

Survey Report on
Caregiver Stress and
Quality of Life and
Expectation towards
**Community Mental
Health Services**

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Caregiving

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**Survey on Caregiver Stress and Quality of Life and expectation
towards Community Mental Health Services:**

List of Researchers

City University of Hong Kong

Professor Daniel Wong Fu Keung

Professor

Department of Applied Social Studies

Mr. Angus Lam Yuk Kit

Senior Research Associate

Department of Applied Social Studies

Baptist Oi Kwan Social Service

Ms. Chan Sau Kam

Senior Service Coordinator

Ms. Chan Suk Fan

In-Charge

Ms. Iris Lam Wing Mui

Social Worker

Ms. Tsui Kam Ping

Social Worker

Ms. Samantha Ng Ling Wan

Social Worker

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Lastly, we would like to express our deepest gratitude to Mr. Johnny Tsang, our Chief Executive Officer, for his valuable advice and guidance on coordinating the survey.

Preface

Caring for the ex-mentally ill and their caregivers has always been one of our main focuses in Baptist Oi Kwan Social Service (BOKSS). Opened in the same year as our organization was founded, our Half-way House and Day Training Centre were both aimed to serve the needs of the ex-mentally ill. In seeing the caregivers' responsibility and responding to the stress they experience, we opened the very first centre in Hong Kong, *the Resource & Service Centre for the Relatives of Ex-mentally Ill People* in 1989, providing help and support services for the caregivers - caring for their physical, mental, social and spiritual needs.

The development of the psychiatric services in Hong Kong has gradually extended to providing different modes of community support in the past 10 years and all such services had been reorganized into a district-based one-stop Integrated Community Centre for Mental Wellness (ICCMW) by the Social Work Department on 1 October 2011. Therefore, we have worked together with Professor Daniel Wong from the Department of Applied Social Studies, College of Liberal Arts and Social Sciences of the City University of Hong Kong, to carry a survey on "Caregiver Stress and Quality of Life and Expectation towards Community Mental Health Services". The aim of the survey is to find out the caregivers' opinions on the existing medical and social services provided in the community as well as their expectations on the newly launched ICCMW. The survey also covers areas on caregivers' sources and intensity of stress and their quality of life in general.

One special feature in this collaborative study is the participation of different parties, which include a group of caregivers who are concerned about the services being provided, Prof. Wong and colleagues from the City University of Hong Kong, and many staff in BOKSS who specialize in

rehabilitation services. We have all contributed to designing, planning and carrying out the survey and we completed a total of 276 questionnaires for this survey. We hope to raise the public awareness on caring for the ex-mentally ill and their caregivers, especially their respective needs in rehabilitation and providing care for their ill relatives. Moreover, this is also the very first survey that looks at the relationship between the stress from taking care of the ex-mentally ill relatives and the quality of life of the caregivers. Interviewees in the current survey come from different districts in Hong Kong. The result of this survey indicated the caregivers' relatively high level of stress and an undesirable quality of life. Such result should serve as a reference for the government and other related disciplines in guiding their development based on the indicated needs of the caregivers, and hopefully to provide a more suitable community support system for the caregivers of the ex-mentally ill.

Mr. Johnny Tsang Wing Keung

Chief Executive Officer

Baptist Oi Kwan Social Service

1. Background of the Survey

The introduction of major tranquillizers and other psychotropic medications has had a dramatic effect on some mentally ill patients by greatly reducing behaviors that were previously difficult to manage in the community (Hatfield, 1987). It makes deinstitutionalization become possible; people with severe and persistent mental illness could be relocated from hospitals back to the community. The deinstitutionalization movement has accelerated in view of the growing concern for the non-therapeutic aspects of hospital care and the civil rights of patients (Ip & Mackenzie, 1998) as well as the impact on family caregiving.

In Hong Kong, the White Paper on Rehabilitation clearly states that “long term institutionalization is avoided as far as possible” (Hong Kong Government, 1995). Actually, the deinstitutionalization and community care campaign started in 1983 in the wake of the Un Chau Estate tragedy; the incident where an ex-mental ill patient armed with a knife killed six people and wounded forty. The first psychiatric nursing service was then started in Kwai Chung Hospital. Following this was the standard halfway house services. In 1990, a 2-year aftercare networking project was launched (Ip, 1998). At the beginning of this decade, a group of community mental health services, for instance, Community Mental Health Link and Community Mental Health Care team, Club House and Supported Employment, were introduced.

Given Chinese caregivers’ strong sense of obligation towards their ill relatives, the people with mental illness very often return to live with families after they are discharged from the hospital. Therefore, community care has become an increasingly important topic of concern in the healthcare arena in Hong Kong. Unfortunately, previous research indicated that there was a lack of support from the government as evidenced by the few direct services aimed at supporting

such families (Tseng, 2003).

Families of individuals with mental illness face a range of practical and emotional stresses, those are financial burden brought by unemployment and medical expenses, caregivers' daily routine of providing care and seeking treatment for the relative, changed relationships in the family, worries about the patient, frustration during the course of rehabilitation and feelings of loss and anger, and even guilt and shame. The subjective burden resulting from social stigma, including frustration, anxiety, low self-esteem and helplessness, is also a salient source of stress (Tsang, 2003).

Study done by Wong (2000) revealed that caregivers with relatives of schizophrenics experienced most difficulties and stress related to the management of negative symptoms such as refusal to perform household duties and neglect of personal hygiene, and less towards handling positive symptoms such as bizarre behaviors and thoughts. The study also reported that perceptions of stress associated with difficulties in the care of individual with schizophrenia accounted for poorer mental health among caregivers themselves.

Another study done by Wong (Wong et al., 2004) revealed that there were high psychological and social costs associated with the care of relatives with mental illness. The stress and strain of caring for a relative with mental illness may contribute to family conflicts and discontent among family members that call for concern among caregivers themselves because this may also leave them vulnerable to developing mental health problems.

In many fields, including medicine, health sciences, and social sciences, the concept of quality of life (QoL) has attracted much research focus (Shek, Chan, & Lee, 2005). In recent years, QoL has emerged as an important outcome measure in guiding health care (Collins, Hogan,

& Desai, 1991). In Hong Kong, QoL studies in the medical and rehabilitation settings, nonetheless, have commonly focused on the physically disadvantaged and intellectually impaired groups (Shek & Lee, 2007). Research on the area relating to caregivers of people with mental illness remains sparse. In line with this, a question is raised as “Does a higher burden imply a lower quality of life among caregivers of people with mental illness?” Study revealed that overall quality of life was lower among parents of outpatients with schizophrenia than in the reference group. The psychological/spiritual domain in particular was affected and this domain was also significantly related to higher subjective burden (Bibou-Nakou, Dikaïou, & Bairactaris, 1997; Martens & Addington, 2001; Foldemo, Gullberg, & Borgen, 2005).

