schools, clinics, sports and recreational facilities) are provided within the PHEs - like a self-sufficient small community, and there are and will be adequate support services for the residents as they 'age' together. Though this model seems to be good, caution needs to be taken when considering essential services and support for the elderly population. For example hospitals and specialist
clinics are at present mainly congregated in central city areas rather than in new towns where the 'self-contained model' PHEs are likely to be developed.
4) Education and Other Support Services

The elderly population in general received little or no formal education. This hinders the effect of many community education programmes including those specifically aimed at the elderly population. There are not at present any formal education programmes designed for the elderly. Tertiary education institutes totally outcast elderly as their mature students. Informal education on simple literacy and numeracy skills may have been taught once or twice for a few SEs but have never been systematically taught.

Whilst the elderly's negative perception about themselves, as a result of their personality attributes, is difficult to change, the positive image of the elderly perceived by the public can most certainly be promoted through campaigns, public events (e.g. Elderly Festival), and civic education.

An employment service for the elderly is on the agenda of the Labour Department, but with the local Employment Service usually being quite a distance from PHEs and when illiteracy is a great barrier for using such a service, one could imagine the utility rate will be sparingly low.
Transport concessions, whether by private companies or the Government in forms of subsidies, are only provided occasionally as campaigns to respect the elderly. There are limited but free transport services subvented by the SWD and voluntary agencies, however, these are usually for groups registered with recognized agencies rather than for individuals.

The district boards and the Urban Council (Regional Council) have become major sponsors for many social, recreational and sports programmes which benefit the elderly substantially. For instance, all elderly people enjoy a discount at Urban Council theatres, and many district boards organize 'thousands old folks dinners' every year. Most public housing estates also enjoy mobile street/open-air shows which have been organized free of charge by the Urban Council free of charge in recent years.

Elderly homes provide the necessary care for the elderly who can no longer live independently at home with family members. Whereas social security and other services provide financial and social support to the elderly who have other difficulties. Though negative feelings may be aroused as the elderly believe that seeking formal help is socially stigmatizing. The anxiety aroused by the uncertainty and helplessness during the process of seeking formal help is also obvious (Lam, 1986). It can be
understood that they may first suffer from stressful feelings when making a formal application for residential place, which they also have no idea about.

Though formal care services can also provide various care activities, such as meals and household chores provided by the home help service, and professional may also give emotional support to their clients, the use of one's own informal service may have the following added advantages for the user:

i) feeling worthy and being loved as he or she has people to help him or her without any reward;

ii) having people with whom you have a personal relationship to discuss and share may avoid the anxiety aroused by consulting a professional who is a stranger.

In fact, informal care is still the system that provides most care for people both in the West and Hong Kong (Gurin, Veroff & Feld, 1960; Croog, 1972; Ngan, 1990; Young, 1989; Chi & Lee, 1989). Old people with family care and a strong social network tended to have better self-rated health status, mental health, and life satisfaction (Chi & Lee, 1989). The common explanation for the relationship between health and a supporting network is that the emotional support and help provided by the social ties have buffering effects for stressful
situations. So it seems the informal care system is more important in relation to old people's health care.

For people without family or whose informal care network is weak, formal care is very important as it is the only system they can rely on. Moreover, not all tasks can be performed by the informal care system, sometimes the crisis is so severe professional knowledge and skills are needed. So the informal caring system can not replace the formal caring system, particularly in aspects of emotional support, but these two systems are supplementary and complementary to each other. Unfortunately, the Government takes a different position that instead of taking an 'equal share of responsibility' view in caring for the elderly, the burden should primarily be borne by their families. This philosophy has made informal care, especially family support, much more influential in determining the happiness of the elderly's life.

ii) Informal Care and Family Support

Despite many writers' assumption that informal support including friends and family kin is still expected in providing the care for the elderly, there is evidence that family support declines as society progresses. In a Finnish study on intergenerational relations (Hurme, 1988), the traditional strong tie between mothers and married daughters is no longer found to be prevalent, and
the grandmothers have lost their roles in relieving their daughters' child care responsibilities; the reciprocal and exchange relationships amongst family members are therefore weakened. Some studies have even shown that having close friends nearby actually has more influence on depression than having family support would have (Mullins & Dugan, 1991; Dean et al, 1990). This indicates a narrowing of the informal caring network which has been believed to be important for the elderly's psychological well-being.

Studies on immigrant families in advanced countries also indicate that family care and support arrangements have changed. Though some studies still find relatively better family and filial support in caring for elders (Cox & Monk, 1990), there is evidence that the Asians, like their Western counterparts, are not insulated against the impacts of social changes. The intergenerational relations, living style and family care arrangements for the elderly have changed. In a study on Korean families in arranging care and support for the elderly, both the elders and younger generations accepted a more American characteristic than the Korean's - e.g. were more ready to use formal services (Koh & Bell, 1987). So the decline in family support seems to be universal due to the impacts of social changes. Take one example, marriage used to bind the couple together for better or for worse, but spouse support seems to be less
reliable alongside increasing liberal sex, marriage of convenience and easy divorce. Hong Kong may have a stronger hold on Chinese values and has a late industrial development, this probably makes the decomposition of the social fabric a slow process.

Ngan (1990) claimed that traditional Chinese have a much broader informal caring system than the west, and proposed four ladders of informal care: namely the family and the kinship group, neighbours and the locality group, friends and counterparts of common needs/situations, and the religious family, with descending orders of importance (p.120). He acknowledged that though Hong Kong is still very much a Chinese society, it is also a highly developed urban city and most of the old people are immigrants with split kinship networks; therefore the extended family system as the sole agent for help is no longer a dominant feature. Presumably the West underwent the same process of social change before us, what were the impacts for family care in the West?

According to Parsons, the nuclear and conjugal family is most functional in the industrial society (Parsons, 1965; Andersons, 1971) because extended kin relationships demand a 'universalistic-affectively neutral achievement orientation' which is incompatible with the industrial economic system (Anderson, 1971). There is also a disharmony between extended kinship ties and the
industrial system because the latter turns to the selection of its workers.

However, such a view has been opposed by Sussman and Litwak. In a study by Sussman on kin and family relationship in Cleveland in America in 1956, it was observed that the nuclear family was actually functioning within a network of other nuclear families. 92% of his respondents reported having received assistance during illness provided by members of kin related families (Litwak, 1960; 1961). Hence, American families can best be characterized as 'modified extended' which means that the nuclear family is housed independently but remains active in situations where extended family aid as well as institutional aid can be given (Litwak, 1965). Furthermore, Adams remarks that ties with parents remain strong, as do those with siblings. However, relations with more distant kin are more selective and dependent on personal compatibility (Adams, 1968).

In reality, findings of several surveys in Hong Kong show that a considerable number of elderly people do not have an adequate social support system which is, however, essential for them.

A random survey was conducted among 540 families throughout Hong Kong in the fall of 1988 and early 1989 (Ngan, 1989). Respondents were asked on the size of their
informal support networks, here being operationalized to mean the number of confidants (outside the family) whom the respondents thought would be able to help their families when experiencing difficulties of any sort. Findings show that 81% of them had a network size not more than 4 persons and the elderly respondents (those aged 60 and above tended to have a smaller support network than the other age groups. 13.6% did not have any confidant for solving their difficulties.

Moreover, in the survey by Lam (1986), more than half of the respondents gave a negative answer to the question if they had somebody with whom they could have a more meaningful relationship, trust, and confide in. It was found that many had been very deprived socially, for they did not have somebody with whom they could share their more intimate feelings and views.

The case may be worse in those elderly people living alone. In a survey by Kwan (1990) in looking at the life of elderly people who live alone, about 40% have no relatives in Hong Kong and 70% said they had no confidants in relatives and 50% no confidants in friends. In addition, over 50% did not participate in any organized social or religious activities. Therefore, the social support network for this group of elderly is very weak.

Apart from emotional support, financial support is
certainly important for many elderly here in Hong Kong where a comprehensive and sufficient pension system does not exist. However, despite family support being the main financial source for the elderly, many of the elderly respondents in a survey by Chi and Lee (1989) claimed that they did not have enough money to cover their daily expenses. Nonetheless, other local studies confirm more or less the same situation where children of the elderly remain supportive in tangible resources, especially in financial support, but physical proximity appears to be more distant (Law, 1982; Chi & Lee, 1989; Kwan, 1990).

All these evidences suggest that social and family network ties may not have been weakened even though proximity of family members and family structure have changed. The traditional family mutual help, which is more expressive and ritualistic in respect to senior members, may have been changed to one that emphasizes tangible support only, such as financial contributions, personal care in times of illness etc..

So, living together is not the most decisive factor governing network helping, nor is geographical proximity. The most important key is the emotional bond and concern among network members. Primary groups in urban society have not undergone decay nor been replaced entirely by secondary groups in industrialized cities. People still maintain regular contacts with their inti-
mate relationships, but admittedly the traditional mode governing the expected patterns of relationships has changed.

In a general hierarchy of informal support, Litwak found that people usually turn to friends for sociability and less personal support, co-workers for advice over work situations and change of employment, kin for long-term assistance, and neighbours for emergency and easy aid (Litwak & Szelenyi, 1969).

Thus family support still constitutes the major part in caring for the elderly, its situations in relation to the changing structure of the informal care system are therefore worth exploring.

The informal care structure can be thought of as having three different parts:

A) Friends

Empirical studies have pointed to the relative importance of friends as the chief one of informal care, especially in terms of offering emotional and social support. Studies have found that friends provide important sources of socialization and affective supports for the elderly, including tension reduction over and above that supplied by kinship system (Cantor & Little, 1985)
Furthermore, friendship networks are said to play special compensatory functions to help during the crisis of bereavement and widowhood in old age (Bankoff, 1981; Arling, 1976). But of course, its reliability should be restricted to real and true friends who are more dependable and trustworthy.

B) Neighbours

Compared with kin and friends, neighbours are a much less significant source of informal care and sometimes the ties may be superficial. Modern tower blocks in the form of high-rise and self-contained flats in cities tend to reduce the communal bases for neighbourly interactions and thus people often do not get to know each other. Generally, neighbours can be available for quick and easy help. But once the need for help is prolonged with heavier commitments and increasing difficulties, neighbours tend to be an unreliable source of aid.

C) Kinship

A number of studies have indicated that people apparently feel free to call on their kinsmen for aid, and indeed they may prefer to do so rather than asking the help of friends, colleagues or neighbours (Bourne, 1973; Gibson, 1972; Korte, 1983; Rapp, 1987; Reiss, 1971; Shulman, 1965; Sussman, 1965). On the other hand, Firth's notion of moral responsibility to care and help among kinsmen applies more typically to primary kin, i.e.,
parents, siblings and adult children. His study in London in 1956 has also found that secondary kin (i.e., uncles, aunts, cousins) were of comparatively little significance in most people's lives (Adams, 1968; 1956; Rosser & Harris, 1965). However, Ikel's study in Hong Kong in 1978 did find that secondary kin would have an important backup function for aid should primary kin not be available in Hong Kong. This was because some of the elderly respondents had secondary kin still living in China and were unable to come to Hong Kong (Ikels, 1983).

It would appear that people have a frame of reference to who and what they wish to help. There are primarily four relevant theories.

a) Social Networks as Embedded in Communal Rather than Exchange Relationships (Clark & Mills, 1979)

Clark and Mills have classified social relationships into two distinct entities: the communal and the exchange relationship (Clark & Mills, 1979). Communal relations, by their affective bond and intimate ties, are governed by the norm of aid to help network members when there is such a need, whereas exchange relations are more typical of business transactions and impersonal social contacts in urban cities. The latter are governed by the norm of reciprocity where to ask for exchange is considered a legitimate claim. Communal relationships apply
most typically to the aiding patterns with kin and friends but not so much to neighbours. Furthermore, communal relationships do vary in strength as governed by the structure of the affective ties and social bonds. Generally speaking, the stronger the tie and affective concern, the more natural and spontaneous is the help.

b) Network Helping as Mostly Governed by Social Exchanges and Reciprocity (Bulme, 1987)

Reciprocity is a system of mutual obligations which forces someone to repay upon receiving help. Thus when speaking in this sense, informal caregiving is regarded as a duty. It is then legitimate for parents to expect care from their adult children when they are getting old, in order to reciprocate the nurturance which the latter received when they were young.

But in close relationships, there is decreasing concern with what is obtained from the other person and increasing concern with what can be done for the other (Rubin, 1973). Perhaps for care among secondary kin, neighbours and ordinary friends, reciprocity and exchanges are the norm for social interaction since the bond is less affective and intimate than those formed by one's primary kin and members of the nuclear family and good friends.
c) Network Helping Behaviours as Governed by Interaction Theory (Adams, 1967)

In a study by Bell and Boat (1957), it was found that kin were the most frequent informal social contacts in the urban United States population. Furthermore, the closer the kin relationships, the more likely was substantial interactional and mutual aid involvement. According to this perspective, the most persistent relation of informal care is the one characterized by strong feelings of positive concern, which includes mutual aid potential and contact desire as well as overt obligatory feelings.

With advanced communication technology today, Adams points out that kinship or friendship relations need not necessarily be interrupted by the distance factor and by residential mobility. Instead, there may simply be a change from face-to-face interaction to communication as the dominant form of contacts.

D) Networks as Determined by Reciprocal Rights and Obligations (Leichter & Mitchell, 1978)

Leichter and Mitchell point out that social networks exist as a series of rights and obligations within a normative context whereby these are social expectations about the help to be given and received (Leichter &
Mitchell, 1978). Severe sanctions may be imposed for failing to live up to these obligations as informal caregiving is governed by powerful norms about mutual obligations.

However, society in reality is in constant change. Traditional and cultural beliefs on felt notions of obligations and rights may appear less mandatory a binding force for informal caregiving in the face of rapid social change and the emergence of new social values. For example, individualism and self-reliance become the opposing values which tend to undermine the traditional emphasis on mutual dependence and obligations among man.

Although assistance is a crucial factor binding kin relationships, it cannot be taken to mean that reciprocity is the prime motive for informal care.

Thus we must understand the fact that an individual may have many interactive network members, especially friends and neighbours, but not all of them are able to help, nor is the relationship sufficiently close and intimate to form a legitimate base to ask for help. Since the key cornerstone of helpfulness actually available to the focal person or family in question, in terms of degree of closeness, primary kin, close friends and crisis-oriented neighbours, tends to form the major
components of the informal helping network.

It seems obvious that tangible support from friends and kin has a moderating effect on depression, but the associations between depression and non-tangible support such as a confiding relationship or how the significant others react to the depressed are not as clear.

Murphy has studied the associations between having a confiding relationship and depression rather extensively and has established that:

- the presence of a confiding relationship might not prevent depression (Murphy, 1983); however, without it the individuals are more vulnerable to depression (Murphy, 1982);

- the states of depression might have a direct effect on intimate relationships; individuals who were recovering from depression developed a more intimate relationship than those who remained depressed (Murphy, 1982).

The associations between social relationships and depression in relation to an expressed emotion (EE) construct have also been substantially investigated since 1962 (see Kuipers, 1987 for a comprehensive review). Recent studies have been confined more to the EE of the
samples' spouses. Findings were consistent that the high EE of the spouses (i.e. hostility, criticism and over-involvement) was a good predictor for depression relapse (Hooley, 1986, Hooley et al, 1986; Franks, 1992). Other studies using 'key' family members (including spouses and children) have also confirmed a definite relationship between EE and depression (Leff & Vaughn, 1980; Franks, 1992). However convincing these results may be, there are still many research questions about EE that remain unanswered (Kuipers, 1987).

It would appear that social relationship or kin ties have a definite link with depression, but the mechanisms linking them together have remained largely unknown.

In a local context, when looking at the kinship ties during this move towards smaller family units, Wong (1977) concluded that the main type of family in Hong Kong was nuclear and the ties and support between the family members have been weakened under the force of industrialization and urbanization. However, Wong's study has been criticized for the over-emphasis on family members living together as an indicator of strong ties. Lee's (1985) study revealed that though family members may not live together, the interaction between family members, especially financial support for the aging parents, are frequent; indicating that respect and trib-
utes to their parents might have transcended to material support.

Apart from family, kin or relatives are perceived as the closest ties in traditional Chinese society. And the closeness of kin depends on blood ties - more so for the Chinese. However, the contacts between kin are more selective for Hong Kong people. Kin with frequent contacts are always objects for emotional ventilation. Moreover, they can sometimes act as the middleman between the elderly and other family members when there is something that the elderly do not want to discuss with their children. For the elderly without family, kin are sources of financial help and emotional and social support. So kin is the important agent in buffering the elderly's stress and preventing the elderly from developing emotional disorder. Friends, as revealed by studies (Chi & Lee, 1989; Yeung, 1989), are equally as important to the elderly as relatives and family members, because old people prefer to talk about personal problems and feelings to friends who are the same age. In fact, findings proved that the larger the number in the social network: that is the more the number of close relatives and friends, the higher the life satisfaction and the better the mental health. However, these studies also revealed that though the Hong Kong elderly have a rather large social network, the number of relatives and friends they feel close to are very few, and that the major
source of support still comes from their adult children - though the support, tangible or emotional, is considered to be inadequate.

"Neighbour nearby is better than relatives far away" is a Chinese proverb, and mutual help between neighbours is common within Chinese society. However, help provided by the neighbour is generally in the emergency and for a short term only. Family members, in particular children, are expected to provide the long-term solution.

For elderly without or with little family support, joining self-help groups, such as Pak Kum Wui (a kind of unregistered credit union which guarantees a decent burial), and the Ku Pal Uk for spinsters, were also a way to solve the problems of old age in past decades. There is no study of these establishments, but stories about them are widespread and horrifying. Most of the elderly would think of these as their last resort.

Again, this closer look at changing informal care patterns has revealed little difference between Hong Kong and other countries. Perhaps a subtle difference only lies in a hierarchy of preference for help seeking (responding) which can be summarized as follows:
Figure (3): Hierarchy of Preference for Help Seeking

<table>
<thead>
<tr>
<th>Sources of Help</th>
<th>Preference Order of Help-seeking</th>
<th>Types of Support/Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>relatives within the family (primary first, then others)</td>
<td></td>
<td>Informal Support</td>
</tr>
<tr>
<td>neighbours &amp; kaifongs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other friends</td>
<td></td>
<td>Support</td>
</tr>
<tr>
<td>religious institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>formal institutions:</td>
<td></td>
<td>Formal Support</td>
</tr>
<tr>
<td>e.g.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical &amp; Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td></td>
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</tbody>
</table>

The preference for informal support reinforces the popular idea that Chinese elderly may wish for, perhaps much more than their Western counterparts, for support from their own families, especially from their children - what often is termed as 'filial piety'. If the assertion is true, family support especially filial piety may still be a crucial factor in depression amongst the Chinese elderly.

Family Support and Filial Piety

Though it is widely believed that cultural difference exists between the East and the West in help seeking, research show that the elderly in both East and West
get their support and help mainly from the informal care network, with family members (especially adult children) ranked first, then comes friends, and finally neighbours. The differences between the care patterns of the East and the West can be traced through the different societal values held. In the West, where independence, self-reliance and privacy are dominant societal values, remaining independent and self-reliant are the main sources of elderly's self-esteem (Clark & Anderson, 1967). This is quite a contrast to Chinese culture, in which old parents will be happy to rely on adult children for their living. To remain independent and respect the privacy of the children and protect their own, elderly in the West prefer to live near to their children rather than living with them. Shanas et al.'s (1968) study of privacy list elderly in Denmark, Great Britain and the United States found that most of the elderly live apart from their children, maintaining regular contacts with at least one child. Among the children, daughters take up the role of caregiver more often than sons (Sussman, 1965), and the traditional sex role is the possible reason for this phenomenon. Though Chinese is famous for their filial piety, the research of Sussman and Burchinal (1962) found out that children in the West also consider physical care, provision of shelter, escorting, shopping, performing household tasks and sharing of leisure time as their filial responsibility and this will be done for their parents voluntarily as the Chinese children could
have done. As the elderly in the West are usually living apart from their children, mutual support and care between the spouses is important for the elderly. This is getting to be so in Hong Kong family system is moving towards a nuclear type. According to Blau (1981), men generally will name their wives as the only person they would talk to about their personal problem, while women tend to have greater need for friendship outside marriage. Moreover, women due to the traditional sex role, will continue their caregiver role even in their old ages. So the lose of spouse may cause more problems in care and support for men than women. On the other hand, other than providing care and support for each other, an old couple may not be necessarily in harmony and beneficial to each other. The problem most old couples face is the adjustment of retirement. A husband's retirement may bring the old couple more time together. In Kerchoff's (1966) study, the result suggested that though some wives may dislike their retired husband disrupting their daily routines, while some husbands will consider helping housework degrading, the morale of the old couple will be higher if the husband participated in domestic chores. This result supported Clark and Anderson's (1967) finding that happy older marriages are based on a greater social equality in the relationship. So spouse support is equally, if not more, important as support provided by children.

Family support in a Chinese family has been gener-
ally taken as efficient and effective by most writers, in the same way that they presume an ever-lasting self-sufficient extended family network in all Asian families (Chan & Lee, 1989). Filial piety, rooted in Confucian values, has been considered in the same unchangeable way: that sons and daughters are still respectful, submissive and obedient, to their parents. There are lots of evidences which has shown that the Chinese family organization, like that in the West, has been evolving in the face of the rapid urbanization and industrialization (see Yang, 1981; Wong, 1972; Lee, 1985; Lee, 1989). Nowadays in Hong Kong we rarely see large extended families living together in city areas. In any case, sizes of most of the housing units are built for small families, the average ranging from 250 to 700 square feet - hardly a place for three generations living together. The social support one used to give to each other, in and out of the extended family structure in an agrarian community, is inevitably diminishing. The elderly in our society, where formal support is minimal, can only fall back on his own immediate family for support. The immediate family is now confined to spouse, own children and siblings.

When immediate family members are expected to be the major caregivers and a source of financial support for the elderly in Hong Kong (Yeung, 1989; Chi & Lee, 1989), care arrangements for the elderly by different family members needs to be looked at more thoroughly in
comparison with the West.

When focusing on the care for the elderly by primary kin, Shanas (1967) points out that aging parents mostly turn to their children for help in meeting many daily responsibilities. Where children are not available, brothers and sisters become a source of social support for them. Furthermore, Townsend and Wilmott found that the dependence of old people on a daughter for support and help had been a prominent feature in their lives in London (Townsend, 1957; Young & Wilmott, 1957). Apart from the younger generation, the spouse is also an important source of care and support in the family. Yeung (1989) found that the elderly with spouse are positively related to more medical care, social support and psychological support. Hence this seems consistent with the evidence provided by Clark and Anderson (1967) in relation to spouse support, though there is not any comparable study in Hong Kong. Spouse care however, can be considered automatic in Hong Kong amongst the older generation. There is a clear notion amongst old people in Hong Kong that 'once with a spouse, always with the spouse' - the spouse is expected to and will give all the support needed. So one can presume, at least amongst the older couples at present, that in a married relationship, spouse care is always there.

What could have been different is the perception
of care provided by sons and daughters. In the West care
provided by children is generally considered and per-
ceived in the same way as the care provided by other
primary kin such as spouse and siblings, but many studies
have postulated that care by the children, in particular
by sons, is more significant for Chinese parents (Yeung,
1990; Ngan, 1989; Lee, 1988). This conception is often
referred to as 'filial piety', denoting an almost undeni­
able obligation and duty for children, particularly the
male ones, to take care of the aged parents (Lee, 1990).
However, similar to other social phenomenon, filial piety
changes over time.

Development and Change of Filial Piety

Lee in one of his articles on Chinese families
gives a brief account of the development of filial piety

Filial piety is central to the social organiza-
tion of Chinese society. The old in society have been
well-looked after by the young for thousands of years
even till this date. This tradition is due to the forma-
tion of a value (or subculture as Lee, 1989 terms it)
which Confucius advocated and wrote about. Like Confucian
teachings within the Chinese, filial piety has been the
dominating mode in the relationship of care from children
to their parents until the present time.

Confucius says 'Filial piety is what the world
means to be, and what the people should behavior...is to respect, to love and to serve the seniors, whether they died or not.' (Chungyun, chapter 19, in Hong Kong Literature Research Centre, 1965). Manchu, the successor of Confucius, also reinforced this idea in his sayings (Manchu, chapter 'Wan Cheung Pin' in Hong Kong Literature Research Centre, 1965). However, there is evidence that shows filial piety was stressed even before Confucius.

Yuen (1987), when reviewing ancient writings, concludes that the atmosphere and norm for filial practices were formed in the Zi Chou period (about 800 B.C.). Examples include poems and poetic proverbs which strongly emphasize the importance of filial piety in the overall equilibrium of society (e.g. Shi Gin (the Poetic Doctrine)). Filial piety, then, was depicted to have two dimensions: the wish for children to care for their parents and the actual behavior for caring. Then in the Seven Kingdoms Period, Confucians re-organized the concepts to form a base for other Confucian values to govern the five hierarchical relations in society (i.e. King-officials, Father-son, Brothers, Friends and Husband-wife). This says that in all virtues filial piety comes first, and that one who practices filial piety would never disrespect the relationships governed by the social hierarchy; social ties and equilibrium are thus maintained (Ruan Yu, chapter 'Hok Ye Pin' in Hong Kong Literature Research Centre, 1965).
This philosophy became the main doctrine guiding social and family relationships for the next few dynasties. Filial expectation, from junior kin to senior kin, has been rooted into the Chinese mind. Later emphasis of filial piety was not just on care, but respect and respectful practices. These thoughts and practices, reinforced by both the rulers and the ruled, have become the central rule to govern individual behaviour in families since the Tong Dynasty (Li, 1988).

In our traditional society, to care is not enough but there is now also a need to respect. To care means to provide adequate material support, and to respect is to accept the responsibility to care and to serve elders without question (Chui, 1983). This within the traditional family structure means that an elderly should get all what s/he wants from his own children, only if this support is not available, then help from distant relatives, villages, clans and friends is acceptable (Chau, 1983).

In traditional Chinese culture, living with the son and being taken care of by his family in old age is a symbol of prestige. Chinese culture explicitly spells out that rearing children is a kind of insurance for old age. Traditionally, sons have an obligation to take care of their parents physically and psychologically until they
die (Lee, 1990). However, is the traditional Chinese value - filial piety - still upheld by Hong Kong people? A study has documented that about 60% of elderly respondents identified that children have the major responsibility to cater for their parents' needs (Chi & Lee, 1989), and Law (1982) found that people in Hong Kong still think that the family have the responsibility to take care of old people. Moreover, both Chi and Lee as well as Yeung's studies revealed that, family members, especially the younger generation, are the chief caregivers, as well as a source of emotional and social support for the elderly in Hong Kong. So in essence filial piety, in the forms of children (not just sons) giving care to elderly parents, still prevails. However, many people believe that in a changing society, the content of filial piety today may have been changed (Wong, 1972; Yang, 1981; Lee, 1989). Filial piety according to Confucius has two important elements: absolute obedience to show respect, and taking care of the parents' various needs till they die. However, many people today believe that the focus of filial piety is more on giving money and material aids - a sign of filial piety being transformed and weakened in aspects of traditional respect.

There has been a long history that the Chinese family functions as a close-knit social unit from which its members receive support, security, and a means for meeting psychological, social and physical needs. The
Chinese elderly are to be respected and taken care of by the younger members in the family (Lee, 1985). In the past, traditional Confucian ideals for family behaviour bound children to obey and serve their parents as long as the children and the parents lived. For daughters, daily responsibility to care for parents ended after they married and joined the households of their husbands. But for sons, particularly eldest sons, the obligations continued throughout their lives beginning from general assistance for father to uphold household decisions and to participate in the exclusive (in the sense that women and younger members are excluded) funeral rites and ritual sacrifices of ancestor worship (Davis-Friedmann, 1983). The whole process gave the eldest son enormous authority over household decisions, but bound him more than the other adult children to absolute respect and care for his parents and other elders.

However, due to industrialization and urbanization, and amongst other things, the Chinese society in Hong Kong has undergone a lot of changes which affect the practice of traditional filial piety. Major factors have been (see Wong, 1977; Yang, 1981; Lee, 1989):

1) Change of economic activities

Industrialization has converted people's major economic activity in society. Farming is no longer peo-
ple's major means of providing their living, but instead they now have to exchange their labour for money in the industrial market. Yang (1981) has come to similar conclusions in his studies of Chinese families. Yang suggested that, unlike the Western societies, the basic unit of economic consumption/production has not been the individual but the family (extended family) as a whole until recently. According to Yang, in agrarian societies this is both functional and inevitable for those people whose livelihood is attached to the earth/land. Power of decision rest with the one who owns most of the land, or most of the knowledge about cultivation, or both. It is not difficult then to see that mobility of labour is scarce, and hence anyone who wishes to find a living outside the family land will find it impossible. And there is never a sense of retirement, though physically the elders may gradually reduce their physical work in the growing fields. The elders continue to make decisions, acquire more land, hold more means of production and more knowledge as they grow older, and become more powerful over their youngers. Alongside this is the elders's role of supporting the young including educating and caring for the grandchildren. Each family household shares the produce amongst the members, each member giving each other support, both in terms of emotion and material. No one single member exists alone in this social network. The elders's only grace when he is old and feeble is the respect and support of his
family, including unconditional respect for his decisions. As extended families develop into clans, the decision process develops into controlling ideologies - which are supported and reinforced by superstitious beliefs - that the old must be respected and hold ultimate authority in the family. And if children do the contrary, they will be punished by gods. Likewise the young must treat the elders the best they can even after their death (reflected in the Daoist tradition of ancestor worship).

However, with increased education and knowledge, and with the introduction of waged labour, amongst other things, men have been freed from their land and obligation ties. And with great competition in the labor market, those with updated knowledge or information are certainly in a more advantageous position. Those with greater adaptability will survive or get a better job. So, the elderly who are obviously disadvantageous in all these aspects, by comparison will be discriminated against (Lee, 1988). Hence, family is no longer a 'production unit' nowadays, and the high status of the elderly regarded by society in old times has diminished with their land and economic controls. Nonetheless, as ideological socialization within the Chinese is admittedly strong, the respect and obligation to care for the old should remain to a certain degree.
On the other hand, there are times that when even the children who wish to care for the old, are prevented from this by having at least two members (married couples or children) working so as to cope with the high cost of living (Hong Kong Government, 1986). The number of working females has increased significantly when compared with that in the old days. Thus, the availability of carers (usually female) for the elderly has been greatly affected.

2) Change of family structure and function

Industrialization and urbanization have also brought about the dissolution of the 'extended family' which is replaced by the nuclear family. In addition, in industrial societies like Hong Kong, a number of functions (which used to be present in the extended families) e.g. health, education and welfare of family members have declined or even been lost (Wong, 1989; Ngan, 1990). Ogburn (1955, 1962) considered that the loss of family functions has weakened the bond which in the old days held the members of a family together. And in reality, more families find it difficult to live together with their aged parents (Ngan, 1990). This has been exacerbated with public and private housing units being geared towards smaller nuclear families and therefore the size of the accommodation is hardly adequate for a three-generations household living together.
Changing expectations of children have resulted in the actual physical and emotional carers also have offered alternative models of care for the elderly. For those who can afford it, nursing maids can be hired; or parents can be put in good private nursing homes where children can visit them as frequently as they like. Others may like to consider the government maintained nursing homes where facilities and care standards are very reasonable, though there is a long waiting list for these homes.

These alternatives of care seem gradually to be accepted by both the elderly and their children who really wish to care.

3) The increased role of government in caring for the elderly

Due to the influence of western culture and values, the government here has assumed a much greater role in the welfare system than in the past. Although under the present welfare system in Hong Kong, community care (in which informal care by family members and kin have an important role as carers) government's role in service delivery plays a significant part as well. The Program Plan on Service for the Elderly states that its aim is:

'To promote the well being of the elderly in all as-
pects of their living by providing services that will enable them to remain members of the community for as long as possible, and to the extent necessary, to provide residential care suited to the varying needs of the elderly.'

4) Political factor

Cheng (1987) and Cheng (1992) has earlier raised the concern that increasing emigration of young families would lead to a group of elderly people lacking appropriate care and thus increase society's burden. Obviously, there have been important political changes since the 1984 Joint Declaration between the United Kingdom and China was signed. Emigration to other countries has become a popular phenomenon (Chu & Lo, 1989) and the 1989 massacre has stimulated such behaviour to a greater extent.

The above factors appear to have weakened the ties within family members and the caring function of the young to the aged. As a result, the traditional filial piety in practice is certainly different now. But what are the present expectations of filial piety? Both from the elderly parents' and children's point of views, in terms of its ideal and its reality?

Most of the elderly no longer have high expecta-
tions. In a study by Hong Kong Council of Social Service (1987), in which a number of elderly people were interviewed, it was revealed that due to universal education, most elderly people consider the younger generation much more knowledgeable. At the same time they are quite prepared psychologically not to be so dependent on their children. They understand that the 'son when grown up must take care of his parents in return' period has passed away and understand that the more they are able to be emotionally and economically independent, the better the relationship between them and their children. Similarly, a study by Lau and Wan (1987) shows that the binding responsibility to care has been transformed to contributions in financial difficulties. In another study earlier, Mitchell (1972) pointed out that the Chinese in general, and the Hong Kong population, in particular tend to have the lowest level of social involvement with kin, but these populations have the highest level of economic interchange among kinsmen. So it is evident that the notion of filial piety constituting 'whole respect and care' has been changing since the early seventies when Hong Kong industries and economy began to flourish. But a note of caution is that although the reality of filial responsibilities may have changed, the expectation from the older generation may remain traditional i.e., elders may have a higher expectation than what they are getting from their children.
Though the daily needs of elderly people are basically met by their family and/or public services, prolonged life discrepancy has caused the elderly's social and health-related problems and become more numerous and complicated. Thus, it is difficult for the elderly and/or their family members, by themselves, to take care of the problems without external support. The traditional family support network seems to be inadequate and insufficient in this respect (Chi & Lee, 1989). The carers of very frail elderly face constant and immense physical, mental, emotional and financial stress which often jeopardizes the harmonious relationship between the elderly persons and the carers (Hong Kong Polytechnic, 1985).

Thus, there are actually many elderly who have been put by their families into residential homes for care. Ngan (1990), in a survey, found that the reasons why people had applied for a care and attention home place for the elderly member under their care were that they found it increasingly difficult to take care of the elderly person (42%) and the relative concerned had deteriorated in health (20%). Furthermore, the strains of caregiving could be reflected as 21.1% of the respondents claimed that as a result of taking care of the elderly, they had to give up their jobs, another 6.1% said that they could only work part-time, whereas 34.3% revealed that their work had been affected in various ways. These situations have undoubtedly forced the caring children to
seek alternatives.

Thus, economic provision appears to be the major way to reconcile filial piety by the young nowadays. However, there are also evidences that alongside this transformation, respect and care to the old is actually declining. In a survey by Chi and Lee (1989), it was found that even though family support was the main financial source for the elderly, many of them claimed that they did not have enough money to cover their daily expenses or barely made their ends meet. Law (1982) also found that people nowadays do not consider the elderly as wise and experienced, in fact the image they hold is rather negative. Hence, as Ngan (1990) said, the paramount importance of kin (adult children) in peoples' affective concern and as a source of aid has declined.

All these must have an impact on the day to day living of the elderly in need of physical and psychological care. The diminishing support from their own family should have encouraged the elderly to seek friendships amongst peers. But again in the survey by Chi and Lee (1989), figures showed that although elderly people in Hong Kong had a fairly large social network, a large network does not necessarily mean strong support. Over 60% of the elderly respondents did not have any relatives or friends they felt they were close to. And for those living alone, they tended to have lower levels of life
satisfaction, which can be defined as "an assessment of the overall condition of existence as derived from a comparison of one's aspirations to one's actual achievements ", (Berghorn & Schafer, 1981).

The depressive index in Chi and Lee's Survey (1989) survey shows that only one out of seven among the elderly is totally free from functional psychiatric disorder. More than half of the elderly are severely depressed (negative emotions and feelings). Many elderly people tend to regard negative effect as unavoidable for the elderly (Chi & Lee, 1989).

Thus, from the above discussion, the types of filial care or support received by the elderly nowadays is no longer exactly the same as that in the past. A number of them are being cared for in residential accommodation instead of their own homes. And for those who are cared for in their families, the family's structure is of a nuclear type rather than an extended one. Thus the availability of carers has decreased. This problem is further compounded by the increasing number of working women and young couples who are forced to emigrate. On the other hand, the type of support is concentrated on material/money instead of emotional aspect. Nevertheless the family is still the major source of help and support to the elderly persons and filial piety cannot be said to have disappeared altogether. The case is that economic,
social and also political changes have transformed filial piety from the traditional way to what it is now.

But if the expectations of old people are not concordant with their children’s - the chance is that if they cannot recover from this discrepancy, then negative feelings, such as despair and loss, may result. Western studies have shown that if level of caregiving is not congruent with filial expectation, higher stress would result both for the carers and the cared (Atkinson et al, 1986; Troll & Stapley, 1985; Cicirelli, 1983). This is similar to Yeung’s (1989) study in Hong Kong indicated that the elderly who adhere more to the traditional filial piety norm and yet receive less medical care, psychological support and social support have more problems. Yeung explained that the demands of the old people may further cause relationship problems between the two generations, so the care given may be decreased, and so on. However, Yeung seems to neglect the possibility that these elderly may be more prone to take what comes from the younger generation for granted and therefore only recommends less informal services, which may not converge with the elderly’s higher expectations from their family and children. This gives a result that the elderly respondents would report less than adequate support, since the rating used to measure adequate or not is rather subjective, and does not necessarily mean the actual quantity of care. Hence the study has missed a very
important point in relation to filial care. Lee (1989) asserts that the forms of filial practices have changed, but the wish to conform to a more traditional model of filial piety may remain to a certain degree for both the old and the young. Only that expectation for a higher level of filial responsibilities may be perhaps stronger amongst the old than amongst the younger generation.

Family Support, Filial Piety and Depression

Family support including spouse care, sibling support and filial piety are, of course, very important elements in determining whether the elderly will get depression or not, as many elderly expect someone to confide in or depend on either financially or emotionally. These people will be sources for longer term support. Spouse and children fill this role well, particularly when the wife needs to take care of the husband, and when the children need to care for their old parents. It has been the most explicit notion for the Chinese that two of the functions of getting married are: to have children to obtain a 'safeguarded' old age, or, if they do not have children for the couple to take care of each other when they are old. Spouse care has always been available within the existing social and cultural expectations - i.e. spouses will always take care of each other. As for siblings, they are not the first ones expected to provide the elderly with long term care. It is rather the
presence of care and respect from their own children which is the determining factor in family support. So this study will focus aspects on filial piety (in part II of the study).
Section Summary

In summary, although there is great diversity in the specific sociological models proposed to explain depression and distress, most share a common perspective where status, sex, marriage, stressful life events, and other sociodemographic variables mark the objective conditions of social life; based on these socially patterned experiences, people form their beliefs, interpretations, and assumptions about the nature of society, human relations, images about themselves, and their relationship to others and to society; and the level of distress depends on the nature of these beliefs. Mirowsky and Ross (1989) offered four major areas in the individual's interaction between self and society as explanations of the known social patterns of distress. These are change events, social alienation including isolation and self-estrangement, self-authoritarianism including inflexibility and mistrust, and inequity including victimization and exploitation. These themes are the link between the external reality of objective social conditions and the internal reality of subjective distress (this linkage will be explained in more detail in the theoretical framework).

From a psychosocial perspective, the older adult is subject to special stressful events that may contribute to the development of depression, such as increasing numbers of interpersonal loss (spouses, siblings, friends,
and sometimes the premature death of children). Losses may also take the form of separations, such as the dispersal of children and other family members. Declining health can also force older adults to leave their homes and neighbourhoods to relocate in nursing homes and retirement communities eroding previously well-established social support systems.

Furthermore, the fear of financial depression may be another source of stress for the elderly, and the physical consequences of aging may limit their social activities and increase their social isolation. However, especially in our Chinese society, the availability and strength of the social support network, including family care, number of close friends, interrelationship with significant others, is important in helping old people to readjust their life and struggle with the illness. This is because the supportive network is the old people's source of material and emotional support (Ngan, 1990; Whittaker, 1983). Research studies have revealed that old people who are living with family members and having more close friends have better physical and mental health (Yeung, 1989; Chi & Lee, 1989). But there are evidences that the family support, particularly in the form of filial piety, which the Chinese elders often expect to have from their sons and daughters, is transforming to merely minimal material and financial support. The elderly in Hong Kong are found to be overwhelmingly in despair in such circumstances (Chi & Lee, 1989).
Finally, although the social aspects of aging seem to be bleak for the elderly in Hong Kong, there are still a lot of people who appear to be standing up to all these adverse social conditions. This would suggest that in order to explain the occurrence of depression, another crucial determinant may have been the cognitive schemes.

The presence of schemes, which old people use to interpret the cause-effect logic of depressive experience encountered, is supported by studies on how social events can be interpreted unfavourably to the extent that depression may result. For instance, Rotter's social learning theory, which use the concept of internal-external locus of control to explain people's attribution of causes to unfavourable events, is a theory classifying people's perception on life. People with internal-oriented locus of control will believe that they have control of the events that occur in life, while people with external-oriented locus of control will believe that their life is determined by fate or by luck - hence they can only wait helplessly in adverse conditions.

These views point to a direction that depression could be psychologically determined.
CHAPTER FIVE: PSYCHOLOGICAL DETERMINANTS OF DEPRESSION
Depression, from a psychological perspective, could also be brought about via a psychological process whereby all factors, from innate drives of the human body or childhood experience to cognitive learning, could be attributed to causing depression. These psychological perspectives accounting for depression can be considered under three categories: a psychoanalytical approach which basically takes on a Freudian interpretation, a behaviourist approach which takes on mainly the reinforcement paradigm, and a cognitive approach which assumes the individual's rationality in depression.

1) Psychoanalytic Perspective

In general, psychoanalysis, similar to many drive reduction theories, attempts to link human behaviour to physiological conditions. Depression as explained by Freud is directly linked with libido energy, regression, oral personality, and other general psychoanalytic concepts derived primarily from innate drives (Freud, 1917). When comparing mourning and melancholia, both were considered to be depressive states of mind and Freud attributed the major cause to the ambivalence towards the loss of a loved object. The ambivalence, he argued, was a result of the high dependence on the object by the patient (a characteristic of people with oral personality),
and would bring with it a feeling of frustration and hostility. If these negative feelings were not expressed, they would be directed, through a process of identification with the lost object and powered by the libido energy, against the ego itself, causing a drastic fall in self-esteem and a painful state of mind (Freud, 1917). Abraham (1960) developed the theory in the same direction around the same time as Freud, only his perspective was more specifically related to depression. He saw depression as essentially a resultant symptom of repressed or diverted libido energy, which carried the same psychodynamic process as described earlier. Believing that this energy could not be destroyed, and based on his explanations, later theorists such as Wollenheim (1971) and McCarley & Hobson (1977) postulated that if libido energy could be either substituted (hence symptoms substitutes) or released, depression could be cured. Their contributions for a psychoanalytic explanatory model of depression were i) demonstrating the importance of ambivalence in depression, ii) indicating the significance of loved persons or objects in childhood (and such an object could be a symbolic loss to the depressed) as predisposing factors to depression in later life, iii) indicating that depression in later life was in fact a recurring episode of early childhood experience, and iv) hence pointing out that love relations during early childhood played a significant role in depression in adult life (Abraham, 1960). These insertions formed the basis for later theo-
retical developments of depression using this path of psychoanalysis (e.g. Rado, 1956; Arieti, 1962; 1977; Arieti & Bemporad, 1978).

The major weakness for this approach in attempting to explain depression is that it is difficult, if not impossible, to ascertain its validity in empirical research.

2) Behavioural Perspective

The originality of behavioral therapy can be traced back to J. Watson who developed and defended principles of behaviorism. Behaviorism proclaimed that psychology is a science, psychological data must be opened to public inspection like the data of any science. Since behavior is public (observable), consciousness is private (not observable), so the latter must be discarded. The opposition to mentalistic psychology and the emphasis on sophisticated experimental as well as statistical techniques are the significant properties of traditional behaviorists. The strong empiricism is reflected in the demand for a definitional link between all so-called theoretical terms and observation terms, while non-observable variables will be discarded as invalid and / or unimportant. Though behaviorists are more consistent than any other group in urging the need for experimental methodologies, the emphasis on experimental tests
is not the monopoly of behavioral therapy.

On the other hand, behavioral therapy has been borrowed heavily from the S-R (stimulus-response) type learning theories developed by Pavlov and Skinner, and forms a good part of the commonly accepted theoretical underpinnings. Again, behavioral therapy is not the only psychological discipline which has a theoretical foundation derived from learning theories, Seligman's cognitive theory of learned helplessness and Rotter's locus of control are good examples.

Behavioral theory has changed a lot during past decades, few behaviorists today reject mentalistic concepts as classical behaviorists such as Pavlov did, though their main focus is still on observable behavior. This development is also true in explaining depression.
a) Reinforcement Approach of Depression

Under the theoretical framework of behavioral therapy, there is no behavior that is sick or abnormal in itself, all behavior is learned and maintained in accordance with the general law of learning. So behaviorists used a reinforcement approach which is based on operant conditioning to explain depression. Reinforcement is any stimulus or event which, when produced by a response, makes that response more likely to occur in future. Operant conditioning is learning in which reinforcement is contingent on a particular response (Morgan, King, & Robinson, 1981). The law of learning is that response leading to reinforcers are strengthened and vice versa.

The cause of depression has been stated as involving a reduction in the frequency of behavior emitted by the person that is positively reinforced by others (Ferster, 1973). That is the lose of positive reinforcers leading to feelings of sadness, worthlessness, and to a low output of behavior (Zarit, 1980).

Lewinsohn, Biglar, and Zeiss (1976) believed there are three reasons for a person getting fewer positive reinforcers. Firstly, positive regards from important sources, such as spouse, boss and eliminated and are not congruent with one's behavior. As the reinforcements
are decrease, the behavior that may elicit positive reinforcement decrease also. Finally, behavior and rewards decrease in a vicious cycle and the person feels sad and worthless. The second factor, which may lead to decrease in behavior that may elicit positive reinforcements, is when the reinforcement a person gets is not contingent to his or her behavior. The situation is similar to a cognitive-behavioural theory of learned helplessness which we will discuss later. The final factor proposed by Lewinsohn et al. is a sudden change of environment, which alters environmental cues that had elicited behaviors leading to positive reinforcements. This factor emphasizes various life changes, especially negative ones, such as the death of spouse and retirement, in decreasing one's possibility of getting positive reinforcements.

Apart from these three factors which lead to decrease in behavior that may elicit positive reinforcements, depression is also maintained and/or accelerated by positive reinforcements towards depressed behavior. This is because showing depressive behavior may get attention from relatives and friends who previously neglect the depressed person. These attentive behaviors and efforts to cheer depressed person up are all positive reinforcements for the depressed persons. And if the person improved, his or her relatives and friends may think he or she is now all right and withdraw their atten-
tion. Through this process, non-depressed behaviors are punished while depressed behaviors are reinforced. On the other hand, the relatives and friends may also become impatient to the depressed person's complaint overtime. However, attention may again be given if the complaint is serious, such as wanting to commit suicide. These selective reinforcements for severely depressed behaviors may further shape the depressed person to a more extreme manifestation of depression.

Other than care and concern obtained from depressed behavior, there are also some secondary gains that may reinforce the depressed person's depressed symptoms. Firstly, friends and relatives may take up responsibilities for the depressed person, such as household chores. Secondly, depressed persons are allowed by others to avoid unpleasant or anxiety-producing situations. Finally, other people may try to please the depressed person by modifying their behavior. So in fact depressed people may learn that they have considerable control over the behavior of others when depressed and acting helpless. (Zarit, 1980).

b) Empirical Support for the Reinforcement Approach

In operant learning theory, conditioning is assumed to occur directly and mechanically, without the mediation of cognitive variables. The theory is based on
conditioning experiments with pigeons and rats to support their claim that these learning principles can also explain human behavior (Erwin, 1978). The belief that learning can take place without awareness is supported by many studies (Greenspoon, 1962; Bandura, 1969). However, studies which support the importance of cognition in learning also exist. DeNike (1964) found that performance gains were shown only on subjects who had became aware of the response-reinforcement contingency, while Erwin (1978) claimed that these learning principles may be effective in learning when motivational, cognitive, and biological variables are not important.

The behaviorists identify the behavioral symptoms of depressed as inappropriate response and eliminating them through social reinforcement programs. But whether the therapy is effective or not fails to answer the following questions concerning the cause of depression. Is the depressed person only passively conditioned to become depressed? Or does the depressed person's cognition plays an active role in interpreting the meaning of decreased reinforcement, and in understanding the cause-effect relationship between his response and the reinforcement received? Hussian and Lawrence's (1981) study on treating the elderly with depression provides some hints. The study used both a problem-solving approach and social reinforcement approach alone and in combination to treat depressed elderly. The results show that both
approaches successfully reduced the depressed behavioral symptoms of the subjects, while the problem-solving approach yielded superior results. The author then concluded that the combination of operant and cognitive methods to increase activity level has been shown to be effective for reducing depression.

c) Weakness of the Reinforcement Approach in Explaining Depression

The most obvious weakness of the approach in explaining the cause of depression is the exclusion of the cognitive factor. Though the behaviorists may not deny the existence of the cognition in influencing human behavior, they omit the cognitive factor in the theory, and believe that it does no harm to the functioning of the theory and therapy based on the following reasons advanced by Skinner:

i) Preoccupation with mentalistic (cognitive) factors burdens behavioral science with problems raised by the limitations and inaccuracies of self-descriptive repertoires.

ii) Explanation of an observed fact that appeals to events taking place somewhere else, at some other level of observation, described in different terms, and measured, if at all, in different dimensions should not be
iii) Human behavior can be explained by appeal to modern learning theory that makes no use of mental (cognitive) causes. Therefore, there is no need to give mentalistic explanations (Erwin, 1978).

It is clear that under the theoretical assumption of the behavioristic approach, mentalistic factors, such as feelings and cognition, cannot be scientifically observed and tested on the one hand, and are unimportant in explaining behavior on the other. But the reality is that cognitive components which the theory fails to answer could provide better solutions to the following questions concerning the cause of depression.

Firstly, why does a decrease of positive reinforcements lead to depression? According to the conditioning concepts, decrease of reinforcement will result in decrease of behavior that the reinforcement elicits, but no explanation is given about the relationship between reinforcement and emotion. Classical behaviorists may think that the relationship between reinforcement and emotion is unimportant for helping the depressed person. However, is it always possible to do the right thing for the wrong reason behaviorists, who believe they can eliminate the behavioral symptoms, leave the source of depression untouched. In fact, in many cases, it is true that
knowing the cause of the problem helps little in treatment, for example, knowing the cause of a person's snake phobia offers little help in eliminating the phobia. However, these cases are not sufficient evidence to support the exclusion of searching for causes in other cases. For the depressed person concerned, the meaning of the decreased reinforcement is important for treatment. It is therefore equally important for therapists to find out what kind of reinforcements are reinforcing the depressed behavior. Without knowing the meaning of the lost reinforcement for different people, the behavioristic approach also fails to answer the question why some people, who experience a series of decrease in favourable reinforcement, have not become depressed.

However, modern behaviorists have increasingly used cognitive concepts to explain behavior. In the reinforcement approach of depression, if cognitive components are included to explain the relationship between the response and reinforcement contingency, a more complete picture of the dynamic interaction between environment and individual can be better drawn. Seligman (1975) suggests that depression can be learned and cognitively reinforced. Similarly, Rotter (1966; 1975) also proposes that social or cultural situations shape an individual's orientation towards life which further reinforces his views on life events.
Seligman's theory of learned helplessness is based on experiments on animals. Seligman believed that animals and man learn that they are helpless when they are faced with an outcome that is independent of their response (Seligman, 1975). So people become depressed when they find that no matter what they do, the situation has no change. The information they get from the experience of failed attempts will cognitively produce a belief in the inefficacy of responding, and difficulty in learning and responding to what may follow. Behaviorally, the person will diminish the initiation a response to control the outcome, while emotionally, especially when the outcome is traumatic, it will produce heightened anxiety, followed by depression (Seligman, 1975).

Julian Rotter's concept of locus of control is another factor which should be considered in determining what responses the elderly will likely to have or whether depression will occur in adverse life happenings. Basically, the concept focuses on the extent the impact which people believe that events may have on their own behavior (Rotter, 1966; 1975). Internal locus of control refers to people's belief that they are responsible and in control of the events that occur in their life. External locus of control refers to people's belief that events are unpredictable and that their life is determined by factors or agents beyond their own control: such as luck, chance, fate, powerful others, etc. (Rotter, 1966).
Lefcourt (1966, 1972) and Rotter (1966, 1975)

have summarized research findings on locus of control and
found that high internality correlates with a) greater
attempt at mastering the environment b) lower disposition
to anxiety c) higher achievement motivation d) greater
social action involvement, and e) placing greater value
on skill-determined rewards.

Greater externality has been related to higher
levels of depression in reviews by Lefcourt (1976) and
Strickland (1978). However, there have been several
reports of findings which contradict the above findings
(Rosenbaum & Raz, 1977; Evans & Dining, 1978). On the
other hand, local studies (Lam, 1986; Chan, 1987) have
found that extreme external control leads to psychopa­
thology on measures such as depression. Generally speak­
ing, there seems to be more studies supporting the hy­
pothesis that greater externality is related to higher
levels of depression. A study of Chinese and American
students (Hsieh et al, 1969) found that the Chinese
respondents showed higher preference for items emphasi­
z­ing external control than American respondents. The
findings of Lam's survey (1986) revealed that the majori­
ty of elderly respondents tended to be more externally
oriented. They felt that they had little control over
things that happened to them and believed that their life
was determined by luck and fate. Moreover, this research
finding also indicated that greater externality was related to higher levels of depression.

Though Seligman's and Rotter's theories are not without weakness, the use of the cognitive component in explaining how the depressed person processes the information they get from the learning process "no response-no reinforcement", may complement part of the deficiency of the behavioristic reinforcement approach.

On the other hand, the reinforcement approach still neglects a possible cause of depression other than decrease of positive reinforcement when people have significant life changes. Changes in life, whether pleasant or not need adaptation, lack of adaptive skills in handling changing environment may also arouse feelings of sadness and helplessness. In Hussian et al's above mentioned study, the superior performance of the problem-solving approach over the social reinforcement approach may suggest that the former can fulfill more of the needs of depressed people. Though the elimination of depressed behavioral symptoms by given social reinforcement may increase the depressed person's confidence in adaptation, it seems clear that it will be more helpful to go straight to the depressed person's cognitive interpretations.

3) Cognitive Perspectives
Since the 1970s, Aaron Beck's cognitive therapy for depression has been with general use. It is a highly structured psychosocial approach used particularly for emotional disorders. The cognitive theory of depression is developed from Beck's clinical case material. Nevertheless the tapping of underlying cognition, and the belief that formation of distorted schemes originate from childhood, reflect the strong psychoanalytical background of this theory. On the other hand, the theory's emphasis on cognitive rationale and extensive use of persuasion and logic (Hollon & Beck, 1986) borrows heavily from Ellis's rational emotive theory and Goldfried's systematic rational restructuring. The theoretical premise of the theory is that an individual's affect and behavior are largely determined by the way in which he constructs the world (Beck, 1983). Beck (1976) viewed depression as expressions of an underlying shift in the depressed patient's cognitive organization. As these dominant cognitive schemes are distorted and idiosyncratic, the depressed patient tends to regard himself, his experience, and his future in a negative way and negative emotions result. So the focus of the therapy is to identify and modify the distorted cognition which produces and maintains the depression.

a) Theoretical Propositions of the Cognitive Theory
In the theory, three concepts are postulated to explain the psychological substrate of depression, namely cognitive triad, schemes and cognitive errors (Beck et al, 1979).

Cognitive triad is the following three cognitive patterns, which are believed to be idiosyncratic and discordant with reality, and aroused depressed mood in patients.

i) negative view of self: the depressed patient regards himself or herself as a loser, and has lost something of substantial value or failed to achieve what he or she considers important;

ii) negative view of experience, the depressed patient expects the outcome of any activity he undertakes to be negative, so is not motivated to set goals and engage in constructive activities.

iii) negative view of his or her future, the depressed patient expects his or her entire future to be deficient in satisfaction and achievement (Beck, 1976).

Developed from clinical cases materials, Beck discovered that the depressed patients use their negative views to process the information around them rapidly and
automatically and many patients are not fully aware of these thoughts. Beck called this "intercom". When a person communicates with others, he or she at the same time communicates with himself or herself. This inter­communication process works to interpret the information they get from communication with others. By studying his clinical cases, Beck found that the negative automatic thoughts of the depressed patients intervened between the event and the unpleasant emotional reaction, so Beck asserted that negative emotions are triggered by automatic thoughts which interpret the information received negatively. Moreover, these negative views have precipitate effects, that means the more negatively the patient thinks, the worse he feels; the worse he feels, the more negatively he thinks (Beck, 1967). These negative automatic thoughts, though seemingly far-fetched to many, are regarded by the depressed patients as plausible or reasonable and accepted without trying to test their reality or logic. One may then come to the question that of some depressed patients, their negative thoughts are consonant with reality, how does cognitive theory view this type of cognition? Beck used the term maladaptive thought to include both distorted thoughts and the reality-based self-defeating thoughts and asserted that these thoughts should be modified as long as they produce interference with the depressed patients' functioning.

Consideration of cognitive triad leads naturally
to the question: how do depressed patients acquire these negative views? This question is answered by the concept of schemes, which are the "relatively enduring characteristics of a person's cognitive organization and organized representation of prior experience" (Kovacs & Beck, 1978). Beck called the dysfunctional cognitive schemes, which lead to negative thinking, "depressogenic schemes", they are formed and developed during childhood and can be reactivated in adulthood (Beck, 1974). These cognitive schemes provide standards and principles which guide a person's actions and are used to evaluate himself or herself and others. So every event may have different meaning for a different person as their personal standards and principles are different. To analyse under what circumstances an event will arouse negative emotions, Beck introduced the concept of personal domain as follows:

"At the center of the domain is the person's concept of himself, his physical attributes and personal characteristics, his goals and values. Clustered around the self-concept are the animate and inanimate objects in which he has investment (Beck, 1976:55-56)."

Whether a person's emotional response to an event is negative or not depends on whether this person perceives the event as adding to, subtracting from, endangering, or impinging upon his domain. And the feeling of
sadness is associated with a person's interpreting life situations as a loss of personal domain. These interpreted losses can be tangible, intangible, fantasy, hypothetical, pseudo, or just expected in the future (Beck, 1976). For depressed patients, who perceive themselves as worthless and a failure, a contracting of personal domain is signalled.

The last concept - cognitive errors - include six common errors found in the depressed patient's cognitive processing. Through these information distorted processes, depressed patients distort the reality to fit their negative thinking. They include:

i) arbitrary inference: drawing a specific conclusion in the absence of evidence or when the evidence is contrary to the conclusion;

ii) selective abstraction: focusing on a detail taken out of context, ignoring other more salient features of the situation and conceptualizing the whole experience on the basis of this fragment;

iii) overgeneralization: drawing a general rule or conclusion on the basis of one or more isolated incidents and applying the concept across the board to related and unrelated situations;
iv) magnification and minimization: reflected in errors in evaluating the significance or magnitude of an event that is so gross as to constitute a distortion;

v) personalization: referring to the patient's proclivity to relate external events to himself when there is no basis for making such a connection;

vi) absolutistic and dichotomous thinking: the tendency to place all experience in one of two opposite categories and describing himself or herself in the extreme negative categorization (Beck et al, 1979).

b) Empirical Support of the Cognitive Theory

The theoretical postulations of the theory are by and large developed from Beck's clinical case materials and observations. To find empirical support for the theory, we may search in studies about the treatment efficacy of the theory. Numerous studies have been conducted to evaluate the effectiveness of the cognitive theory for depressed patients and compare the therapy to alternative therapies with both analogous as well as clinical population.

Shaw (1977) contrasted cognitive theory with behavioral treatment by applying a four week treatments on depressed college students. The results indicated
that subjects in the cognitive theory have superior improvement. A study (Rush, Beck, Kovacs, & Hollon, 1977) was conducted to contrast cognitive theory with tricyclic pharmacotherapy on clinical depressed population, and again, cognitive theory yielded superior improvement with maintenance over a one-year follow-up. Studies (Blackbur, Bishop, Glen, Whalley, & Christie, 1981; Murphy, Simons, Wetzel, & Lustman, 1984; Beck, Hollon, Young, Bedrosian, & Budenz, 1985) with comparisons of cognitive theory, combined cognitive-pharmaco-therapy and pharmacotherapy were conducted, and the findings suggest that cognitive therapy can typically be expected to equal, but not necessarily exceed, tricyclic pharmacotherapy in the treatment of the acute episode. In addition, lower relapse rate was evident in the subjects of cognitive therapy no matter whether this was combined with pharmacotherapy or not.

However, though the treatment efficacy of the theory seems promising, there is insufficient evidence to support the view that the reduction in depression resulting from cognitive therapy is due to changes in cognitive processes. The possibility that the change in cognition is the consequence of change in syndrome depression produced by other means, possibly nonspecific, still exists (Hollon & Beck, 1986).

c) General Weaknesses of the Cognitive Theory in Explaining Depression

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The concept of cognitive triad, with its cognitive patterns of negative thinking, is in a position of central importance in the cognitive theory. As the theory takes negative cognition as the prime cause of depression, for the reason that cognition preceding other emotive symptoms, this cognitive-deterministic element in the theory leads to criticism. Teasdale (1983), after experimental studies on mood induction, found that negative thought and mood have a reciprocal relationship. This means though negative thinking leads to a predictable change in mood, mood change can also change thinking. Zajonc (1980) challenged the notion that cognition was a universal cause of affective processes. And most theorists agree that thought, feeling and action are dynamically interdependent rather than one is the prime cause to the other (Marzillier, 1986).

The postulation that distorted schemes (what Beck called depressogenic schemes) lead to negative thinking through cognitive errors schemes:

"formed as a result of unhappy childhood experiences, and from beliefs or rules that are transmitted from parents to children. They may remain dormant in the adult until reactivated by events or experiences that are similar to those which led to their original formation (Marzillier, 1986:101)."
These were difficult to verify. It is in fact more a reflection of Beck's psychoanalytical-oriented perspective. Almost all people may have some unhappy experience in childhood, such as the loss of something or someone dear, but why do some people among us become depressed while others not? The theory has not answered these questions. Our experience of life are more or less colored by societal culture and sub-culture of social class. These common experiences may help us to understand what kind of principles and standards are more likely to be organized into different people's schemes as rules of behavior and criteria of successfulness on the one hand, and their relationship to depression on the other. However, variables outside the individual level receive little or no attention in the theory.

Although people with distorted negative thoughts may always be sad, in reality there are various events that may make even the most optimistic people sad, such as having AIDS or seeing close ones die. Obviously, as the focus of cognitive theory is the distorted cognitive pattern in shaping one's emotion, depression based on realistic chronic events has been neglected. Though Beck includes this realistic reality-based negative thinking under the title of maladaptive thoughts and claims that all negative thoughts needed to be modified as long as they interfere with the depressed patients' functioning, the cause of depression for these two types of people are
somewhat different. It is obvious that people with distorted negative thinking are more a cognitive problem, while the other types are not and so the change in cognition may not be necessarily appropriate. To take an example, if an poor man suffering from a chronic illness has to wait for hours to consult a doctor in the public hospital every week and becomes depressed, by common sense, one may know what the problem is. It is the social service system rather than the man's cognition which is the problem. So putting reality-based negative thinking under the term maladaptive thought is literally misleading. By focusing on man's cognition, depression becomes a personal fault, the environmental and social cause of depression will be blurred. Moreover, if people in an obvious depression-aroused situation are encouraged to hold the positive aspect of a situation in which the majority of human beings in the same society cannot do, then it involves not only psychological treatment but also a conveying of a life philosophy which may be outside the domain of scientific psychology.
Psychological Aspects of Depression and Aging

In the psychoanalytic literature, loss is discussed as an important etiological factor in the emergence of depression, an observation relevant to the elderly since they are at risk for multiple losses as they grow older.

Depression, as opposed to grief, often involves intense feelings of self-reproach, guilt, and decreased self-esteem that derive from hostility that the patient unconsciously directs toward the loss object, with the anger ultimately being directed against the patient's own ego. Cath (1965) postulated that seeking appropriate emotional and interpersonal restitution for the losses incurred in late life was a major adaptive task in the elderly. Failure to reconstitute or adapt to losses could lead to depression.

Some authors have tried to expand the above assertion by stating that depression in the elderly is more related to loss of self-esteem from an inability to successfully provide oneself with gratification of needs and drives, or because one feels especially vulnerable to threats to basic security (Wolman, 1990). The elderly must confront societal prejudices regarding their helplessness, powerlessness, and futility which are often associated with aging. This has given rise to another
view that elderly depression can be seen as a result of reacting to society's expectations.

When the reinforcement approach is applied to explain the cause of depression in old people, the focus will be on the life changes that people entering their old age would encountered. According to Ferster there are three factors for a depressed person whose decreasing behavior may elicit positive reinforcement. Firstly, the lack of responsiveness from those individuals who are important to the old person. Old people after retirement may idle at home, and the family members' regard for them may decrease. Moreover, the diminishing ability in financial contributions, or even becoming financially dependent, would exclude the elderly from decision-making. Secondly, the non-contingency between the reinforcement and behavior, due to the deteriorating physical and psychological ability (such as physical strength and memory), old people may find that no matter how hard they try, their performance cannot be as good as before. Thirdly, the loss of the reinforcement due to sudden changes in the environment is also common experience of old people. Retirement, loss of spouse, and close friends would leads to loss of emotional support and care. Moreover, as the social circle of old people is contracting, the replacing of new one is difficult.

The reinforcement of depressed behavior is also important in explaining depressed behavior in the elder-
ly. As the younger generations concentrate more in their own work and family, attention paid to the older generation is mean. Depressed behavior to a certain extent can attract the attention of family members, especially, when the depressed symptoms are severe. Moreover, the secondary gains, including visits from relatives and family members and activities arranged to cheer the depressed old people up, are all possible reinforcements for depressed behavior. Through this process, old people learn that depressed behavior can get positive gains from others.

However, the reinforcement approach is not without weaknesses in explaining depression in old people. Firstly, the approach fails to take account of why many old people can adjust to the decrease of positive reinforcement after retirement without becoming depressed. This weakness exposes the approach's major weakness excluding the cognitive factor in explaining human behavior. Hence the decrease of positive reinforcement may have different meanings for different people. One's psychological preparation for old age, philosophy of life, personal significant towards different reinforcement may influence one's possibility of having depression. Without the cognitive component, the impact of decreasing positive reinforcement for different old people may remain unexplained.

Thirdly, the reinforcement approach, which fo-
cuses on the decrease of positive reinforcement, neglects other possible causes of depression. When people enter their old age, changes of life circumstances and status lead to various adaptation problems, which may lead to depression. So if the focus of the therapy fails to detect the needs of the client, then the effectiveness of the therapy would be reduced and the client will suffer.

When one tries to apply cognitive theory to explain depression in old people, attention will inevitably be given to the negative changes old people encounter. It is true that people experience loss and separation continuously after entering old age. Jarvik (1983) indicated that, through adulthood one has accustomed to the role of being the final arbiter, the source of strength, the fount of financial, social, and emotional support, then either gradually or suddenly, one is required to give it all up. All these changes contract old people's "personal domain". The contraction due to various losses, such as physical strength, attractiveness, sense of independence, lead to sadness. The losses include both tangible and intangible ones. Moreover, expectation of future losses may trouble old people, as these frequent events encountered by their friends and relatives of the same age may warn them about their likelihood of meeting the same event in the near future. Examples include impending deaths and sudden losses of their close ones (e.g. fatal accidents, emigration).
It seems clear enough that as with increasing age, old people's views on self, everyday experience and expectation for their future are negative. Especially for those with a traditional attitude that reverence from their children has to be maintained during and after their lives, the reality may seem to be very harsh. The problem is that the standard, which was acceptable for old people, is no longer appropriate due to changes in relation to aging. So the schemes, which functioned well in guiding one's action and evaluating one's performance before, now has become maladaptive and need to be adapted. If this is true, then when a person enters old age and begins to experience physical, psychological and social losses, maladaptive thoughts will exist if the person is still using his or her previous standard to evaluate his performance, and depression will result.

However, many old people, who have suffered from various losses, do not have depression. It is obvious that most old people can lead a happy life despite increasing vulnerability. So it is questionable that negative thinking is the prime cause of depression. Some old people can avoid negative views and look at the positive aspects of a situation by adjusting self-evaluation standards. For example some may continuously complaining about their poor health but feel thankful for their still being alive have not become depressed. People may
have different vulnerability to depression; negative views on self, experience and the future alone cannot explain people's different vulnerability.

In fact, the weaknesses of cognitive triad is in its explanation of depression in terms of negative thinking due to a subjective interpretation of reality. In these cases, environmental factors, such as social support networks, which are important variables influencing one's vulnerability to depression, are treated as unimportant in the process of depression. However, rather than the way of thinking, it is the real situation that needs to be changed. For example, if an old man is depressed as he lives far away from his relatives and friends and feels lonely, the best way to help him is to break his isolation rather than to help him to look at the positive aspect of living alone. The theory's main focus - one's cognitive distortion in causing depression - may blur the social aspects of depression. In explaining depression in the elderly, cognitive theory's focus on individual failure will undermine the social causes, such as inadequate elderly services, of depression.
Section Summary

From the biological standpoint, biochemical changes in the elderly may contribute to development of depression, such as rising levels of enzyme monoamine oxidase, neuroendocrine changes, and decreases in brain norepinephrine. Deterioration of general health no doubt contributes to the overall bleak outlook on life which makes depression almost inevitable. But poor health alone does not account for depression biologically, rather it is other social and/or psychological processes which trigger off the condition.

From the sociological perspective, factors affecting other age groups also equally have an impact on the elderly. In particular, stresses caused by sudden changes in life situations such as financial strain, families becoming distant, diminished social contacts, retirement, and cultural prejudices against the elderly may contribute to the development of depression. However, the fact that not all elderly in adverse social conditions become depressed calls for a fuller explanation.

The psychology of aging also naturally deserves special attention, since the success with which the elderly individual adapts to the developmental tasks and
stress of aging will determine his/her susceptibility to depression. But equally true for the elderly is that the determinant of depression to a larger degree lies in their own hands - they become depressed because they ought to. The cognitive triad provides the view that an elderly must be depressed, as their view of self, their present experience, as well as their views of the future will give them a negative feeling. This explanation though gives a better understanding of the inner process of the negative thinking leading to depression, it is deterministic in the case of the elderly and fails to take into serious consideration the impact of sociological factors.

A more convincing explanatory model for depression seems to be one that hangs on to the cognitive process - through which an individual interprets her/his situation, and yet is able to take into account sociocultural variables.
CHAPTER SIX: DETERMINANTS OF DEPRESSION AMONGST THE
CHINESE ELDERLY IN HONG KONG - A CONTROL PROCESS VIEW
Stresses are inevitable in everyone's life. According to the psychological theories, stress (e.g. Shapiro, 1979; Lazarus & Launier, 1978; Lazarus & Folkman, 1984; Lazarus, 1966; Ingram, 1990 also gives a comprehensive overview of these theories), is seen as the result of a perceived mismatch between environmental demands and individual coping resources. Lazarus and Folkman (1984) define two types of coping resources: person-resources and environmental resources. Examples of the former are physical resources such as health and energy and psychological resources such as problem-solving and social skills. Examples of the latter are more tangible resources (e.g. money) and social support.

Elderly people are more likely to be confronted by certain stresses or even crises in old age: e.g., loss of health, loss of job, loss of loved ones and loss of income. At the same time, they are more likely to suffer from a lack of sufficient coping resources, too. Hence, their well-being is more easily affected in a negative way. As the experience of stressful life events is associated with an increased risk of wide range of physical as well as mental disorders (Stroebe & Stroebe, 1987), it is not surprising to see that there is a relatively high incidence of mental illness among this population group. Among the most prevalent mental health problems of the elderly, depression is found to be a common diagnosis for
many of them who are hospitalized by acute psychiatric services (Mei-Tai & Meyers, 1985-86; Roth, 1955; Spar, Ford & Liston, 1980). But of course, whether depression sets in will depend on the length of the period during which stress is experienced. Individuals are more likely to react with depression if stress is prolonged rather than brief. Thus, like physical illness, depression can be a disease of adaptation resulting from prolonged exposure to stress (Stroebe & Stroebe, 1987). The patient can be said to be in a state of learned helplessness.

One has, in fact, a lot of standards or expectations towards various aspects of one's lives. They may be set by one either consciously or unconsciously. For example, one may expect a certain number of distinctions in the exams; or one expect to be loved and cared for by one's parents or spouses; or one expect oneself to be very independent and capable of solving any problems in difficult times, or one expect to have good health etc. So, numerous expectations (later termed as reference values) are actually influencing our behaviour. But first of all, how are these expectations formed? It is believed that one's own experiences, knowledge, values, personality, and the influence or expectation by one's social groups (e.g. family, schoolmates, colleagues) are all important factors influencing one's formation of different reference values. For example, the reference of expecting good health may be formed because an individual
has been healthy all the time (his/her own experience), and he/she can predict the sufferings (both psychological and physical) when health deteriorates (his/her knowledge). In addition, if his/her family members have not always been caring for him/her, he/she will expect himself/herself to be in a difficult situation (family factor). To take another example, a person may expect several distinctions in his/her examinations if he/she has always obtained similar results before (his experiences) and his/her "smart" image has been established among his/her classmates who thus have strong expectations of this individual (influence of peers) in addition, he/she may have such a reference of getting very good results because he/she is a person who always wants to be at the top (his personality).

So, from the above illustrations, we can understand that the setting of one's reference is influenced by various factors which may be of different weight to different individuals. Bases from which an individual develops his or her reference values are socially normative.

However, the perceived situation or reality may not generally meet the reference values or expectations. So, corresponding behavior will be inputted to reduce the mismatch between the perception and reference value. This cognitive process involved constituting a closed feedback
loop which will be explained shortly by the control theory. This paper tries to use the control theory (Carver & Scheier, 1982; 1990; Glaaser, 1981; 1984a; 1984b) to explain how elderly people in Hong Kong may get depression.

The main focus of control theory falls on to the cognitive process of human beings. The human brain is like a control system (Glasser, 1981; 1984a; 1984b) which control human behavior in order to satisfy basic needs which can be summarized as i) need for survival and reproduction, ii) need for belonging iii) need for power, iv) need to love and be loved, v) need for fun. The cerebral cortex is the centre which control human behavior and there are 4 parts which are related to human behavior:

1) internal world : this consists of need-fulfilling perceptions (pictures) each of which represents perception on the behavior and its external environments that are required to meet a certain need.

2) comparing station : this is a station where the perception of the external environment is compared with the perception of the internal world.

3) perceptual system : this is to convert the individu-
al's contact with the external world into a perception in the brain.

4) Behavioral system: this is an output system, i.e., suitable behaviour (includes doing, thinking and/or feeling) is initiated to meet needs.

It is thought that whatever behavioral output is, it is basically the individual's own choice and responsibility. Sometimes when a certain need (e.g., belonging) cannot be met, the individual may respond by different behavior e.g., depression, anxiety or even doing harmful acts (HKSWA, 1989).