Although literature on perceived stress on families of mentally ill patients has been blooming, there is no research done on the area of caregivers’ stress and its relationship with QoL in Hong Kong. A comprehensive review by Shek and Lee (2007) also clearly stated that even burnouts among caregivers are not uncommon. Research on the QoL of caregivers is comparatively neglected in Hong Kong.

On the other hand, the Secretary for Labor and Welfare of Hong Kong Government attached great importance to the welfare needs of formerly mentally ill persons and their families. More than \$70 million has been allocated in the financial year of 2010-2011 to extend the district-based one-stop integrated mental health service to all 18 districts in the territory and, at the same time, strengthen the manpower with a view to stepping up community support service. Promotion of a more consumer and caregiver oriented approach to medical care is essential, where the patients' own opinion of what is happening to them is taken as important, versus patients being the objects of expert attention from professionals who themselves judge the effectiveness and relevance of what they do (Gill & Feinstein, 1994). It is vital to collect the opinion from the view of caregivers of people with mental illness.

In sum, according to the aforementioned, a project focusing on evaluation on caregivers' stress and its relationship to caregivers' level of quality of life is called for. In addition, it is important to incorporate the opinions of caregivers of people with mental illness on the development of the services of district-based one-stop integrated mental health service center.

Domains of concern

Researchers more or less agree that there are two central dimensions, objective and subjective burdens, that comprise the family burden concept (George & Gwyther, 1986, Montgomery, Gonyea, & Hooyman, 1985).

Objective burden

In general, objective burden may be defined as 'all those things that the caregiver and/or his or her family has to do (helping, supervising, controlling, paying, etc.), experiences (disturbed family and/or social relations), or is not allowed to do any longer (hobbies, clubs, career, work) as a consequence of the caregiving task' (Schene, Tessler, & Gamache, 1994). Alternatively, objective burden may be defined as 'the time and effort required of one person to attend to the needs of another' (Biegel, Sales, & Schulz, 1991). Yet, objective burden includes the task of handling the emotional needs of patients (Sales, 2003).

Subjective burden

Subjective burden may be defined as the distress experienced by a caregiver in dealing with the objective stressors described above (Schene, Tessler, & Gamache, 1996). In the case of mental illness, this include feeling trapped, being confined to the house, becoming isolated from others, feeling responsible for others, and emotional reactions towards other's behaviors. Generally, indicators of these emotional strains include worrying, distress, stigma, shame, and guilt. Marsh and Johnson (1997) suggest that grief and loss, chronic strain, the emotional roller

coaster associated with the course of illness and empathic pain are additional features of distress.

Family burden relating to mental health care

The burdens of families associated with a patient's illness can take many forms. It can be generated by the illness, disruption of normal household routines and roles, financial concerns relating to medical costs and income loss, and emotional stresses triggered by the illness. Family burden is typically defined as consisting of all the difficulties and challenges experienced by families as a consequence of a member's illness.

The enormous burden involved in taking care of a family member suffering from a severe and persistent mental illness such as schizophrenia has been well documented (Greenberg et al., 1993; Winefield & Harvey, 1994). A study from Calgary, Canada reported that caregivers are significantly distressed as a result of having a family member with schizophrenia (Ryder, Bean, & Dion, 2000). In another study, 30 Chinese American caregivers of schizophrenic patients were found to experience intense objective and subjective burdens. The study mentioned that for ill relatives, Chinese parents are expected to act as a buffer against the outside world and parents' self-sacrificing and devoted behaviors are considered part of their responsibilities (Kung, 2003).

Quality of life

Dealing with a family member with schizophrenia can be overwhelming. Research has suggested that Chinese parents of a child with a mental illness, such as schizophrenia, experience significant caregiver burden (Liu, Lambert, & Lambert, 2007). Prior studies have noted caregivers' demographics, such as income and education, which can be factors associated with physical and psychological burden, as well as their QoL (White et al., 2004). In addition, a relationship has been noted between caregivers' burden and QoL (Wager, Bigatti, & Storniolo,

2006). The caregivers of individuals with schizophrenia have reported reduced QoL (Magliano et al., 2002).

Concept of quality of life

The term quality of life is used to evaluate the general well-being of individuals and societies. The term is used in a wide range of contexts, including the fields of international development, healthcare, and politics. Quality of life should not be confused with the concept of standard of living, which is based primarily on income. Instead, standard indicators of the quality of life include not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging (Gregory et al., 2009). Scholars conceptualized QoL as a multi-faceted construct that encompasses the individual's behavioral and cognitive capacities, emotional well-being, and ability regarding the performance of domestic, vocational, and social roles (Meeberg, 1993). Hornquist (1982) defines QoL specifically in terms of satisfaction of need in the physical, psychological, social activity, material and structural realms.

The WHOQOL group defines QoL as individuals' perceptions of their positions in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by the persons' physical health, psychological state, level of independence, social relationships, and relationship to salient features in the environment (WHO, 1995). The emphasis within the definition is primarily, on the subjective nature of QoL and then, on the need to explore all the parts of life considered as having a significant impact on QoL. In the WHOQOL definition, QoL consists of six domains: physical, psychological, level of independence, social relationships, environment and spirituality.

The WHOQOL-100 allows detailed assessment of each individual facet relating to the quality of life. In certain instances however, the WHOQOL-100 may be too lengthy for practical use. The WHOQOL-BREF version has therefore been developed to provide a short form quality of life assessment that looks at domain level profiles, using data from the pilot WHOQOL assessment and all available data from the WHOQOL-100. The WHOQOL-BREF contains a total of 26 questions. To provide a broad and comprehensive assessment, one item from each of the 24 facets contained in the WHOQOL-100 has been included. In addition, two items from the overall quality of life and general health facet have been added.

Service satisfaction

Patient satisfaction is an important variable in the evaluation of psychiatric services and it complements the measurements of other outcome variables. It has been suggested that satisfaction is strictly linked to effectiveness of the care provided, whereas dissatisfaction is frequently the reason behind patients' discontinuation of the service (Hansen, Hoogduin, & Schaap, 1992). Ensuring high level of patient satisfaction is therefore an essential aim for any mental health service. Its measurement constitutes a valid and important aspect of service planning and evaluation to the extent that in many countries providers of health care are increasingly required to monitor level of satisfaction among patients.