To explain more, the whole cognitive process underlined by control theory is actually a negative feedback process (negative in terms of reducing the perceptual discrepancy between reality and perception). This can be seen from the diagram adapted from Carver & Scheier (1982:90) and Figure (4).
Figure (4): The Negative Feedback Loop—the Basic Unit of Cybernetic Control

Reference Value

Comparator

Input function (Perception)

Impact on environment

resultant behavior taken into account of disturbance

Output function (Behavior)

Disturbances (outside influences)
This basic construct of control theory thus involves the discrepancy-reducing feedback loop. The input function is the sensing of a present condition. That perception is then compared against a point of reference via a mechanism called a comparator. If the comparisons indicate discrepancies between reference value and present state (i.e., between intended and actual qualities of behavior), people adjust behavior (the output function) (Carver & Scheier, 1990). In more psychologically meaningful terms, thus is done by changing what one is doing or changing the personal qualities that one is displaying (Carver & Scheier, 1985). This behavior, operating on the environment, is aimed at moving the perceptual input closer to the reference value, thus reducing the discrepancy. When a feedback loop is functioning properly, it induces a sensed quality closer to the reference value (Carver & Scheier, 1990).

Moreover, another view is suggested that behavior is organized hierarchically (e.g., Broadbent, 1977; Dawkins, 1976; Gallistel, 1980; Martin & Tesser, in press; Ortony, Clore and Collins, 1988; Powers, 1973; Vallacher and Wegner, 1985; 1987). In the control process, the output of a superordinate feedback system (the system directing behavior at the level of present current concern; Klinger, 1975; Shallice, 1978) is the resetting of reference values at the next level of abstraction. This can be illustrated by the following diagram (Figure (5)).
Figure (5): The Control Process
(adapted from Carver & Scheier, 1985; 1990)

Over-riding reference value ("System concept")
Idealized Self-image

Comparator 3
Behavior output + ref. value
("Principle") e.g.
i) Be responsible
ii) Be kind

Perceptual
Input 3

Comparator 2
Beh. output 2 + ref.
Value ("Program") e.g.
i) Wash dishes on own
ii) Shovel snow off walk

perceptual
input 2

Comparator 1
Behavior output
Execution of
program

perceptual
input 1

Effect on
Environment
In the figure, a three-level hierarchy of feedback system in which the output of a superordinate level consists of the setting of reference values at the next lower level. The levels illustrated here are those at the top of the hierarchy postulated by Powers (1973). The first illustration (i) captures the behavior of a young man who is actively attempting to match his present idealized self, by following the principle of responsibility, which is presently being realized in terms of the programmed activity of washing the dishes willingly.

This kind of organization can, in principle, be multileveled. Powers (1973) suggests that there are 9 such levels in voluntarily controlled human behavior (see Carver and Scheier, 1981; 1982 for a detailed discussion). The ones illustrated in the figure are those at the top of the hierarchy.

In sum, at the highest level shown (labeled system concepts) are such values in the global sense of idealized self. Other possible references can be idealized sense of a relationship or of a society, but reference values at this level are abstract and difficult to define. Powers (1973) suggests that the behavioral output of this high-order system consists of providing reference value at the next lower level, the principle control. Thus people act to "be" who they think they want (or
ought) to be by adopting any of the guiding principles that are implied by the idealized self to which they want to achieve. Examples of guiding principles are honesty, responsibility, experience etc. However, they are to be executed in activities termed programs (Shank and Abelson, 1977). As a result, the behavior output of the superordinate system constitutes the setting of standards for the next lower level. That lower level, in turn, is providing reference values to the next level (Carver and Scheier, 1982;1990).

Furthermore, Carver and Scheier (1982) suggest that people often function at the level of program control with little or no conscious reference to higher order goals. Very often, a lower level might be functionally superordinate for long periods of time e.g. an assembly line worker repeating the same sequence of acts over and over may be unaware of the fact that the sequence may also be relevant to goals at higher levels of abstraction. They suggest that the highest level of control operating at any given moment corresponds to the level to which the person is focally attentive at that moment (Shallice refers this as "dominant action system"; 1978). In adults, this often means control at the programme level, though self-regulation is sometimes governed by principles and system concepts. That is to say, the hierarchical concept does not necessarily exist in every behavior output; and when it does, the step 3-2-1
process may not be undergone consciously.

So if we could put aside the actual influence of body biology, the norms of a society including its history and ways of life, in fact provide a reference for high order system concepts, and under this influence the individual's cognitive process is programmed to interpret other lower level reference values and actions. Hence, a value change in the society should also be offset by a change (or adaptation) in the control process.

Concepts of 'disturbance' and 'expectancies' are also central to the understanding of the control process. The term 'disturbance' can be easily understood by taking the 'washing dishes' example. Suppose the young man has just started to wash the dishes, but the water supply was suddenly cut off due to the repairing of a leaked water pipe in the building. External situation/events like this thus constitute a disturbance. But are certainly need to be aware that disturbance can be either negative or positive.

Then what is 'expectancy'? Assessment of the likelihood that the desired outcome will occur or not may be made either during a discrepancy-reduction attempt, or before the attempt when they foresee that there will be potential barriers to action. They make use of various information e.g. consideration of physical or social
constraints on one's behavior and internal qualities such as skill, anticipated effort, and available response options. And very often, expectancy assessment relies quite heavily on memories of prior experiences. An impulse to withdraw from the attempt may occur if the person's expectancy of being able to reduce the discrepancy is sufficiently unfavorable (Carver & Scheier, 1982; 1990). And they point out that expectancies about one's eventual outcome are an important determinant of whether the person responds to adversity by continuing to work for the goal or, instead, by disengaging from the attempt. The importance of expectancies in behavioral change process has been supported empirically (e.g. Bandura, Adams & Beyer, 1977; Bandura, Adams, Hardy & Howells, 1980).

Disengagement clearly is adaptive in many circumstances (Field et al, 1985). Freeing oneself from further efforts aimed at the attainment of expected standards where one is making no progress (and may even be losing ground) allows the taking up of new goals or values for self-regulation, goals that may be more profitable in the long run. This should not obscure, however, the fact that the disengagement function has costs, costs that are problematic when disengagement is difficult. Such costs are often reflected in developing depression.

But some of the reference values that people
hold are simply too important to cast aside. For example, giving up trying to do your job well may get you fired. In such cases, although there may be temporary disengagement, people are repeatedly forced to confront the reference values that are salient, and the large discrepancies between the reference values and their existing states. The result of the combination of an inability to disengage plus an inability to reduce discrepancies is a cycle of weak efforts, awareness of the unfavorable outcome expectancies (which, due to the weak and ineffective efforts, are likely to become reconfirmed and solidified, and ultimately despondency reduction generates intense negative affect (Field et al, 1985). This, Scheier and Carver (1982b) suspect, may be the process by which depression is generated.

Up to now, we should have realized that one possible consequence of prolonged discrepancy between reality and reference value can be depression. But we must also note that the reference values or the cognition of many depressed people are actually distorted/unrealistic. As Beck explains, a cognition is an appraisal of events from any time perspective (past, present, or future) (Beck et al, 1979), cognition is generally viewed by the individual as factual representations of reality and hence, are believed to be true by the beholder. To use this logic, the "automatic thoughts" (part of a habitual pattern of thinking) in depressed people may be that they
The following is an illustration from Beck et al (1979):

"a 31-year-old mother of 3 children indicated that the worst time of the day' was between 7 am and 9 am in the morning. During this time period she habitually prepared her breakfast for her family. She could not explain why this period was so difficult until she began recording her cognition at home. As a result, she discovered she consistently compared herself with her mother who she remembered was irritable and argumentative in the morning. When her children misbehaved or made unreasonable requests, the patient (i.e. the woman) often thought, "Don't get angry or they'll resent you", thus her typical response was to ignore them. With increasing frequency, however, she "exploded" at the children. She began to think "they'd be better off if I were dead". She became even more depressed when she imagined her negative childhood experiences, such as "my mother slapped me if I complained about anything."

In this case, we see that the mother wanted to be a good mother (the principle) by reminding herself not to get angry or the children would resent her (the program). However when she could not remain calm when the children are naughty (failure of executing the program), discrep-
ancy between her reference value and reality occurred and was distressing. Obviously, some of her belief/cognition were distorted (e.g. they'd be better if I were dead) and kept on influencing her behavior until she sought for therapy.

To return to the feedback loop, apart from expectancy (i.e. whether efforts are perceived to lead to the attainment of goals), sensitivity to the discrepancy, the specificity of translating reference values to programmes and the time length at which the discrepancy is felt to last, are also important factors affecting the extent of the impact of the mismatch. It seems likely that a good deal of inappropriate behaviour stems from an inability to react to specific reference values from the level of system concepts (or principles) down to-and-through the level of program control. For instance, many people want to be "fulfilled" or "successful" but have no idea what actions will move them in the direction of those superordinate goals. Such difficulties are very distressing particularly when they are central aspects of one's life goals (Carver & Scheier, 1982). According to Hyland (1987), prolonged discrepancy between reference criterion and perceptual input in a control loop characterized by high error (i.e. discrepancy) sensitivity at the principle or program level, is a sufficient condition for depression.

To illustrate the above points, let us consider
the following example: an elderly person is trying to adjust his life after retirement from work. S/he holds strongly the reference value 'to remain as a useful person'. But the perceived reality is that his daily routine work has now been disengaged and he no longer has a secure income to support himself, and has become a financial burden on his family. So, a discrepancy between reality and reference value may be perceived. However, this elderly person has little ability in specifying this superordinate reference to a lower level (i.e. program), say, by helping out with housework or participating in volunteer work at a social centre for the elderly. If his sensitivity to such discrepancy is high (i.e. he realizes his present situation as exactly implying that he is not useful any more), this low specificity of translating high reference values into low level programmes may lead the elderly into a higher risk of getting depression, especially when the period of experiencing discrepancy is long and his sensitivity to the helpless situation is high.

In sum, one possible route of getting depression is simplified in Figure (6).
As the theory develops, it begins to emerge that
the social and psychological worlds of an individual
cannot be analyzed alone. The values, traditions and
other social elements socialize an individual to form the
foundation of his own higher level reference values. By
and large these values are the same as others in the same
peer group and within the same society. However, within
these value boundaries, the individual is free to develop
his own perceptual and action modes. In any case, the
individual is constantly struggling to bring closer
her/his expectation to the reality. But the reality
sometimes becomes the individual's reality which could be a distortion, making achievement of real life goals difficult. A prolonged process of distortion will make depression an inevitable outcome. To realize if there is a distortion of the social world in an individual's perceptual process in relation to depression, it is proposed that in the present study four concepts: expectancy, specificity, sensitivity and prolonged discrepancy. High severity, or distortion, in any one aspect is sufficient within to cause depression.

So, it is this framework that we propose to explain depression amongst the elderly in Hong Kong when they face adverse social conditions.
CHAPTER SEVEN

PART I : VALIDATION OF THE GERIATRIC DEPRESSION SCALE

(CHINESE VERSION)
As the key concepts of the study revolve around depression, depression needs to be defined operationally.

**Operational Definition of Depression**

The word depression may refer to a symptom, such as sadness, low spirits, dejection etc.. Therefore the word may not necessarily entail any abnormal states of human emotion especially when the condition happens under predictable circumstances and is manifested within culturally accepted manners, for instance, in the case of the loss of loved ones. On the contrary it will be taken as abnormal or pathological if it happens in circumstances in such a way considered to be inappropriate (Cameron, 1987). This definition, like many others depicted in studies of depression, gives only a summative view of what depression may be. The distinction between normal and abnormal depression, the degree of severity and other issues relating to the classification of types of depression are still matters for intense controversy and for continuing discussions. Symptomatological studies, that is studies of depression as states of mood - a conscious state of mind (Lin, Dean & Ensel, 1986), so far dominates this field of study. These studies usually take the form of self-reported depressed-mood scales to establish the existence of depression. In attempts to establish relationships between self-reported scales and
clinical diagnoses of depression (such as Myers & Weissman, 1980; Zimmerman et al., 1986; Boyd, Weissman, Thompson, & Myers, 1982; Roberts & Vernon, 1983), there has been little congruent discussion against the validity or ability of these scales in the screening of clinical depression in the normal community. So-called clinical depression, though multidimensional in nature, is commonly considered to have the following characteristics:

(modified from Diagnostic Criteria for Major Depressive Episodes of DSM-III-R: P222)

(1) depressed mood most of the day and nearly every day;
(2) loss of interest or pleasure in all, or almost all, activities most of the day and nearly every day;
(3) significant weight loss or gain when not dieting;
(4) insomnia or hypersomnia nearly every day;
(5) observable psychomotor agitation or retardation nearly every day;
(6) fatigue or loss of energy nearly every day;
(7) feelings of worthlessness or excessive or inappropriate guilt nearly every day;
(8) loss of ability to think or to concentrate, or indecisiveness nearly every day; and
(9) recurrent thoughts of death, suicidal ideation with or without a plan, or actual attempts of suicide.

In order to satisfy the criteria set for major depression
(i.e. clinical depression), at least five out of the nine characteristics must be present, either (1) or (2) is required amongst the five, for a duration of not less than two weeks.

It is easier said than done to recognize these features in real life cases. "True" clinical depression in the elderly must be differentiated from the mild dysphoria or demoralization that may be caused by increased physical, social, and economic stresses to which the aged may be subjected (Blazer & Williams, 1980). Numerous authors have noted that late life depressions are qualitatively different from depressions in earlier life. The frequency of psychotic or delusional depressions appears to be more common as age increases (Kiloh & Garside, 1963). On the other hand, guilt-ridden depressions appear to be less frequent in the elderly (Shapiro, 1979).

In fact, many physical illnesses can also induce depression or mimic its symptoms. So, accurate diagnosis of depression in the elderly is, therefore, not easy. Particularly when they are more vulnerable to normal grief because of multiple losses such as deaths of friends and relatives.

Normal grief reactions in general are self-limiting (6 months to 1 year) but poor adaptation after the
loss of a spouse may lead to a form of chronic dysphoria. Pathological grief or unresolved grief can merge into incapacitating depression. Occasionally, the usual depressive symptoms that accompany the grief process, often present prominent somatic features. Such a syndrome is labeled a pathological grief reaction (Bornstein et al., 1973; Parkes, 1972).

We need to be conscious as some of these symptoms may present themselves as consequences of other complaints in the elderly. For example, physical deterioration in old age generally brings significant weight loss and fatigue; chronic pain causes insomnia, agitation and inability to concentrate; a loss in ability to think or indecisiveness may also be due to a condition fairly common among the elderly called 'dementia'.

So, overall this study must be satisfied with only a symptomatological orientation of its use in the wider community. The term 'depression' in this study is used to include all depressive disorders meeting the above criteria. In any case clinical depression in this study is taken as either a formal diagnosis confirmed by a psychiatrist or by the scale validated in this study, i.e., the GDS.
Search for a Suitable Screening Scale for Depression

In order to identify a suitable screening instrument for depression amongst the Chinese elderly in Hong Kong, this study will have to go through a vigorous procedure whereby, existing measures of depression will have to be reviewed, as there is no suitable instrument validated in Hong Kong specifically for the elderly, concepts and procedure of developing (or adapting) such an instrument will have to be carefully discussed.

Measures of Depression

Over the years, based on different theoretical orientations on how depression could be expressed, researchers have developed various scales to measure the presence and the degree of depression. Thompson summed up the functional characteristics of these scales as: (Thompson, 1989:89)

1. For assessment of severity.
2. For making a diagnosis either of the presence of depression or of the subtypes, for example endogenous versus non-endogenous, major versus minor, primary versus secondary.
These scales have almost exclusively focused on symptoms and signs (i.e., the behavioural aspects) of depression. Rehm (Rehm, 1988) summarized the contents of all these scales according to their symptom content (as a syndrome depicted as central to depression) and depressive signs (neuro-physical signs).

Symptoms have four types: verbal-cognitive, overt-motor behavioural, somatic and interpersonal. Verbal-cognitive, as it indicates, refers to the verbalization of depression which may include sad affect where people describe their feelings as sad, low, down, unhappy, pain in the heart etc.; may include cognitive distortions such as negative image about self and the world around; and may include changes in cognitive functioning such as being less able to remember things and to concentrate. Overt-motor behavioural symptoms refer to observable behaviour which may include behaviour excesses such as weeping, agitation etc. and/or behaviour deficits such as low motor activities, lack of appetite, less sleep etc. Interpersonal symptoms of depression focus on the importance of social interaction, which depict certain interpersonal interaction patterns as specific to depression: namely persons who are demanding, dependent, manip-
ulative, negative, hostile, complaining and withdrawn. The
first three types in particular have been commonly adopt-
ed in scales of depression, with the forth one slowly
gaining importance in the study of depression, for exam-
ple Brown and Harris's study on the significance of life
situations (Brown & Harris, 1978), and Lloyd's study on
the significance of major life events (Lloyd, 1980). Not
only were both studies able to conclude that interaction
patterns previous to the onset of depression had a sig-
nificant off-set effect that depression was offset by
interaction patterns for depression, they also confirmed
that life patterns had a 'maintenance' effect on depres-
sion, i.e., duration of depression.

The neuro-physiological signs if considered
severe enough are often taken as the only necessary and
sufficient conditions for depression. Rehm (Rehm,
1988:318) again noted several types: disturbances in
sleep, eating, sexual desire, work and suicidal beha-
viour. These for the purpose of easy identification are
broken into:

Sleep Disturbance: difficulty in getting to sleep
    frequent awakening
    early morning awakening
    hypersomnia
An ideal scale for measuring depressive syndromes (symptoms of an illness) should contain all these aspects and yet be simple enough to administer. Internationally adopted scales such as the Minnesota Multiphasic Personality Inventory (MMPI) have no doubt gone through vigorous tests of reliability and validity, many of their translated or adopted versions, shortened or otherwise,
have also been validated and re-validated in different situations and in different countries. Nonetheless it is worthwhile noting that depression scales used so far for community samples (non-patients) could be applied by non-clinically trained staff who have a reasonable understanding of the subject. Validity is confirmed by comparing its results in terms of close agreement with that of the psychiatrists' diagnoses of the same sample. These points must be born in mind when choosing a measurement scale for depression in general.

Choosing a Scale to Measure Depression

Broadly there are two factors to consider when choosing an appropriate measurement: one is its good psychometric properties, and the other is its match to investigator's assumptions.

Good psychometric properties essentially include reliability and validity of the scale.
1. Reliability measures

Reliability of a scale refers to the consistency of the observed scores (Nunnally, 1978). As a general rule, reliability for a survey type study should be not less than .8 (alpha) (Nunnally, 1978). Common types of reliability measures include alternate-form reliability, which measures the consistency of the same respondents' response to two comparable forms of the scale, inter-rater or scorer reliability, which measures the stability of the scale when applied by two or more raters', and test-retest reliability which measures the stability of a scale on two separate occasions. Mathematically it can be represented by:

\[ r = \frac{S_t^2}{S_o^2} = \frac{S_t^2}{S_t^2 - S_e^2} \]

where \( r \) is the reliability coefficient
- \( S_t^2 \) is the variance of the true scores
- \( S_o^2 \) is the variance of the observed scores
- \( S_e^2 \) is the variance of the score variances error

There are other mathematical derivatives used to compute the values of \( r \), for example the standard error measurement (SEM) formulated as \( SEM = S_o \sqrt{1-r} \), but the meaning
of r remains the same. Values of r as indicated by the
equation fall between 0 and 1. High values are taken as
reliable and vice versa. As a general rule reliability
for a survey type study should be not less than 0.6, and
for small samples, such as in clinical drug trails, it
should have a value of not less than 0.8 (Nunnally,
1978). This is based on the assumption that larger sam­
pies can average out measurement errors. Common types of
reliability measures include internal consistency, which
measures the overall correlation of different items
towards a specific dimension, inter-raters reliability,
which measures the stability of the scale when applied by
two or more raters (this does not usually apply for self­
report scales unless the respondents require assistance
from other people); test-retest reliability, which meas­
ures the stability of a scale on two separate occasions,
and alternative form reliability which measures the
correlation between the new form (usually the shorten
version) of the scale and the original. Statistical
techniques employed to calculate internal consistency are
either the Split-half coefficient, which represents the
correlation between two equal halves of the sample
scores; or Cronbach's Alpha methods. Cronbach's Alpha is
supposed to be more accurate as it computes the mean
value of all possible estimated Split-half coefficients
within a sample population (Cronbach, 1951), and, there­
fore the Alpha coefficient is usually the value used to
indicate internal consistency. Mathematically Alpha ($\alpha$) is represented by:

$$\alpha = \frac{k \bar{r}}{1 + (k-1) \bar{r}}$$

where $k$ is the number of items on the scale

$\bar{r}$ is the mean of the correlations between all paired items

2. Validity measures

Validity refers to the ability of a scale in measuring what it is designed to measure. Validity ($v$) is mathematically related to reliability ($r$) by the following equation:

$$v \leq \sqrt{r}$$

According to Downie and Heath (1967), validity coefficients usually fall between 0.4 and 0.6, given a maximum value of 1. A validity above 0.6 is said to be good. Usual types of validity include content, criterion, and construct validity.

Content validity refers to the content relevance of all items contained in a scale in relation to the universe of performance. In practice, content validity is in fact a judgment made by competent judges on the subject. Two methods are commonly used to ascertain the validity of a scale: one is the method of consensus
where more than one judge is asked to rate the overall relevance for the universe being measured, the result then becomes the validity; this is often referred to as the face validity.

Criterion validity is the ability of a scale to account for some specified criterion and is usually indicated by correlation measures. The idea is that scores obtained by the scale being validated are compared with those obtained by a reference or a set criterion (e.g., clinician's diagnosis), a high correlation is taken as confirmation of being valid in what it measures.

There are two types of criterion validity: predictive validity and concurrent validity. Predictive validity is the ability to predict a condition under a specific criterion. For example, experiences of stressful events are used to predict depression, scores on experience of stressful events will be measured at a particular time (say T1) and screened for depression by using a depression instrument, and at a later date (T2), the same subjects studied will be screened for depression by using a set criterion or other method (e.g. clinician's diagnosis) for depression; results of matched depressed cases in T1 and T2 will then be correlated to show the validity of the experience of stressful events as a good instru-
ment for predicting depression. Concurrent validity refers to the ability of a scale to indicate the condition which the scale items are designed to measure. One method of establishing a scale's concurrent validity is to use other established criterion to compare with the one being validated in the same study at the same time. For example, scales such as clinician's ratings (diagnosis) for depression are often used as a reference point for validation, a high correlation between the score of the established criterion and that of the scale being validated, at the same time, should conclude its concurrent validity.

Construct validity refers to the ability of a scale in measuring a specific theoretical construct which is not operationally defined (Cronbach & Meehl, 1955). Operationally in a multi-methods multi-traits study, Campbell and Fiske (1959, Cambell, 1960) defined it as the ability to correlate well with other factors that are theoretically related to the construct by using different methods, this is usually referred as the convergent validity. In other words it should also be significantly different from other less-related traits by using the same method, hence the term 'discriminant validity'. Another method commonly used to test construct validity is by correlating the scales being validated with other measurements already validated, say the GDS with the CES-D; this is referred to as the nomological validity.
A good measurement scale should have its reliability and validity tested, and have the results listed and explained in relation to the concepts and assumptions which have been used to develop the scale.

Depending on which concept of depression the scale is based on, an appropriate scale should be chosen on the grounds of its best match with the investigator's assumptions. For example, use of BDI would confine the investigator to a cognitive appraisal theory of depression. Some scales are developed entirely on clinical experience, and hence there are no categoric theoretical frameworks in the scale's formulation, these can be best described as eclectic, they are often adopted as global measures as they are not confined to any age groups or to any specific human groupings in their formulations. There are studies which assume one of the specific aspects as the key deficit of depression, and hence other signs and symptoms come as consequences of this core deficit. For instance, Ferster (Ferster, 1973) noted a major lowering of daily activities together with other depressive symptoms. Similarly, social skill deficits and anxiety were postulated respectively as being the core phenomena in neurotic depression by Wolpe (Wolpe, 1979) and Lewinsohn, Biglan and Zeiss (Lewinsohn, Biglan & Zeiss, 1976). Beck (Beck, 1972) also successfully made his case concerning
the core deficit of cognitive distortion in the process and outcome of depression. Scales developed in these studies inevitably put emphasis on the assumed core deficits and paid less attention to other symptoms. However, piecemeal as they were, these scales made convincing arguments in the situations they were designed to test and measure. So the choice of any one of these scales will really depend on its intended purpose of application. However, the emphasis on one aspect of these syndromes may be a lesser problem, as there is broad agreement on what depression should entail in behaviour expression. Larger problems exist in deciding a measurement scale to measure depressive moods or traits. There are four areas for consideration when choosing a scale:

(a) Mood-state mood-trait or personality-trait measures

There is a general tendency to view depression as an affective disorder rather than as a personality or as a thought disorder. The principle signs and symptoms identified in depression are mood disturbances; the fact that mood may be masked either by the person's not being aware of it or by deliberately hiding it, then draws investigators to depressed functions, including corresponding behaviour manifestations and somatic complaints, which are often used to indicate the presence of and to confirm the condition (Silverman, 1968; Levitt et al., 1983). Depression as an affect (mood-state and mood-
trait) as opposed to a personality-trait fluctuates more over time, and therefore those scales measuring a more immediate and momentary state of depression are in fact mood-state measures as opposed to those mood-trait measures which are intended for a condition lasting for a longer time (for example Steer et al., 1986, suggested a time span of a week). Personality-trait is relatively much more stable. However, there is an existing confusion in these measurements as to whether they are measuring mood-state, mood-trait or personality-trait, especially when there is no agreement on time-length cut-offs for what could be a mood or a trait. Statements like 'I feel sad' are obviously referring to the respondent's present state, while those like 'I am generally a sad person' clearly measure a personality trait; statements like 'I have been feeling sad for the last month' surely are problematic in deciding whether we need a mood-state, a mood-trait or a personality-trait measure. Levitt et al. (1983), however, suggested that the mood-trait distinction is less important as long as the investigators are certain in what they are wanting to measure. Many established scales provide flexibility in using them as a state or a trait measurement scale, for example the Depression Adjective Check List (DACL) developed by Lubin (1981). As it has been established that elderly people have a high incidence of being depressed (symptomatic) due mainly to their physical and psychosocial circum-
stances (Cheah & Beard, 1980; Abrahams & Crooks, 1984), it makes more sense in depression measures to focus on fluctuations from what is said to be normal in the cohort these people belong to. From a service provider's point of view, there is little one can do with a personality-trait characteristic which is almost a style or a personality of the client's normal life, but social workers and others alike could help if it is a mood-state or a mood-trait attributable to situational factors. As this study will essentially look at cultural factors, which tend to produce a situational condition longer than a mood-state, suitable mood-trait measures of depression will be developed in an attempt to identify possible situational and cultural factors, such as family support and filial piety. Operationally the adopted scale should be sensitive to situational changes (Thorne, 1974; 1980) and yet be reliable over a period of time in order to ascertain whether psychiatric intervention is required (Steer et al., 1986, suggested to use BDI with added time references for different measures - present for state and one week for trait measures, DSM-IIIR suggested a period of two weeks for depression).

(b) The Unitary-Binary Conception of Depression

Whether depression types can be considered to have different dimensions, i.e., a binary concept such as primary versus secondary depression types as extreme and
different types, or to exist within the same dimension, but with different intensity on an continuum of severity, i.e. a unitary concept such as the neurotic-psychotic conceptions, or both, is a controversy to be clarified in the classification models of depression. Eysenck (1970) and Kendell (1969) suggest that if depression is binary, in the sense that it can be conceived to have different category types resulting from different factors, then in order to measure its severity, one has to first decide which type of depression one wants to study, or if more types are studied, separate types will have to be measured separately. But as Levitt et al (1983) point out, the unitary and binary distinction can be a result of different diagnostic criteria, and Kendell, probably starting from the same stance, postulated that the binary concept of depression could be incorporated into what he called type A and type B depressions: the two types are mixtures of various depression types but type A is more severe than type B in every dimension (Kendell, 1968; 1977). Type A entails more severe diurnal variations in mood, guilt, retardation, insomnia and loss of weight, while type B denotes a milder fluctuation in these conditions. Type A as opposed to type B also occurs with a relative lack of situational factors which may cause stress. Our concern here, is to recognize depression at a degree of severity which indicates the need for psychiatric intervention, and then to identify possible factors
contributing to that type of depression in focus. At this point, it seems Kendell's model would suit our purpose, at least at a conceptual level. Therefore depression is seen on a continuum of severity where different dimensions, such as, guilt could be considered as summative values adding up to a level of severity. What to do next, then, is to draw a cut-off point for what could be considered to be clinical (i.e., type A, requiring psychiatric intervention) and non-clinical depression.

(c) Psychometric considerations on depression scales

Related to the unitary-binary conception and state-trait distinction are the psychometric considerations on test-retest reliabilities and internal consistency.

Basically test-retest reliabilities are used to indicate the stability and sensitivity of a depression scale over a time span. High scores indicate a scale's stability in measuring depression. Low scores, however, do not mean that the scale is unreliable, instead they indicate high sensitivity of a scale at different times and in different situations (Steer et al., 1986; Boyle, 1979; 1983; 1985). Boyle, in discussing the test-retest reliabilities (i.e., stabilities) of depression scales, concluded that test-retest reliability of a mood measure should not be too high if different situations were
encountered by the reporters. On the other hand, it should be high if the situations causing the depression were similar (Boyle, 1985). This means that, assuming situations vary over time, an ideal mood-trait measure should have only moderate test-retest reliability to have the advantages of being sensitive to changes and yet be a reliable measure to indicate stability of the condition over a period of time. There are no indications as to what the reliability cut-offs over a stated time span using a specific scale should be for these purposes, but Boyle in response to Miller and Seligman's (1973) findings of a .74 test-retest coefficient on a community sample (by using the original BDI over a three months interval) proposed that this score might have been too high, and therefore would not recommend it for situational sensitivity testing (Boyle, 1985:48).

Internal consistency or reliability by using item correlation has certain problems in the multi-dimensional studies of depression. High correlation scores indicate the items and dimensions under study are pretty similar to each other, and, therefore, it may be difficult to discriminate different aspects or factors of depressive moods. But if the scores are too low, they may indicate that what the items or dimensions represent are unrelated to each other in relation to the concepts studied (Cattell has addressed this dilemma at length in 1973; 1978;
Boyle (1983, 1985) agreed with Kline's proposal that the items correlation should be ideally around .7 (Kline, 1979). This score, as Kline indicated, could show a reasonably good reliability in a scale of depressive moods, and at the same time allow enough discrimination between different aspects of mood measures.

So in essence, the psychometric properties of a good scale for depressive moods would be one that has a moderate test-retest reliability over a desirable period of time, a moderate items correlation and one that would allow simple and straightforward factorial analysis. Needless to say, the overall validity of the scale will depend on the availability of a large pool of normalization data.

(d) Self-report or Observer-rated scales

Existing scales could be divided into these two types, the choice of which is really dependent on the investigator's purpose and the respondent's situation. For example, for the purpose of a psychiatric diagnosis and treatment, only a conclusion by the psychiatrist (i.e., observer-rated) is taken as final, whilst low literacy levels of the respondents limit the employment of self-report questionnaires. Paykel and Norton (1986) having conducted a research in comparing self-report scales and clinical interview schedules gave a summary
comparison for self-report and observer-rated instruments as follows: (P201)

<table>
<thead>
<tr>
<th>Areas assessed:</th>
<th>Self-report</th>
<th>Observer-rated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective feelings and moods</td>
<td>Yes</td>
<td>Less well</td>
</tr>
<tr>
<td>Verbal reports of observable behavior</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Judgment depending on insight</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Specificity</td>
<td>More global</td>
<td>More specific</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range of Severity</th>
<th>Less useful with severe depression, major retardation and psychotic features</th>
<th>can be used over all range, less well with mild depression</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Circumstances</th>
<th>Requires respondents' co-operation, motivation and ability to concentrate and read</th>
<th>can be completed with minimal cooperation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
<th>Brief, easy, cheap in professional time</th>
<th>Longer, requires professional rater</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Potential biases</th>
<th>Pencil-and-paper response sets</th>
<th>Rater sets and bias</th>
</tr>
</thead>
</table>

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On assessable areas, the strengths of self-report obviously lie in the non-observable items, such as feelings and moods, however, the observer-rated scales are evidently more applicable in reporting observable behaviour differences: both seem equally important for this study. Whilst moods or feelings can be best described by the respondents themselves, observable behaviour may infer more meaningful interpretations for a professional rater. For example, a respondent may not be conscious of his facial expressions during the time of depression, but a psychiatrist who knows the respondent well may observe this as a significant indicator. Nonetheless, feelings and moods are difficult, if not impossible, for observers to assess; behavioural aspects such as verbal communication well established can be quantified and incorporated into a self-rated scale. For example, in Maser's work, there was a collection of studies detailing the quantification of body movements, facial expression, vocal assessment and the pacing of speech, and their uses in self-reported scales (Maser, 1987). So unless there are strong reasons to use observer-rated scales, as would be the case in psychiatric diagnosis and treatment, self-report scales remain more comprehensive in considering both the non-observable and observable dimensions of depression. The self-report measures are designed to capture a condition globally and therefore are more suitable for use as a community screening tool, observer
ratings are designed for the observers to note specific conditions and, therefore, are for more specific uses, such as differentiating depression subtypes. As for severity measurement, Maser (1987) reported that the self-report scales performed better in identifying milder depression, while the observer-rated ones were better in identifying more severe depression. As the study is intended for the development of a community screening tool in general situations where respondents are expected to have less severe experience of depression, self-report measures would seem to be more appropriate for this study's purpose. Circumstantial considerations such as concentration, co-operation and literacy levels are more of a concern for self-report scales. However, when weighted against the huge time costs of the professional raters in observer ratings, the self-report scales are a lot cheaper. Where self-report scales are very simple and brief and people who use community services (provided by the caring professionals) are now willing to cooperate and are able to read, self-report instruments should be used. For the few who can not read, self-report measures could easily be read out to them by either their relatives, friends or the investigator. As for the biases incurred by both types, they are both liable to biases of different natures and therefore we can not conclude which is better. Nonetheless the overall rational for using self-report measures is clear.
Review of Self-reported Scales of Depression

Self-report method is by far the most common way of obtaining information in depression studies. The obvious advantage lies with its relatively easy administration (self-reported) by persons who may possess the condition, and therefore do not require 'expert psychiatrist' interviewers as the case would be in diagnostic interviews. There are naturally numerous scales developed to measure depression, but only a few have gained recognition and popularity in compatible studies (Levitt & Lubin, 1975). This review will first look at global depression scales which are adaptable for use with elderly people in cross-cultural settings, then we will look at specific scales developed for elderly people especially those suited the non-white and the Chinese population.

1. Minnesota Multiphasic Personality Inventory Depression Scale (MMPI-D)

This is the scale of choice used so far in the United States, and therefore may be the most widely applied scale in depressive studies. MMPI itself has a total of 566 items divided into ten scales originally named after the diagnostic groups (i.e., hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-
femininity, paranoid, psychasthenia, schizophrenia, hypomania, and social introversion) and are currently referred to as numbers. The depression scale is referred to as scale 2. The original depression scale consists of 60 true-false items mainly used for screening purposes to differentiate clinically depressed and non-depressed groups, and the severity; the scale can be applied to both clinical (patients with other psychiatric diagnoses) and community samples (Hathaway & McKinley, 1951). Based on all published MMPI studies of white Caucasians with a mean intelligence (IQ) of 80 or above, and with education up to sixth form level, it has been concluded that a T-score of 70 and above would indicate clinical depression (Friedman, Webb & Lewak, 1989). Scores between 70-85 would indicate a depressed person with good prognosis as he/she is still actively seeking relief. Scores between 60-70 would indicate a tendency for depression. Generally the higher the score above 70, the more severe depression would be, and vice versa. The cut-offs are meant to be the same for both sexes and for all ages. The scale attempts to make a fair coverage on cognitive items (affects, behaviour, and inter-personal) and on somatic items (sleep and eating disturbances, work disturbance, but no items on sexual disturbance or suicide). Out of the sixty items, forty-seven are also equally distributed on other scales, making only thirteen which are exclusively obvious for identifying depression (Dahlstrom,
Due to its popularity and long history, MMPI-D has no shortage of normative data to prove its reliability in many situations. According to Dahlstrom and Welsh's (Dahlstrom & Welsh, 1960) review of the data available at the time of their study, reliabilities (split-half coefficient) ranged from .35 to .84, the median was in the low .70s. Recent reviews based on 74 studies carried out between 1970 and 1981 were reported to have an average internal consistency of .81 (Hunsley et al., 1988). However, test-retest reliabilities have only been moderate if test intervals exceeded one year (average reliability coefficient about .5 for one year intervals, lower for longer periods) (Dahlstrom, Welsh & Dahlstrom, 1975). It has been argued that this moderate score reflects the accuracy and sensitivity of the scale's focus on the 'here and now' situation and thus shows up the variation of depression in the samples at different periods of time (Dahlstrom & Welsh, 1960, 1972, 1975; McNair, 1974). It is therefore not surprising to see that the scale has been more often applied in clinical situations where changes of mood symptoms need to be detected, for example, before and after drug treatments.

There are at present no acceptable shortened versions of MMPI scales, and it is advised that the full version (on sale from the Psychological Corporation as
either Form R - hard cover or Group Booklet Form - reusable) of 566 statements should be administered, as any partial use would seriously destroy accuracy and would generate a significantly different profile from that of a full version (Willcockson, Bolton & Dana, 1983; Streiner & Miller, 1986). Further evidences for this are provided by Friedman, Webb and Lewak (1989). In a review on studies and interpretations of MMPI scales, they have found that scores on depression are elevated alongside scales 7, 1, 8 and 0, meaning clinical depression is expressed with added anxiety (scale 7), increased somatic complaints (scale 1), added feelings of alienation and loneliness (scale 8) and increased social disengagement (scale 0) (Friedman, Webb & Lewak, 1989:161-162). The part or full versions of MMPI are available in 100 languages including Chinese.

The Chinese versions of MMPI have been used in Hong Kong since the 1970s: details and processes of developing revised editions of the Chinese MMPI scales can be found in Cheung's 1985 article in Butcher and Spielberger (Eds.) (1985). It has been reported that in general these Chinese versions have consistently high scores in scale-2 (depression) and scale-8 (schizophrenia) (Cheung, 1985). Based on Fanny Cheung's 1979 and 1984's (1979's revised version, available at Chinese University of Hong Kong) translated versions, Fong, Li
and Shen (1986) developed a computerized version of MMPI (MMPI-CCV, i.e., Computerised Chinese Version for Apple II and its compatibles). This version was aimed at increasing the item-responses rate as opposed to using the off-putting, tedious, pen-and-pencil exercise, and to automatically accumulate a data bank for users of MMPI. However, the respondents to this MMPI-CCV were all patients: standardized scores for normal samples are yet to be developed. Whilst acknowledging Chinese versions of MMPI, including MMPI-CCV's overall validity and reliability in Hong Kong and China (especially in clinical uses), Song et al (Song, 1986; Song et al, 1980; The National Coordination Group of MMPI in China, 1982) pointed out that there were still major problems hindering further development in China. These included:

- the full version was too long and thus it was difficult to get most respondents to complete all the items;
- some of the items were difficult for the respondents to understand;
- answers were different from those from Americans.

Cheung (1986) has indicated that the same problems existed in Hong Kong. On top of these, there were, and are, the following operational difficulties in Hong Kong:
research in service settings is extremely limited due to few resources being made available for such activities, thereby limiting the number of service personnel who can conduct the lengthy MMPI questionnaire.

The introduction of MMPI-CCV will help with the time and manpower involved in administering the questionnaire. However, the respondents in this reporting-to-computer process are still required to have a fairly good literacy level; most adults and elderly in Hong Kong do not have this.

There is no study in Hong Kong which employs MMPI together with other scales to measure depression. Hence the validity of its compatibility with other instruments used in Hong Kong, as well as its applicability with the local elderly population, is still to be developed.

A note of caution is that MMPI-D is intended to be a personality measure and therefore is more suited for depression traits rather than states.

2. Beck Depression Inventory (BDI)

BDI is based upon Beck's theory of Cognitive Triad (Beck, 1970; Beck et al., 1961) which states that a
depressive man possesses three basic cognitive qualities:

- Negative expectations of the environment
- A negative view of self
- Negative expectation of the future

Beck suggested that these negative cognitive patterns happened as a result of traumatic experience in earlier life, and would be set off from the memory when one was faced with similar circumstances. Beck asserted that the subjective appraisal of these dimensions in life determined one's affective states. This has led to two assumptions, that like other self-reporting scales intended to measure the existence and severity of depression, it is a continuum from normal to pathological depression, and factors determining depression and normal emotions are the same. The scale was formulated within these concepts - hence BDI is a comprehensive symptomatological study of depression with emphasis on cognitive contents.

The BDI consists of 21 items presented as a series of ordered statements relating to a symptom of depression, each item statement is assigned a grade from 0-3 (i.e., weights), statements and weights were developed through experience and common logic. The respondents are asked to choose statements which best describe their current situations, and then to self-evaluate on a five-levels statement indicating their intensity of
depression. Out of the 21 items, 2 are affect-related, 2 are for covert behaviour, 5 for somatic symptoms, 1 for interpersonal skill, and 11 for cognitive symptoms. Originally the BDI was intended to be an assisted self-rating instrument for clinical samples - the statements were to be read to the patients, but it has been used more commonly as a self-rating tool for the normal population.

The first use of BDI was in 1961 (Beck et al., 1961) and it was the first trial using self-reporting scales to diagnose depression. Considerable psychometric data has been accumulated over the years. Based on studies which were considered to have drawn on representative data, Beck (1972) reported general item-total correlation between .31 and .68 (Kruskal-Wallis) with only a moderate internal consistency - indicated by items-total score correlates between .32 to .62 (Schwab et al 1967), and a general reliability of .93 (Spearman-Brown split-half). Test-retest reliability, as reported by Miller and Seligman (1973), had been fairly good (.75). Correlations with the Hamilton Depression Rating Scale (HRDS, a widely used clinician scale) ranged from moderate (.58 recorded by Miller et al., 1982) to good (.82 recorded by Williams et al., 1972). Cut-off (mean) scores to diagnose depression and its severity in clinical samples were summarized by Beck et al in their 1961 study on 409 patients (Beck et
al., 1961) as:

<table>
<thead>
<tr>
<th>Depression Level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No depression</td>
<td>10.9</td>
</tr>
<tr>
<td>Mild depression</td>
<td>18.7</td>
</tr>
<tr>
<td>Moderate depression</td>
<td>25.4</td>
</tr>
<tr>
<td>Severe depression</td>
<td>30.0</td>
</tr>
</tbody>
</table>

However, in a later study, having incorporated more standardized data, Beck and Beamesderfer (1974) proposed a cut-off score of 13 for screening and 21 for clinical depression. For normal population samples, the cut-off scores for screening are suggested to be between 7-9 for both sexes and for all ages (Blumberry et al., 1978).

There are few shortened versions for the BDI (Beck & Beck, 1972, for version of 13 items; Bech et al., 1975 for a version of 9 items). But because the original scale is already very short and easy to administer, the full version has been utilized most frequently, especially when some of the shortened versions were found to be unsatisfactory (Kearns et al., 1982; Beck and Beamesderfer, 1974).

The Chinese version of BDI was first translated by Chan and Tsoi (1984), and Shek (in press) has further established its validity and reliability in Hong Kong. However, Shek in one of his studies investigating the impacts of parental treatment styles on adolescents in
relation to depression symptomatology, pointed out that the BDI missed quite a few key determinants of depression in its theoretical construct (Shek, 1989). His study concluded that though Beck's 'cognitive triad' theory was supported, other determinants which BDI failed to focus on - chronic anxiety, parent-child relations, personality traits, somatic complaints and purpose in life - were found to have a direct effect on symptomatological depression in adolescents.

Additionally, BDI may not be as good a predictor for depression among the elderly, as most likely the elderly in Hong Kong would feel depressed, as would be the case in the States (Weissman et al., 1982), under the cognitive construction (or distortion) of a negative self-image and a negative expectation about their present and their future. This was made evident by Lam in her study about the locus of control of the Chinese elderly. She found that the Chinese elderly tended to have an externally oriented locus of control, meaning that they felt they had little control over their life situations; this was associated with a low self-image, a negative view of the present and the future (Lam, 1986). Similarly, the report of Lyons et al on the hospitalized elderly (1989), discarded the use of BDI for screening depression because the hospitalized elderly tended to perseverate on the most negative response (i.e., most severe) on each
question-item of the BDI, creating an overall inflated picture of depression in these cases. However, Gallagher et al (1983), in using the BDI on 102 elderly, who were seeking psychological treatments, reported that BDI was efficient in screening the major depressive disorders (MDD as according to the DSM-III criteria), though its accuracy for minor depressive disorders was questioned. Beck et al (1988), in their review on the psychometric properties of BDI, claimed that BDI was suitable for all ages, though the cut-off scores might need to be adjusted; and Schnurr et al's (1976) study of an elderly psychiatric sample was cited to support this claim. So it would appear that the suitability of using BDI in the older population is still to be confirmed. But, what seems to be clear, is that BDI did indeed capture the cognitive distortion which is much more common in the elderly, thereby making the scores on the inventory more inflated.

In all, the BDI has excellent validated psychometric data for references. And locally, Shek's study (Skek, 1989) posted an important development of the use of BDI in Hong Kong, that validity of BDI is not affected when applied together with other standardized instruments to measure depression, as well as capable in cross-comparison analysis with other scales used. However, its applicability and validity as a diagnostic scale with the elderly in Hong Kong are yet to be affirmed.
3. Zung's Self-Rating Depression Scale (SDS)

Zung introduced a 20-item self-reporting scale in 1965 initially designed to measure severity of depression in patients diagnosed to have depression or other psychiatric disorders. The items were formulated to cover the usual symptoms of depression in an attempt to discriminate it from anxiety (Zung, 1965), and the respondents were asked to rate themselves on a 4-point scale denoting the frequencies, rather than the felt severity, of the symptom from a little of the time (0) to most of the time (4). Half of the items were worded positively and the others negatively to avoid response bias, as suggested by Cronbach (1946). There are 3 affect items, 6 cognitive, 4 overt-motor behaviour, 6 somatic and 1 inter-personal. The cut-off scores were suggested as 74 (out of a total of 80) for diagnosed depressed patients, 53 for other psychiatric patients, and 33 for normals (under 65 years) (Zung, 1965), Zung also carried out another study to establish a higher cut-off score of 48.3 for people over 65 (Zung, 1967b). Blumenthal and Dielman (1975) reviewed 22 later studies and also confirmed that the mean scores for suggested cut-offs were generally consistent with those suggested by Zung.

The general validity of the SDS has been good
when compared to clinician ratings such as HDRS (r=.79 in Brown & Zung, 1972), to self-reporting scales such as BDI (r=.73, Davis et al, 1975) and MMPI (r=.70, Zung et al, 1965). However, Relm in his search over a massive number of studies using SDS still concluded that little attempt was made to validate the internal consistency or its test-retest reliability (Relm, 1988). In studies which attempted to use the SDS as a diagnostic instrument to differentiate clinical depression from non-depression and its severity (e.g. Carrol et al., 1973; Lunghi, 1977), the scale was found to have a discriminatory ability. However, some other studies were not as promising. For example Zung himself (1967a) and Zung et al (1965) found that only one set of items, not the full version, was found significantly correlated to depression; Downing and Rickels (1972) used the scale with samples of psychiatric patients and found that it could not differentiate the depressed from the non-depressed; Raft et al (1977), in their study on depressed patients and conversion hysteria, suggested that the scale could not make any distinction between primary depression and secondary depressions. Despite these weaknesses, the SDS has been widely used as a diagnostic instrument in research with normal and clinical populations. It has also earned a good reputation in Zung's (1972) cross-cultural studies with samples from the States, some East and West European countries as well as from India; and Taiwan's Chinese population (Miao, 1976; 1977).
The full version of SDS is normally applied to normal adults below age 65, although shortened versions of less than the original 20 items have been used, for example Snaith et al (1971) and Zinkin and Birtchnell (1971) extracted ten items from the SDS to aid their studies in depression, with two added items to cover anxiety (i.e., usually referred to as the Wakefield Self-Assessment Depression Inventory). Some items, not the full version, have occasionally been used for the over 65s (e.g., Kane & Kane, 1981; Lam, 1986). All shorten versions for the elderly, so far, were developed, as suggested by Zung (1967b), by eliminating those items which were directly related to biological symptoms, such as loss of libido, decreased appetite and diurnal variations. Findings of these studies generally have good correlations with those derived from using the full version, hence the shortened versions were taken to be as good as the full version in its applicability to the elderly population. Though rarely have these studies have questioned the internal consistency, test-retest reliability of the shortened versions, and its validation against clinicians' ratings.

The Chinese language version (full) was translated and first employed by Miao (1976) in her study on the mental health of college freshmen in Taiwan.
ric properties reported were similar to that of Song's studies. Lam, by dropping all but one question in the physiological disturbances domain of the SDS, and by eliminating those she thought would be inappropriate to ask a Chinese elderly respondent, came up with a 10-item shortened Chinese version in her study of 100 elderly in the waiting list for residential homes in Hong Kong (Lam, 1986), an equivalent cut-off score of 19.3 (48.3 for the full version) was used. These two studies both claimed good reliability for their translated versions (Chinese) and compared well with Zung's cross-cultural findings. However, Miao found that there were significant differences for different sexes in her samples of the under 19s (Miao, 1976; 1977), whilst Lam found no significant differences in this aspect in her elderly sample of the over 60s (Lam, 1986). But like other studies employing the SDS, these Chinese studies did not query the Chinese version's test-retest reliability and its validity against the local clinicians' ratings or diagnoses. Operational advantages of the SDS are obviously its being short and simple, and that it can be further shortened for specific target groups as well as being used with other scales.

4. The Centre for Epidemiological Studies Depression (CES-D) Scale

This is a 20 item scale to indicate current
depressive symptoms. The original aim of this scale was to survey the presence of depressive mood (i.e. the affective component of depression) and to measure its severity. It was not to be an instrument for diagnosis of depression. However, later studies have often used it for this purpose (for examples, Craig & VanNatta, 1976a; 1976b; Weissman et al., 1977). The scale was first tested by Weissman, Prusoff and Newberry in 1975 (Weissman et al., 1975), by Weissman, Scholomskes, Pottenger, and Locke in 1977 (Weissman, Scholomskes et al., 1977), and, more recently, in 1986 by Lin; Dean and Ensel (Lin et al., 1986). The items were derived from four previously commonly used scales:

- Zung's Self-Rating Depression Scale (Zung, 1965)
- the Beck Depression Inventory (Beck et al, 1961)
- parts of the Minnesota Multiphasic Personality Inventory (development by Dahlstrom and Welsh, 1960)
- the Raskin Self-reported Depression Scale
  (developed based on various clinicians ratings and self ratings by Raskin et al, 1969; 1970)

The 20 items were each graded to a 4-point scale with 4 worded positively and 16 worded negatively. Respondents were asked how often they were asked how often they experienced the feelings obtained in the questions in the past week prior to the interview and the answer was rated
according to: (0) rarely or none (less than once a week) (1) some or a little (1-2 days a week) (2) occasionally or a moderate amount (3-4 days a week) (3) most or all of the time (5-7 days a week). The positive items were rated the reverse. These 20 items were supposed to test all the 6 major components of depression symptoms: feelings of guilt and worthlessness, feelings of helplessness, hopelessness, loss of appetite, sleep disturbance and psychomotor disturbance (Radloff, 1975). Obviously the design was meant to be sensitive beyond a one-week duration, and would not be appropriate for shorter time assessments; and the severity is measured by frequencies and not qualities - for example one could feel severely depressed in 1 or 2 days each week.

The suggested cut-off score (mean) for being depression-prone is from 7.94 to 9.25, and for clinical depression, 16 in the Caucasian white normal populations (Radloff, 1977; Vernon et al, 1982; Roberts & Vernon, 1983). Kuo (1984) and Ying (1988) have both accepted these values for their American-Chinese samples (normal) as cut-offs for indicating the same conditions.

The psychometric properties of the CES-D have been good. It was tested with high internal consistency and test-retest reliability. Radloff (1977) claimed an alpha coefficient range from .85 to .90, and that Guttman split-half and Spearman-Brown coefficient ranges were .76.
to .85 and .86 to .92 respectively. Sensitivity of the scale to test changes in mood has also been good. From correlations on test-retest reliability data of intervals from 2 weeks to one year, reliability significantly decreased as intervals increased—showing that the scale was sensitive to changes (Radloff, 1977). Validity, compared with other scales, including clinicians ratings, was acceptable, from .44 to .75 (Radloff, 1977; Craig & VanNatta, 1976b; Weissman et al., 1975; Weissman, Potterger et al., 1977). It is highly correlated to other standardized depression scales, such as the Symptoms Check List 90-item version, being .89 (Weissman and Locke, 1975; Weissman, Scholomskes et al., 1977). Its stability over (time up to 8 weeks) has been fair (test-retest reliability correlation of .57 for 8 weeks recorded in Radloff, 1977); Lin et al (1986) has also affirmed this stability over a span of one year, but recommended not to use the scale for times longer than one year. The CES-D's cross-cultural applicability has been good. For example, Roberts & Vernon (1983) on Mexican-Americans and Kuo (1984) and Ying (1988) on American-Chinese, have noted little difficulty in applying the scale.

There is no acceptable shortened version of the CES-D. There is also no publicized attempt in Hong Kong and other notable Chinese countries, such as China and Taiwan, to use the CES-D in community research or clini-
cal studies, and therefore one has to rely on the two studies on overseas Chinese (i.e., Kuo and Ying’s) to highlight the performance of the scale with Chinese samples.

Ying’s study was the most recent and was based on a randomly selected sample (1000 households) from the San Francisco telephone directory. The final completed interviewees who met the criteria of being ethnically Chinese and aged 19 and above were 360. All interviews were conducted over the telephone. Kuo’s study was on American-Asians in Seattle, in which a sample of ethnic Chinese was included. Methods used to draw this sample and socio-economic background of the sample were not explained in detail, and hence it is difficult to compare the findings of the two studies. If Radloff’s mean scores for cut-offs were accepted (Radloff, 1977), Ying found that her sample was generally above the highest cut-off for being depression-prone; this was 11.55 as opposed to the original 9.25, and Kuo found that the Chinese sample had a mean of 6.93 - well below the suggested mean. These somewhat contradictory scores on two groups of Chinese in the States were explained by Ying as possibly reflecting socioeconomic differences, as she found that the education and occupation status of the Chinese sample significantly correlated with the mean scores, and suspected that the Seattle sample might in fact be of a higher socioeconomic category than hers. But neither of the two
studies indicated the need to adjust the original cut-off scores. In those attributes which Kuo failed to report, Ying reported that, quite contrary to previous findings employing CES-D, marital status was not a factor correlated with depression and age difference was not significant, but was only significant when socioeconomic factors were held constant - in fact the below 40s experienced greater depression than those above, including the 60s and older. Ying explained that the family support network could have given the singles the same emotional buffering effect as the marriage relationship would have; the interplay of age and socioeconomic factors could mean that socioeconomic factors have an overriding importance to age differences with this Chinese sample, and that those less prone to depression in the older age groups had more settled home and family environments. It is doubtful that these explanations do indeed explain the statistical findings, especially when depressive symptoms are usually thought of as being inevitable in old age (i.e., above 60, see Weissman et al., 1982). Nevertheless psychometric properties of the CES-D so far, do not exclude its possibility of being used with the elderly population.

5. The Clinical Measurement Package (CMP)

The CMP were initially made up of seven scales
and were developed by Hudson and Glisson (1976), various studies then were carried out to affirm their validity and reliability in the dimensions the scales were intended to test (Hudson and Proctor, 1976; 1977; Hudson, 1977). The seven dimensions were (1) depression, (2) self-esteem, (3) marital discord, (4) sexual discord, (5) parent-child relationship as seen by the parent, (6) parent-child relationship as seen by the child in relation to the mother, and (7) parent-child relationship as seen by the child in relation to the father. Two more dimensions (scales) were added in 1978 (Hudson, 1978), namely the intrafamilial stress (8) and peer stress (9). Then all nine scales were revised to form the existing CMP in 1981 (Hudson, 1981). Despite the claimed good reliability and validity of the scales by Hudson (1982), there were few other studies and texts adopting this package (Fischer, 1978; Grinnell, 1981; Rosenblatt & Waldfoget, 1982; Fischer & Bloom, 1982). There is, in general, a relative lack of normative data when compared to the situation of other established measurements of depression such as SDS, BDI, CES-D and MMPI-D. However, the historical development of the CMP has been well accounted for and its psychometric characteristics have been carefully verified by Hudson and his associates (1982), and the CMP certainly would seem to be a measurement which incorporates significant and specific social dimensions, such as parent-child relationship, which other scales would have missed.
The nine scales have the same structure and weighting. Each contains a 25-item questionnaire with every item assigned a five point scale (from 1 to 5), noting frequencies from rarely or none of the time; a little of the time; some of the time; a good part of the time; to most or all of the time. Response set biases are controlled by the usual practice of having both positively and negatively worded statements. Each scale is designed to be uni-dimensional in its measurement. The CMP, unlike some of the scales, requires reverse scoring for positively worded items, as a high summated score is used to indicate the severity of the problem, and vice versa.

The Generalized Contentment Scale (GCS) is designed to measure non-psychotic depression with a suggested cut-off score of 30 or above for diagnostic purposes. A score of 50 to 70 indicates the respondent is suffering from quite severe depression, anything above 70 is an indication of severe depression. It was found in Hudson's and his associates' studies that scores between 50 to 70 were often accompanied by suicidal ideation, and 70 or above with actual suicidal attempts. These findings though was correlated with the scores of GCS, the scale should not at this moment be used as a predictive tool for suicide. The scale has not been designed as such. Also, though the scale can be used in measuring the
intensity of depression in psychotic cases, it should not be administered while the respondents are actively psychotic.

The structure of GCS is simple. There are 12 positively worded questions and the rest (13) are worded negatively. Questions spread to cover content domains are loaded towards affects, feelings and inter-personal areas: 6 for affects, 10 related to the cognitive appraisal, 5 inter-personal, 1 overt-motor sign and 1 somatic complaint. This in fact clearly illustrate that the GCS as a partial package of CMP was designed to fit in with other scales in the same package, which has a stress on cognitive appraisals as well as on inter-personal relationships. General reliability was very good (Hudson, 1982). According to Hudson's review, general reliability was very good, ranging from .89 alpha (Murphy, Hudson & Cheung, 1980; Hudson & Murphy, 1980) to .96 alpha (Hudson, Acklin & Bartosh, 1980; Hudson, Hamada, Keech & Harlan, 1980). Discriminant validity was verified against BDI and SDS with a known depression group, the score was a good .74 (as opposed to the .7 for BDI and .72 for SDS) (Hudson, Hamada, Keech & Harlan, 1980).

There are versions of CMP in other languages including Chinese, though the pool of normalization data is extremely limited. The Chinese version of the whole CMP, including the GCS, was said to have good psychomet-
ric properties similar to the original English version (Murphy, Hudson & Cheung, 1980; Cheung & Hudson, 1981). There are no shortened versions of GCS. The CMP has never been used in Hong Kong as a whole package, nor the GCS on its own. As for its applicability for the elderly population, part of the CMP, namely the GCS, ISE, IMS, ISS was tested and had similarly good results in a study on personal and social dysfunctionings of older couples (Murphy, Hudson & Cheung, 1980).

6. Carroll Rating Scale (CRS)

This scale is a 52-statements self-reported version of the original 17-items clinician rating scale 'Hamilton Depression Rating Scale (HDRS)' which has been enjoying a good reputation amongst psychiatrists for its good reliability and validity as a measure of severity of diagnosed depression (Feinberg & Carroll, 1986; Thompson, 1989). The HDRS has altogether 21 items but only 17 will score. Four were considered by Hamilton as either irrelevant or too frequently occurring in known depressed patients (Hamilton, 1960) and therefore were for psychiatrists' reference only. The 52-statements, following the construct of HDRS, in fact have been re-structured from the original 17 items with a yes/no answer for each statement. Each of the item is now referred by two or four statements with increased severity depending on the
assigned scores (either 0-2 or 0-4 for each item) on the original items, for example, the item on sex was on a 0-2 score, but is now replaced by two yes/no statements denoting different severity: 'My sexual interest is the same as before I got sick'. 'Since my illness I have completely lost interest in sex'. Although the HDRS was intended for known depressives, Feinberg and Carroll (1986) suggested that the CRS could be used as a screening instrument for community samples seeking psychiatric help.

Good reliability and validity have been reported by Feinbery and Carroll (1986) based on their study of 119 adults aged from 18-64. A split-half reliability of .87 (for 12 negatively worded statements) and .98 (for 40 positively worded statements, and criterion validity with HDRS on another study using 278 known depressed patients was very good (.8) (Carroll et al, 1981). Same day comparison with BDI also revealed a good validity of .86. In comparing the CRS with the BDI by holding the HDRS as a standard criterion, it would appear that the CRS was a better instrument for matching the HDRS than the BDI, validity being .71 for CRS-HDRS and .6 for BDI-HDRS (Carroll et al, 1981). Feinberg (Feinberg et al, 1981), when comparing the CRS to the Visual Analogue Scale (VAS) and the Global Clinical Rating of Depression (CRGD) reported a fair correlation, being .71 and .63 respectively. However, Robbins (Robbins et al., 1985), indicat-
ed a poorer validity with HDRS in a study focusing on adolescents rather than adults, being just .46. This perhaps reflects the poor transferability (ability to measure the severity of the variable in different situations or samples) of the original HDRS, as indicated in Bech et al's study (1981), using a complicated Rasch model (Rasch, 1960) of factor analysis. So how well the CRS will perform in the case of the Chinese elderly remains to be seen.

7. Other Rating Scales

There are other self-rating scales for depression which are less developed in terms of their construct or having less normative data, but are worth mentioning for either their simplicity in scoring or their potential for adoption in this study. Scales include the Visual Analogous Scale (VAS) initially developed by Aitken (1969), Depression Adjective Checklists (DACL) by Lubin (1965, 1966, 1967) and Levitt, Lubin and Brooks (1983), Symptoms Check Lists (SCL) by Derogatis (1977), and a self-report version of the Social Adjustment Scale (SAS) by Weissman & Bothwell (1976).

The VAS contains just one 100mm line anchored at one point which says 'worst' and at the other point 'best'. Respondents are asked to anchor at any point on the line.
which they feel best describes their image as a response to the question 'how is your mood today'. Then the marked point is measured to score. It can be adapted to fit different time frames as well as different aspects of depression. Obviously the VAS is exposed to various problems including unclear theoretical construct, and tapping responses which may not be comparable (as respondents may have different criteria of response). But, strikingly, VAS has been reported to have high correlations with many established depression scales such as the HDRS, BDI and SDS, from .51 to .88 (Davies et al, 1975), and a good test re-test reliability ranging from .61 to .73 (Folstein & Luria, 1973). The VAS, then, seems to be inadequate for specific aspects of depression, however, it should be the shortest and simplest and yet is a reliable instrument for global depression.

The DACL was designed to measure a transient depressive state as opposed to a chronic and enduring depression, having altogether seven alternate forms (A-G) containing 22 positive and 10 negative adjectives for some (A-D), and 22 positive and 12 negative adjectives for the rest of the three forms (Lubin, 1965). Adjectives contained in the forms were based on a pool of adjectives from which 47 known female depressives were differentiated from 100 normal females, and were descriptive of mood states. The scoring was done by adding the number of all positives then minuses all the nega-
tives selected. Seven forms are to be used alternately if
the same respondents are asked to assess themselves
repeatedly. The time frames can be set to 'today' or 'in
general'. Basic psychometric properties reported by
Lubin (1967) were good (reliabilities were good with
normals (.83-.92) and with known depressives (.89-.92).
Internal consistency or validity of each form was excel-
 lent, ranging from .79 to .90. Test retest reliabilities
reported were low, ranging from .198 to .22 for different
forms; reflecting the DACL's sensitively to mood
changes). As a whole, DACL has a large and sophisticated
data pool from which normative results could be used for
comparison; it is easy and short to administer; and it is
good for measuring mood changes over a brief period of
time. However, like the VAS, the DACL has failed to be a
syndromnal measure of depression and appears only to tap
depressive mood (Shaw et al., 1985).

The SCL, sometimes referred to as HSCL (Hopkins
Symptoms Checklists), developed by Derogatis and others,
was based on a joint research between Johns Hopkins
University (where Derogatis was a staff member), the
University of Pennsylvania and the University of Chicago.
The fund was made available by the National Institute of
Mental Health. There were three scales developed as a
result of this joint research, namely the SCL-35, SCL-58
and SCL-90 versions. Different versions were developed
for different research purposes, for instance the SCL-58 was specifically for use in clinical drug trials. All of the three scales were based on clinicians' consensus on syndromes of depression covering a) somatization, b) obsessive-compulsion, c) interpersonal sensitivity, d) depression, e) anxiety, f) hostility, and g) phobic anxiety; with SCL-90 to cover two more dimensions considered to be associated with severe depression: h) paranoid ideation and i) psychoticism. The three SCLs all have numbered statements, each with a five point scale ranging from 'not at all' (0), 'a little bit'; (1), 'moderately' (2), 'quite a bit' (3) to 'extremely' (4). Time frame was set to the past week. The SCL-90 has a self-report version, a clinician version and an observer version; and is the one amongst the three scales that has a comprehensive range of data presented in Derogatis's manual (Derogatis, 1977). Reliabilities and validities reported by Derogatis were very good, but few other studies have made use of the scale since its development. So this is a scale that appears to be good at face value especially in tapping psychiatrically related symptoms. However, other social dimensions of depression such as social relationship seem to have been ignored.

The SAS was developed from an equivalent clinician interview schedule originally discussed in Weissman & Paykel's study on depression and social adjustment among women (Weissman & Pakkel, 1974). It was designed to
measure social adjustment within the context of depression, and therefore could be considered as measuring the social interactional aspects of depression. The SAS contains 42 items each with five statements describing five different roles in relation to social adjustment: respondents are asked to choose just one which best describes their situation. Psychometric properties reported by Weissman & Bothwell (1976) were good. The obvious advantage of this scale over the others is its extensive coverage of social interpersonal factors, which other scales only address lightly.

Measurements mentioned so far were intended for the general population and were not age or culture specific. As discussed, there is no reason why these scales cannot be adapted to suit a specific purpose, providing that the instrument is carefully cross-validated in its construct and its application. However, inevitably some are biased towards certain theoretical construct (e.g. BDI for cognitive assumptions, MMPI for personality traits), and yet some have been verified to be more suited to certain population groups (e.g. SCL for known patients, CAS for adults). Some studies have also raised doubts on the precision of general scales in measuring depression in the elderly, especially in the case of the old. For example, in a study undertaken to verify the validity of six commonly used rating scales for depression in the old
old, Weiss, Nagel and Aronson (1986) concluded that most scales developed under the DSM-III criteria had missed those symptoms commonly reported by the elderly population - including loss of self-esteem, feelings of helplessness, and complaints of cognitive deficit. There has not been any new or modified depression measurements developed specially for the Chinese elderly population in Hong Kong, except for Lam's study where the SDS was employed to measure the depression level of those elderly awaiting nursing home places (Lam, 1986). There is, however, not enough evidence to refute the valid uses of these scales; but at the same time evidence so far presented certainly has encouraged the development of an old age specific depression measurement. A scale developed specifically for old age respondents and which has been widely used internationally, in recent years, is the Geriatric Depression Scale (GDS).

8. The Geriatric Depression Scale (GDS)

The GDS was initially developed and reported on by Brink and Yesavage and his colleagues (Brink et al., 1982; Yesavage et al., 1983). Since then the scale has been widely adopted as a self-report measure for depression in old age. The scale has the advantages of being short (30 items) and simple to administer (only requires yes/no answers), and is not heavily loaded with somatic symptoms which are frequently reported in the case of the
elderly. There is also a validated shortened 15-item version of the scale (Yesavage, 1988). Scoring is simple. An answer which matches with the pre-coded (highlighted Yes or No answers) answers for depression will score one point. On a 30-item version, a score of 11 would indicate mild depression and 17 for severe depression. A score of 6 or more on the shortened 15-item version should indicate presence of depression. The shortened version however has been found to only correlate moderately (r = .66, p < .01) with the full version (Alden et al., 1989), hence, it should not be considered as a good substitute for the long version.

Recent studies have also shown good reliability and validity of the scale (O'Riordan et al., 1990; Lyons et al., 1989; Dunn & Sacco, 1988; 1989; Agrell & Dehlin, 1989; Alden et al., 1989). Yesavage et al (1983) in their own study reported a general reliability of .94 and a test-retest score of .85, discriminant validity was within the .8 range. Lyons et al (1989) reported a general reliability between .88 to .93, and an inter-rater reliability (reading out) reaching .85. The test-retest reliability was exceptionally high within ten to twelve days, being .98, indicating that the scale was stable over time. Validity when compared to other ratings such as the HDRS, Symptoms Checklist (SCL-90), were also good, ranging from .62 to .94 (Yesavage et al., 1983; Lyons et
The GDS has so far received almost exclusively positive comments from those studies employing this scale. It has been conclusively recommended for screening depression in the older population including the old old. Cross-cultural applications, so far have been few and far between. But from those studies already carried out, such as in Israel (Cwikel & Ritchie, 1989) and in Sweden (Agrell & Dehlin, 1989), there were no difficulties reported. There have not been any attempts to apply the GDS on older Chinese, nor is there a translated Chinese version.

Choosing a Suitable Scale for the Chinese Elderly

It is possible that all of the scales reviewed in this paper could be used with older people. Some are more suitable in their length and structure, others have been more specifically tested for this use. It is not possible to choose one without carefully comparing them against some standardized characteristics. A comparative summary can be produced as follow: (Table 2)
Table 2: Comparison of Measurement Scales of Depression

<table>
<thead>
<tr>
<th>Scales</th>
<th>MMPI-D</th>
<th>SDS</th>
<th>BDI</th>
<th>CES-D</th>
<th>CMP</th>
<th>CRS</th>
<th>GDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory Construct</td>
<td>No (a)</td>
<td>No (a)</td>
<td>Yes</td>
<td>No (a)</td>
<td>No (a)</td>
<td>No (a)</td>
<td>Yes</td>
</tr>
<tr>
<td>Pool of Norm data</td>
<td>Large</td>
<td>Large</td>
<td>Large</td>
<td>Fair</td>
<td>Little</td>
<td>Fair</td>
<td>Large</td>
</tr>
<tr>
<td>General</td>
<td>.35-</td>
<td>no firm data</td>
<td>.31-</td>
<td>.76-</td>
<td>.89-</td>
<td>.87-</td>
<td>.85-</td>
</tr>
<tr>
<td>Reliability</td>
<td>.84</td>
<td>.93</td>
<td>.92</td>
<td>.96</td>
<td>.98</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>Test-retest</td>
<td>.5(e)</td>
<td>no firm data</td>
<td>.75</td>
<td>.57(e)</td>
<td>no firm data</td>
<td>.46(e)</td>
<td>.98</td>
</tr>
<tr>
<td>Reliability</td>
<td>.81</td>
<td>.79</td>
<td>.82</td>
<td>.89</td>
<td>-</td>
<td>.86</td>
<td>.94</td>
</tr>
<tr>
<td>Validity</td>
<td>.5-</td>
<td>.7-</td>
<td>.58-</td>
<td>.44-</td>
<td>.74</td>
<td>.63-</td>
<td>.62-</td>
</tr>
<tr>
<td>Range</td>
<td>.81</td>
<td>.79</td>
<td>.82</td>
<td>.89</td>
<td>-</td>
<td>.86</td>
<td>.94</td>
</tr>
<tr>
<td>No. of Items</td>
<td>60*</td>
<td>20*</td>
<td>21*</td>
<td>20</td>
<td>25</td>
<td>52</td>
<td>30*</td>
</tr>
<tr>
<td>Answer Structure</td>
<td>Y/N</td>
<td>Likert 0-4</td>
<td>Y/N(f)</td>
<td>Likert 0-4</td>
<td>Likert 1-5</td>
<td>Y/N(f)</td>
<td>Y/N</td>
</tr>
<tr>
<td>Validated Chinese Version</td>
<td>Yes</td>
<td>Yes(g)</td>
<td>Yes(h)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Validated Use in Hong Kong</td>
<td>Yes</td>
<td>Yes(g)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Validated Use with Elderly</td>
<td>Yes</td>
<td>Yes(g)</td>
<td>Yes(i)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(j)</td>
</tr>
</tbody>
</table>

* shortened version available
(a) based on common clinical symptoms of depression
(b) but not had its reliability (test-retest) tested
(c) but data based on the research studies carried out by Hudson's team were fairly substantial
(d) large research data especially in recent years
(e) only for the MMPI-D, not the whole scale
(f) with different weighting for different questions
(g) a shortened 10-item version with the elderly awaiting admission to nursing homes
(h) validated on Chinese teenagers
(i) conflicting evidences on its construct validity
(j) specially designed for the elderly

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If the choice for a scale is primarily on its empirical validity for the construct (i.e. depression) in specific situations for specific groups, then BDI would appear to be not the most appropriate for the elderly as it is intended to tap the perception of the past, the present and the future situations which the elderly often respond negatively. And if one considers the practical aspects of the scale being used by the elderly, then the scale must be short and simple enough for self-administration or for reading out loud, hence the MMPI and CRS would appear to be less ideal. So this leaves the SDS, CES-D, CMP, and GDS for further elimination. GDS is obviously the best choice when criteria such as having a large pool of elderly-relevant data, specially designed items, being validated for the elderly and using just yes/no answer structure; the SDS and CES-D though not specially designed for the elderly have a fairly large elderly-relevant data pool; CMP is the weakest in these criteria. These factors with further considerations on local-specific situations, indicate a clear choice for GDS.

Local-specific Considerations

Depression in its general sense has been said to be an inevitable reality in the aging process across culture (Marsella, 1980; Marsella et al., 1982). Depres-
sion occurs in any age groups from children to the old old, though certain symptoms may be manifested in different ways. The elderly, especially the old old, have been considered to have their depressive symptoms 'masked' by their bodily complaints (Goldfarb, 1975; Yesavage et al., 1983) and by cognitive impairment (Kiloh, 1961; Wells, 1983; La Rue et al., 1985; 1986). Such differences in symptoms presentation do not suggest that depression exists in different forms, rather many gerontologists have now adopted a view which sees elderly depression as possessing the same primary features (syndrome) as adults of younger age groups across culture. Manifestation of depression, if different, is seen as a secondary response to depression and other related factors.

Based on the above view, depression among the Chinese elderly in Hong Kong may present symptomatic differences or may be responded to differently when compared to their Western counterparts. However, the primary features of depression shall still prevail underneath the 'mask' of somatic and cognitive complaints. The major advantage of taking this view, as proposed by Wells (1983), Yesavage et al. (1983) and Kanton et al. (1986), is that it allows physicians and caring professionals alike to be alert of depression which may exist in all elderly patients once relevant secondary symptoms are observed. While treating the medical complaints as they are presented, preventative (e.g. prescribing prophylac-
tics or psychotherapeutic groups) measures of depression may also be considered.

Taking these into consideration in terms of choosing a depressive screening measurement for Hong Kong elderly people, the following are worth considering:

1) Depressed elderly people in general are unwilling to seek medical help. This is believed to be more pronounced in the Chinese (Lau, 1991). Community screening, as opposed to clinician interviews, therefore could be an easier way to identify these people in normal social settings (e.g. social centres) well in advance of any deteriorating conditions (e.g. suicidal risk). This also implies the use of a simple, validated, self-report type, questionnaire. (Cheung et al., 1984; Wong & Chan, 1984).

2) It has been said that Asians, including the Chinese elderly, are more apt to present their depressive feelings in somatic forms (Tseng, 1975; Kleinman, 1977, 1982; Rack, 1982). Studies on the Chinese in Hong Kong have also confirmed that this may be still the case (Cheung et al., 1984; Wong & Chan, 1984). Also it has been suggested that the Chinese frequently display somatic and cognitive distortion symptoms instead of verbalizing their depressed feelings. These symptoms, though usually indica-
tors for diagnosis of depression in younger people, are usually overlooked by medical practitioners who take them as normal aging symptoms. A good screening tool should avoid on the one hand amplifying these symptoms while being able to reveal undue somatic and cognitive symptoms on the other.