The importance of consumers is emphasized and more researches have been conducted in this area. Study on the satisfaction with mental health services from the view of caregivers, however, is neglected. As mentioned, since the advent of deinstitutionalization, families have increasingly assumed the role of a caregiver for their ill relatives. Disruptions in family routines, unpredictable, bizarre, and destructive behavior, and intermittent crisis situations produce high levels of stress within the family. Although such phenomenon of family burden is visible, several authors have noted numerous needs that families believe are not being adequately

addressed by mental health professionals.

Studies indicated that family members have complained of insufficient knowledge and information about mental illness, its treatment, availability of services and practical management techniques. In fact, families have often indicated that other sources of information were more helpful than mental health professionals. Problems in relationship between caregivers and mental health professionals are important to resolve or else caregivers may feel an increased sense of isolation and burden. Moreover, poor communication between caregivers and professionals may result in inconsistencies in support networks that negatively affect the ill relatives (Biegel et al, 1998).

2. Research Questions and Hypotheses

2.1 *Research question*

- 2.1.1 What is the level of caregiver's stress and level of quality of life among caregivers of individual with mental illness in Hong Kong?
- 2.1.2 Are the caregivers of individuals with mental illness in Hong Kong satisfied with health care services?
- 2.1.3 What is the relationship between caregiver's stress and health care service satisfactory level in Hong Kong?
- 2.1.4 From the view of caregivers, what is the expectation towards newly established district-based one-stop integrated mental health service?

2.2 *Hypotheses*

- H1: Caregivers who have higher level of caregiver stress will have poorer quality of life outcomes.
- H2: Caregivers who have higher level of caregiver stress will have lower satisfaction with community psychiatry services.

3. Definition of Terms

3.1 *Caregiver stress*

In this study, caregivers stress is defined as subjective burden and refers to the extent of emotional cost in terms of feelings of overload, embarrassment, entrapment, and resentment associated with the management presence of the ill relative's behaviors at home.

3.2 *Quality of life*

This study adopted the definition of quality of life from World Health Organization (WHO): which is 'an individual's perception of his/her position in life, in the context of the culture and value systems in which s/he lives, and in relation to goals, expectations, standards and concerns.

3.3 *Caregiver*

Caregiver refers to a person having a family member with mental illness. It is not a criterion that the caregiver has to live with the family member with mental illness but that person has to provide regular support, for instance, visit, financial support or daily care, to the ill relative.

3.4 *Ill relative*

Ill relative refers to a person with mental illness. The type of illness, for instance, schizophrenia, is not a criterion but the person has to be regularly receiving support from the caregiver.

3.5 *Mental health services*

For this study, the mental health services refer to non-residential health care services. Therefore, services of in-patient of hospital, halfway house, supported hostel and long stay care home are excluded for this study.

4. Method

4.1 Participants

Inclusion criteria:

- I. Caregiver of mentally ill relative aged 18 or above, both sex included;
- II. Able to speak and write simple Chinese;
- III. Provides regular support, e.g. visit, financial, daily care to the ill relatives.

Participants were approached and given details of the survey. After signing the consent form, participants were given a self-completed questionnaire. For participant with special need, for instance, poor literacy, members of the research team would provide individual assistance.

Participation is voluntary and does not have any negative effects on the use of services that participants are receiving.

4.2 Recruitment

The study adopts a one-time cross-sectional survey design and uses a convenience sampling technique covering all territories including all administrative districts to select caregivers. This sampling procedure is chosen because there is an absence of a list of caregivers in Hong Kong and it is more feasible to obtain a sample of caregivers through community psychiatric rehabilitation units and Specialist Outpatient Department (SOPD).

4.3 Instruments

The main survey instrument is essentially a self-administered questionnaire. In addition to socio-demographic data, the set of questionnaire contains the following instruments:

4.3.1 A short version of the Chronic Stressors Scale, 16 items, developed by Wong (2000):

This is a four-point scale denoting the severity of chronic stress faced by caregivers from “no pressure” to “extremely stressful”. The original scale consisted of 32 items and they were categorized into four sub-domains:

- i) Difficulty in managing drug compliance and follow-up,
- ii) Difficulty in managing bizarre and disturbing behaviors of individuals with schizophrenia,
- iii) Difficulty handling negative symptoms of persons with schizophrenia, and
- iv) Social cost associated with the constant care of people with schizophrenia.

For practical concern, the study adopted the 16-item shorter version and a test of reliability revealed an acceptable level of internal consistency (Cronbach's $\alpha = 0.933$) (See Appendix A).

4.3.2 Service satisfaction scale for Mental Health Services in Hong Kong (developed by the research team):

This scale was developed by the research team to evaluate caregiver's satisfaction towards mental health services. There are total 10 services selected for evaluation. A four-point scale (from 1 “very unsatisfied” to 4 “very satisfied”) is used. It is agreed among the research team that some items may not be relevant to caregivers, for instance, the opening hour of out-patient department and, hence cannot be commented on. In these instances, an option “Don't know” is added. A test of reliability revealed an acceptable level of internal consistency (Cronbach's $\alpha =$ from 0.867 to 0.947) (See Appendix

C).

4.3.3 Service Expectation Questionnaire for Mental Health Services in Hong Kong
(developed by research team):

This scale has four sub-domains for exploring the service expectation towards various types of mental health services:

- i) Integrated Community Centre for Mental Wellness (ICCMW)
- ii) Case Manager
- iii) Hospital Authority services
- iv) Other services

A list of services was provided and participants were asked to prioritize the first five services (from 1 to 5) that they want most (See Appendix C).

4.3.4 WHOQOL-BREF (HK) scale developed by World Health Organization and validated by Leung et al. (2005):

The World Health Organization Quality of Life Brief Version (WHOQOL-BREF) is a 26-item, self-administered generic questionnaire. Subjects assess their satisfaction on each item during the past 2 weeks on a 5-point scale (from 1=very dissatisfied to 5=very satisfied). The 26 items can be divided into four subscales including physical health, psychological health, social relationships and environmental factors domains. The WHOQOL-BREF has well-established psychometric and cross-cultural properties and is sensitive to QoL changes. The scale has been widely used to assess QoL worldwide, including Hong Kong. For this study, a test of reliability revealed an acceptable level of internal consistency (Cronbach's alpha = from 0.684 to 0.810 for the four sub-domains) (See Appendix D).