3) Education is generally poor amongst the elderly in Hong Kong, so pen-and-pencil types of self-reporting instrument may be a problem. However, shortage of community professional staff is also a problem for observer-rated instruments. The compromise perhaps is a device which has the structure of a simple self-report questionnaire, and can be read out to the respondents by a sensible person, i.e., a structured interview instrument.

So this study employed the GDS as its major instrument for screening depression, its reliability and validity were tested against clinicians' ratings. The two self-report scales, namely the SDS and CES-D were tested concurrently, but the SDS was eventually dropped for many of its items were not completed by the respondents.

Limitations of Scaling Measures

It must be stressed that measurement of human characteristics in any form is just an assigned numeral to an element of behaviour or a phenomenon such as de-
pression, it has no meaning until it is given one. For example, sleep disturbance is assigned scores ranging from 1 to 5 at equal intervals of 1, corresponding to no sleep disturbance(1), less than normal sleep disturbance(2), normal sleep disturbance(3), more than normal sleep disturbance(4), and frequent sleep disturbance(5); this way sleep disturbance as a qualitative symptom is quantified to have a numerical value which carries a meaning that the higher the scores, the more severe sleep disturbance one would have experienced. The numerical differences between two scores therefore imply a 'calculable' quantity of sleep disturbance, hence quantity of sleep disturbance between score 1 and 2 is 1, which is in theory equivalent to the same quantity of sleep disturbance between score 4 and 5. Such mathematical assumptions of human behaviour have their advantages in making known quantitatively a unit of human behaviour which otherwise could only be subjectively qualified, thereafter such assigned values could then be used in all numerical operations to yield objective statistical results. The inherent problems of so doing, are: to what extent does this assignment reflects the true value of the referred behaviour (there is no absolute zero in human behaviour), and that to what extent are the assigned equal intervals in fact equal in behavioural terms. The lack of true (absolute) value is a less severe handicap when human behavioural scientists accept that
the assigned numerals are only referred to the 'rank-order' of the concerned behaviour, and hence the existing scales used to measure intelligence, aptitude, behaviour etc. are basically ordinal and relative. More severe problems lie in the area where behaviour difference is assumed to have equal intervals, thereby mixed calculations (e.g. addition and multiplication) are made possible within and between variables. For instance, sleep disturbance score could be added with weeping frequency score to produce an overall score indicating a level of depression. However, different levels of sleep disturbance and symptoms alike may have varying meanings and intensities from individuals to individuals, and from culture to culture, which also do not escalate or decrease by equal or proportional intervals. This renders any standardized behaviour interpretations of these statistical results problematic. Thus social science researchers using measurement scales need to be thoughtful in choosing and assigning values to the studied behaviour, they should especially refrain themselves from making too liberal a generalization without carrying out thorough reliability and validation tests. Only by so doing, as well as repeating the same studies in similar and varied circumstances, will the results then approach to the actual situations.

Another point to note is that there is still ambiguity as to whether depression can be classified into
its subtypes for appropriate medical treatments (Brown & Harris, 1978). The global distinction between normal and abnormal depression is practically and objectively difficult, if not impossible. However, there are advances in using global scales to measure clinical depression in terms of its presence and severity (e.g. MMPI-D, Hamilton Rating Scales HRS), but the common deficiency of these scales is their inability to identify the subtypes of depression (Rehm, 1988). There have been some attempts to delineate depression further, for example, Winokur (1973) made distinctions - normal grief, secondary depression and primary depression, while Carey et al (1965) and Roth et al. (1983) used various Newcastle Scales to delineate endogenous and reactive depression types. Perris (1966) suggested the distinction between the unipolar and bipolar differentiations, however, precise diagnosis of depression still very much relied on the clinicians' judgments through their own diagnostic interviews with the person concerned.

So depression seems to be a rather non-specific condition to which assignment of numerical values is difficult.

Apart from the scales mentioned in this study, there are no doubt continuing efforts to develop new or modified measurements of depression. As Maser (1987)
concluded, when discussing scales to measure overt behaviours, including body movements, facial expressions, vocal qualities and speech rate, the trend should be towards measuring those overt behaviours which are commonly agreed by care workers (such as nurses, social workers, psychologists and psychiatrists), to be indicators for specific affective disorders such as depression. The advantages are obvious. While the nursing and psychiatric clinicians will inevitably focus on mental illness and its syndrome, psychologists and social workers tend to look at mental health and to compare the condition with normative events, including social support and other person-environment interactions. So a measurement developed in this manner is likely to draw maximum support from all care professionals, hence maximizing resources available to the service recipients. However this may result: failure to consider an individual's feelings and could create a situation whereby depression measured by such a scale will be the sum effect of all the dimensions included, hence making it more difficult to study the independent relationship of each dimension to depression.

So from these premises, scales used to study depression can be considered in two ways: the first is to have a scale incorporating many dimensions of depression from its physiological to social manifestations; the second is to have a depression scale used solely as a measure for
depression, with other relevant assumed attributes or consequences (quantified as measurement scales), as independent variables, added on to form a 'battery' of scales to study depression and its related concepts. This study attempts to do both. First of all the scale used will be based on the modified (translated) versions of the existing ones, to test its reliability and validity in measuring clinical depression amongst Chinese elderly people in Hong Kong. Secondly when the scale is calibrated and verified, it will be used as a dependent variable in relation to other assumed attributes of depression amongst the Chinese elderly in Hong Kong. The scale of choice for local validation, is the GDS.
Validation Study of the GDS

This study attempted to validate the use of GDS (30 item version) as a screening instrument for clinical depression with elderly people aged 60 or above in Hong Kong. The study concentrated on measuring the construct and criterion related validities of the scale. The main focus was to have the GDS's convergent and discriminant validities tested against expert psychiatrists' ratings of depressive cases in Hong Kong; along with this, its concurrent validity was tested together with that of the SDS and CES-D; in addition, a contrasted group of 'normal' elderly people were drawn from the community and included as a group for test-retest reliability. The GDS was proven generally valid amongst the Chinese elderly people, and it could be introduced as a community tool as a symptomatic measure for depression. This has considerable value to the caring professions for the reasons already mentioned.

Method

The validation involved the following procedure:

1. The original English version was translated into Chinese by the Translation Service of the City Polytechnic of Hong Kong.
2. The Chinese version was back translated by a social work lecturer, who specialized in mental health and holds a degree in Chinese language, into English to confirm the consistency in meaning of the Chinese version with the original English version. The result was that 27 items were matched word-for-word (i.e. 90%), others were matched in their meaning.

3. Then two experienced psychiatrists went over the wording of the Chinese version so as to make sure the meaning of the items conveyed the intended meaning to the respondents (i.e. elderly attending OPDs).

4. The verified Chinese version was pre-tested using 20 elderly from a social centre, for unforeseen technical difficulties, e.g., inability to understand the wordings etc., so that final adjustments could be made.

5. Then the validation exercise was carried out in two parts, but carried out at almost the same time:

5.1. Psychiatrists' Diagnosis and Ratings

All patients aged 60 or above attending psychiatric out patient clinics were seen by a qualified psychiatrist\(^{(1)}\) (those having MRCPsy, or DPM or having a general
medical qualification with a minimum of three years diagnostic experience in psychiatry, or equivalent qualifications). The psychiatrist made a diagnosis based on DSM-IIIR categories, which are the main classification systems doctors in Hong Kong refer to for:

- no clinical depression,
- Primary degenerative dementia of the Alzheimer type, pre-senile onset, with depression (290.13)
- Primary degenerative dementia of the Alzheimer type, senile onset, with depression (290.21)
- Multi-infarct dementia, with depression (290.43)
- Major depression, single episode (296.2)
- Major depression, recurrent episode (296.3)
- Bipolar disorder, depressed (296.5)
- Bipolar disorder, mixed (296.6)
- Dysthymia (300.40)
- Depressive disorder NOS (311.00)
- Adjustment disorder with depressed mood (309.00)
- Other depressive types

The psychiatrist was also required to note the severity of the depression according to mild, moderate and severe categories. The questionnaire containing GDS was also administered to the same patients before seeing the psychiatrists. The two parts of the interview were done preferably within the same day at the same place. In practice this meant that the psychiatrist would see the
patient to make a diagnosis as he/she normally did at out
patient clinics.

5.2. Self-report questionnaire

A questionnaire containing Chinese versions of the
GDS and the 20-item Centre for Epidemiological Study -
Depression Scale (CES-D) (Ying, 1988) was given to all
those aged 60 or above attending psychiatric out patient
clinics. (The validity of the CES-D had already been
tested amongst the Chinese.) Its score in this study
served as a construct measure for comparison with the GDS
as a scale to measure severity of depression. Nurses
working at the out patient clinics were recruited and
trained to be interviewers. The elderly patients had this
questionnaire read out to them and were asked to respond.
This was carried out while the patients were waiting at
the reception desk, or any time before they saw the
psychiatrists.

A community sample of 40 'normal' elderly people
were drawn from social centres for the elderly (SEs) and
were requested to complete the same questionnaire for
comparison. SEs in Hong Kong organize social recreational
activities (such as picnics, interest classes) for elder­
ly people. The elderly who participate actively in these
SEs are generally considered to be more physically
healthy and happier than other elderly. So it was expected
that the mean scores for GDS and other depression scales
amongst this group would be significantly lower than the
identified depressed group. Test-retest reliability was
performed with this group over a period of two weeks.

Sampling

In the year 89-90 there were about 500 diagnosed
affective disorder cases in the nine government out
patient clinics. About 60 were diagnosed to have clinical
depression. These figures did not vary a great deal for
the period of the study (i.e. from March 1992 to March
1992). So over a period of one year, the following sam­
pling procedure applied:

1. All patients who were aged 60 and above when regis­
tered with the out patient clinics for consultation was
asked to fill in the questionnaire by themselves or with
the interviewers' assistance. The interviewer had to
satisfy themselves that the elderly respondents was still
sensible enough to make the response.

2. The psychiatrists saw the patient following the normal
procedure, and made a diagnosis.
Results

1. Sample Size and Characteristics

a) Sample Size

There were altogether 626 cases interviewed over a period of twelve months from January 1992 to February 1993. For the purpose of the GDS validation, cases were extracted on condition that all the thirty items of the GDS were responded to. This gives a total of 461 cases for the validation study.

b) Validation Sample Characteristics

The sample consists of 167 male and 290 female respondents, with 4 answers missing for the sex column. Their mean age is 70.19 (SD= 7.27). Among the sample of 461, 54.3% are married, 37.4% widowed and there are about 8.3% who are either cohabited, divorced/separated or never married. Regarding their education, 42.5% received no education, 30.9% received education at primary school and 9.2% received private tuition respectively. Table (3) summarizes their characteristics.
Table (3) : Sex, Age, Health Status and Education Level of Validation Sample

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>167</td>
<td>36.2</td>
<td>36.5</td>
<td>36.5</td>
</tr>
<tr>
<td>Female</td>
<td>290</td>
<td>62.9</td>
<td>63.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>4</td>
<td>0.9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>461</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Valid cases 457  
Missing cases 4

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-69</td>
<td>239</td>
<td>51.8</td>
<td>52.3</td>
<td>52.3</td>
</tr>
<tr>
<td>70-79</td>
<td>163</td>
<td>35.4</td>
<td>35.7</td>
<td>88.0</td>
</tr>
<tr>
<td>80-89</td>
<td>49</td>
<td>10.6</td>
<td>10.7</td>
<td>98.7</td>
</tr>
<tr>
<td>90 or above</td>
<td>6</td>
<td>1.3</td>
<td>1.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>4</td>
<td>0.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>461</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Mean 70.19  
SD 7.27

Valid cases 457  
Missing cases 4

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widowed</td>
<td>171</td>
<td>37.1</td>
<td>37.4</td>
<td>37.4</td>
</tr>
<tr>
<td>Cohabitee</td>
<td>3</td>
<td>0.7</td>
<td>0.7</td>
<td>38.1</td>
</tr>
<tr>
<td>Divorced or separated</td>
<td>7</td>
<td>1.5</td>
<td>1.5</td>
<td>39.6</td>
</tr>
<tr>
<td>Married</td>
<td>248</td>
<td>53.8</td>
<td>54.3</td>
<td>93.9</td>
</tr>
<tr>
<td>Never married</td>
<td>26</td>
<td>5.6</td>
<td>5.7</td>
<td>99.6</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>0.4</td>
<td>0.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>4</td>
<td>0.9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>461</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Valid cases 457  
Missing cases 4
The level of income was insufficient to meet the needs of this group. A high proportion (91.4%) were below the Hong Kong's median income of HK$5170 per month recorded in the 1991 Census, and 59.7% only maintained Public Assistance levels (below HK$2000 per month for two eligible members). However, reported sources of income were mainly from children's contributions (58.4%) and from their own savings (9.6%). Only a small proportion relied on social security payments such as Public Assistance (11.1%) and Disability Allowances (2.8%), although more received on the Old Age Allowance (23.6%), the sum of which was hardly adequate for daily living (being HK$413 per month). Only 5.9% were still economically active (either in full or part time employment).
Table (4) : Sources of Income of Validation Sample

<table>
<thead>
<tr>
<th>Source</th>
<th>Yes</th>
<th></th>
<th>No</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>1. PA</td>
<td>51</td>
<td>11.1</td>
<td>407</td>
<td>88.9</td>
</tr>
<tr>
<td>2. OAA</td>
<td>106</td>
<td>23.6</td>
<td>352</td>
<td>76.9</td>
</tr>
<tr>
<td>3. DA/HDA</td>
<td>13</td>
<td>2.8</td>
<td>446</td>
<td>97.2</td>
</tr>
<tr>
<td>4. Pensions</td>
<td>15</td>
<td>3.3</td>
<td>444</td>
<td>96.7</td>
</tr>
<tr>
<td>5. Savings</td>
<td>44</td>
<td>9.6</td>
<td>415</td>
<td>90.4</td>
</tr>
<tr>
<td>6. Earnings</td>
<td>22</td>
<td>4.8</td>
<td>436</td>
<td>95.2</td>
</tr>
<tr>
<td>7. Spouse Income</td>
<td>33</td>
<td>7.2</td>
<td>426</td>
<td>92.8</td>
</tr>
<tr>
<td>8. Children's Contribution</td>
<td>268</td>
<td>58.4</td>
<td>191</td>
<td>41.6</td>
</tr>
<tr>
<td>9. Other Income</td>
<td>22</td>
<td>4.8</td>
<td>437</td>
<td>95.2</td>
</tr>
</tbody>
</table>

Table (5) : Sources of Income of Validation Sample by Number of Items

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid</th>
<th>Cum</th>
</tr>
</thead>
<tbody>
<tr>
<td>No source of income</td>
<td>8</td>
<td>1.7</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Have 1 source of income</td>
<td>346</td>
<td>75.1</td>
<td>75.4</td>
<td>77.1</td>
</tr>
<tr>
<td>Have 2 sources of income</td>
<td>89</td>
<td>19.3</td>
<td>19.4</td>
<td>96.5</td>
</tr>
<tr>
<td>Have 3 sources of income</td>
<td>12</td>
<td>2.6</td>
<td>2.6</td>
<td>99.1</td>
</tr>
<tr>
<td>Have 4 sources of income</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>99.3</td>
</tr>
<tr>
<td>Have 5 sources of income</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>99.6</td>
</tr>
<tr>
<td>Have 6 sources of income</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>99.8</td>
</tr>
<tr>
<td>Have 7 sources of income</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Have 8 sources of income</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>0.4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

461 100.0 100.0

Valid cases 459 Missing cases 2
### Table (6): Income of Validation Sample

<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 or below</td>
<td>83</td>
<td>18.0</td>
<td>59.7</td>
<td>59.7</td>
</tr>
<tr>
<td>2001 to 5000</td>
<td>44</td>
<td>9.5</td>
<td>31.7</td>
<td>91.4</td>
</tr>
<tr>
<td>5001 to 1000</td>
<td>9</td>
<td>2.0</td>
<td>6.5</td>
<td>97.8</td>
</tr>
<tr>
<td>10001 to 20000</td>
<td>2</td>
<td>0.4</td>
<td>1.0</td>
<td>99.3</td>
</tr>
<tr>
<td>20001 or above</td>
<td>1</td>
<td>0.2</td>
<td>0.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>322</td>
<td>69.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total             | 461       | 100.0   | 100.0         |             |

Valid cases: 139  
Missing cases: 322

### Table (7): Occupation of Validation Sample

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired</td>
<td>277</td>
<td>60.1</td>
<td>60.7</td>
<td>60.7</td>
</tr>
<tr>
<td>Never worked or housewives</td>
<td>132</td>
<td>28.6</td>
<td>28.9</td>
<td>89.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>14</td>
<td>3.0</td>
<td>3.1</td>
<td>92.7</td>
</tr>
<tr>
<td>Self-employed</td>
<td>4</td>
<td>0.9</td>
<td>0.9</td>
<td>93.6</td>
</tr>
<tr>
<td>Fulltime employed</td>
<td>18</td>
<td>3.9</td>
<td>3.9</td>
<td>97.5</td>
</tr>
<tr>
<td>Parttime employed</td>
<td>9</td>
<td>2.0</td>
<td>2.0</td>
<td>99.5</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>0.4</td>
<td>0.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>5</td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total               | 461       | 100.0   | 100.0         |             |

Valid cases: 456  
Missing cases: 5
So, overall, we were looking at an elderly group most of whom had little or no education, were economically inactive and were very poor. On the other hand, these people have not become dependent on public assistance payments. Their daily survival seems to be either supported by their children, their own savings or through other means which were unlikely to provide them with a good living e.g. low pay part time jobs.

2. Reliability

a) Internal consistency

Internal consistency by Cronbach's method was high at .89 (alpha).

b) Test retest reliability over two weeks

Test retest reliability was tested with a community sample (40) selected from an elderly social centre, which showed a reliability coefficient of .85, indicating that the scale was relatively stable over time.

3) Validity

a) Criterion-related validity i.e. correlations with psychiatrist's diagnosis
Criterion related validity with psychiatrist's diagnosis as a reference criterion was a high .95 (alpha, p < .001) with all 30 items' total score.

b) Nomological validity i.e., correlations with CES-D

With CES-D the validity reached to a higher .96 (alpha, p < .001). One contributing factor to this might be that the translated CES-D questions were strikingly similar and those of the GDS's. It was expected that CES-D would also correlate well with the psychiatrist's diagnosis, indeed the result confirms a significant correlation of .23 at p < .001.

With these good psychometric properties, the GDS could be used at least as a measure of symptoms for depression. At the recommended cut-off score (i.e. 11), the scale identified 69.6% of the sample population to have depressive symptoms (as against the 43.7% diagnosed as having depression by the psychiatrists in the same sample).

4. Items Analysis

a) Item responses (yes/no)

Responses to each item are shown in Table (8).
b) Item-total correlations

Table (9) shows all item-total correlations were high at more than .89 ($p < .001$).
Table (8) : Validation Respondents' Responses (Yes/No) to Each Item

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Yes Percent</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS1*</td>
<td>108</td>
<td>353</td>
<td>23.4</td>
<td>.424</td>
</tr>
<tr>
<td>GDS2</td>
<td>246</td>
<td>215</td>
<td>53.4</td>
<td>.499</td>
</tr>
<tr>
<td>GDS3</td>
<td>240</td>
<td>221</td>
<td>52.1</td>
<td>.500</td>
</tr>
<tr>
<td>GDS4</td>
<td>253</td>
<td>208</td>
<td>54.9</td>
<td>.498</td>
</tr>
<tr>
<td>GDS5*</td>
<td>313</td>
<td>148</td>
<td>67.9</td>
<td>.467</td>
</tr>
<tr>
<td>GDS6</td>
<td>238</td>
<td>223</td>
<td>51.6</td>
<td>.500</td>
</tr>
<tr>
<td>GDS7*</td>
<td>198</td>
<td>263</td>
<td>43.0</td>
<td>.496</td>
</tr>
<tr>
<td>GDS8</td>
<td>196</td>
<td>265</td>
<td>42.5</td>
<td>.495</td>
</tr>
<tr>
<td>GDS9*</td>
<td>210</td>
<td>251</td>
<td>45.6</td>
<td>.499</td>
</tr>
<tr>
<td>GDS10</td>
<td>215</td>
<td>246</td>
<td>46.6</td>
<td>.499</td>
</tr>
<tr>
<td>GDS11</td>
<td>223</td>
<td>238</td>
<td>48.4</td>
<td>.500</td>
</tr>
<tr>
<td>GDS12</td>
<td>286</td>
<td>175</td>
<td>62.0</td>
<td>.486</td>
</tr>
<tr>
<td>GDS13</td>
<td>183</td>
<td>278</td>
<td>39.7</td>
<td>.490</td>
</tr>
<tr>
<td>GDS14</td>
<td>241</td>
<td>220</td>
<td>52.3</td>
<td>.500</td>
</tr>
<tr>
<td>GDS15*</td>
<td>209</td>
<td>252</td>
<td>45.3</td>
<td>.498</td>
</tr>
<tr>
<td>GDS16</td>
<td>217</td>
<td>244</td>
<td>47.1</td>
<td>.500</td>
</tr>
<tr>
<td>GDS17</td>
<td>204</td>
<td>257</td>
<td>44.3</td>
<td>.497</td>
</tr>
<tr>
<td>GDS18</td>
<td>155</td>
<td>306</td>
<td>33.6</td>
<td>.473</td>
</tr>
<tr>
<td>GDS19*</td>
<td>363</td>
<td>98</td>
<td>78.7</td>
<td>.410</td>
</tr>
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<td>GDS20</td>
<td>321</td>
<td>140</td>
<td>69.6</td>
<td>.460</td>
</tr>
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<td>GDS21*</td>
<td>357</td>
<td>104</td>
<td>77.4</td>
<td>.418</td>
</tr>
<tr>
<td>GDS22</td>
<td>184</td>
<td>277</td>
<td>39.9</td>
<td>.490</td>
</tr>
<tr>
<td>GDS23</td>
<td>221</td>
<td>240</td>
<td>47.9</td>
<td>.500</td>
</tr>
<tr>
<td>GDS24</td>
<td>228</td>
<td>233</td>
<td>49.5</td>
<td>.501</td>
</tr>
<tr>
<td>GDS25</td>
<td>202</td>
<td>259</td>
<td>43.8</td>
<td>.497</td>
</tr>
<tr>
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<td>164</td>
<td>64.4</td>
<td>.479</td>
</tr>
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<td>GDS27*</td>
<td>251</td>
<td>210</td>
<td>54.4</td>
<td>.499</td>
</tr>
<tr>
<td>GDS28</td>
<td>242</td>
<td>219</td>
<td>52.5</td>
<td>.500</td>
</tr>
<tr>
<td>GDS29*</td>
<td>288</td>
<td>173</td>
<td>62.5</td>
<td>.485</td>
</tr>
<tr>
<td>GDS30*</td>
<td>336</td>
<td>125</td>
<td>72.9</td>
<td>.445</td>
</tr>
</tbody>
</table>

* a negative answer is expected in these items to indicate depression
<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total Correlation</th>
<th>Value of Alpha if Delete Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS1</td>
<td>.3844</td>
<td>.8857</td>
</tr>
<tr>
<td>GDS2</td>
<td>.1791</td>
<td>.8901</td>
</tr>
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<td>GDS3</td>
<td>.5457</td>
<td>.8823</td>
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<td>.5876</td>
<td>.8814</td>
</tr>
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<td>.3789</td>
<td>.8858</td>
</tr>
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<td>GDS6</td>
<td>.4898</td>
<td>.8835</td>
</tr>
<tr>
<td>GDS7</td>
<td>.5543</td>
<td>.8821</td>
</tr>
<tr>
<td>GDS8</td>
<td>.5097</td>
<td>.8831</td>
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<td>.8802</td>
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<td>.5452</td>
<td>.8823</td>
</tr>
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</tr>
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<td>.8818</td>
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<td>-.0130</td>
<td>.8940</td>
</tr>
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<td>.8880</td>
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<td>.8830</td>
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<td>.8839</td>
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<td>.8820</td>
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<td>.8890</td>
</tr>
</tbody>
</table>

Mean alpha .89
c) External validity

Item correlations with the psychiatrist's diagnosis (i.e. external validity) were not as good as the item-total correlations. Amongst the 30 items, 5 were not correlated with the psychiatrists' diagnosis. A closer look revealed that these items were not so commonly asked in their exact forms by the psychiatrists in the interviews - this might suggest that questionnaire covers some other symptoms which Hong Kong psychiatrists do not take as core diagnostic symptoms for depression. The noted aspects were: negative views about the future, feeling of hopelessness or happiness, thought clarity, memory loss, and readiness in making decision.
Table (10): Correlation of Items with Psychiatrist's Diagnosis

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS1</td>
<td>0.1757**</td>
</tr>
<tr>
<td>GDS2</td>
<td>0.0833</td>
</tr>
<tr>
<td>GDS3</td>
<td>0.2240**</td>
</tr>
<tr>
<td>GDS4</td>
<td>0.2072**</td>
</tr>
<tr>
<td>GDS5</td>
<td>0.1219*</td>
</tr>
<tr>
<td>GDS6</td>
<td>0.2408**</td>
</tr>
<tr>
<td>GDS7</td>
<td>0.3238**</td>
</tr>
<tr>
<td>GDS8</td>
<td>0.1884**</td>
</tr>
<tr>
<td>GDS9</td>
<td>0.3285**</td>
</tr>
<tr>
<td>GDS10</td>
<td>0.2306**</td>
</tr>
<tr>
<td>GDS11</td>
<td>0.3193**</td>
</tr>
<tr>
<td>GDS12</td>
<td>0.1106</td>
</tr>
<tr>
<td>GDS13</td>
<td>0.2164**</td>
</tr>
<tr>
<td>GDS14</td>
<td>-0.0251</td>
</tr>
<tr>
<td>GDS15</td>
<td>0.2662**</td>
</tr>
<tr>
<td>GDS16</td>
<td>0.3857**</td>
</tr>
<tr>
<td>GDS17</td>
<td>0.1869**</td>
</tr>
<tr>
<td>GDS18</td>
<td>0.1898**</td>
</tr>
<tr>
<td>GDS19</td>
<td>0.1805**</td>
</tr>
<tr>
<td>GDS20</td>
<td>0.1660**</td>
</tr>
<tr>
<td>GDS21</td>
<td>0.1519**</td>
</tr>
<tr>
<td>GDS22</td>
<td>0.1528**</td>
</tr>
<tr>
<td>GDS23</td>
<td>0.1503*</td>
</tr>
<tr>
<td>GDS24</td>
<td>0.2191**</td>
</tr>
<tr>
<td>GDS25</td>
<td>0.2512**</td>
</tr>
<tr>
<td>GDS26</td>
<td>0.1898**</td>
</tr>
<tr>
<td>GDS27</td>
<td>0.2115**</td>
</tr>
<tr>
<td>GDS28</td>
<td>0.1236*</td>
</tr>
<tr>
<td>GDS29</td>
<td>0.0736</td>
</tr>
<tr>
<td>GDS30</td>
<td>-0.0538</td>
</tr>
</tbody>
</table>

1-tailed significance: * 0.01 ** 0.001
5. Cut Off Scores

The cut-off used to differentiate depressive prone cases is usually taken to be 11, while for clinical depression is 14. But at scores 11 and 14 cut-offs, the sensitivity, specificity, false positives and false negatives were not satisfactory. In fact tests with different scores near these two values revealed no better performance (Table (11)). This might suggest that the scale might be an excellent tool for symptomatic measures, but not as good as a screening instrument to identify the possible clinical depressive cases.

Table (11): Sensitivity, Specificity, False Positives and False Negatives at Cut-off Scores 8 to 16

<table>
<thead>
<tr>
<th>Cut off score</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>False +ive (%)</th>
<th>False -ive (%)</th>
<th>Kappa Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>91.7</td>
<td>26.2</td>
<td>73.8</td>
<td>8.3</td>
<td>.163</td>
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<tr>
<td>09</td>
<td>89.5</td>
<td>30.5</td>
<td>69.5</td>
<td>10.5</td>
<td>.184</td>
</tr>
<tr>
<td>10</td>
<td>87.8</td>
<td>38.6</td>
<td>61.4</td>
<td>12.2</td>
<td>.246</td>
</tr>
<tr>
<td>11</td>
<td><strong>85.6</strong></td>
<td>42.9</td>
<td>57.1</td>
<td>14.4</td>
<td><strong>.268</strong></td>
</tr>
<tr>
<td>12</td>
<td>81.8</td>
<td>48.1</td>
<td>51.9</td>
<td>18.2</td>
<td>.283</td>
</tr>
<tr>
<td>13</td>
<td>77.3</td>
<td>56.2</td>
<td>43.8</td>
<td>22.7</td>
<td>.324</td>
</tr>
<tr>
<td>14</td>
<td><strong>72.9</strong></td>
<td><strong>61.4</strong></td>
<td><strong>38.6</strong></td>
<td><strong>27.1</strong></td>
<td><strong>.335</strong></td>
</tr>
<tr>
<td>15</td>
<td>70.7</td>
<td>66.1</td>
<td>33.9</td>
<td>29.3</td>
<td>.362</td>
</tr>
<tr>
<td>16</td>
<td>65.7</td>
<td>69.5</td>
<td>30.5</td>
<td>34.3</td>
<td>.351</td>
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<tr>
<td>17</td>
<td>60.2</td>
<td>73.8</td>
<td>26.2</td>
<td>39.8</td>
<td>.343</td>
</tr>
</tbody>
</table>
Conclusion

In view of these findings, the performance of the Chinese GDS was comparable in its reliabilities and validities as the original English version. However, the sensitivity and specificity were not as satisfactory, indicating that the Chinese GDS may be better as a measure of depressive symptoms rather than as a screening instrument. Nonetheless, these results were based on preliminary findings of a single study, concluding remarks for its application are yet to be refined.
Footnote

(1) Ideally a second psychiatrist should see the respondents as well for a diagnosis, and only those cases which match with the first psychiatrist's diagnosis should count as confirmed cases. However, the advice from Dr B S Sum, Psychiatrist-in-charge of all the Government Out Patient Clinics, suggested that this is practically impossible in view of their existing workloads and administrative arrangements.
CHAPTER EIGHT

PART II: PHYSICAL HEALTH AND FILIAL PIETY AS KEY DETERMINANTS OF DEPRESSION AMONGST THE CHINESE ELDERLY IN HONG KONG
Brief Background

Like other advanced countries, depression amongst the elderly is very common in Hong Kong (Yung, Lau & Lai, 1991). However, to provide an explanation for how this is caused is rather difficult.

As reviewed, there are several established areas which are closely connected to elderly depression. Amongst these, physical health status and social support (especially family support in terms of filial care, spouse and sibling support), are said to be closely related to depression. Amongst these variables, physical health and filial piety (care, respect and affection from children to elderly parents) are significant and could confirm the control process. Reasons are:

i) self perceived poor physical health has been established to have a positive correlation with depression amongst the elderly in Hong Kong, for those with poor health seems to have higher levels of depression, and yet little explanation has been offered; the control theory seems to fill this gap well;

ii) Filial responsibility and care in times of need have been proposed as having a more significant impact on life satisfaction and well-being of elderly in Hong Kong.
(Yeung, 1989) despite the fact that traditional modes of care are changing; it would be timely to investigate the same in relation to depression and to offer an explanation;

iii) despite the form of expressing filial piety has been changed, the physical care aspects seem to remain; children will express filial care more closely when their parents are ill and in times of special need (e.g. in physical pain); making health care an area which indicate the elderly's perception of specific filial expectations;

iv) as Chinese have a tendency to express feelings and emotions in somatic forms, physical health complaints may be a way for them to express their wish for filial care.

**Physical Health Status**

Health conditions deteriorate as one grows older. As a result, we can conclude that many elderly people experience considerable stress due to deteriorating physical health. Studies carried out for the past few years have consistently concluded that self reported health status of the elderly (physical and mental) correlates highly with depression, life satisfaction, psychological well-being (Rapp et al, 1991; Bowling & Farquhar, 1991; Bowling, 1990; Kennedy et al., 1990; Revicki &
Mitchell, 1990; Lindesay, 1990). However, rarely have these studies proposed an explanation as to how this status contributes to depression and other psychological morbidity. Nonetheless, physical health status has been found to be a better predictor for depression than other psychosocial factors such as social support in general (Bowling, 1990; Goldstein & Hurwicz, 1989).

Although the nature of association between depression and physical illness has not been clarified, it was suggested that people with physical illness may become depressed as a reaction to the reality of physical limitations in activities (Weissman et al., 1982). This assumption is actually verified by local surveys (Chi & Lee, 1989; Lam, 1986) which show that both health condition and level of physical ability had a negative linear correlation with depression. In other words, the better the health condition and the higher the physical ability, the lower the level of depression respondents experienced. The explanation for being depressed could well be due to: i) The elderly expect to be generally in good health (discrepancy), ii) the elderly specifically wish to be in good health 'amplifies' the discrepancy between the wish to have good health and the actual frequent illnesses (specificity), iii) the elderly are sensitive to realize the large discrepancy between their actual bad health and the good health expected (sensitivity), and iv) the discrepancy is felt to be a prolonged process of health
deterioration, most probably to come with chronic pain and misery (prolongation).

Among these four domains of cognitive control, it is expected that the negative impact on the emotions of the elderly is the greatest at discrepancy, then prolongation, then sensitivity and lastly specificity. This rank order is based on the observations made of the respondents in the validation study and on the elderly participants attending elderly centres. Most of the elderly have high expectations of their children, and yet often they have received no proper respect and care. This is the most common reason for them to feel unhappy. Another common reason for them to feel unhappy is the 'drag' of life – meaning that their suffering, caused by children not being filial, or ill health or both, has been felt to be too long. One statement heard frequently amongst the elderly, which may be just for seeking attention, is a significant indicator for this – 'I'd rather have died young than suffer till now'. Only through deeper exchanges with others will the elderly begin to realize the nature of the discrepancy (sensitivity), and less often still, will they search for a resolution for the discrepancy (specificity). So the Chinese elderly are expected to be low at sensitivity and specificity.

Assuming, with little doubt, that the elderly
would like to maintain good physical health, then discrepancy between such an expectation and reality is more likely to occur among the aged population. Moreover, not only actual, but also worries about deterioration of physical health can cause considerable stress to the elderly. Many depressed respondents reported that they were not so much afraid of death, but they worried more that they might suffer from prolonged sickness and become incapacitated (Lam, 1986).

The question is how and in what aspects physical health can be measured.

Observer-rated scales often have been used in aspects such as chronic illness and daily functioning (by medical and paramedical professionals, for example Cumulative Illness Rating Scale, Linn, Linn & Gurel, 1967) Physical health status can be considered to have three dimensions: chronic illness, daily functioning, and self-rated health (Whitelaw & Liang, 1991; Centre for the Study of Aging and Human Development, 1975). Where chronic illness and daily functioning are meant to be observer-rated. However, these scales, as those discussed in the Part One study, are often adapted for self-reporting for community samples.

Self-report measures of physical health for the elderly used in Hong Kong are mainly adaptations of the
OARS MFAQ (Older American Resources and Services Multidimensional Functional Assessment Questionnaire) originally developed in 1975 by the Duke University Centre for the Study of Aging and Human Development. This scale contains a list of chronic illnesses commonly associated with old age, a list of daily living activities from household chores to outdoor routines (commonly referred to as the Activity of Daily Living ADL), and a simple self-rated question on general health. Others include a Guttman Health Scale on self-report of physical abilities developed by Rosow & Breslau (1966).

Items on chronic illness in the OARS MFAQ and Rosow and Breslau's Guttman Health Scale (GHS) were chosen to measure physical health status. While cumulative illnesses can help the elderly respondents to indicate more clearly the functions of each bodily system, the GHS will demonstrate their self-assessed daily functions. The original ADL of the OARS MFAQ is abandoned because it has more items and a more complicated answering structure than the GHS. The two scales would have to be adapted for this study's purposes, but the Chinese version used in Chi & Lee's study (1989) provided a base.

Filial Piety

Filial piety, as discussed, was embedded into the old tradition of the agrarian culture which involved
absolute obedience, on the children's part, to family authority especially to the father's authority. As Chinese society in Hong Kong progresses into its industrialized and urbanized forms, conformity to the absolute authority of parents also weakens. But filial piety does not just disappear with the absolute authority. As evidenced in a recent comparative study between China and Hong Kong of the younger generation's attitude towards family authority (Kwan, 1991), the respondents defied absolute obedience to their parents, but felt that parent's wishes were to be respected and that children should not quarrel with their parents. So filial piety in terms of showing respect, care and concern in the forms of respecting to parental wishes; providing parents with good material support; children saying to their parents that they love and care for them in general situations, and in physical ailments; is to a certain degree still expected from children (Ho, 1987). But the elderly parents may have lower their expectation from their adult children to just respect and care. Adult children are no longer expected to in reality be absolutely obedient. For those elderly people who are holding strong expectations (high expectancy), they may be assumed to be at higher risk of getting depression (specificity in this case is low), especially when sensitivity to discrepancy is high and duration of experiencing discrepancy is long.
Instruments specifically related to the Chinese concept of filial piety is less common but a few are available locally (Yeung, 1989; Lee, Cheung & Chan 1992). Items adopted in these scales are mainly adapted from Ho's 28-item filial piety scale (Ho, 1974). Some of the items in this scale are outdated in view of what has been said about the core concepts of filial piety. The 21 items used in Yeung's study (1989) and the 9 items used in Lee et al's study (1992) have been further adjusted. The procedure for adaptation was:

a) To use the original (Ho's) 28 items as a base.
b) To self-select those items appropriate to the construct, i.e., to falls in areas of health care, respect, tangible help, and emotional support; and to delete those items which were out of date. This left 11 items.
c) To cross check the meaning of the chosen items with the 21 items used by Yeung (Yeung, 1989) and the 9 items used by Lee et al, 1992. All the 11 items, in fact, has the same meaning as the aforementioned.
d) The original 6 point Likert scale was rearranged to a yes/no answering structure, as it was thought that the elderly would find it easier to respond to; and the 11 items were reworded so that scores could be obtained according to the different domains of the control theory.

Our study in supporting the hypotheses, needs to consider for four subjectively assessed domains (i.e. discrepancy, prolonged discrepancy, sensitivity and speci-
ficity) for each aspect of physical health and filial piety. If we were to ask each question item four times to cover the four dimensions, the elderly respondents would find it difficult to differentiate the content of the items. For this reason it was decided that a self-consciousness scale (SCS) (Fenigstein, Scheier & Buss, 1975; Scheier & Carver, 1985) was to be used to replace the sensitivity items. The rationales for doing this were:

a) Other domains (i.e., subscales: discrepancy, discrepancy, prolongation and specificity) need to be asked with reference to specific aspects (e.g. physical health & filial piety situations), but sensitivity could be measured globally by using the SCS. And

b) the SCS was readily available in Chinese too (Shek, 1992).

This warrants a brief introduction to the Self Consciousness Scale (SCS).

The final revised version of the SCS is composed of 22 short statements on a four points Likert scale (0= not at all like me, 1= a little like me, 2= somewhat like me, 3= a lot like me). Items were constructed to capture different dimensions of self-consciousness: (Fenigstein,
'(a) preoccupation with past, present and future behavior; (b) sensitivity to inner feelings; (c) recognition of one's positive and negative attributes; (d) introspective behaviour; (e) a tendency to picture or image oneself; (f) awareness of one's physical appearance and presentation; and (g) concern over the appraisal of others.'

The SCS therefore has been designed to follow these constructs. According to Scheier and Carver (1985), three dimensions could be divided: the private and public self-consciousness (items 1, 4, 6, 8, 12, 14, 17, 19, 21 for private, items 2, 5, 10, 13, 16, 18, 20 for public) and the social anxiety (items 3, 7, 9, 11, 15, 22) subscales. Private self-consciousness is, as the term entails, the tendency to think about hidden aspects of the self which are not easily observed by others; public self-consciousness is the tendency to think about self-matters which could contribute to an image held by others; social anxiety refers to the reaction of putting the self in certain social situations. Reliabilities by Cronbach's alphas were .75 for private self-consciousness, .84 for public self-consciousness and .79 for social anxiety (Scheier and Carver, 1985).

Empirical studies using SCS have focused on the
process whereby self-consciousness is mediating between cognition and behaviour. One of the phenomena investigated was discrepancy reduction (Scheier & Carver, 1982). Psychometric properties reported by Scheier & Carver both for the college students and the general population were good (Scheier & Carver, 1982; 1985). In these cases, self-consciousness was seen as one's sensitivity to all aspects of life. It is obvious that when one is conscious about his general being, one would be equally sensitive towards discrepancy between the reality and what is expected. Hence the SCS is expected to have an additive effect, in the presence of high discrepancy, on depression. The three subscales of the SCS are expected to show the same.

**Principles for Questionnaire Design**

Taking into account the cultural differences, the format of the instrument need to take three criteria into consideration:

a) The scale should have a simple structure, preferably presented in just a yes/no format. If other formats are used, items must be a short close-ended type statements offering a simple Likert structure.

b) The meanings conveyed in the questions should be clear
- i.e., avoiding abstract concepts, so that the elderly can respond easily and accurately (Rosow & Breslau, 1966); this points to the more tangible domains of health and expectations, such as illness and physical functioning, and expectation for children's respect and affection. In addition,

c) There should be few questions, and each question should be as short as possible, to avoid incomplete return due to the elderly's short concentration span. So items in order of discrepancy, prolongation, sensitivity and specificity should be asked. This, in case of incompleteness is to safeguard the first parts, which are the more significant items.

Sample

A convenient, and yet accurate, way of getting a relatively more active community sample of the elderly in Hong Kong is through the registered membership of the SEs (i.e. social centres for the elderly). As each SE has about 250 to 300 members, and characteristics of these members appears to be normally distributed (Yung, Lau & Lai, 1991).

The rationale for getting a more active community sample is that when problems exit with this sample, one could assume confidently the presence of the same, or
even worse, problems amongst other elderly cohorts.

Procedure

Twenty SEs (out of 130 SEs, ten were approached first, and ten for reserve in case of rejection) were drawn randomly from the list of SEs recorded in the Directory of the Hong Kong Council of Social Services, 1992. The agencies responsible for the SEs were contacted for the necessary assistance. The interviewers then fixed the times with the Centre-in-charges, who would arrange an accidental sample of around 50 in each SE, to complete the interviews at the centre's offices (experience of previous research revealed that elderly people seem to prefer interviews of this kind at the centre rather than in their homes). In any case, the monthly meetings with different groups in these centres made it much easier to interview people before or after the meetings. Step-by-step this mean:

a) selection of 20 (10 for replacement) such centres drawn randomly from the list;

b) send a letter to, and contact, agencies responsible for, assistance so that:

i) the centre-in-charge would select an accidental sample
from existing members under the following criteria:
- fit to participate in such an interview
- aged 60 or above
- married (widowed or divorced) with at least one adult children (above 21 years old)

c) the interviewers would contact the centre-in-charge to fix dates and times for interviews.

These are easier said than done.

In November 1992, the centre-in-charges (ICs) were contacted first by myself via the phone. They were briefed about the purpose and objectives of the study, and were invited to participate. In my first round of phone calls to the ten SEs, eight ICs were willing to participate. Two said that they were at a time to renew their annual membership, and therefore would not like to join in.

Official letters (sent by myself as a lecturer of the City Polytechnic of Hong Kong) were then sent to their agency headquarters to seek official support for their ICs to get involved in the project. Invariably all the administrators of these organizations requested for further details - as they wished to make sure that they were disseminating their clients information for a worthy cause. Although eventually the responses were all posi-
tive - they would give the full support, the process took more time than expected. This had made a delay of about two months. The interviews were not started till January 1993.

During these times, ten interviewers were recruited from the final year social work degree students, they were studying at the Department of Applied Social Studies, City Polytechnic of Hong Kong. They were trained (in their course with the Polytechnic) to conduct face to face interviews. They were asked to do the interview at a quiet corner at the SEs, only read out the questions after the respondents were seated comfortably. To ensure a smooth and efficient process, the students were grouped into pairs for each SE, so that one could arrange the respondents to be seen in turn one after another and to keep those waiting occupied, while the other student was conducting the interview. It took generally two full days for each pair of students to finish one SE.

By April 1993, only 152 questionnaires were completed in the first round (400 were expected from these 8 SEs) of interviews. The reason for the small number of respondents was mainly that elderly members of these SEs either refused to participate or failed to turn up for the pre-arranged interviews.
A second round of interviews then became necessary. The procedure employed for the rest of the ten SEs (pre-selected as reserve) was the same as in the first round, the only difference was that this time all elderly respondents who participated in the interviews would get a present (either a bath towel or a box of chocolate, worth about HK$20 each). Only six SEs were willing to participate. The elderly respondents were more willing to participate this time. By June 1993, another 198 questionnaires were collected in the second round, making a total of 350 for the final analysis.

Instrument

This was a questionnaire with all close-ended questions designed for self-reporting (assisted reporting) including items on demographic variables, perceived health status (GHS and chronic illness, yes/no answers), the SCS (Chinese version 22 item Likert-type 0-3), filial piety (11 items, yes/no) and depression (GDS). Items for reality situations (subjectively assessed) were also included as a reference base. Though the full battery contains 128 questions, all the scales have shown reasonable reliabilities (none falls below .65). Details and format are attached in the Appendix.

The pilot test was carried out in a SE at Tai Po with 20 elderly members. The interviewers experienced
that the respondents always were wanting to clarify the meaning of the questionnaire items. This was particularly the case with items measuring sensitivity and specificity. However, reliabilities of the scales were satisfactory (all above .70). Thus the questionnaire was used as it was, except that the interviewers were told to make a special emphasis. They were asked to remind the respondents at the beginning of the interview that respondents needed only to respond to whatever meaning they felt when the item was read out to them, and that the interviewers should not interpret or explain these items. As the scales were measuring the respondents' perceived aspects rather than the actual ones.

Results

Sample Characteristics

A total of 350 elderly were successfully interviewed between the period from February to July 1993. When only completed questionnaire with less than 5 void items (i.e., missing, double entries and unclear marking) were included, there were 327 remained for further analysis.

Mean age is 72.49 (SD=6.242). Among the total of 327, 53.5% were married, 40.1% widowed and some 6.4% who
were either cohabitee, divorced/separated or never married. Regarding their education, there were only 32.6% who received no education as opposed to the 41% recorded in one of the community survey conducted recently by Liu et al (1993). Table (12) summarizes these demographic and education characteristics.
### Table (12): Sex, Age, Marital Status and Education Level of Sample

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>77</td>
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<td>24.1</td>
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<tr>
<td>Female</td>
<td>243</td>
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<td>Missing data</td>
<td>7</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
</tbody>
</table>

**Valid cases 327**  
**Missing cases 7**

<table>
<thead>
<tr>
<th><strong>Age</strong></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
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<td>32.3</td>
<td>32.3</td>
</tr>
<tr>
<td>70-79</td>
<td>160</td>
<td>48.9</td>
<td>50.6</td>
<td>82.9</td>
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<tr>
<td>80-89</td>
<td>48</td>
<td>14.7</td>
<td>15.2</td>
<td>98.1</td>
</tr>
<tr>
<td>90 or above</td>
<td>6</td>
<td>1.8</td>
<td>1.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>11</td>
<td>3.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
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</table>

**Mean 72.490**  
**SD 6.242**  
**Valid cases 316**  
**Missing cases 11**

<table>
<thead>
<tr>
<th><strong>Marital Status</strong></th>
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<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
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<td>40.1</td>
<td>40.1</td>
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<td>Cohabitee</td>
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<td>0.3</td>
<td>0.3</td>
<td>40.4</td>
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<tr>
<td>Divorced or separated</td>
<td>8</td>
<td>2.4</td>
<td>2.4</td>
<td>42.8</td>
</tr>
<tr>
<td>Married</td>
<td>175</td>
<td>53.5</td>
<td>53.5</td>
<td>96.3</td>
</tr>
<tr>
<td>Never married</td>
<td>12</td>
<td>3.7</td>
<td>3.7</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Valid cases 327**  
**Missing cases 0**

<table>
<thead>
<tr>
<th><strong>Education Level</strong></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never been to school</td>
<td>102</td>
<td>31.2</td>
<td>32.6</td>
<td>32.6</td>
</tr>
<tr>
<td>Primary School</td>
<td>114</td>
<td>34.9</td>
<td>36.4</td>
<td>69.0</td>
</tr>
<tr>
<td>F1 to F3</td>
<td>34</td>
<td>10.4</td>
<td>10.9</td>
<td>79.9</td>
</tr>
<tr>
<td>F3 to F5</td>
<td>18</td>
<td>5.5</td>
<td>5.8</td>
<td>85.7</td>
</tr>
<tr>
<td>F6 to undergraduate</td>
<td>2</td>
<td>0.6</td>
<td>0.6</td>
<td>86.3</td>
</tr>
<tr>
<td>University and above</td>
<td>3</td>
<td>0.9</td>
<td>1.0</td>
<td>87.3</td>
</tr>
<tr>
<td>Private tuition</td>
<td>21</td>
<td>6.4</td>
<td>6.7</td>
<td>94.0</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>5.8</td>
<td>6.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing data</td>
<td>14</td>
<td>4.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Valid cases 313**  
**Missing cases 14**
Family incomes were low amongst those inter-viewed. A high proportion (99.4%) were below the city's median income of HK$5170 per month recorded in the 1991 Census, and 97.5% were only maintained at Public Assistance levels (below HK$2000 per month for two eligible members). Also, 84.1% of the sample received no income. However, reported sources of income were mainly from their adult children's contributions (70.1%) and from their own savings (21.7%). Only a small proportion relied on social security payments such as Public Assistance (13.1%) and Disability Allowances (1.3%).

So as with the previous GDS validation sample, we are looking at an elderly group who mostly had little or no formal education, were economically inactive and were poor. On the other hand these people did not apply for public assistance payments. Their daily survival seemed to be either supported by their children, their own savings or through other means which were unlikely to give them a good living.

Counts on Number of Chronic Illnesses

In order to provide a more objective reference for respondents' health conditions, a count of the total number of chronic illnesses (which was based on the
modified Cumulative Illness Rating Scale used in Chi & Lee, 1989) was used to indicate the health condition. The results showed that the sample's health, considering their age (mean age = 72.5), was not poor after all (see table (13) and (14)). The majority of the respondents had only one or nil type of chronic illness (62.7%), and tended to be illnesses associated with old age (e.g. Rheumatism, blood pressure problems).
### Table (13): Yes/No Responses on Reported Chronic Illness

<table>
<thead>
<tr>
<th>Illness</th>
<th>Frequency</th>
<th>Responses</th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes  no</td>
<td>yes  no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Alcoholism</td>
<td>7  301</td>
<td>2.3  97.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Rheumatism</td>
<td>163 145</td>
<td>52.9 47.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fracture</td>
<td>16 292</td>
<td>5.2 94.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Diabetes</td>
<td>29 279</td>
<td>9.4 90.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cancer</td>
<td>8 300</td>
<td>2.6 97.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. High/low BP</td>
<td>84 224</td>
<td>27.3 72.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Heart disease</td>
<td>28 279</td>
<td>9.1 90.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. CVAs/hemiplegic</td>
<td>7 301</td>
<td>2.3 97.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Kidney disease</td>
<td>3 305</td>
<td>0.9 93.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Pulmonary disease (not TB)</td>
<td>17 291</td>
<td>5.2 89.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. TB</td>
<td>2 306</td>
<td>0.6 99.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Liver disease</td>
<td>0 308</td>
<td>0 100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Mental illness</td>
<td>5 303</td>
<td>1.5 98.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. others</td>
<td>55 253</td>
<td>17.9 82.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table (14): Total Number of Chronic Illness

<table>
<thead>
<tr>
<th>Number</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cum. Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>63</td>
<td>19.3</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>one</td>
<td>130</td>
<td>39.8</td>
<td>42.2</td>
<td>62.7</td>
</tr>
<tr>
<td>two</td>
<td>71</td>
<td>21.7</td>
<td>23.1</td>
<td>85.7</td>
</tr>
<tr>
<td>three</td>
<td>26</td>
<td>8.0</td>
<td>8.4</td>
<td>94.2</td>
</tr>
<tr>
<td>four</td>
<td>10</td>
<td>3.1</td>
<td>3.2</td>
<td>97.4</td>
</tr>
<tr>
<td>five</td>
<td>2</td>
<td>0.6</td>
<td>0.6</td>
<td>98.1</td>
</tr>
<tr>
<td>more than 5</td>
<td>6</td>
<td>1.7</td>
<td>2.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>19</td>
<td>5.8</td>
<td>missing</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Mean 1.659
Valid cases 324
Missing cases 19

SD 2.994
Status of Perceived Health Conditions

Health status was indicated by self-perceptions on three dimensions (subscales): i.e. discrepancy (HD), prolongation of ill health (HP) and specificity (HSP). The results (scores) are shown in table (15). The discrepancy scores indicate that there was little difference between the perceived reality and what the respondents expected their body ability to be. The overall mean score for discrepancy also confirmed this (mean = 0.97 as opposed to the full score of 6). Scores for the other two subscales were similarly low (HP mean = 1.208, HSP mean = 1.036). The overall mean was 1.07, indicating a not-so-bad health condition as seen by the respondents themselves. This is in line with the more objective indicator shown by number of chronic illnesses.
### Table (15): Yes/No Responses to Discrepancy (HD), Prolongation (HP) and Specificity (HSP) of Health Condition

<table>
<thead>
<tr>
<th>Scales (items)</th>
<th>Yes Frequency</th>
<th>Yes %</th>
<th>No Frequency</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HD:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) no illness</td>
<td>137</td>
<td>46.3</td>
<td>159</td>
<td>53.7</td>
</tr>
<tr>
<td>No other's help in:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) going out</td>
<td>32</td>
<td>10.7</td>
<td>267</td>
<td>89.3</td>
</tr>
<tr>
<td>(3) stair climbing</td>
<td>15</td>
<td>5.0</td>
<td>284</td>
<td>95.0</td>
</tr>
<tr>
<td>(4) walking</td>
<td>21</td>
<td>7.1</td>
<td>276</td>
<td>92.9</td>
</tr>
<tr>
<td>(5) house work</td>
<td>54</td>
<td>18.2</td>
<td>243</td>
<td>81.8</td>
</tr>
<tr>
<td>(6) all activities</td>
<td>42</td>
<td>14.2</td>
<td>254</td>
<td>85.8</td>
</tr>
<tr>
<td>Mean score:</td>
<td>0.967</td>
<td></td>
<td>SD 1.214</td>
<td></td>
</tr>
</tbody>
</table>

| **HP:**       |               |       |              |      |
| (1) prolonged illness | 127       | 43.1  | 168          | 56.9 |
| Has long been needing other's help in: |          |       |              |      |
| (2) going out | 43            | 14.4  | 255          | 85.6 |
| (3) stair climbing | 33         | 11.1  | 264          | 88.9 |
| (4) walking    | 32            | 10.8  | 265          | 89.2 |
| (5) house work | 77            | 25.9  | 220          | 74.1 |
| (6) all activities | 62         | 21.2  | 231          | 78.8 |
| Mean score:   | 1.208         |       | SD 1.552     |      |

| **HSP:**      |               |       |              |      |
| (1) tried to reduce illness | 244       | 83.8  | 47           | 16.2 |
| has tried without other's help in: |          |       |              |      |
| (2) going out | 266           | 89.3  | 32           | 10.7 |
| (3) stair climbing | 271        | 90.9  | 27           | 9.1 |
| (4) walking    | 263           | 88.3  | 35           | 11.7 |
| (5) house work | 232           | 78.1  | 65           | 21.9 |
| (6) all activities | 244         | 83.3  | 49           | 16.7 |
| Mean score:   | 4.964 (Reverse mean score: 1.036) | SD 1.589 |

**Overall Mean score for HD, HP & HSP:** 1.07
Status of Perceived Filial Piety Conditions

Filial Piety was indicated by self-perceptions on three subscales of discrepancy (FD), prolongation (FP) and specificity (FSP). The results are shown in Table (16). Both FD and FP scores indicate that the majority of respondents were well adjusted to their perceived reality (FD mean = 2.398, FP mean = 1.763 as opposed to the full score of 11). These respondents were, in general, satisfactory in responding to their perceived situations specifically (FSP reversed mean score = 5.063), i.e. know how to face with the situations. This gave an overall mean score of 3.408 (as opposed to full score of 11), indicating that the respondents' perception of received filial piety was on the lower side. The score might mean that the elderly did not expect a high level of filial piety from their adult children.
Table (16): Yes/No Responses to Discrepancy (FD), Prolongation (FP) and Specificity (FSP) of Filial Piety Conditions

<table>
<thead>
<tr>
<th>Scales (items)</th>
<th>Responses</th>
<th>Yes</th>
<th>Frequency</th>
<th>%</th>
<th>No</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FD</strong> Discrepancy in child's:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) absolute trust</td>
<td>49</td>
<td>17.0</td>
<td>239</td>
<td>83.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) quick in task completion</td>
<td>85</td>
<td>29.5</td>
<td>203</td>
<td>70.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) takes you to see the doctor immediately</td>
<td>75</td>
<td>26.0</td>
<td>214</td>
<td>74.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) remembers your birthday</td>
<td>43</td>
<td>14.8</td>
<td>247</td>
<td>85.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) living together</td>
<td>59</td>
<td>20.5</td>
<td>229</td>
<td>79.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) no quarrels</td>
<td>68</td>
<td>23.4</td>
<td>222</td>
<td>76.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) support and encouragement</td>
<td>43</td>
<td>14.9</td>
<td>245</td>
<td>85.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) repays what you have done</td>
<td>73</td>
<td>25.6</td>
<td>212</td>
<td>74.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) absolute obedience</td>
<td>87</td>
<td>30.7</td>
<td>196</td>
<td>69.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10) gives you all wages</td>
<td>50</td>
<td>17.5</td>
<td>236</td>
<td>82.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11) respects and cares for you</td>
<td>43</td>
<td>14.8</td>
<td>247</td>
<td>85.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean score: 2.398 SD 3.193

| **FP** Has long been not having child's:            |           |     |           |    |     |           |    |
| (1) absolute trust                                 | 60        | 21.1| 225       | 78.9|     |           |    |
| (2) quick in task completion                        | 95        | 32.9| 194       | 67.1|     |           |    |
| (3) takes you to see doctor immediately             | 95        | 33.1| 192       | 66.9|     |           |    |
| (4) remembers your birthday                         | 225       | 88.9| 32        | 11.1|     |           |    |
| (5) living together                                 | 105       | 37.1| 178       | 62.9|     |           |    |
| (6) no quarrels                                     | 133       | 46.5| 153       | 53.5|     |           |    |
| (7) support and encouragement                       | 72        | 25.4| 212       | 74.7|     |           |    |
| (8) repays what you have done                       | 65        | 22.8| 220       | 77.2|     |           |    |
| (9) absolute obedience                              | 36        | 12.6| 250       | 87.4|     |           |    |
| (10) gives you all wages                            | 83        | 29.0| 203       | 71.0|     |           |    |
| (11) respects and cares for you                     | 78        | 27.2| 209       | 72.8|     |           |    |

Mean score: 1.763 SD 3.110
FSP

Has tried to do something about child's:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) absolute trust</td>
<td>144</td>
<td>51.2</td>
<td>137</td>
</tr>
<tr>
<td>(2) quick in task completion</td>
<td>139</td>
<td>49.1</td>
<td>144</td>
</tr>
<tr>
<td>(3) takes you to see doctor immediately</td>
<td>158</td>
<td>55.6</td>
<td>126</td>
</tr>
<tr>
<td>(4) remembers your birthday</td>
<td>154</td>
<td>54.2</td>
<td>130</td>
</tr>
<tr>
<td>(5) living together</td>
<td>122</td>
<td>43.1</td>
<td>161</td>
</tr>
<tr>
<td>(6) quarrels with you</td>
<td>162</td>
<td>57.2</td>
<td>121</td>
</tr>
<tr>
<td>(7) support and encouragement</td>
<td>156</td>
<td>55.5</td>
<td>125</td>
</tr>
<tr>
<td>(8) repays what you have done</td>
<td>116</td>
<td>41.3</td>
<td>165</td>
</tr>
<tr>
<td>(9) absolute obedience</td>
<td>114</td>
<td>40.3</td>
<td>169</td>
</tr>
<tr>
<td>(10) gives you all wages</td>
<td>22</td>
<td>7.8</td>
<td>260</td>
</tr>
<tr>
<td>(11) respects and care for you</td>
<td>138</td>
<td>48.6</td>
<td>146</td>
</tr>
</tbody>
</table>

Mean score: 5.937 (Reverse score 5.063) SD 8.559

Overall mean score for FD, FP & FSP: 3.408

Respondents' Sensitivity to Their General Condition

This was measured by the Self Consciousness Scale (SCS). The scores are shown in Table (17). The mean score (27.01) as opposed to the full score of 66 indicated that the sensitivity (or self-consciousness) of these respondents was inclined to the lower side. This would mean a lower tendency for depression.
Table (17): Respondents' Sensitivity to Their General Condition

0 = not at all like me  
1 = a little like me  
2 = somewhat like me  
3 = a lot like me

<table>
<thead>
<tr>
<th>Items</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) try to understand self</td>
<td>55 19.6  101 36.1  58 20.7  66 23.6</td>
</tr>
<tr>
<td>(2) care about own working style</td>
<td>73 25.7  79 27.8  62 21.8  70 24.6</td>
</tr>
<tr>
<td>(3) need time to overcome</td>
<td>110 39.0  52 18.4  53 18.8  67 23.8</td>
</tr>
<tr>
<td>shy*</td>
<td>110 39.0  52 18.4  53 18.8  67 23.8</td>
</tr>
<tr>
<td>(4) think about own matters</td>
<td>75 26.6  64 22.7  62 22.0  81 28.7</td>
</tr>
<tr>
<td>(5) care about performance</td>
<td>113 39.9  68 24.0  53 18.7  49 17.3</td>
</tr>
<tr>
<td>(6) daydream about self</td>
<td>169 60.6  64 22.9  26 9.3  20 7.2</td>
</tr>
<tr>
<td>(7) can't work when others watching</td>
<td>150 53.5  64 22.9  33 11.8  33 17.8</td>
</tr>
<tr>
<td>(8) never observe self carefully</td>
<td>107 38.4  92 33.0  40 14.3  40 14.3</td>
</tr>
<tr>
<td>(9) easily feel embarrassed*</td>
<td>96 34.4  78 28.0  50 17.9  55 19.7</td>
</tr>
<tr>
<td>(10) care about own outlook</td>
<td>69 24.5  71 25.2  67 23.8  75 26.6</td>
</tr>
<tr>
<td>(11) easily can talk to a stranger</td>
<td>78 27.7  91 32.3  47 16.7  66 23.4</td>
</tr>
<tr>
<td>(12) attend to own feelings*</td>
<td>55 19.6  104 37.1  72 25.7  49 17.5</td>
</tr>
<tr>
<td>(13) worry about giving others a good impression</td>
<td>87 30.7  82 29.0  57 20.1  57 20.1</td>
</tr>
<tr>
<td>(14) think about why do such things</td>
<td>76 27.1  83 29.6  68 24.3  53 18.9</td>
</tr>
<tr>
<td>(15) nervous speaking in front of many people</td>
<td>110 39.0  62 22.0  49 17.4  61 21.6</td>
</tr>
<tr>
<td>(16) check appearance before leaving home</td>
<td>82 22.0  77 27.3  58 20.6  85 30.1</td>
</tr>
<tr>
<td>(17) evaluate self at a distance</td>
<td>116 42.6  70 25.7  43 15.8  43 15.8</td>
</tr>
<tr>
<td>(18) care about how others see self</td>
<td>95 34.2  77 27.7  58 20.9  48 17.3</td>
</tr>
<tr>
<td>(19) notice has quickly own emotion changes</td>
<td>65 23.3  102 36.6  67 24.0  45 16.1</td>
</tr>
<tr>
<td>(20) care about own manner</td>
<td>52 22.3  76 27.3  61 21.9  79 28.4</td>
</tr>
<tr>
<td>(21) aware of own process of problem solving</td>
<td>80 28.8  78 28.1  60 21.6  60 21.6</td>
</tr>
<tr>
<td>(22) nervous in a crowd</td>
<td>128 46.5  58 21.1  37 13.5  52 18.9</td>
</tr>
</tbody>
</table>

Mean score: 27.010  SD 14.222

* reversed scores
Discrepancy (D), Prolongation (P), Specificity (SP) and Sensitivity (S) of the Respondents

The collapsed scores for these four subscales indicating tendency for depression are shown in Table (18). The discrepancy score was low (weighted at .188) suggesting that the elderly was not unrealistic about their health and filial conditions. Prolongation of adverse health and filial conditions were not felt as bad (weighted at .181). In terms of their ability to specifically tackle the problems, the score was also on the low side (weighted at .316. The sensitivity score was at .409, showing that their self-consciousness level was not high, and therefore would not exert too much pressure on themselves for fulfilling an expectation made by themselves or by others. These scores showed that in general the sample had low risk for depression.

Table (18): Collapsed Scores of Discrepancy (D), Prolongation (P), Specificity (SP) and Sensitivity (S)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Scales Mean (Health)</th>
<th>Scales Mean (Filial)</th>
<th>Grand Mean (weighted for Max=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>HD  .967</td>
<td>FD  2.398</td>
<td>.188</td>
</tr>
<tr>
<td>P</td>
<td>HP  1.208</td>
<td>FP  1.763</td>
<td>.181</td>
</tr>
<tr>
<td>SP</td>
<td>KSP*  1.036</td>
<td>FSP*  5.063</td>
<td>.316</td>
</tr>
<tr>
<td>S</td>
<td>27.010</td>
<td></td>
<td>.409</td>
</tr>
</tbody>
</table>

* reverse scores
Note: high grand mean indicates depression
Reliability and Validity of the Scales:

General reliability of the scales was tested by using Cronbach's method, alpha coefficient was employed to indicate the levels of reliability (from 0 to 1). Reliability of a scale tends to increase with the number of items it contains, and scale with less than ten items usually has a relatively value reported. The present study would consider a reliability coefficient value of .65 or above acceptable for further analysis.

Validity of the scale items was tested by using the item-total correlations method. Regression and ANOVA (Analysis of Variance) were used to confirm and to explain those variables which had a stronger influence on depression.

Items in a scale (or a subscale) should correlate significantly with the total score (with at least $p < .01$) as they were designed to measure the same trait (construct), the coefficient used was the product-moment coefficient of correlation (commonly referred to as $r$) which ranges from $-1$ to $+1$, denoting a negative (-) or a positive (+) correlation from 0 to 1.

Correlations between variables (that is demographic and others represented by scores of the scales or
subscales) were measured by product-moment coefficient. Correlations with good r values at a significance level .01 or below would be extracted for further discussion and explanation.

Factor analysis was by stepwise multiple regression method. The procedure involved selecting a dependent variable (in this case is the GDS depression score) and others as independent variables (scales or subscales supposedly accounted for depression in the present sample) to find out which of these variables are 'best-fit' in accounting for depression.

Regression analysis yields some key values which help to interpret the results. The correlation coefficient between the sum of the independent variables selected and the dependent variable is called multiple correlation (R). R square represents the proportion in which these independent variables can be accounted for in influencing the dependent variable (depression), hence is also commonly referred to as the coefficient of determination. B is the slope of the regression line (denoting the proportion between an independent variable and the dependent variable) with the best-fit to the sample distribution, and is called the regression coefficient. In order to make all the variables with different units (for example age, sex) in a multiple regression analysis
more comparable, 'beta', as the standardized regression coefficient, is calculated by using the standardized scores (i.e. Z scores) of the X and Y values on the regression lines. The F value denoted the ratio between the mean square regression (accountable influence on the dependent variable) and the mean square residual (influence which the regression equation is not accounted for), the observed significance of F should therefore be good (p<.001). All these values would be shown in the regression and ANOVA analyses.

For ascertaining the moderating (or additive) effect of some variables (for example sensitivity) between the independent variables and depression, analysis of variance (ANOVA) was used.

All statistical analysis was assisted by the computer package SPSSPC+.

1. The Geriatric Depression Scale (GDS)

The internal consistency by Cronbach's method was high with an alpha value of .85 (see Table (19)). The mean score was 10.28 (full score is 30) with a standard deviation of 6.171. The mean was just below the recommended cut-off (i.e. 11) for depression prone cases. There were about 44% whose scores were on 11 or above, decreasing to 24.5% at 14 (cut-off for clinical depression) or above. The distribution of the scores appeared to be fairly similar to another study by Yung, Lau and Lai (1991) using similar samples.
Table (19) : GDS Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total Correlation</th>
<th>Value of Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS1</td>
<td>0.4514</td>
<td>0.8473</td>
</tr>
<tr>
<td>GDS2</td>
<td>0.2411</td>
<td>0.8515</td>
</tr>
<tr>
<td>GDS3</td>
<td>0.5965</td>
<td>0.8413</td>
</tr>
<tr>
<td>GDS4</td>
<td>0.6407</td>
<td>0.8397</td>
</tr>
<tr>
<td>GDS5</td>
<td>0.3874</td>
<td>0.8472</td>
</tr>
<tr>
<td>GDS6</td>
<td>0.5008</td>
<td>0.8437</td>
</tr>
<tr>
<td>GDS7</td>
<td>0.3215</td>
<td>0.8497</td>
</tr>
<tr>
<td>GDS8</td>
<td>0.3234</td>
<td>0.8498</td>
</tr>
<tr>
<td>GDS9</td>
<td>0.4730</td>
<td>0.8452</td>
</tr>
<tr>
<td>GDS10</td>
<td>0.5831</td>
<td>0.8417</td>
</tr>
<tr>
<td>GDS11</td>
<td>0.5950</td>
<td>0.8416</td>
</tr>
<tr>
<td>GDS12</td>
<td>0.3514</td>
<td>0.8482</td>
</tr>
<tr>
<td>GDS13</td>
<td>0.4995</td>
<td>0.8440</td>
</tr>
<tr>
<td>GDS14</td>
<td>0.2378</td>
<td>0.8517</td>
</tr>
<tr>
<td>GDS15</td>
<td>0.1946</td>
<td>0.8520</td>
</tr>
<tr>
<td>GDS16</td>
<td>0.6221</td>
<td>0.8407</td>
</tr>
<tr>
<td>GDS17</td>
<td>0.5309</td>
<td>0.8430</td>
</tr>
<tr>
<td>GDS18</td>
<td>0.4813</td>
<td>0.8449</td>
</tr>
<tr>
<td>GDS19</td>
<td>-0.1041</td>
<td>0.8615</td>
</tr>
<tr>
<td>GDS20</td>
<td>0.1750</td>
<td>0.8536</td>
</tr>
<tr>
<td>GDS21</td>
<td>0.3513</td>
<td>0.8483</td>
</tr>
<tr>
<td>GDS22</td>
<td>0.4282</td>
<td>0.8463</td>
</tr>
<tr>
<td>GDS23</td>
<td>0.2438</td>
<td>0.8516</td>
</tr>
<tr>
<td>GDS24</td>
<td>0.4900</td>
<td>0.8442</td>
</tr>
<tr>
<td>GDS25</td>
<td>0.5213</td>
<td>0.8434</td>
</tr>
<tr>
<td>GDS26</td>
<td>0.3682</td>
<td>0.8478</td>
</tr>
<tr>
<td>GDS27</td>
<td>0.0462</td>
<td>0.8559</td>
</tr>
<tr>
<td>GDS28</td>
<td>0.2314</td>
<td>0.8517</td>
</tr>
<tr>
<td>GDS29</td>
<td>0.2234</td>
<td>0.8517</td>
</tr>
<tr>
<td>GDS30</td>
<td>0.3223</td>
<td>0.8492</td>
</tr>
</tbody>
</table>

Mean alpha 0.8411
2. Perceived Health (Discrepancy) Scale HD

The six-items scale gave a fair reliability coefficient value of .70 (see Table (20)). The reliability could be significantly improved if item 1 (i.e. HD1, 'wish to have no illness at all') was deleted from the scale, indicating that this item was the least clear in its meaning to the respondents in relation to other items in the scale. Item 6 ('wish to be not limited in any activities') was the least correlated (r=.2308) with the total score amongst all items, suggesting that this item deviated the most from the discrepancy construct amongst all other items.

The scores of the scale was acceptable for further analysis.

3. Perceived Filial Piety (Expectancy) Scale FD

The scale contained 11 items giving a reliability coefficient of .81 (see Table (21)). All the items were fairly good in attracting correct responses from the respondents. Item-total correlation also indicated that all items had a fairly good affiliation to the total construct (r=.3184 to .5894).

The scores of the scale was accepted for further analysis.
4. Perceived Health (Prolongation) Scale HP

The full scale contained six items which gave a fair reliability coefficient of .7573 (see table (22)). Reliability could be improved significantly with item 1 (i.e. HP1, 'has long been ill') deleted, indicating that the meaning of this item was not clear to the respondents. Item 1 (i.e. HP1, 'feel that the illness is prolonged') had the weakest Item-total correlation (r=.1882) indicating that its meaning deviated from the total construct of bad health prolongation.

Nonetheless the full scale was still acceptable and valid for further analysis.
Table (20): HD Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-Total Correlation</th>
<th>Value of Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD1</td>
<td>.2885</td>
<td>.6682</td>
</tr>
<tr>
<td>HD2</td>
<td>.3992</td>
<td>.5961</td>
</tr>
<tr>
<td>HD3</td>
<td>.4798</td>
<td>.5918</td>
</tr>
<tr>
<td>HD4</td>
<td>.5173</td>
<td>.5716</td>
</tr>
<tr>
<td>HD5</td>
<td>.3459</td>
<td>.6130</td>
</tr>
<tr>
<td>HD6</td>
<td>.2308</td>
<td>.5779</td>
</tr>
</tbody>
</table>

Mean alpha .7016

Table (21): FD Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-Total Correlation</th>
<th>Value of Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD1</td>
<td>.3885</td>
<td>.8032</td>
</tr>
<tr>
<td>FD2</td>
<td>.5894</td>
<td>.7824</td>
</tr>
<tr>
<td>FD3</td>
<td>.5717</td>
<td>.7847</td>
</tr>
<tr>
<td>FD4</td>
<td>.5426</td>
<td>.7897</td>
</tr>
<tr>
<td>FD5</td>
<td>.3246</td>
<td>.8088</td>
</tr>
<tr>
<td>FD6</td>
<td>.4364</td>
<td>.7987</td>
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<td>FD7</td>
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<td>.7936</td>
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<td>FD8</td>
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<td>FD9</td>
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<td>FD10</td>
<td>.3184</td>
<td>.8088</td>
</tr>
<tr>
<td>FD11</td>
<td>.5747</td>
<td>.7871</td>
</tr>
</tbody>
</table>

Mean alpha .8108

Table (22): HP Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-Total Correlation</th>
<th>Value of Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP1</td>
<td>.1882</td>
<td>.7798</td>
</tr>
<tr>
<td>HP2</td>
<td>.5802</td>
<td>.6276</td>
</tr>
<tr>
<td>HP3</td>
<td>.5796</td>
<td>.6351</td>
</tr>
<tr>
<td>HP4</td>
<td>.5872</td>
<td>.6375</td>
</tr>
<tr>
<td>HP5</td>
<td>.4298</td>
<td>.6666</td>
</tr>
<tr>
<td>HP6</td>
<td>.5081</td>
<td>.6397</td>
</tr>
</tbody>
</table>

Mean alpha .7573
5. Perceived Filial Piety (Prolongation) Scale FP

A reliability coefficient value of .68 was recorded (see Table (23)). The low reliability was largely accounted for by two items, item 4 (FP3, 'child has long been not remember your birthday') and Item 6 (FP6, 'child has long been quarreling with you'). These two items might have given a loose meaning to the respondents, making the responses less consistent than other items. The item-total correlations of these two items were also low (item 4 $r=-.1972$, item 6 $r=.1089$) indicating that these two items deviated from the total construct of the prolongation of bad filial piety.