5. Results

Table 1 shows the demographic profile of participants. The data was territory-wide and covered the 18 administrative districts of Hong Kong. On the whole, the caregivers in this study were mainly parents in their late adulthood. The majority of the caregivers were female, a result similar to a previous research done by the principle investigator. Age of the caregivers was relatively higher that more than 70% was over the age of 51. Above 69% of caregivers were parents of the ill relative while siblings and couples each shares about 11% of the population. The employment status was mainly housewife and retired people (39.7% and 24.1% respectively). The family income level was relatively low; 30.8% fell within the range of \$5000-10000. 36.1% of the ill relatives suffered from schizophrenia, whereas 18.6% had a diagnosis of “early psychosis”. 13.1%, 9.1% and 3.1% of the ill relatives had the diagnosis of Depression, Bipolar and Mania respectively. The profile of the year of care was reported to be equally distributed. Regarding the number of ill relative, in a family, over 80% reported to have only one person in the family suffering from mental illness and most of the caregivers lived with the ill relatives.

Table 2 displays the profile of caregiver stress. There is no cut off score for this scale. The range is from 1-4 and a higher score refers to a higher level of stress perceived by the caregiver. The most highly rated stressors mentioned by caregivers relate to difficulty in handling bizarre and disturbing behaviors and fluctuating emotions of the ill relatives ($M = 2.96$, for both). These were followed by difficulty in handling suicidal thoughts or/and attempts and no suitable job available for the ill relative ($M=2.83$ and 2.78 , respectively). The least stressful area mentioned was the ill relative’s rejection to participate in doing household chores.

Gender	Male	20.1%
	Female	79.9%
Age	20-30	2.9%
	31-40	5.9%
	41-50	16.8%
	51-60	37.2%
	61-above	37.2%
Relationship	Father	12.0%
	Mother	57.1%
	Children	8.7%
	Sibling	10.9%
	Couple	11.3%
Employment Status	Full time	23.3%
	Housewife	39.7%
	Student	1.2%
	Part-time	8.2%
	Unemployed	3.5%
	Retired	24.1%
Income	On CSSA	9.2%
	\$5000-\$10000	30.8%
	\$10001-\$20000	27.1%
	\$20001-\$30000	10.3%
	\$30001-\$40000	7.3%
	\$40001 or above	6.6%
	Unknown	8.7%
Type of Mental Illness of the Family Members	Schizophrenia	36.1%
	Bipolar	9.1%
	Mania	3.1%
	Depression	13.1%
	Early Psychosis	18.6%
	Anxiety Disorder	4.5%
	OCD	7.8%
	Delusion	5.4%
	Personality Disorder	2.1%
	Eating	0.2%
No. of Family Member with Mental Illness	1	84.9%
	2	11.7%
	3	2.6%
	4	0.8%

Table 1: Demographic Data

Individual Stressor	Mean Score
1. Ill relative refuse to take medication	2.72
2. Ill relative refuse to go for medical follow-ups	2.69
3. Bizarre behaviors made by ill relative (e.g. muttering to self)	2.96
4. Suicidal thoughts or and attempts made by ill relative	2.83
5. Fluctuation of emotions of the ill relative	2.96
6. Destructive behaviors made by ill relative (e.g. damage to furniture)	2.72
7. Ill relative idle at home	2.47
8. Ill relative refuse to perform household chores	2.16
9. Ill relative refuse to go to work	2.56
10. No suitable job available for the ill relative	2.78
11. Ill relative spends a great deal of time in bed	2.55
12. Ill relative neglects of personal hygiene	2.57
13. Household living affected due to care of the person	2.63
14. Financial difficulties because of have to take care of the ill relative	2.58
15. Cannot participate in social activities due to care of the ill relative	2.31
16. Disputes among family members arising from differences	2.72
Overall mean	2.09

Table 2: Mean score Caregiver stress

The result of the WHOQOL-BREF is shown in Table 3. There is no cut off score for that scale and the range of the score is from 4 to 20. A lower score indicates a poorer level of quality of life. There are four sub-domains measured by this scale: physical, psychological, social and environment. The quality of life in physical wellbeing was reported to have the highest mean score among the four sub-domains, whereas the quality of life in psychological wellbeing had the lowest.

	Mean (SD)
Overall QoL (Q1)	3.08 (0.73)
Overall Health (Q2)	3.12 (0.82)
QoL Physical	13.37 (2.40)
QoL Psychological	12.07 (2.55)
QoL Social	12.87 (2.36)
QoL Environment	12.61 (2.10)

Table 3: Mean score of WHOQOL-BREF

Table 4 shows the distribution of the services used by ill relatives or caregivers. The average number of services used was 3.93. The most frequently used service was the psychiatric outpatient departments (SOPD). The lowest percentage of service usage was among the community mental health intervention project, a service for handling people suspected to have mental illness, which has been in operation for less than 3 years. The table also shows the mean score of the caregivers' satisfaction towards individual services. There is no cut-off for that scale and the range is from 1 to 4. The highest score reveals that most caregivers were satisfied with the service. The service that most caregivers were satisfied with was the family support services. On the contrary, the lowest mean score was found amongst the services of SOPD.

Average % of the Use of Service	3.93%	
	%	Mean (SD)
SOPD	90.6	2.38 (0.58)
CPT	17.4	2.23 (0.69)
CPN	37.3	2.70 (0.46)
Day Hospital	23.9	2.80 (0.41)
A & E	52.5	2.58 (0.43)
ComLink	30.1	2.76 (0.48)
ComCare	22.1	2.85 (0.46)
ComHip	9.4	2.63 (0.44)
Work Reh.	33.3	2.64 (0.49)
Family Support Services	76.4	2.95 (0.38)

Table 4: Ratio of Service usage and Service satisfaction

Table 5 shows the difference in caregiver stress and the mean score on QoL relating to whether the caregiver lives with the ill relative(s) or not. Generally speaking, caregivers who lived with the ill relative(s) were found to have higher caregiver stress and poorer quality of life. An independent t-test was done and found a significant difference in the sub-domain of QoL Social and QoL environment.