Nonetheless, the scale was accepted for further analysis.

6. Self Consciousness (Sensitivity) Scale S

The recorded alpha value was very good (i.e..90, see Table (24)). All items contributed to the overall reliability evenly with two items slightly deviated from the sensitivity construct: item 5 (i.e.S5, 'care a lot about my presentation to others') with an item-total correlation $r=.2239$, and item 11 (i.e.S11, 'easily for me to talk to strangers') with an item-total correlation $r=.2618$). All the other items had a fairly even contribution to the total construct.
Reliabilities of the subscales were also favourable: .77 for private self-consciousness, .83 for public self-consciousness and .72 for social anxiety.

These findings indicated that the SCS (Chinese version) was a good instrument in measuring Chinese elderly's self-consciousness (sensitivity), and was acceptable for further analysis in the present study.
Table (23): FP Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total Correlation</th>
<th>Value of Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP1</td>
<td>.3453</td>
<td>.6863</td>
</tr>
<tr>
<td>FP2</td>
<td>.5422</td>
<td>.6480</td>
</tr>
<tr>
<td>FP3</td>
<td>.5457</td>
<td>.6475</td>
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<tr>
<td>FP4</td>
<td>-.1972</td>
<td>.7345</td>
</tr>
<tr>
<td>FP5</td>
<td>.4148</td>
<td>.6683</td>
</tr>
<tr>
<td>FP6</td>
<td>.1089</td>
<td>.7161</td>
</tr>
<tr>
<td>FP7</td>
<td>.5162</td>
<td>.6479</td>
</tr>
<tr>
<td>FP8</td>
<td>.4757</td>
<td>.6560</td>
</tr>
<tr>
<td>FP9</td>
<td>.4017</td>
<td>.6766</td>
</tr>
<tr>
<td>FP10</td>
<td>.3907</td>
<td>.6727</td>
</tr>
<tr>
<td>FP11</td>
<td>.2316</td>
<td>.6957</td>
</tr>
</tbody>
</table>

Mean alpha .6833

Table (24): S Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-Total Correlation</th>
<th>Value of Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>.4288</td>
<td>.8972</td>
</tr>
<tr>
<td>S2</td>
<td>.5572</td>
<td>.8940</td>
</tr>
<tr>
<td>S3</td>
<td>.4793</td>
<td>.8961</td>
</tr>
<tr>
<td>S4</td>
<td>.5238</td>
<td>.8949</td>
</tr>
<tr>
<td>S5</td>
<td>.5140</td>
<td>.8951</td>
</tr>
<tr>
<td>S6</td>
<td>.2239</td>
<td>.9013</td>
</tr>
<tr>
<td>S7</td>
<td>.4340</td>
<td>.8971</td>
</tr>
<tr>
<td>S8</td>
<td>.3594</td>
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<td>.5838</td>
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<td>.9013</td>
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<td>S13</td>
<td>.6157</td>
<td>.8926</td>
</tr>
<tr>
<td>S14</td>
<td>.6369</td>
<td>.8922</td>
</tr>
<tr>
<td>S15</td>
<td>.4886</td>
<td>.8959</td>
</tr>
<tr>
<td>S16</td>
<td>.6392</td>
<td>.8919</td>
</tr>
<tr>
<td>S17</td>
<td>.6049</td>
<td>.8929</td>
</tr>
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<td>S18</td>
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<td>.8936</td>
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<td>S19</td>
<td>.5007</td>
<td>.8955</td>
</tr>
<tr>
<td>S20</td>
<td>.6034</td>
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<td>.5082</td>
<td>.8953</td>
</tr>
<tr>
<td>S22</td>
<td>.5450</td>
<td>.8944</td>
</tr>
</tbody>
</table>

Mean alpha .8989

317
7. Perceived Health (Specificity) Scale HSP

The recorded coefficient value was .70 (see Table (25)). All items showed a fairly even contribution to the overall reliability except item 1 (i.e. HSP1, 'have tried to reduce illness'). The same item also had a low correlation ($r=.0913$) with the total construct of specificity.

8. Perceived Filial Piety (Specificity) Scale FSP

The alpha value was high at .90 (see Table (26)). All the items contributed fairly evenly to the reliability. Item-total correlations were good all round, with item 1's ($r=.3856$, 'has tried to do something for child's absolute trust') and item 10's ($r=.2830$, 'has tried to make the child give you all wages') relatively lower than the others.

The overall scale was acceptable for further analysis.

9. Reliabilities of Scales : Health Status (H), Filial Piety (F), Discrepancy (D), Prolongation (P) and Specificity (SP)

Table (27) contained the summary of the reliabilities for all health status (H) and filial piety (F) (in different dimensions of discrepancy, prolongation and specificity) scales.
Scales (subscales) measuring health status in general had lower reliabilities than those measuring filial piety. These scales then arranged to show different dimensions of discrepancy (D), prolongation (P) and specificity (SP).
Table (25): HSP Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total Correlation</th>
<th>Value of Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP1</td>
<td>0.0913</td>
<td>0.6739</td>
</tr>
<tr>
<td>HSP2</td>
<td>0.5319</td>
<td>0.4717</td>
</tr>
<tr>
<td>HSP3</td>
<td>0.5447</td>
<td>0.4651</td>
</tr>
<tr>
<td>HSP4</td>
<td>0.4295</td>
<td>0.4932</td>
</tr>
<tr>
<td>HSP5</td>
<td>0.4483</td>
<td>0.4695</td>
</tr>
<tr>
<td>HSP6</td>
<td>0.2492</td>
<td>0.5779</td>
</tr>
</tbody>
</table>

Mean alpha .7003

Table (26): FSP Scale Item Total Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total Correlation</th>
<th>Value of Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSP1</td>
<td>0.3856</td>
<td>0.9092</td>
</tr>
<tr>
<td>FSP2</td>
<td>0.7536</td>
<td>0.8726</td>
</tr>
<tr>
<td>FSP3</td>
<td>0.7433</td>
<td>0.8733</td>
</tr>
<tr>
<td>FSP4</td>
<td>0.7114</td>
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<tr>
<td>FSP5</td>
<td>0.6004</td>
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<td>FSP6</td>
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<tr>
<td>FSP9</td>
<td>0.7350</td>
<td>0.8739</td>
</tr>
<tr>
<td>FSP10</td>
<td>0.2830</td>
<td>0.8955</td>
</tr>
<tr>
<td>FSP11</td>
<td>0.7897</td>
<td>0.8705</td>
</tr>
</tbody>
</table>

Mean alpha .9000

Table (27): Summary of Reliabilities: Health Status (H), Filial Piety (F), Discrepancy (D), Prolongation (P) and Specificity (SP)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>P</th>
<th>SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>(HD) .70</td>
<td>(HP) .70</td>
<td>(HSP) .67</td>
</tr>
<tr>
<td>F</td>
<td>(FD) .81</td>
<td>(FP) .70</td>
<td>(FSP) .90</td>
</tr>
</tbody>
</table>

HD=Discrepancy in health  HSP=Specificity in making good health
HP=Prolongation of bad health  FB=Discrepancy in filial piety
FP=Prolongation of bad filial piety  FSP=Specificity in making good
Correlation Matrix of the Scales and Depression

Table (28) is rather complex and it would be clearer if relationships between the scales (and subscales) is discussed under different categories:

1. Demographic Variables and Depression

Demographic variables (sex, age, education and income) and the total raw scores for each scale were used for correlations. An added dimension (i.e. the total number of reported chronic illnesses) was included as a more objective reference for respondents' health status.

Among these four demographic variables, only income was significantly correlated with depression (GDSTOTAL r=.1555 p<.01; sex is not associated with depression using the chi square test), indicating that income may be a better predictor for depression amongst the elderly in Hong Kong.

2. Scales and Depression

Amongst different scales, depression correlated directly with the health scale (HTOTAL with all subscales added up r=.2971 p<.001) and the filial piety scale (FTOTAL all subscales added up r=.2298 p<.001).
Sensitivity (STOTAL) and number of chronic illnesses (CTOTAL) in this sample were found not to correlate significantly at all with depression.

3. Demographic Variables and Other Scales (subscales)

The findings showed that age is significantly correlated with number of chronic illness (CTOTAL $r = .8012 p < .001$) and discrepancy in filial piety (FDTOTAL $r = .4176 p < .001$). It is obvious that age increases with number of chronic illnesses; and correlation with discrepancy in filial piety means that the elderly would have higher expectation in filial piety as they grow older. This can be explained by the expectation that the elderly would wish for more adult children support as their health deteriorates; the significant correlations between age and filial piety discrepancy ($r = .4176 p < .001$), and total number of chronic illness (CTOTAL) and filial piety discrepancy ($r = .4351 p < .001$) confirmed the same explanation.

Some correlations though existed among income and other variables (with HDTOTAL $r = -.1578 p < .01$; STOTAL $r = .2967 p < .001$; FSPTOTAL $r = .1597 p < .01$), these findings did not attribute meaningful explanations, and it may be that these variables just happened to be statistically significant.
4. Health Subscales and Depression

Two out of the three subscales of health correlated directly with depression i.e. Health discrepancy (HDTOTAL $r=0.2083$ $p<0.001$), prolonged bad health (HPTOTAL $r=0.2948$ $p<0.001$). The specificity in doing something about their bad health (HSPTOTAL) though was not significantly correlated with depression, it correlated inversely (expectedly this has a moderating effect on depression) with discrepancy (HDTOTAL $r=-0.1710$ $p<0.01$). This has confirmed our assumption that discrepancy and prolongation are more important.

5. Filial Piety Subscales and Depression

For filial piety, only one subscale was directly correlated with depression, i.e. discrepancy of filial piety (FDTOTAL $r=0.2724$ $p<0.001$). Discrepancy was significantly correlated with prolonged bad filial piety (FPTOTAL $r=0.2196$ $p<0.001$) but not the specificity of making the children filial (FSPTOTAL). However, specificity was found to have a good correlation with prolonged bad filial piety ($r=0.6081$ $p<0.001$), meaning that the elderly would do something only when bad filial piety is prolonged.
6. Sensitivity, Health and Filial Piety Subscales

None of the health subscales correlated significantly with number of illnesses or with sensitivity and its subscales (i.e. private self-consciousness, public self-consciousness and social anxiety) indicating that perceived health was seen rather independently of the reality health situations and the levels of self consciousness. Health discrepancy (HD) was correlated with filial discrepancy (FD) (\( r = .2718 \ p < .001 \)) and with filial specificity (FSP) inversely (\( r = -.1545 \ p < .01 \)). Health specificity correlated (HSP) with all three filial subscales inversely (with FPTOTAL \( r = -.3038 \ p < .001 \); with FDTOTAL \( r = -.1660 \ p < .01 \); with FSPTOTAL \( r = -.1605 \ p < .01 \)); these correlations did not seem to offer meaningful relationships.

Filial discrepancy was correlated with number of illnesses (\( r = .4351 \ p < .001 \)), indicating that the elderly wished for more filial support when the number of chronic illnesses increased - that is when their health deteriorates. Filial specificity was correlated with sensitivity (\( r = .2294 \ p < .001 \)). This makes sense because when one is conscious of oneself, he/she will be specific in what action to take to safeguard his/her interests. Prolonged bad filial piety was not correlated with number of illnesses and sensitivity at all.
Although it was claimed that high discrepancy coupled with high sensitivity would produce depression (Hyland, 1987), there were not significant correlations between sensitivity (STOTAL) and discrepancy scales (HD, FD), and depression (GDSTOTAL). Regression and ANOVA for these variables with depression as dependent also did not indicate that sensitivity was a significant variable in the equation.

In all there were four variables associated significantly and directly with depression: income, health in two subscales of prolonged bad health and discrepancy of health, and filial discrepancy. Correlations of these four variables with other correlates also indicated that they were the primary factors for depression amongst the present elderly sample. Multiple regression analysis would yield a more refined explanation.
Table (28): Correlations Matrix of Age, Education, Income and All Subscales

<table>
<thead>
<tr>
<th>SCALES</th>
<th>HPTOTAL</th>
<th>HDTOTAL</th>
<th>HSPTOTAL</th>
<th>CTOTAL</th>
<th>STOTAL</th>
<th>FPTOTAL</th>
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</table>

1-tailed Significance: * - .01 ** - .001

HPTOTAL  Prolongation of bad health
HDTOTAL  Expectancy in health
HSPTOTAL Specificity in getting better health
CTOTAL  Total number of chronic illnesses
STOTAL  Sensitivity
FPTOTAL  Prolongation of bad filial piety
FDTOTAL  Expectancy in filial piety
FSPTOTAL Specificity in getting better filial piety
GDSTOTAL Depression
AGE Age
EDU     Education (number of years)
INCOMET Income Total

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Multiple Regression Analysis with Depression as a Dependent Variable

Analysis using multiple regression confirmed the results obtained. Perceived health status and filial piety had the best fit among all the variables of depression. The sum effect of these two explained more than 12% of the depression experienced in the present sample. As for further explanations, prolonged bad health (HPTOTAL) was the most crucial amongst the three subscales in determining depression. Filial discrepancy (FDTOTAL) was the determinant amongst the subscales for depression; these two variables accounted for more than 15% of the depression experienced in the present sample.
Table (29): Multiple Regression - Depression as Dependent Variable, with Full Scales of Health Status and Filial Piety, Number of Chronic Illnesses and Sensitivity

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<th>Variable</th>
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<th>F(Eqn)</th>
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Table (30): Multiple Regression - Depression as Dependent Variable, with Subscales of Health and Filial Piety, Chronic Illness and Sensitivity

<table>
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<tr>
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<th>Variable</th>
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<th>F(Eqn)</th>
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Conclusion

The present study has confirmed many of the hypotheses that while adverse social conditions are tolerable to the elderly, the outcome of depression in relation to perceived health and filial situations are to a certain degree determined by how the elderly themselves would wish to interpret their situations.

The weak associations between depression and demographic variables such as sex, age, education and income suggest that the elderly can deal with their social disadvantages. However, health condition, particularly perceived as prolonged bad health, remains to be the most important determinant amongst the aged. Perceived filial piety (particularly in terms of discrepancy), crucial as it is independently, also serves as a buffering agent for those elderly who are in fear of bad health in growing old.

In relation to the research questions and hypotheses set, some were confirmed while the others were not. Amongst the four dimensions of the control theory proposed, discrepancy seems to be the most crucial in determining depression in two aspects, namely perceived health and filial conditions. Prolonged bad health is considered by the elderly to be another bad aspect of
life leading them to depression. Sensitivity and specificity do not seem to have any direct bearing on depression at all with the present sample. Sensitivity, unlike what Hyland (1987) proposed, was not found to be a significant intervening variable between discrepancy and depression.

It has been confirmed that when discrepancy is high, depression will be high; and that when bad health is prolonged, depression will also be high.

It is now certain that with high scores on health and filial scales (subscales), i.e. low physical health status and low filial support, depression will be inevitable. Filial support will be a good moderator for depression amongst those elderly who have a bad health status. It follows that when perceived health and the filial support are good, the elderly will be protected from depression.
CHAPTER NINE: CONCLUSION AND LIMITATIONS
Conclusion

In reviewing possible cultural differences in the nature and origin of depression, the present study asserts that there are only little differences amongst the elderly population between those living in Western countries and the Chinese. Chinese elderly people would express depressive symptoms in more or less the same way as their Western counterparts. Such an assertion has led the present study to follow an explanatory path where the occurrence of depression can be attributed to the same physiological, sociological and psychological factors. However, the fact that there are some factors which are taken as more influential in a culture (or by an individual) and not the other requires further explanation. A control process view is hence used to explain these finer variations. In the process of ascertaining the proposed explanatory model, an instrument of choice for measuring elderly depression, which was originally developed and validated in the United States, was translated into Chinese and re-validated in Hong Kong (i.e. GDS); and two variables, namely physical health status and filial piety, were investigated for their fitness into the model.

Historically conceptualization of depression in China has taken a different path from psychiatric medi-
cine in the West. The Ying-Yang and the Five Elements, which Chinese medics have consistently used to explain all illness in relation to natural and physical conditions, have encouraged the Chinese to manifest depressive symptoms more in somatic forms. However, this Chinese inclination becomes blurred when compared to the older age groups in different countries whose concern with physical health is equally apparent. As evident in many studies, psychosocial symptoms of depression amongst the elderly in Western societies are, like what the Chinese elderly experience, also frequently masked by their physical complaints. Thus somatization should not be taken as the most significant cultural difference amongst the elderly having depression.

Physiologically, there is not any evidence that the inherent body-built or brain chemistry in relation to depression are significantly different between the Caucasians and the Mongolians (Chinese). It is particularly obvious that the biological functioning of human brains is basically the same regardless of race and ethnicity.

From the existing literature search it is fairly well established that depression can be accounted for by the bio-chemical activities within the human brains. Cerebral amine and its breakdown process, which are responsible for producing depression, have been identified. Endocrinological changes, such as mysoedema, and
some age-related diseases such as Alzheimer's disease could also imitate depression. However, the biological or bio-chemical cures for depression are not as clear; as there are still a vast area of unknowns in the functioning of the human brain, any direct (say operation) or indirect (say drugs) interventions with live human brains (that is living human beings) would inevitably become a controversial ethical question.

Physical health though is a definite correlate of depression in both races, there are no conclusive evidences that the deteriorating physical conditions of the elderly could have any direct effect on the brain-chemistry which produces depression. It is likely that those with bad physical health get depression via a process of psychological and sociological reaction to their adverse health conditions (for example chronic pain).

Sociological explanations provide a general view that social factors such as being female, low education, low income, being from a minority culture and race may produce depression under given social conditions. An elderly person may have experienced most of these in the present society.

Women have been reported to have a higher chance than men in getting depression. The difference has been
due to that women in general have been awarded a subordinate status in our society through sex stereotyped behaviour learning and expectation. The taking and leading of a powerless life style in a competitive social environment may lead women into a more frustrating and stressful situation which eventually drives them to depression. The present findings from the two studies did not reveal a significantly higher incidence of depression in elderly women, the reasons could be that when people age, social differences begin to fade away, and that both men and women in Hong Kong society are experiencing the same low level of powerlessness and discrimination. This indicates that service providers should not assume elderly men in Hong Kong to be less likely to become depressed, and that preventive services should not exclude men.

Income and education levels determine one's life chance and life style in the present society. People with good income and high education usually are equipped with good problem-solving skills and have more resources to cope with stressful situations. On the contrary, people with low income and low education, such as the elderly population in Hong Kong, will find themselves less able to deal with their daily problems, for example health problems such as physical pain or financial problems or the inability to pay for entertainments. The present study has established, like others before them, that the elderly population is both low in income and education.
However, only income was found to be significantly related to depression. This indicates that income maintenance schemes providing adequate income to meet the expenses should be considered as an effective service against depression. Such a finding is in line with those studies done in Western countries.

Undesirable life events are another area that create distress. Many often could cope and could return to their normal self after a brief period. However, for the elderly some undesirable events or accidents may become too often, for example fractures, and perhaps inevitable, for example deaths of close ones. There is not much difference amongst all elderly people when it comes to consider which events are more undesirable - as all ordinary undesirable life events at old age would seem inevitable for them in all cultures.

It is necessary to point out that even the caring professionals in Hong Kong assume the presence of a supportive informal network amongst Chinese families - the assumption is not always right. The review on recent studies has shown that the social and family fabrics of the current Hong Kong society are changing. The sum effect of the change on the pattern of care for the elderly has given way to a share-care model - care for the elderly is shared between the family, community and the public.
services. This shift has at the same time transformed the traditional pattern of filial piety, where sons more than daughters are expected to fully provide for their elderly parents and to show absolute obedience, to one that only emphasizes material provision and one that expects adult children, regardless of sex, to provide mainly material support. Such a change requires the elderly, particularly for those who enjoyed the power and authority over their adult children in the past, to make realistic adjustments in the obligations expected from their adult children. A note to make here is that the elderly in the West in fact would wish for the same from their adult children, only that their expectation is more in tune with the reality as a result of longer-established norms of their society. Thus filial care though may equally be an important factor, it may not be as determining as it is amongst the Chinese. The reason is that Hong Kong may be as advanced as other countries in the West, but its rapid transitions from an agrarian society to an urban city in just over twenty years does not allow enough time for new life styles and values to gradually sink in and to replace the traditional ones. The old generation therefore helplessly accepts the changes and witnesses their traditional power and authority eroded in front of their own eyes. As a result, the elderly people in Hong Kong know that they could not get filial piety to the same intensity and in the same forms as in old times, but obviously they would still expect and make their children to conform as much as possible. The present
study indeed has shown that filial piety - in itself is changing and being modified - is still a determining factor affecting the life of the elderly in Hong Kong.

Powerful in their explanatory power as the sociological perspectives may be, these propositions often neglect the detailed individual variations. All those elderly who are in such bad physiological and social conditions, not every one of them become depressed; this fact reveals that elderly as individuals have different perspectives consciously or unconsciously in perceiving which social conditions are more important to them. Such details or small variations could not easily be accounted for by sociological perspectives which tend to employ a 'blanket' view of social or psychological phenomena and neglect individual differences. In order to take into account of all these theoretical observations, an explanatory model which could account for the sociological variables and at the same time could explain individual (cognitive) variations has been developed.

The present study has proposed a control theory framework which has taken the stance that unfavourable social and physical conditions have a predisposing effect on the elderly for depression; but what condition(s) is considered more crucial than others is determined by the elderly themselves, hence this becomes the "triggering
off" mechanism. But in turn, the process of making this decision, as demonstrated by the cybernetic feedback loop, is also influenced by the elderly's socialization pattern i.e. adhesion to norms and culture which have confined and shaped their thinking.

The control process states that the elderly try to control (or to reduce the discrepancy between actual and the expected situations) their external environment by adjusting their cognition and behaviour. The process is a self-control discrepancy-reducing feedback mechanism. Starting with a social condition being fed through the perception system of the brain, the perceived condition is then compared against a reference value (i.e. person's expectation in similar situations) which was formed upon the person's past experience. If the comparison indicates discrepancies between the perceived state and the reference value, corresponding behaviour will be produced as an attempt to move further perceptual inputs closer to the reference value, thus discrepancy will also be reduced. It is also obvious in the feedback loop that discrepancy could be reduced by giving up or by modifying existing reference values. However, when such values are too important to the person and could not be cast aside, then the result of the combination of an inability to disengage plus an inability to reduce discrepancy will become an endless cycle of weak effort, increasing awareness of the unfa-
vourable outcomes, and ultimately this will be leading to negative affect i.e. depression.

Depression is therefore taken as both a result of and an attempt to adapt to actual unfavourable conditions. Like their counterparts in the west, the Chinese elderly people expect, or wish for, good health in old age, but in reality they seldom have this. Depression often comes when actual health conditions are much worse than their expectation, especially if bad health is perceived to be a prolonged suffering. However, those who, in fact, expect bad health in their later lives, are able to reconstruct their cognition to a more positive outlook - e.g. thankful to be alive till now - and thus are protected from depression.

Apart from perceived health status, perceived filial piety has been taken as another significant factor for depression amongst the Chinese elderly. The elderly in general, would wish for their children's respect, support and care, but it has been proposed that the Chinese elderly particularly, tend to have too high an expectation compared to actual situations. Such a discrepancy, or failure to adapt, often gives rise to depression.

Depression amongst the Chinese elderly in relation
to perceived physical health status and perceived filial piety so far has been explained as an outcome of discrepancy and when the discrepancy is prolonged (i.e. prolongation). But there are other situations in the control process which need to be considered. If the person having a large discrepancy is not sensitive or conscious to its outcomes (i.e. sensitivity), the impacts of unfavourable outcomes may be cushioned; and if the person is specific in confronting the discrepancy (i.e. specificity), reference values or behaviour are more likely modified to effectively reduce the discrepancy. So in order to fully ascertain the construct of the control process model, these four aspects need to be established empirically.

In order to operationalize these constructs coherently, a valid measurement for the dependent variable (i.e. depression) has to be found first. As the review of the literature has led us to believe that there is little difference amongst all elderly population in expressing depressive symptoms, a translated version (Chinese) of a validated instrument from either the West or the East, which is designed for an elderly respondent, should also serve the purpose. The GDS has been selected as a result, it was translated and validated in the first part of the present study.

The validation study took a year to do from January 1992 to February 1993. All elderly aged 60 and over attending
the ten out-patient clinics (government maintained) were included. A total of 461 cases were used in the analysis. Criterion validity with psychiatrist's diagnosis as a reference was verified (.95), concurrent validity with CES-D was also very good (.96). General reliability reached a high .89 and the test-retest reliability over two weeks with a community sample (40) was .85. However, in establishing the cut-off score for the scale for clinical depression, it was found that the statistical values for false positives and false negatives were too high for being used as a diagnostic tool. The results of the validation has indicated that the GDS (Chinese version) is good for measuring symptoms of depression, but is not adequate as an illness-wellness screening instrument. This means that the GDS can be used by the non-medical care professionals, such as social workers and nurses, as a tool to identify those elderly having symptoms of depression for further investigations and interventions, the scale cannot screen in accurately those who are clinically depressed.

The second part of the present study attempted, by using the GDS (Chinese version) as a dependent variable, to provide an explanation, through the four aspects of the control process model, for the depression amongst the elderly in Hong Kong in relation to their perceived physical health status and perceived filial piety.
Methodologically these four aspects would have to be incorporated into measurements of the physical and the filial aspects. So the procedure was to first identify a measurement of choice for physical status and filial piety, and then to arrange the items into these four aspects or dimensions. So theoretically each question item in a scale measuring the construct (say physical health status) would generate four questions for discrepancy, prolongation, sensitivity and specificity correspondingly. Such a questionnaire setup would be rather repetitive as well as be rather confusing to the elderly respondents. For these reasons the Self-consciousness Scale (SCS, 22 items) was used to replace all the sensitivity items; on top of this, the Chinese version of SCS in its construct to measure global self-awareness has also been validated.

The Guttman Health Scale (GHS) was chosen to measure physical health status for its short (only six items) and easy to answer (all on self-assessed daily functions) structure. These six items were re-arranged to measure three dimensions of the control process in relation to perceived physical health status.

Scales for measuring filial piety were modified to take into account of the changes noted in the review of the literature. Criteria for selection of items from Ho's 28-items (Ho, 1974), Yeung's 21-items (Yeung, 1989) and Lee et al's 9-items (Lee et al, 1992) were item's relevance to
health care and to children's respect in relation to offering emotional support and tangible helps. The 11-items scale then obtained was re-arranged to cover the three dimensions in the same way as in the case of perceived physical health status.

It has been evident in the findings of the second part of the study that perceived health status (subjective) is a good predictor for depression; and this is in line with the findings in other countries where physical health status has also been closely related to depression amongst the elderly population.

It has been confirmed that there is a significant association between depression and perceived health status (with all dimensions added up, r=.2971 p<.001), especially when bad health was felt (i.e. depression with discrepancy r=.2083 p<.001) and was thought likely to last for a long time (i.e. depression with prolongation r=.2948 p<.001).

Depression was again significantly correlated with filial piety (with all dimensions added up, r=.2298 p<.001), especially when the discrepancy between the expected ideal and reality is great (r=.2724 p<.001). As expected, the result has confirmed that filial piety still plays a significant role in determining depression amongst the Chinese elderly in Hong Kong.
Analysis by using multiple regression (depression as a dependent variable) revealed that perceived physical health status alone accounted for 9.2% (multiple R square, signF=.000) of all the factors for depression, while perceived filial piety accounted for 2.85% (multiple R square, signF=.000). The sum effect of these two accounted for more than 12% of all the factors of depression (multiple R square, signF=.000). These results obviously have confirmed our assumption that perceived physical health condition, like all elderly people in other countries, is the primary determinant for depression. Perceived filial piety, as it has been assumed in front of all the rapid social changes, is losing its importance; but the fact that it still meant something amongst the older generation in Hong Kong did entail some retention of these values as the present study predicted.

The explanatory power of the control process model has been further confirmed by looking at regression analysis results on the dimensions (subscales) of the scales. Depression amongst the Chinese elderly was accounted for most by the perceived prolonged suffering as a result of bad health (8.69% multiple R square, signF=.000). This indicates that people would normally expect illness at old age, but were hoping that it would just last for a short duration. Therefore prolonged illness would not be in their ideal expectations. The fact that discrepancy in perceived filial
piety accounted for 6.69% (multiple R square, signF= .000) of the depression indicates the existence of a significant gap between what the elderly was expecting and what they actually perceived to get from their children.

So by and large the overall presentations of the findings in relation to perceived physical health and perceived filial piety fit in with the control process model proposed. The reference values used amongst the Chinese elderly were as expected and as portraited in the questionnaire items. The most significant determinant for depression is found to be the discrepancy between the reality and the expectation. As for physical conditions, the Chinese, perhaps not unlike the elderly in other cultures, would fear a prolongation in their physical sufferings - hence prolongation was also found to be a direct correlate of depression. As for filial piety, only discrepancy was found to have a direct significant effect on the elderly.

However, sensitivity or self-consciousness and specificity, which have been proposed to be an intervening variable between discrepancy and depression, was found to have no significance at all in the model. This may indicate another area of cultural difference where the Chinese elderly pay less attention to the 'self' as opposed to their Western counterparts. In making their own effort to try to tackle the adverse conditions so perceived, the Chinese
elderly people were also found to be non-specific or lacking in specific actions and would rather wait what it was to come - this perhaps fits in with what has been said about the Chinese's locus of control being more externally oriented. All these observations naturally call for further investigations. But if this tentative assertion is true, the effect of those cognitive restructuring treatments focusing on the 'self' may be in doubt, for example self-assertiveness training; and that these elderly may be more susceptible to a more social interactional approach of cognitive restructuring, say reality therapy.

So when services to the elderly are considered, service providers need to be aware that good health maintenance and illness prevention (say for depression), should constitute as a major component for all services. As regarding the implications of the effect of filial piety expectations, the elderly are to a certain degree realistic in facing the transformation of the traditional filial care, but the presence of a fair expectancy-reality discrepancy warns the service providers that family relationship between the two generations is still a potential psychological trauma for the older generation. And in cases of the elderly admitting to residential homes, or in any situations where erosion of traditional filial piety is indicated (say emigration of their adult children), though the elderly may accept the reali-
ty unwillingly without verbalizing their feelings, caring workers should observe the presence of depression amongst these elderly and should provide appropriate services accordingly.

All in all, the findings of the present study have provided confirmatory evidence for the control process being a valid explanatory model to explain depression amongst the elderly Chinese in Hong Kong. The findings have also indicated that two of the major determinants influencing the cognition of the Chinese elderly in the process were perceived prolonged bad health and discrepancy in filial piety.
Limitation of the Two Parts of the Study

Limitations of the Theoretical Constructs

In the first part of the study, it was taken that depression per se could be measured by question items covered by the GDS in sad affect, cognitive distortion and poor social interaction over a duration of two weeks. Depression, as it has been reviewed, is a non-specific psychiatric condition which may present itself in various variations or subtypes; and some of its constructs may overlap with other conditions such as anxiety and dementia. The present study suffers from the same theoretical drawbacks.

The second part of the study, by adopting a control process model, also suffers from the weaknesses of such a model. It has never been proven empirically that discrepancy between reference values and reality will produce depression and not other mental conditions. The result (depression) has largely been an observation. The general weakness of cognitive theories, of which the control process is one, is that the exact mechanism of the thinking process inside the human brain is difficult, if not impossible, to be uncovered.
Methodological Limitations

There were four common limitations in both parts.

Firstly it is the low responses from those who were first approached for interviews. In the first study all the targeted respondents in fact responded (626 interviewed, only 461 successful cases), the presence of incomplete items rendered many invalid for the validation (165 cases). For the second part of the investigation, it was the low responses rate of the respondents (only 14 out 20 agencies approached were willing to participate; only 350 completed interviews out of the 700 expected; discarding those with 5 void items or more then only 327 left for the final analysis) that limits the interpretation of the results. So readers should take caution when interpreting the findings of these two studies.

The second limitation lies in the representativeness of the two samples in representing the community sample. The validation sample was all out-patients of psychiatric clinics, and thus were either having depressive illness or/and other types of mental illness. This might affect the validity of the instrument under test in terms of its precision in identifying depressive cases, for instance those who had Alzheimer's disease would produce depression-like symptoms. The study has tried to eliminate all these errors by using proper criterion
reference (i.e. qualified psychiatrists' diagnosis); and by administering the Mini Mental State Examination (MMSE) and the Mental State Questionnaire (MSQ) to screen out those who might come with cognitive impairments; and by using qualified psychiatric nurses to conduct the interviews. Nonetheless the findings were correct insofar as psychiatric out-patients are concerned, interpretations beyond this selected population need extra cautions. The second sample was drawn from SEs. Members attending SEs though were believed to have common characteristics as the general aged population in Hong Kong. However, elderly from these centres are undeniably the more active and more initiative ones. So findings from this study should be interpreted with care when inferences are made to cover the general elderly population in Hong Kong.

The third limitation is the not-yet-perfect psychometric properties of the scales. The GDS (Chinese version) though has a very good reliability, its validities were not as good. The false positive and false negative identifications were too high for uses as a screening tool for depression. So one needs to be aware that the scale is measuring the depressive symptoms, and is not adequate to claim that those who are identified with this scale must need psychiatric treatments. As for the scales used in the second investigation, those having reliabilities between .65 and .75 will require further improvements, as this reliability range is normally

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considered marginal. So results interpreted under these scales need to be taken with care. On top of this, the scales used for physical health status and filial piety have been modified and translated, the means of these scales were used as the cut-offs and these were the only reference points for drawing corresponding conclusions. Without reference values from other normative data, such inferences run the risk of being non-representative and hence cannot be generalized to cover the general population.

The forth limitation is common with all studies. The studies have tried their best to exhaust all conceivable variables which may affect the subjects under investigation. So some of these variables may not have been identified and controlled. So readers are reminded of this fact.
APPENDIX 1: TERMS AND ABBREVIATIONS
LIST OF LOCALLY USED TERMS AND ABBREVIATIONS

TERMS:

ASWO - ASSISTANT SOCIAL WORK OFFICERS
C&A HOMES - CARE AND ATTENTION HOMES
DE - DAY CARE CENTRE FOR THE ELDERLY
FLE - FAMILY LIFE EDUCATION
ME - MULTI-SERVICE CENTRE FOR THE ELDERLY
OAA - OLD AGE ALLOWANCE
OPDs - OUTPATIENT PSYCHIATRIC CLINICS
PA - PUBLIC ASSISTANCE
PHE - PUBLIC HOUSING ESTATES
SE - SOCIAL CENTRE FOR THE ELDERLY
SWD - SOCIAL WELFARE DEPARTMENT

ABBREVIATIONS FOR MEASUREMENT SCALES

MMPI-D MINNOSOTA MULTIPHASIC INVENTORY - DEPRESSION SCALE
SDS ZUNG'S SELF REPORT DEPRESSION SCALE
BDI BECK'S DEPRESSION INVENTORY
CES-D CENTRE FOR EPIDEMIOLOGICAL STUDIES-DEPRESSION SCALE
CMP CLINICAL MEASUREMENT PACKAGE
CRS CAROLL'S RATING SCALE
GDS GERIATRIC DEPRESSION SCALE
CT TOTAL NUMBER OF CHRONIC ILLNESS
D DISCREPANCY SCORES
P PROLONGED DISCREPANCY SCORES (PROLONATION)
SP SPECIFICITY SCORES
S SENSITIVITY SCORES (SELF CONSCIOUSNESS SCALE)
H HEALTH STATUS SCORES
F FILIAL PIETY SCORES
HD DISCREPANCY IN HEALTH SCORES
HP PROLONGED DISCREPANCY IN HEALTH SCORES
HSP SPECIFICITY IN HEALTH SCORES
PD DISCREPANCY IN FILIAL PIETY SCORES
FP PROLONGED DISCREPANCY IN FILIAL PIETY SCORES
FSP SPECIFICITY IN FILIAL PIETY SCORES
APPENDIX 2 : LETTERS TO ORGANIZATIONS
23rd November 1991

Mr Johnny Au
Senior Nursing Officer
David Trench Rehabilitation Centre
5th Floor
Hong Kong Psychiatric Centre
9B Bonham Road
Hong Kong

Dear Mr Au,

Re: Clinical Validation of the Geriatric Depression Scale

It was nice talking to you over the telephone yesterday.

Kindly find the papers enclosed for your reference and retention. Your support and your colleagues's help are much needed and are crucial for the success of this study.

If you feel that it may be necessary for me to go round to all the OPDs and to explain to your colleagues about the purpose and procedure of the study, I will be very pleased to do so.

Should you have any queries, please do not hesitate to call me at 7888766.

Thank you very much.

Yours sincerely,

CHAN Cheung Ming, Alfred

encl.

CC Dr C S Yu
Dr T W Fan
5th December 1991

Dr B S Shum
Consultant Psychiatrist In Charge
Kwai Chung Hospital
Lai King Shan Road
Kwi Chung N.T.

Dear Dr Sham,

Re: Clinical Validation of the GDS

Please find the final drafts of the research design questionnaire enclosed for your reference and retention. There are yet another few questions (the Mini Mental State Questionnaire) to be added by Dr Fan.

The assistance and advices from both Dr Yu and Dr Fan have been invaluable. As for getting the assistance from the Clinics' nurses, Mr Johnny Au has already agreed the arrangement in principle, but would like your final approval for the project to go ahead. Likewise we are also waiting for your 'greenlight' to start the data collection process on 1st January 1991.

Your comments and suggestions will be much appreciated.

I am really grateful for the assistance and support you have been giving.

Thank you once again.

Yours sincerely,

Alfred Chan

encl.
Mr Alfred Chan  
City Polytechnic of Hong Kong  
83 Tat Chee Avenue  
Kowloon  

Dear Mr Chan,  

Re: Clinical Validation of the GDS  

Thank you for your revised protocol on the above.  