	Living with ill relatives N=203	Not living with ill relatives N=78	<i>p</i>
Caregiver stress	2.10 (0.89)	2.05 (0.89)	0.717
Overall QoL (Q1)	3.02 (0.73)	3.20 (0.61)	0.071
Overall Health (Q2)	3.10 (0.81)	3.16 (0.82)	0.579
QoL Physical	13.26 (2.38)	13.73 (2.41)	0.162
QoL Psychological	11.94 (2.52)	12.48 (2.57)	0.133
QoL Social	12.68 (2.31)	13.43 (2.39)	0.023*
QoL Environment	12.44 (2.15)	13.12 (1.82)	0.011*

Table 5: Difference in caregiver stress and QoL on the living condition (* $p < 0.05$)

Table 6 displays the difference in caregiver stress and mean score on QoL relating to the number of years of caring. A one-way ANOVA with post-hoc test was also conducted to explore the impact of number of years of care on caregiver stress and level of QoL. Participants were divided into four groups according to the number of years of caring. There was a statistically significant difference at the $p < .05$ level in QoL Social sub-domain for the four groups [$F(3, 271) = 2.82, p = .039$]. Post-hoc comparisons using the Tukey HSD test indicated that mean score in QoL sub-domain for the group 0-5 years of caring ($M = 13.45, SD = 2.35$) was significantly different from the group with 6-10 years of caring ($M = 12.37, SD = 2.56$).

Year of Care	Caregiver Stress	Overall QoL	Overall Health	QoL Physical	QoL Psychological	QoL Social	QoL Environment
0-5	1.99 (0.91)	3.06 (0.69)	3.05 (0.78)	13.44 (2.50)	12.50 (2.45)	13.45* (2.35)	12.67 (2.07)
6-10	2.24 (0.78)	3.05 (0.72)	3.16 (0.86)	13.25 (2.37)	11.59 (2.57)	12.37* (2.56)	12.13 (2.52)
11-20	2.00 (0.92)	3.12 (0.64)	3.20 (0.79)	13.74 (2.32)	12.26 (2.46)	12.85 (2.02)	12.97 (1.84)
Above 20	2.13 (0.90)	3.06 (0.89)	3.04 (0.87)	12.96 (2.36)	11.89 (2.71)	12.72 (2.38)	12.74 (1.67)

Table 6: Difference in caregiver stress and QoL on year of caring (* $p < 0.05$)

Table 7 displays the difference in mean score of caregivers stress and QoL relating to the category of the mental illness experienced by the ill relatives. For comparison purposes, the disorders were re-categorized into four groups: 1.Psychotic, 2.Depression and Anxiety, 3.Mania and Bipolar, and 4.other. A one-way ANOVA test was also conducted but no statistical significance was found.

Type of Illness	Caregiver stress	Overall QoL	Overall Health	QoL Physical	QoL Psychological	QoL Social	QoL Environment
Psychotic	2.13 (0.89)	3.06 (0.77)	3.09 (0.82)	13.16 (2.42)	12.10 (2.57)	12.84 (2.25)	12.47 (2.09)
Depression/ Anxiety	1.95 (0.80)	3.00 (0.60)	3.11 (0.81)	13.91 (2.52)	12.05 (2.65)	12.64 (2.96)	12.82 (2.37)
Mania- related	1.78 (1.16)	3.11 (0.68)	3.28 (0.75)	14.15 (1.79)	11.93 (2.55)	13.70 (2.00)	13.38 (1.85)
Other Disorders	2.42 (0.52)	3.28 (0.46)	3.28 (0.89)	13.81 (2.51)	12.07 (2.37)	13.17 (2.73)	13.14 (1.61)

Table 7: Group difference in caregiver stress and QoL on different category of mental illness

Pearson correlations were computed to examine the relationship between number of service received and caregiver stress and quality of life, as displayed in Table 8. It was found that there was a positive correlation between the number of service received and caregiver stress, indicating the more services received, the higher the level of perceived caregiver stress. The same statistical procedure was done to examine the correlation between caregiver stress and satisfaction with mental health services. Generally, there was no consistent pattern found between the two variables (Table 9).

	No. of service received
Caregiver Stress	0.154*
Overall QoL (Q1)	0.09
Overall Health (Q2)	0.74
QoL Physical	-0.065
QoL Psychological	-0.032
QoL Social	-0.067
QoL Environment	-0.076

*Table 8: Correlation between no. of service received and caregiver stress and quality of life (*p<0.05)*

	Caregiver Stress
SOPD	-0.028
CPT	0.186
CPN	-0.227*
Day Hospital	-0.192
A & E	-0.016
ComLink	-0.055
ComCare	0.075
ComHip	-0.171
Work Reh	0.025
Family support services	0.029

*Table 9: Correlation between caregiver stress and satisfaction with mental health services (*p<0.05)*

Pearson correlations were computed to examine the relationship between caregiver stress and QoL. These correlations are presented in Table 10. Caregiver stress was significantly and negatively correlated with overall QoL, overall health and all the sub-domains, clearly supporting the hypothesis that caregivers with more family burdens would have poorer quality of life outcomes.

	CS Mean 1
Overall QoL (Q1)	3.2%
Overall Health (Q2)	2.99%
QoL Physical	8.120%
QoL Psychological	8.2%
QoL Social	1.42%
QoL Environment	4.97%*

Table 10: Correlation between Caregiver stress and quality of life (* $p < 0.05$)

Table 11 shows a comparison of the mean score of the WHOQOL-BREF. Five additional studies using the same scale were introduced as comparisons. One of the studies was done on caregivers of people with schizophrenia in mainland China. The remainders were data collected from general population in Hong Kong (twice) and from general population in mainland China and Taiwan. Except for the scale of the sub-domain QoL Environment, participants of this study had lower scores in all the other three sub-domains than the other populations.

	This study N=276	Caregiver of Sch. in China N=96	HK General Population N=155	HK General Population N=89	China General Population N=50	Taiwan General Population N=132,045
Overall QoL (Q1)	3.08 (0.73)	2.80 (0.98)	-	3.45	-	-
Overall Health (Q2)	3.12 (0.82)	3.21 (0.93)	-	3.29	-	-
QoL Physical	13.37 (2.40)	14.08 (2.36)	15.85 (2.13)	15.41	15.8 (2.9)	15.05 (2.08)
QoL Psychological	12.07 (2.55)	12.92 (2.68)	14.77 (2.39)	13.43	14.3 (2.5)	13.61 (2.27)
QoL Social	12.87 (2.36)	14.44 (2.40)	14.26 (2.39)	13.83	13.7 (3.0)	14.39 (2.20)
QoL Environment	12.61 (2.10)	12.32 (2.60)	13.74 (2.45)	13.61	13.2 (2.4)	13.00 (2.15)

Table 11: A comparison table of WHOQOL-BREF mean score

The service expectations of caregivers are shown from table 12 to table 15. For ICCMW, on-site psychiatrist consultation was rated as the most preferred service that caregivers would like to have. From Table 12 and 13, counseling was found to be a common item that was

indicated by caregivers. For the expectation on HA services for community rehabilitation, emergency support and psychiatric consultation were ranked as the top prioritized services (Table 14). For other services, short-term residential service is a priority. Insurance for medical need and legal consultation for handling inheritance were also seen as top in the priority list.

	%	
	Yes	No
Knowing that a Wellness centre is going to be established in every district	50.80	49.20
Priority of preferred / expected services		
1 On-site Psychiatrist consultation	26.81	-
2 Counseling	56.15	-
3 Public Education	15.21	-

Table 12: Knowledge and preference about the service of Wellness centre

	%	
	Yes	No
The need of a case manager	94.00	6.00
Priority of preferred / expected job nature of a case manager		
1 Working a Reh. plan with patient	27.54	
2 Counseling	35.87	
3 Counseling for family member	26.09	

Table 13: Necessity and expected job nature of a case manager

Priority	%
1 Round the clock emergency support	63.77
2 Psychiatrist Consultation at A & E Department	39.13
3 Consultation by nursing staff	29.71

Table 14: Expectation on HA services for community rehabilitation

6. Discussion

To the best of our knowledge, this is the first study exploring QoL and caregiver stress and its socio-demographic correlates in caregivers of individuals with mental illness in Hong Kong. The result of this study is territory-wide covering all the administrative districts of Hong Kong. The interviewees in the current study are relatives of patients with most major mental illnesses, where previous trend in the field included mostly relatives of Schizophrenics. Participants were found to have a certain degree of caregiver stress and this figure was significantly related to their quality of life. Cultural factor was found to have an influence on how caregivers perceived a stressful circumstance. Lastly, emergency support and counseling were the top prioritized services proposed by caregivers that should be provided by ICCMW.

6.1 Caregiver Stress

It is found that ill relatives' bizarre or delusional behaviors and unstable mood were found to be most stressful for the caregivers. It is a result consistent with other studies (Ricard, Bonin, & Ezer, 1999). People with psychotic problems are commonly found to have residual symptoms and frequent occurrence of these psychotic symptoms can pose a great deal of stress on caregivers. For example, hallucinations, with the manifestations of overt bizarre behaviors such as self-muttering and self-giggling, can be embarrassing for caregivers. Delusions which are directed at caregivers and other family members can be particularly difficult to handle because persons with delusions can be argumentative and even hostile. In this study, more than 70% of caregivers lived with their ill relative. It means that caregivers are directly and constantly confronted with the residual symptoms on a daily basis.

In addition to the aforementioned, in Chinese culture, mental illness is highly stigmatized for the entire family. It may be perceived as a hereditary trait that runs through the family line, as a punishment for past behaviors of the family, or as reflection of poor guidance and discipline by parents (Shon & Ja, 1982). This has led Lin and Lin (1981) to suggest that the stigma of mental illness tends to fall more heavily on the family than the individual in Chinese culture. Coupled with the Chinese culture that people have to keep the skeletons in the cupboard, caregivers may feel ashamed and fearful of letting other know that they have a family member who is suffering from schizophrenia (Gabrenya & Hwang, 1996). Evidence revealed that Chinese caregivers had a more negative conceptualization of mental illness than did Euro-Canadian caregivers. Chinese caregivers were particularly more likely to endorse the practice of keeping mental illness a secret from others, as well as hiding individuals with mental illness from others (Ryder, Bean & Dion, 2000). In line with this, caregivers in Hong Kong were believed to be particularly uncomfortable when their ill relative manifests residual symptoms in front of friends, relatives, neighbors and in the public.

Regarding the unstable mood of the ill relatives, we conducted a focus group interview with caregivers to examine this issue. There were generally two consensuses that caregivers mentioned: i) lack of skills to handle ill relatives' unstable mood; ii) caregivers perceived that "the emotion of the ill relatives, is my emotion". For the first point, the psycho-education programs available for caregivers are commonly organized to input knowledge about the cause of illness and of the availability of treatment to caregivers. Practical skills on how psychiatric patients should be taken care of were rarely included in the mentioned psycho-education program.

For the second point, the wording "the ill relative's emotion, is my emotion", is

believed to be influenced by the Chinese cultural belief. Traditionally, Chinese family members play the central role in providing care for other members in their families. They are expected to devote all their energy and time to help their family to live healthily and should they fail to do so, they will be considered as incompetent (Wong, 2000).

The third ranked stressor was the suicidal behaviors of the ill relatives. In Chinese culture, caregivers were commonly found to feel a collective shame about one of their members attempting suicide, mainly because Chinese culture deems suicide as a stigma and perceive such an act as: shameful, foolish, and violating the concept of filial piety, meaning that children who attempt suicide are not devoted to their parents (Sun et al., 2008). From the biomedical viewpoint, suicide is seen as a mental disorder and is treated in psychiatric settings. As aforementioned, psychiatric stigmatization can be a source of stress for caregivers.

The issue concerning “the ill relatives could not find a suitable job” ranked as the fourth most stressful problem. The focus group suggests that caregivers treated a suitable job for the ill relatives as a very helpful resource for rehabilitation and for providing a meaningful and structured life for their ill relatives. Furthermore, ill relative’s stable engagement in a job allows the relatives to gain more of their own leisure time, though, caregivers did not tend to focus the income the job may bring. Indeed, relatives’ realization of their relatives’ relatively lower threshold in job stress was found.

Another highly ranked stressor is disagreement between family members when concerning how to handle the need of the ill relative. The participants of the focus group quoted that the financial arrangement, for example, offering pocket money for the ill relative, is the most common point of argument. In addition, family members also

complain about favoritism towards the ill relative.

6.2 *Caregiver's Quality of Life*

This study clearly indicates that the caregiver's quality of life was significantly related to perceived caregiver stress. When comparing with other populations, the caregivers in this study were found to have lower level of quality of life. Among four sub-domains, QoL Physical was reported to be the highest score in this study. It is understandable because mental illness does not require caregiver's heavy commitment in physical care.

The lowest score was found among participants in the sub-domain QoL Psychological. It is a domain measuring the psychological wellbeing of a person covering bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality, thinking, learning, memory and concentration. As mentioned, since a mental ill relative is highly stigmatizing, it is not unexpected that caregivers ranked a poorer outcome in this domain. Surprisingly, Hong Kong caregivers were found to have a comparatively lower score than their counterparts in China. To explain this, first, the study from China was done for caregivers of people with schizophrenia; difference in characteristic (i.e. our sample had caregivers of people with diseases other than schizophrenia) might generate different results than other studies. Second, as told by the participants in the focus group, the expectation from the caregivers might be different. Due to the lack of available resources, caregivers in mainland China might have a lower expectation towards the rehabilitation of the ill relatives. Caregivers from mainland China might not expect the ill relative to have a full recovery or good progress in treatment process. Instead, they would accept the ill relatives to stay the rest of their lives in asylum.