Since the external collaborators namely Drs Yu and Fan and the Senior Nursing Officer have all indicated their support and participation in this project, I have no objection to this being carried out in our psychiatric outpatient clinics at the earliest possible opportunity.  

I wish you every success in this worthwhile endeavour.  

Yours sincerely,  

( Dr P S SHUM )  
Consultant Psychiatrist i/c  
Mental Health Service  

PSS/it  
c.c. Dr C S Yu  
Dr T W Fan  
Mr Johnny Au c/o HKPC
26th February 1993

Dear Colleagues,

I am conducting a survey on the elderly people's perception of their own situation in relation to their health status, filial support and an overall outlook of their life. The study will require about 50 to 100 completed interviews from a social centre for the elderly, making a total sample of about 500.

Your Centre is considered amongst all social centres for the elderly to be appropriate for our research, and I am requesting your help in arranging interviews for this study.

The respondents need to come from those aged 60 and above, sound in their mind and are married, widowed, cohabitees or single with children. They will be asked to respond to a questionnaire (copy enclosed) which is designed for self-administering (if they can read) or for assisted self-reporting (by someone reading out to them).

I could also arrange for our students to be interviewers if it is necessary.

Should you have any query please do not hesitate to contact me at 7888766.

Thank you very much for your help.

Yours sincerely,

Alfred Chan

P.S. The final part of the questionnaire (i.e. GDS) is a scale which has been just cross-validated with an psychiatric outpatient clinic sample. Your Centre is welcome to use it on your clients for the purpose of identifying depressive symptoms. Details application procedure will be available at a later date when this final part of the research is finished.
APPENDIX 3: INSTRUCTIONS TO INTERVIEWERS
Clinical Validation of the Geriatric Depression Scale (GDS)

Interview Instructions: (for Nurses)

1. Only those patients who are aged 60 or above need to be included.

2. Fill in the Patient Out Patient Clinic No. (OPD No.) on both the Questionnaire and the Psychiatrist's Rating Forms, patient's name is not required.

3. Explain briefly to the patient the purpose of the study and ask for his co-operation.

4. Fill in Part One of the Questionnaire as much as possible, ask the patient to verify when necessary.

5. Administer the rest of the Questionnaire by reading each question as it is directly to the patient, indicate their answers as stated.

6. After the Patient's Questionnaire, please answer the short Interviewer's Questionnaire.

7. Detach the Psychiatrist's Rating Form, and the MMSQ and put them on top of the patient's case note ready for the attending psychiatrist to fill in.

8. Collect the completed Psychiatrist's Rating Form, and the MMSQ after the consultation, attach them back to this Questionnaire.

9. Hand it to the OPD Nursing Officer ready for our monthly collection.

THANK YOU VERY MUCH FOR YOUR HELP

Any queries please contact Alfred Chan at 7888766
Patient's OPD No. __________

Interviewer's Questionnaire:
(For OPD Nurses)

1. Do you have any difficulty in completing the Questionnaire?
   [ ] no --> end here, thank you very much.
   [ ] yes --> reasons:
       [ ] patient unable to answer
       [ ] patient not cooperative
       [ ] dialect problems
       [ ] hearing problems
       [ ] too confused
       [ ] others, please state __________

(2) Any comments to improve the questionnaire?

Nurcom (%) ______

THANK YOU VERY MUCH
APPENDIX 4: QUESTIONNAIRE FOR THE FIRST STUDY

Original Chinese version:

English versions of the Scales:
GDS
CES-D
Mini Mental State Examination (MMSEQ)

Orientation (maximum scores in brackets)

1. What is the Year? (1)
   Season? (1)
   Month? (1)
   day? (1)
   day of week? (1)

2. Where are we now? City (Hong Kong) (1)
   Region (HK/KLN/NT) (1)
   District (1)
   Name of Clinic (1)
   Floor (1)

Registration

3. Ask patient to remember the names of 3 objects (e.g. 番茄, 鎖匙, 單車) then tell them slowly once. Then ask patient to repeat them and score 1 mark for each correct answer: (3)

   Repeat the 3 names until patient able to tell all 3 correctly or up to 5 trials. Warn patient that he will be asked on them later.

Attention and calculation

4. Perform the serial 7’s up to 5 times. (Prompt only once)
   Score 1 mark for each correct answer. (5)

Recall

5. Ask the patient for the names of the 3 objects in Q.3 (3)

Language

6. Point to 2 objects (e.g. watch, pencil) and ask patient to give their names. (2)

7. Ask the patient to repeat the sentence after saying it once. (e) 「西施死時四十四」 (1)
   「入後極慢緩緊急製」 (1)

8. Ask the patient to listen to your commands and follow accordingly. Hand a piece of paper to patient.
   「請用左手接住這張紙」 (1)
   「把紙對摺一次」 (1)
   「把紙放在地上」 (1)
9. Ask patient to read out aloud and follow as written below. (1)

10. Ask patient to write a sentence of own choice. 「請隨便寫出一句話」 (Score 1 mark if the sentence makes sense to you. Wrong words are ignored). (1)

11. Ask patient to copy the figure below to the adjacent space. (5 sides preserved with intersecting sides forming a quadrangle) (1)

For the interviewer:

Any of the following problems during administration?

□ No

□ Yes --> please indicate □ uncooperative □ dialect □ illiteracy □ Hearing □ vision □ confused □ others, specify:

For queries about this part, please contact Dr. T.W. Fan (SHO) of Castle Peak Hospital, N.T. (Tel: 461 6251)
Cont.... (Question 3)

[ ] Primary degenerative dementia of the Alzheimer type, senile onset (290.00/290.2)
[ ] Primary degenerative dementia of the Alzheimer type, presenile onset (290.1)
[ ] Multi-infarct dementia (290.4)
[ ] Dementia associated with alcoholism (291.20)
[ ] Dementia due to other unknown etiology (294.10)
[ ] Delirium due to unknown etiology (293.00)
[ ] Autistic disorder (299.00)
[ ] Pervasive developmental disorder NOS (299.80)
[ ] Mild mental retardation (317.00)
[ ] Moderate to profound mental retardation (318)
[ ] Unspecified mental retardation (319.00)

4. Any other comments?

Dementia (91-96)

Ignore dot

DR. Cown (97)

----- END ------

THANK YOU VERY MUCH

for queries please contact Alfred Chan (Tel: 7888766),
Department of Applied Social Studies, City Polytechnic of Hong Kong, 83 Tat Chee Avenue, Kowloon.
1. Please state the provisional diagnosis:
   __________________________________________ (DSM-III-R Code: )

2. Is the patient clinically depressed?
   [ ] No ---> go to question (3)
   [ ] Yes ---> how serious:
       [ ] mild   [ ] moderate   [ ] Severe
       ---> does the patient fit in one of the following categories? (DSM-III-R codes in brackets)
         [ ] Primary degenerative dementia of the Alzheimer type, pre-senile onset, with depression (290.13)
         [ ] Primary degenerative dementia of the Alzheimer type, senile onset, with depression (290.21)
         [ ] Multi-infarct dementia, with depression (290.43)
         [ ] Major depression, single episode (296.2)
         [ ] Major depression, recurrent episode (296.3)
         [ ] Bipolar disorder, depressed (296.5)
         [ ] Bipolar disorder, mixed (296.6)
         [ ] Dysthymia (300.40)
         [ ] Depressive disorder NOS (311.00)
         [ ] Adjustment disorder with depressed mood (309.00)
         [ ] Other depressive types, as specified:

3. Is the patient showing cognitive impairments?
   [ ] No ---> go to question (4)
   [ ] Yes ---> how serious: [ ] mild [ ] moderate [ ] severe
       ---> does the patient fit in one of the following categories? (DSM-III-R codes in brackets)
敬啓者：

香港城市理工學院現正進行一項有關老人症狀之臨床研究。承蒙閣下撥冗回
答此問卷之問題，不勝感激。

所有資料都會絕對保密，且祇用作整體資料分析。

答案並無對錯之分，請閣下就即時的想法作答。

倘有疑問，請與應用社會科學系講師陳章明（788-3766）聯絡。

有勞之處，不勝銘感。
For Attending Nurses

MSQ

請回答以下十條簡單的問題:

<table>
<thead>
<tr>
<th>項目</th>
<th>對</th>
<th>錯</th>
</tr>
</thead>
</table>
| $1$. 你現在幾多歲？
（實際年齡加一兩歲作虛齡計亦可） | □ | □ MSQ1 (124) |
| $2$. 你是那一年出世？
（民國或陽曆均可，民國元年:1911） | □ | □ MSQ2 (125) |
| $3$. 你的生日是幾月幾號？
（陰曆或陽曆皆可，月日都須正確） | □ | □ MSQ3 (126) |
| 4. 現在是一九幾多年？ | □ | □ MSQ4 (127) |
| 5. 現在是幾月？
（陰曆或陽曆皆可） | □ | □ MSQ5 (128) |
| 6. 今日是幾多號？
（陰曆或陽曆皆可） | □ | □ MSQ6 (129) |
| 7. 這地方是屬於香港、九龍抑或新界區？ | □ | □ MSQ7 (130) |
| 8. 你現在的住址是那裡？
（須能說出大廈及樓或機構的名稱） | □ | □ MSQ8 (131) |
| 9. 香港現在的港督叫甚麼名字？ | □ | □ MSQ9 (132) |
| 10. 香港上一任的港督叫甚麼名字？ | □ | □ MSQ10 (133) |

* For the first 3 questions, if no objective data is available, treat as correct if answers consistent to that obtain for Part I.

For queries about this part, please contact Dr. T.W. Pan (SMO) of Castle Peak Hospital, N.T. (Tel: 461 6251)
第一部份：基本資料（由訪問者問老人家）

1. 出生年份： 項前一 ——月——日——歲

2. 性別： □ 男 □ 女

3. 婚姻狀況：
   1. □ 雙重
   2. □ 偏親
   3. □ 離婚／分居
   4. □ 已婚
   5. □ 從未結婚
   6. □ 其他，請註明

4. 教育程度：
   1. □ 小學
   2. □ 初中
   3. □ 高中
   4. □ 預科／大專
   5. □ 大學
   6. □ 私塾
   7. □ 其他，請註明

5. 財政狀況（可選多項）
   1. □ 公共援助
   2. □ 退休津貼
   3. □ 優養津貼
   4. □ 養老金
   5. □ 禮金
   6. □ 退休金
   7. □ 儲蓄與配偶收入
   8. □ 子女津貼
   9. □ 其他，請註明

   每月總收入 HK$________

6. 職業狀況：
   1. □ 退休
   2. □ 從未就業／家庭主婦
   3. □ 失業
   4. □ 自僱（做生意）
   5. □ 全職工作（每週40小時） 職業
   6. □ 部份時間工作（每週少於40小時） 職業
   7. □ 其他，請註明

   N DATE (6-11)
   Lyr. Mth. Day

   N Age (12-14) ________
   L Age (15-20) ________
   Sex (21-23) ________
   H. Status (24) ________
   Ed. (26) ________

   Finance 1 (27) ________
   Finance 2 (28) ________
   Finance 3 (29) ________
   Finance 4 (30) ________
   Finance 5 (31) ________
   Finance 6 (32) ________
   Finance 7 (33) ________
   Finance 8 (34) ________
   Finance 9 (35) ________
   Income (36-38) round up to nearest hundreds.
   Occupation (39) ________
在以下問題請圈出「是」或「否」作為你的答案：

在過去二星期中

1. 你對生活基本感到滿意嗎？
2. 你有沒有放棄了很多過去常常參與的活動和興趣嗎？
3. 你感到自己的生活空虛嗎？
4. 你常常感到生活沉悶嗎？
5. 你對前景充滿希望嗎？
6. 你為那些不能放下的心事而煩惱嗎？
7. 你大部份時間心情都是好的嗎？
8. 你擔心有些不幸的事將會在你身上發生嗎？
9. 你大部份時間都是快樂的嗎？
10. 你時常感到缺乏幫助？
11. 你是否常常覺得煩燥和坐立不安？
12. 你是否寧願留在家中，也不願出外做些新事？
13. 你常常憂心將來嗎？
14. 你是否覺得你比一般老人家有更多記憶力的問題？
15. 你生存到現在覺得是美好嗎？
16. 你感到情緒低落嗎？
17. 你是否覺得自己現時毫無價值？
18. 你是否對過去的事感到非常擔憂？
19. 你是否覺得自己的生活令人興奮？
20. 你是否很難開始一些在生活裡的新事物？
21. 你是否感到精力充沛？
22. 你是否覺得你現時的處境沒有希望？
23. 你是否覺得大部份人的景況比你好？
24. 你是否常因一些小事而不開心？
25. 你常有想哭的感覺嗎？
26. 你很難集中精神嗎？
27. 你早上起來感覺愉快嗎？
28. 你是否尽量避免不参与社交聚会？
否 GDS 28 (47)
是

29. 你很容易作出决定吗？
否 GDS 29 (68)
是

30. 你的脑筋是否跟以前一样清楚？
否 GDS 30 (69)
是 GDS 40-71
請在最接近你的感受上✓出答案：
在過去二星期中：

|  |  |  |  |  |  |
|---|---|---|---|---|
| 1. 你被一些通常不會困擾你的事情困擾著 | □ | □ | □ | □ |
| 2. 你不想吃東西，你的胃口很差 | □ | □ | □ | □ |
| 3. 你感覺到就是有家人和朋友的幫助，你也 | □ | □ | □ | □ |
| 4. 你覺得你和別人一樣的好 | □ | □ | □ | □ |
| 5. 你有困難難去集中精神做一件事情 | □ | □ | □ | □ |
| 6. 你感到憂傷 | □ | □ | □ | □ |
| 7. 你覺得你做每件事情都要費氣力 | □ | □ | □ | □ |
| 8. 你對未來充滿希望 | □ | □ | □ | □ |
| 9. 你認為你的一生是失敗的 | □ | □ | □ | □ |
| 10. 你感到害怕 | □ | □ | □ | □ |
| 11. 你睡眠不寧 | □ | □ | □ | □ |
| 12. 你很快樂 | □ | □ | □ | □ |
| 13. 你比平常少說話 | □ | □ | □ | □ |
| 14. 你感到孤單 | □ | □ | □ | □ |
| 15. 人們是不友善 | □ | □ | □ | □ |
| 16. 你享受人生 | □ | □ | □ | □ |
| 17. 你有時哭泣 | □ | □ | □ | □ |
| 18. 你感到悲哀 | □ | □ | □ | □ |
| 19. 你覺得人們不喜歡你 | □ | □ | □ | □ |
| 20. 你不能提起精神做事 | □ | □ | □ | □ |
APPENDIX 5: QUESTIONNAIRE FOR THE SECOND STUDY

Original Chinese version
English versions of the scales
SCS
HD
HP
HSP
FD
FP
FSP
CT
老人心理狀況調查

問卷編號：__________ [1-3]

中心名稱：__________ [4]

完成問卷日期：__日__月__年 [5-19]

我地而家做緊一個有關老人心理狀況既調查，好多謝您接受訪問。所有資料都係絕對保密。問題答案係沒有對錯之分，希望您放心，唔到乜野就答乜野，就您自己既想法去答。
基本資料

1. 出生年份：______年（______歲）
   （新曆） [11-14] [15-17]

2. 性別：1.□男  2.□女 [18]

3. 婚姻狀況：[19]
   1.□未婚
   2.□同居
   3.□離婚／分居
   4.□已婚
   5.□從未結婚 ------- 有沒有子女？  6. 有 □
   7. 無 □ -- 停止作答，多謝合作
   8.□其他，請註明

4. 教育程度 [20]
   1.□從未入學
   2.□小學
   3.□初中
   4.□高中
   5.□預科／大專
   6.□大學
   7.□私塾
   8.□其他，請註明

5. 財政狀況（可選多項）
   1.□公共援助 [21]
   2.□高齡津貼 [22]
   3.□傷殘津貼 [23]
   4.□退休金 [24]
   5.□積蓄 [25]
   6.□薪金 [26]
   7.□倚賴配偶收入 [27]
   8.□子女津貼 [28]
   9.□其他，請註明 [29]
   10.□每月總收入 [30]
6. 職業狀況：
1. □ 退休 [31]
2. □ 從事職業／家庭主婦 [32]
3. □ 失業 [33]
4. □ 自僱（做生意） [34]
5. □ 全職工作（每週 40 小時） [35] 職業 ———— [35]
6. □ 部份時間工作（每週少於 40 小時） [36] 職業 ———— [36]
7. □ 其他，請註明 ———— [37]

7. 健康狀況：（已得醫生診症）是否有下列慢性病？可選多項
1. □ 酗酒 [38]
2. □ 颶風（關節炎，骨刺） [39]
3. □ 折骨 [40]
4. □ 糖尿 [41]
5. □ 癌症 [42]
6. □ 高血壓 [43]
7. □ 心臟病 [44]
8. □ 中風 [45]
9. □ 腎病 [46]
10. □ 肺病／支氣管炎／肺氣腫 [47]
11. □ 肺病 [48]
12. □ 肝病 [49]
13. □ 精神病（請註明 ————） [50]
14. □ 其他，請註明 ———— [51]

——— C1 Total [52-53]
健康状况

現在我會問出以下句子，請你說出你個人對每句句子的意見。你的意見可以是以下其中一個：1. 是 2. 否。請根據你的意見回答，句子是否有你認為正確或標準答案。

<table>
<thead>
<tr>
<th></th>
<th>是</th>
<th>否</th>
<th>是</th>
<th>否</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. 你是否希望自己</td>
<td>1. □ 2. □</td>
<td>1b. 實際上你是否這樣？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td></td>
<td>沒有任何痛苦？</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a. 你是否希望自己在沒有人幫助之下可以去電影，參拜神廟，到老人中心，探訪親朋等？</td>
<td>1. □ 2. □</td>
<td>2b. 實際上你是否可以做得到？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>3a. 你是否希望自己在沒有人幫助之下可以上落由地下至三樓的梯級？</td>
<td>1. □ 2. □</td>
<td>3b. 實際上你是否可以做得到？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>4a. 你是否希望自己在沒有人幫助之下可以連續步行半小時或十五分鐘？</td>
<td>1. □ 2. □</td>
<td>4b. 實際上你是否可以做得到？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>5a. 你是否希望自己在沒有人幫助之下可以在家中做一些輕重的工夫和家務？</td>
<td>1. □ 2. □</td>
<td>5b. 實際上你是否可以做得到？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>6a. 你是否希望自己在沒有人幫助之下可以參與所有的活動？</td>
<td>1. □ 2. □</td>
<td>6b. 實際上你是否可以做做到？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
</tbody>
</table>

II.

<table>
<thead>
<tr>
<th></th>
<th>是</th>
<th>否</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 你是否觉得你的病痛已持續太耐？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>2. 你是否覺得長期以來要有人幫助才可去看電影，參拜神廟，到老人中心，探訪親朋等？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>3. 你是否覺得長期以來要有人幫助才可上落由地下至二樓的梯級？</td>
<td>1. □ 2. □</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(HP1 HP2 HP3)
4. 你是否覺得長期以來要有人幫助
才可連續步行半里路或十五分鐘？

1. □ 2. □

5. 你是否覺得長期以來要有人幫助
才可在家做一些粗重的工夫或家務？

1. □ 2. □

6. 你是否覺得長期以來要有人幫助
才可無限制地參與所有的活動？

1. □ 2. □

孝德指標

1a. 你是否希望自己的子女
絕對信任你

1. □ 2. □

1b. 實際上你是否覺得你的子女
絕對信任你

1. □ 2. □

2a. 你是否希望自己的子女
會儘快完成你叫他們的工作

1. □ 2. □

2b. 實際上你是否覺得你的子女
會儘快完成你叫他們的工作

1. □ 2. □

3a. 你是否希望自己的子女
當你病的時候會立即請假和你
去看醫生

1. □ 2. □

3b. 實際上你是否覺得你的子女
當你病的時候會立即請假和你
去看醫生

1. □ 2. □

4a. 你是否希望自己的子女
很快能記起你的生日

1. □ 2. □

4b. 實際上你是否覺得你的子女
很快能記起你的生日

1. □ 2. □

5a. 你是否希望自己的子女
為了照顧與幫助你而和你一起

1. □ 2. □

5b. 實際上你是否覺得你的子女
為了照顧與幫助你而和你一起

1. □ 2. □

6a. 你是否希望自己的子女
不會和你爭執或吵架

1. □ 2. □

6b. 實際上你是否覺得你的子女
不會和你爭執或吵架

1. □ 2. □

7a. 你是否希望自己的子女
會支持和鼓勵你

1. □ 2. □

7b. 實際上你是否覺得你的子女
會支持和鼓勵你

1. □ 2. □

8a. 你是否希望自己的子女
報答你的大恩大德

1. □ 2. □

8b. 實際上你是否覺得你的子女
報答你的大恩大德

1. □ 2. □
1. 你是否希望自己的子女
   1. □ 2. □ 絕對跟從你

9b. 實際上你是否覺得你的子女
   1. □ 2. □ 絕對跟從你

9a. 你是否希望自己的子女
   將全部薪金交給你分配使用
   1. □ 2. □ 結算

10b. 實際上你是否覺得你的子女
   將全部薪金交給你分配使用
   1. □ 2. □ 結算

1a. 你是否希望自己的子女
   去考你
   1. □ 2. □ 去考你

11b. 實際上你是否覺得你的子女
   去考你
   1. □ 2. □ 去考你

以下是用來描述自己情況的句子。請小心閱讀每一句，並按著你覺得每一句所描述的內容與您情況相似的
程度，選出適合自己的答案。

B. 1. 2. 3.
   完全 有 尚 非
   不 類 爲 常
   相 相 相 相
   似 似 似 似

1. 我經常會嘗試了解自己
   _____________
   ___ [81] 81

2. 我關注自己做事的方式
   _____________
   ___ [82] 82

3. 在新的環境下，我需要一些時間才可以克服
   自己的冪羞
   _____________
   ___ [83] 83

4. 我很多時會思考關於自己的事
   _____________
   ___ [84] 84

5. 我十分關心自己在人們面前怎樣表現自己
   _____________
   ___ [85] 85

6. 我經常有有關自己的白日夢
   _____________
   ___ [86] 86

7. 當有人注視著我時，我難以繼續工作
   _____________
   ___ [87] 87

8. 我從不仔細地觀察自己
   _____________
   ___ [88] 88

9. 我很容易感到尷尬
   _____________
   ___ [89] 89

10. 我很注意和留心自己的外表
    _____________
        ___ [90] 90

11. 對我來說，和陌生人交談是一件容易的辦到的事
    _____________
        ___ [91] 91

12. 我通常會留心自己內在的感覺
    _____________
        ___ [92] 92

13. 我通常會擔憂自己能否給人家留下好的印象
    _____________
        ___ [93] 93

14. 我經常思考有關自己做事的原因
    _____________
        ___ [94] 94

15. 當我面對一群人講話時，我感到緊張
    _____________
        ___ [95] 95

16. 在我離家前，我會檢查自己的外表
    _____________
        ___ [96] 96
<table>
<thead>
<tr>
<th>序号</th>
<th>问题</th>
<th>是</th>
<th>否</th>
<th>评分</th>
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</thead>
<tbody>
<tr>
<td>17</td>
<td>有時會在腦海中，以旁觀者的角度從一段距離外檢視自己</td>
<td></td>
<td></td>
<td>[97]</td>
</tr>
<tr>
<td>18</td>
<td>我關注其他人對我的看法</td>
<td></td>
<td></td>
<td>[98]</td>
</tr>
<tr>
<td>19</td>
<td>我很快便注意到自己在情緒上的改變</td>
<td></td>
<td></td>
<td>[99]</td>
</tr>
<tr>
<td>20</td>
<td>我經常注意自己的儀表</td>
<td></td>
<td></td>
<td>[100]</td>
</tr>
<tr>
<td>21</td>
<td>當我解決問題時，我知道我的思想是怎樣運作的</td>
<td></td>
<td></td>
<td>[101]</td>
</tr>
<tr>
<td>22</td>
<td>大群的人使我緊張</td>
<td></td>
<td></td>
<td>[102]</td>
</tr>
<tr>
<td></td>
<td><strong>U.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>你是否有試過去使到自己的身體更好而沒有病痛</td>
<td>1.</td>
<td>2.</td>
<td>[185]</td>
</tr>
<tr>
<td>2</td>
<td>你是否有試過去在沒有人幫助下與電影，參拜神靈，到老人中心，探訪親朋等</td>
<td>1.</td>
<td>2.</td>
<td>[186]</td>
</tr>
<tr>
<td>3</td>
<td>你是否有試過去在沒有人幫助之下上落由地下至二樓的梯級</td>
<td>1.</td>
<td>2.</td>
<td>[187]</td>
</tr>
<tr>
<td>4</td>
<td>你是否有試過去在沒有人幫助之下連續步行半里路或十五分鐘</td>
<td>1.</td>
<td>2.</td>
<td>[188]</td>
</tr>
<tr>
<td>5</td>
<td>你是否有試過去在沒有人幫助之下在家中做一些粗重的工夫或家務</td>
<td>1.</td>
<td>2.</td>
<td>[189]</td>
</tr>
<tr>
<td>6</td>
<td>你是否有試過去在沒有人幫助之下可以無限制地參與所有的活動</td>
<td>1.</td>
<td>2.</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td><strong>V.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>你是否覺得你的子女長久以來不信任你</td>
<td>1.</td>
<td>2.</td>
<td>[112]</td>
</tr>
<tr>
<td>2</td>
<td>你是否覺得你的子女長久以來不會立刻完成你叫他們做的事情</td>
<td>1.</td>
<td>2.</td>
<td>[113]</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Total</td>
<td></td>
<td></td>
<td>[183-186]</td>
</tr>
</tbody>
</table>
你是否觉得你的子女长久以来当你生病的时候不会立即请假去看医生

1. □ 2. □  

你是否觉得你的子女长久以来都会将全部薪水交给你们分配使用

1. □ 2. □  

你是否觉得你的子女长久以来不会为了方便照顾你而和你一起生活

1. □ 2. □  

你是否觉得你的子女长久以来都绝对服从你

1. □ 2. □  

你是否觉得你的子女长久以来并不支持和鼓励你

1. □ 2. □  

你是否觉得你的子女长久以来都没有答复你的好意

1. □ 2. □  

你是否觉得你的子女长久以来都跟你吵架

1. □ 2. □  

你是否觉得你的子女长久以来不能即时可以记起你的生日

1. □ 2. □  

你是否觉得你的子女长久以来都会考顾你

1. □ 2. □  

FF Total  

VII.

1. 你是否有能力令你的子女
   绝对信任你
   1. □ 2. □  

2. 你是否有能力令你的子女
   立刻完成你叫他们做的事情
   1. □ 2. □  

3. 你是否有能力令你的子女当你
   生病的时候会立即请假和你去看医生
   1. □ 2. □  

8.
4. 你是否有能力让你的子女
   能時時記起你的生日
   1. □  2. □

5. 你是否有能力让你的子女為了
   方便照顧幫助你而和你一起生活
   1. □  2. □

6. 你是否有能力让你的子女不和你吵架
   1. □  2. □

7. 你是否有能力让你的子女要支持和鼓勵你
   1. □  2. □

8. 你是否有能力让你的子女要
   報答你的大恩大德
   1. □  2. □

9. 你是否有能力让你的子女
   絕對服從你
   1. □  2. □

10. 你是否有能力让你的子女
     將全部薪金交給你分配使用
     1. □  2. □

11. 你是否有能力让你的子女
     考顧你
     1. □  2. □
請選擇是或否作為答案
在過去二星期中

1. 大體來說你對一般生活感到滿意嗎？
   是否 GDS1 (137) ______

2. 你是否放棄了很多過去常常參與的活動或興趣？
   是否 GDS2 (138) ______

3. 你是否感到自己的生活空虛？
   是否 GDS3 (139) ______

4. 你是否常常感到生活沉悶？
   是否 GDS4 (140) ______

5. 你是否對前景充滿希望？
   是否 GDS5 (141) ______

6. 你是否為那些不能放下的思慮而煩燥不安？
   是否 GDS6 (142) ______

7. 你是否大部份時間心情都是好的？
   是否 GDS7 (143) ______

8. 你是否擔心有些不幸的事會在你身上發生？
   是否 GDS8 (144) ______

9. 你是否大部份時間都是快樂的？
   是否 GDS9 (145) ______

10. 你是否時常感到孤獨無援？
   是否 GDS10 (146) ______

11. 你是否常常覺得煩燥和坐立不安？
   是否 GDS11 (147) ______

12. 你是否寧願留在家中，也不願走出屋外做些新的事情？
   是否 GDS12 (148) ______

13. 你是否常常憂心自己的將來？
   是否 GDS13 (149) ______

14. 你是否覺得記憶力差這個問題比其他問題更嚴重？
   是否 GDS14 (150) ______

15. 你是否確信自己仍然生存在世？
   是否 GDS15 (151) ______

16. 你是否時常感到鬱鬱不樂和意氣消沉？
   是否 GDS16 (152) ______

17. 你是否覺得自己現時毫無價值？
   是否 GDS17 (153) ______

18. 你是否對過去的事感到非常擔憂？
   是否 GDS18 (154) ______

19. 你是否覺得自己的生命充滿刺激？
   是否 GDS19 (155) ______

20. 你是否很難实行一些在生活裡的新嘗試？
   是否 GDS20 (156) ______
<table>
<thead>
<tr>
<th>21. 你是否感到精力充沛？</th>
<th>是</th>
<th>否</th>
<th>GDS21 (157)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. 你是否觉得你现在的处境真是求助无门？</td>
<td>是</td>
<td>否</td>
<td>GDS22 (158)</td>
</tr>
<tr>
<td>23. 你是否觉得大部份人的景况比你好？</td>
<td>是</td>
<td>否</td>
<td>GDS23 (159)</td>
</tr>
<tr>
<td>24. 你是否常因一些小事而烦恼？</td>
<td>是</td>
<td>否</td>
<td>GDS24 (160)</td>
</tr>
<tr>
<td>25. 你是否常有想哭的感觉？</td>
<td>是</td>
<td>否</td>
<td>GDS25 (161)</td>
</tr>
<tr>
<td>26. 你是否很难集中精神？</td>
<td>是</td>
<td>否</td>
<td>GDS26 (162)</td>
</tr>
<tr>
<td>27. 对你来说早起是否很享受？</td>
<td>是</td>
<td>否</td>
<td>GDS27 (163)</td>
</tr>
<tr>
<td>28. 你是否比较喜欢选择不参与社交性的聚会？</td>
<td>是</td>
<td>否</td>
<td>GDS28 (164)</td>
</tr>
<tr>
<td>29. 你是否很容易下定决心去做事？</td>
<td>是</td>
<td>否</td>
<td>GDS29 (165)</td>
</tr>
<tr>
<td>30. 你的脑筋是否跟以前一样清醒？</td>
<td>是</td>
<td>否</td>
<td>GDS30 (166)</td>
</tr>
</tbody>
</table>

答是______题  否______题  GDST (167-168)  

----- 完 -----

11
Self Consciousness Scale (SCS) i.e. Sensitivity Scale (S) :

Responses are arranged on a four points Likert type scale:

0 = not at all like me  
1 = a little like me  
2 = somewhat like me  
3 = a lot like me

(1) I'm always trying to figure myself out.
(2) I'm concerned about my style of doing things.
(3) It takes me time to get over my shyness in new situations.
(4) I think about myself a lot.
(5) I care a lot about how I present myself to others.
(6) I often daydream about myself.
(7) It's hard for me to work when someone is watching me.
(8) I never take a hard look at myself.
(9) I get embarrassed very easily.
(10) I'm self-conscious about the way I look.
(11) It's easy for me to talk to strangers.
(12) I generally pay attention to my inner feelings.
(13) I usually worry about making a good impression.
(14) I'm constantly thinking about my reasons for doing things.
(15) I feel nervous when I speak in front of a group.
(16) Before I leave my house, I check how I look.
(17) I sometimes step back (in my mind) in order to examine myself from a distance.
(18) I'm concerned about what other people think of me.
(19) I'm quick to notice changes in my mood.
(20) I'm usually aware of my appearance.
(21) I know the way my mind works when I work through a problem.
(22) Large groups make me nervous.
Perceived Health Status Scales:

Discrepancy in Health Status Scale (HD)

1. Do you wish that you:
   a. are free of any disease or illness?
   b. can perform these tasks without any help from others?
      i. go to cinema, go to temple to worship, go to elderly centre, visit friends and relatives.
      ii. walk up and down the first and the second floor.
      iii. walk half mile or fifteen minutes continuously.
      iv. perform some heavy chores at home.
      v. can participate in any activities without limitations.

2. In reality, do you think that you are:
   a. free of any disease or illness?
   b. can perform these tasks without the help from others?
      i. go to cinema, go to temple to worship, go to elderly centre, visit friends and relatives.
      ii. walk up and down the first and second floor.
      iii. walk half mile or fifteen minutes continuously.
      iv. perform some heavy chores at home.
      v. can participate in any activities without limitations.

HD score is calculated by adding up the absolute differences in each pair of corresponding answers, with the value of 1 assigned to positive answers, 0 to negative ones. The full score is therefore worked out as follow:

\[
\begin{align*}
1a - 2a &= 0 \text{ or } 1 \\
1bi - 2bi &= 0 \text{ or } 1 \\
1bii - 2bii &= 0 \text{ or } 1 \\
1biii - 2biii &= 0 \text{ or } 1 \\
1biv - 2biv &= 0 \text{ or } 1 \\
1bv - 2bv &= 0 \text{ or } 1 \\
\text{Total score} &= \text{ up to } 6
\end{align*}
\]
Specificity in Health Scale (HSP):

3. Have you tried or put efforts to make yourself:
   a. to be free of any illness or disease?
   b. able to perform these tasks without any help:
      i. go to cinema, go to temple to worship, go to elderly centre, visit friends and relatives.
      ii. walk up and down the first and second floor.
      iii. walk half mile or fifteen minutes continuously.
      iv. perform some heavy chores at home.
      v. participate in any activities without limitations.

Positive answer to each item score one mark, the HSP score is calculated by adding up all the scores.

Prolongation of Bad Health Scale (HP):

4. Do you think what are described below have happened to you for a long time?
   a. have illness or diseases.
   b. cannot perform these activities even with the help of others:
      i. go to cinema, go to temple to worship, go to elderly centre, visit friends and relatives.
      ii. walk up and down the first and second floor.
      iii. walk half mile or fifteen minutes continuously.
      iv. perform some heavy chores at home.
      v. participate in any activities that you like.
Perceived Filial Piety Scales:

Discrepancy in Filial Piety Scale (FD):

1. Do you wish that your children:
   a. trust you absolutely?
   b. will carry out the work as soon as you assigned to them?
   c. will put aside their work immediately to accompany you to visit doctors?
   d. can recall you birthday immediately?
   e. live with you in order to take care of you?
   f. do not have quarrells with you at all?
   g. will support and encourage you?
   h. repay what you have done for them?
   i. have absolute obedience?
   j. give you all their wages?
   k. respect and care for you?

2. In reality, do you think that your children:
   a. trust you absolutely?
   b. will carry out the work as soon as you assigned to them?
   c. will put aside their work immediately to accompany you to visit doctors?
   d. can recall you birthday immediately?
   e. live with you in order to take care of you?
   f. do not have quarrells with you at all?
   g. will support and encourage you?
   h. repay what you have done for them?
   i. have absolute obedience?
   j. give you all their wages?
   k. respect and care for you?

FD score is calculated by adding up the absolute differences in each pair of corresponding answers, with the value of 1 assigned to positive answers, 0 to negative ones. The full score is therefore worked out as follow:

\[
\begin{align*}
1a - 2a &= 0 \text{ or } 1 & 1g - 2g &= 0 \text{ or } 1 \\
1b - 2b &= 0 \text{ or } 1 & 1h - 2h &= 0 \text{ or } 1 \\
1c - 2c &= 0 \text{ or } 1 & 1i - 2i &= 0 \text{ or } 1 \\
1d - 2d &= 0 \text{ or } 1 & 1j - 2j &= 0 \text{ or } 1 \\
1e - 2e &= 0 \text{ or } 1 & 1k - 2k &= 0 \text{ or } 1 \\
1f - 2f &= 0 \text{ or } 1 \\
\end{align*}
\]

Total score = up to 11
Specificity in Filial Piety Scale (FSP):

3. Have you tried or put efforts to make your children:
   a. to trust you absolutely?
   b. to carry out the work as soon as you assigned to them?
   c. to put aside their work immediately to accompany you to visit doctors?
   d. to recall you birthday immediately?
   e. to live with you in order to take care of you?
   f. do not have quarrell with you at all?
   g. to support and encourage you?
   h. repay what you have done for them?
   i. have absolute obedience?
   j. give you all their wages?
   k. respect and care for you?

Positive answer to each item scores one mark, the FSP score is calculated by adding up all the scores

Prolongation of Bad Filial Piety Scale (FP):

4. Do you think what are described below have happened to you for a long time?

   Your children:
   a. do not trust you absolutely.
   b. will not carry out the work as soon as you assigned to them.
   c. will not put aside their work immediately to accompany you to visit doctors.
   d. cannot recall you birthday immediately.
   e. do not live with you in order to take care of you.
   f. have quarrells with you.
   g. will not support and encourage you.
   h. repay what you have done for them?
   i. have absolute obedience?
   j. give you all their wages?
   k. respect and care for you?

Positive answer to each item scores one mark, the FSP score is calculated by adding up all the scores
Chronic Illness Scale (CT)

Do you have the following chronic illness? (as diagnosed by a medical doctor)

1. alcoholism
2. rheumaticism
3. fracture
4. diabetes
5. cancer/carcinoma
6. high BP
7. heart disease
8. CVAs
9. renal disease
10. pulmonary disease/bronchitis
11. TB
12. Hepatic disease
13. psychiatric illness (please state: ____________________)
14. others, please state: ____________________

Total number of illness ____________________

The CT score is calculated by adding up the total positive answers, with each one assigned the value of 1 for positive and 0 for negative answer.
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