Regarding the QoL social-domain, it relates to personal relationships, social support,

and sexual activity. Studies reveal that caregivers experienced financial burdens and disruptions to family routines, family leisure activities and interactions, and physical and psychological health. Previous local studies, such as that conducted by Wong (2000), on caregivers with relatives suffering from chronic mental illness shared similar results. Due to stigmatization, caregivers might be embarrassed by the bizarre behaviors of the ill relative and therefore rejected to join social activity. They might also have to stay at home to take care of the ill relatives.

The same argument applies to the analysis of QoL environment sub-domain. It is a domain covering financial resources, physical safety and security, accessibility and quality of home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure activities. Living with a mentally ill relative possibly becomes an obstacle for the caregiver to enjoy social life. It is not surprising that such a living condition limited the opportunities for the caregivers to take part in any activities that could help them to relax or promote personal growth. In addition to this, over 40% of the family incomes of the caregivers fell below the range of \$5000-10000, a figure considered to be of a low income profile, compared to the local average level (approximately HKD16,700) (Xiang, Luk, & Lai, 2009). Caregivers in our study might not have the money to achieve a quality living environment.

6.3 Service satisfaction

This study found that the more service received by a caregiver, the higher her/his stress is. This result, in fact, is not surprising. Caregivers who received more services implied that they had fewer resources, as well as the possibility that the ill relative had a more severe psychiatric condition.

The hypothesis “higher caregiver stress correlates to lower satisfaction towards mental health services” is rejected. However, in the focus group, the most common complaint about medical services is the waiting time. The caregivers said that commonly they had to spend more than 1 to 2 hours at the outpatient department waiting for consultation and then had to spend at least another one hour to wait for medication collection. In addition, they were not satisfied with the frequency of the rotation of medical officers. Regarding the services offered by NGOs, the caregivers participating in the focus group agreed that generally social workers and other staff were more willing to offer more time to meet with them and listen to them.

6.4 Knowledge and preference about the ICCMW

More than half of the respondents knew that an ICCMW was going to be available in every district. The first prioritized service that caregivers expected ICCMW to have is on-site psychiatric consultation. In the focus group, caregivers explained this point in more details that they do not expect a psychiatrist in the ICCMW to provide a full outpatient service. Rather, they see the role of the psychiatrist as an information giver, for example, offering opinion about the use of medication or teaching them the skills in relapse prevention. The second prioritized service is counseling. The caregivers mentioned that they do not fully understand the meaning of counseling service but they really need some service to ventilate or receive emotional support. Lastly, for public education, the third prioritized service, caregivers expected more programs to be run to reduce the stigmatization towards people with mental illness. In addition, they expected training programs that can help them to handle relapse.

The most frequently mentioned expectation on the role of a case manager was to work with the ill relative to develop an individualized rehabilitation plan. This may reflect

the problem of the service fragmentation and complication of the existing mental health services system. Caregivers clearly emphasized that they felt frustrated in seeking opinion from different department or service units. For example, one participant in the focus group stated that he received service from Community Mental Health Intervention Project that helped his ill relative to be admitted into hospital. However, after discharging from mental hospital, the Community Mental Health Intervention Project was replaced by Community Mental Health Care Program. Furthermore, since vocational rehabilitation was needed for his ill relative, he had to ask the psychiatrist to make a referral but also had to go to Medical Social Work Unit for administrative help. Caregivers from focus group expected a person or service unit to help them navigate more smoothly in the system. The next two prioritized duties of a case manager are providing counseling for the ill relative and the caregivers respectively. Echoing the fact that it is difficult to handle the unstable mood of the ill relative, the caregivers expected some psycho-social intervention that can help the ill relative to manage his or her emotions better.

For expectation on the services offered by Hospital Authority, the most common request is round the clock emergency support. It is a point highly related to the second prioritized expectation that psychiatric consultation can be available at Accident and Emergency Department. In the focus group interview, the caregivers mentioned that the medical staff of Accident and Emergency Department might not have the professional knowledge and sensitivity to detect the mental health problem of the ill relative. In many occasions, it wasted their time and also delayed the availability of treatment for the patient. The caregivers clearly stated that psychiatric assessment in an emergency unit is very crucial. The third prioritized service is consultation by nursing staff, or so called nursing clinic. Similar to the requested on-site psychiatry consultation at ICCMW, caregivers do not expect a full nursing service but an easily accessible consultation services for the use of medication

and relapse prevention.

Caregivers from the focus group interview further mentioned the need of a short stay hostel. They mentioned that, nowadays, the hospital stay for the ill relative is too short. In many occasions, medical staff has to let the ill relative go back home even though the caregivers were not yet ready to do so. The caregivers stated that a transitional hostel service in that regard is important for them. They were clear that a halfway house was a service commonly offering a 2-year residential service, but it is not their need in this particular circumstance. Instead, caregivers wanted a hostel service for just one or two weeks to allow them and the ill relative to have a better preparation for returning back home. For the last two points, caregivers mentioned that they have encountered difficulties in getting insurance coverage for their ill relatives. In some occasions, they received a message that they had to pay additional premium in order to get the insurance. They felt frustrated about that. For legal consultation, some caregivers had need for legal advice and guidance in handling inheritance.

7. Recommendation

7.1 Caregiver's education

Referring to stressors mentioned in the discussion, skill training for caregivers to handle the emotions and bizarre behaviors of ill relatives is necessary. Currently, a lot of psycho-education training programs are available but mainly focus on information giving. This kind of program is worth to be carried out continuously. However, some skill training is needed to help caregivers grasp more solid skills to handle the unstable mood or residual symptoms. These can be achieved through role play and small group discussion.

Handling suicidal thought or behaviors is another top stressor found in this study. In addition to this, caregivers clearly mentioned the need for support during emergency situation. It reveals that caregivers lack confidence in handling emergency/crisis situations. Although it is understood that handling of psychiatric emergencies is complicated and never easy for anyone, it is unfortunate that caregivers are usually the first person to be confronted by the situations. Hence, some well-established skill training, for instance, Mental Health First Aid, LivingWorks training program, are recommended.

Mental Health First Aid is the help provided to a person developing a mental health problem or in a mental health crisis. The first aid is given until appropriate professional treatment is received or until the crisis is resolved. This program has been available in Hong Kong for several years but lacks government funding support to gain popularity. LivingWorks is a well-established program for improving helper competencies to intervene with person at risk of suicide. This program is available worldwide but has never been introduced in Hong Kong.

7.2 Caregiver's counseling

This study reveals that caregiving of mentally ill relative adversely affects the physical and psychological health of the caregivers. Caregiver stress can also have consequences on for the wellbeing of individuals with mental health problem. Caregiver fatigue and ill health can impact the quality of care, and continual stress can lead to anger and resentment directed towards the other family members or the ill relative.

Cognitive Behavioral Intervention (CBI) is one of the most widely used and best evaluated psychological interventions currently available. CBI helps clients to develop both cognitive and behavioral skills to cope with current stressors, making it particularly suitable to the complex demands and stresses of the caregiving role of caregivers. Echoing the point that counseling is a top prioritized service in ICCMW, the research team suggests running CBI group for handling caregiver stress and emotional needs regularly.

7.3 Social Marketing Program

This study suggests that traditional Chinese belief and the problem of stigmatization would affect the help seeking or the use of mental health services as well as increase caregiver's stress. Research suggests that one of the most effective ways to positively changing attitude is to deliver relevant messages that will resonate with target audiences, encourage the public to recognize, and acknowledge and disclose their own problems or those of family members. Social marketing or public education through mass media is an effective mean in creating greater public understanding and reducing stigmatization (Watson and Corrigan, 2004). Future programs must be developed to reach out to diverse communities and tailored to their specific needs.

7.4 Professional training

Considering the fact that service of ICCMW is going to be implemented in a short period of time, professional training to gear up practitioners' skills and confidence becomes vital. The training, however, should not just focus on delivery of direct services to people with mental illness but also address the needs of caregivers. This study reveals that Chinese value still plays an influence on the caregiver's stress. It is essential to let caregivers be aware of how cultural forces impact their thinking and behaviors.

Last but not least, ICCMW is a service mainly operated by social workers. It is essential to provide advanced training for social workers to equip themselves to conduct initial psychiatric assessments.

7.5 Mental Health Crisis Team

Mental illness is complex and multi-dimensional, especially in the handling of psychiatric emergencies. Currently this kind of services relies on the community psychiatric team, which is a service covering only normal office hours. At other times, all emergency cases go to the Accident and Emergency Department. Workers in the Accident and Emergency Department are professional medical practitioners who may not be specialists in handling psychiatric emergencies. Hence, a service model from Australia, Crisis Assessment and Treatment Services (CATS), is recommended.

7.6 Research Limitation and recommendations

8.6.1 With regard to the measures used in the present study, the service satisfaction scale requires further validation and local norms should be established in order to facilitate more meaningful comparisons in future studies.

Although this study is territory-wide, the limitation of convenience sampling still exists so the representativeness of the study is therefore reduced.

8. Conclusion

The movement to deinstitutionalize mental health clients does not just bring a shift in care from the hospital to the community, but also increases the burden of informal care provided by caregivers. This movement impacts family caregiving and enormous evidence, including from our study, reveals that caregivers of people with mental illness are facing different kinds of caregiver stress. The present study also clearly shows the relationship between caregiver stress and quality of life.

Chinese culture, stigmatization, and lack of skills to handle mental health problems, were the factors found to have influence on caregiver stress and quality of life. The level of service satisfaction and expectation towards ICCMW were also explored. For these, a list of services or training programs is recommended. In all, it is anticipated that the ICCMW could offer culturally sensitive practices and strengthen the therapeutic alliance between workers and caregivers, and even to develop an indigenous service model for Hong Kong.

Appendix

Appendix A

Result of the Cronbach's Alpha for the 16-item measurement of Stress

Reliability Statistics

Cronbach's Alpha	No. of Items
.933	16

ANOVA with Cochran's Test

	Sum of Squares	df	Mean Square	Cochran's Q	Sig.
Between People	732.666	95	7.712	140.994	.000
Within People Between Items	79.781	15	5.319		
Residual	735.032	1425	.516		
Total	814.812	1440	.566		
Total	1547.479	1535	1.008		

Grand Mean = 2.6777

Appendix B:

**A Table showing the results of all Cronbach's Alpha of the 10 selected services
(Caregivers to rate their satisfaction towards)**

Reliability Statistics

	Cronbach's Alpha	No. of Items
1. Specialists Outpatient Department	.888	10
2. Community Psychiatric Team	.940	9
3. Community Psychiatric Nurse	.892	9
4. Psychiatric Day Hospital	.888	9
5. Accident & Emergency Department	.925	10
6. Community Mental Health Link	.925	7
7. Community Mental Health Care	.947	7
8. Community Mental Health Intervention Project	.867	7
9. Vocational Rehabilitation Service	.947	9
10. Family Support Service	.904	9

Appendix C:

A list of services participants were asked to prioritize – Section 5 of the Questionnaire

五：你認為還需要甚麼服務，才能支援康復者在社區生活？

- I. 醫管局服務(請選出你認為最需要的5項服務，並以1-5的分數表達需要的優次程度，以1代表最需要，如此類推)

24小時緊急支援服務	<input type="checkbox"/>
夜間門診及打針服務	<input type="checkbox"/>
星期六/日下午門診及打針服務	<input type="checkbox"/>
急症室精神科醫生駐診	<input type="checkbox"/>
精神科護士診所	<input type="checkbox"/>
其他(請註明)：_____	<input type="checkbox"/>

- II. 其他服務項目(請選出你認為最需要的5項服務，並以1-5的分數表達需要的優次程度，以1代表最需要，如此類推)

青少年康復者宿舍	<input type="checkbox"/>
短暫住宿支援中心	<input type="checkbox"/>
恩恤徒置	<input type="checkbox"/>
保險(支援康復者的醫療需要)	<input type="checkbox"/>
宗教服務(支援康復者的靈性需要)	<input type="checkbox"/>
法律諮詢(如協助處理資產)	<input type="checkbox"/>
其他(請註明)：_____	<input type="checkbox"/>

Appendix D:

A Table showing the results of all Cronbach's Alpha of the 4 sub-domains in the WHOQOL-BREF (HK) scale developed by World Health Organization and validated by Leung et al. (2005)

Reliability Statistics

	Cronbach's Alpha	No. of Items
1. Physical	.784	7
2. Psychological	.799	6
3. Social Relationship	.684	4
4. Environment	.810	9

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Resource & Service Centre for the Relatives of Ex-mentally Ill People

Address: G/F, Wing C, Choi Yip House, Choi Fai Estate, Choi Hung, Kowloon
Telephone: 2560 0651
Fax: 2568 9855
Email: rsc@bokss.org.hk
Website: www.bokss.org.hk

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