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THE ASSOCIATION OF PSYCHOSOCIAL HEALTH PROBLEMS WITH FUNCTIONAL DISABILITIES AMONG COMMUNITY MEMBERS IN RURAL CAMBODIA

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Cambodian Institute for Cooperation and Peace

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Abstract:

This study showed a large positive correlation coefficient between psychosocial health problems and dysfunctional abilities among rural community members. This relationship would explain that mental health was closely linked with the performance of daily activities including creational activities and occupational tasks. Therefore, at a policy level, this finding would give insights to policy decision makers to be aware and value the importance of mental health of the people, particularly rural community members. Improving people's mental health and well-being is the key to increasing their functional abilities, productivity and to lift them out of poverty. However, further research needs to be conducted among a larger sample size and different social classes in order to generalize the findings to the country's population. A second round of interviews will also be necessary to compare the relationship of these two variables before and after the interventions.

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THE ASSOCIATION OF PSYCHOSOCIAL HEALTH PROBLEMS WITH FUNCTIONAL DISABILITIES AMONG COMMUNITY MEMBERS IN RURAL CAMBODIA

LOR Vann Thary

Section 1: Introduction

1.1 General Background Information

1.1.1 Defining Psychosocial Health Problems

Health is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” according to the World Health Assembly, 1948 (Jadad and O'Grady, 2008). This definition is still accepted and widely used, but in 1986, the World Health Organization (WHO) reported that the Ottawa Charter for Health Promotion Statement defined health as "a resource for everyday life, not the objective of living; health is a positive concept emphasizing social and personal resources, as well as physical capacities." "Mental health refers to an individual's emotional and psychological well-being in which he or she is able to use his or her cognitive and emotional capabilities to function in society, and meet the ordinary demands of everyday life" (Merriam-Webster).

According to the World Health Organization, there is no single official definition of mental health. Cultural differences, subjective assessments, and competing professional theories all affect how mental health is defined. In general, most experts agree that "mental health" and "mental illness" are not opposites. In other words, the absence of a recognized mental disorder is not necessarily an indicator of sound mental health. There is no clear-cut line between mental health and mental illness since the wide range of people's emotions, feelings and thinking may be scaled differently according to an individuals' culture, tradition and in the environment where they live. In clinical settings, doctors tend to judge patients based on the severity, duration and frequency of their psychological or psychosomatic symptoms combined with their levels of impaired functioning. One way of thinking about mental health is by looking at how effectively and successfully a person functions. Feeling capable and competent; being able to handle normal levels of stress, maintain satisfying relationships, and to lead an independent life; and being able to bounce back or recover from difficult situations, are all signs of "good mental health". People with good psychosocial health would feel good about oneself, feel comfortable about other people around, be able to control tension and anxiety, maintain a positive outlook, say thanks for simple things, be able to meet goals, and respect and appreciate nature. Therefore, a combination of physical, emotional, social and most importantly mental well-being is necessary to achieve overall health.

Unlike physical illness, where doctors can examine by seeing, touching, listening and observing to find out which organ is having a problem, mental and social illness, or in other words “psychosocial health”, cannot be seen and touched. Psychosocial health involves both psychological and social aspects of people.

1.1.2 Defining Functional Ability

International Classification of Functioning, Disability and Health, also known as ICF, is a classification of the health components of functioning and disability. After nine years of international revision efforts coordinated by WHO, the World Health Assembly on May 22, 2001, approved the International Classification of Functioning, Disability and Health, and its abbreviation of "IC" (International Classification). This classification was first made in 1980 and then called the International Classification of Impairments, Disabilities, and Handicaps or ICIDH by WHO to provide a unifying framework for classifying the health components of functioning and disability.

The International Classification of Functioning (ICF) is structured around the following broad components: body functions and structure; activities related to tasks and actions by an individual, and participation which refers to involvement in a life situation; and additional information on severity, and environmental factors. According to a population conceptualization of disablement, a disability refers to the loss of capacity to carry out usual and necessary functional tasks that allow individuals to maintain themselves within a given environment (Deeg, Verbrugge, & Jagger 2003; Verbrugge & Jette, 1994).

Functioning and disability are viewed as a complex interaction between the health condition of an individual to perform activities of daily living and contextual factors of the environment that could inhibit him or her to do those tasks. For example, two individuals with similar physical capacities may face a different level of difficulty in getting up from the different patterns of sleeping place. A person who sleeps on a bed would get up more easily than a person who sleeps on the floor. The picture produced by this combination of factors and dimensions is of "the person in his or her world". With this regard, the language of the ICF is neutral as to etiology, placing the emphasis more on function of an individual rather than his or her disease. Changing the environment can greatly improve the person's functions as can be seen in the rehabilitation process of physically handicapped people. The adaptations have to be carefully designed to be relevant across cultures as well as age groups and genders or types of disability.

Accordingly, a functional ability is defined as the ability of a person to perform the tasks adequately within his or her social roles such as household activities, occupational tasks or/and leisure activities (Weissman, 2000). Verbrugge and Jette (1994) claimed that "functional status refers to the ability to perform tasks that are necessary within a particular environment, and a functional limitation can be considered as a gap between physical abilities and the demands of the environment." Generally, it is common to consider that only physical disabilities can lead to dysfunction. People with no limbs or no sight are considered to be dysfunctional, because they are not able to work normally and properly. Contrarily, invisible impairments such as a mentally handicapped person or a person with mental health problems are usually overlooked because of their rather normal physical appearances. Another consideration is that functional limitations, which are measured using activities of daily livings (ADLs) can shorten the active life expectancy (ALE). Active life expectancy refers to the number of years an individual can expect to live without functional limitations (Katz et al. 1983). Actually, more than not being able to work or take care of themselves, mentally handicapped or mentally ill people need someone to take care of them.

1.1.3 An Overview of Mental Health

With concerns over protecting and improving health of communities, the World Health Organization has prioritized and focused more closely on Human Immunodeficiency virus/Acquired Immuno-Deficiency Syndrome (HIV/AIDS), Tuberculosis (TB), Malaria, Cardiovascular Diseases (CVD) and Diabetes, Mental Health, Road Accidents, and avian Flu in public health worldwide. Although there is a difference between developed and developing countries that infectious diseases predominantly occur in developing countries while chronic metabolic diseases bother developed countries, both groups are facing these main problems of concern. As stated above, mental health is one of those leading public health priorities.

The disease burden in the form of total Disability Adjusted Life Years (DALYs) lost worldwide because of mental and behavioral disorders has been estimated as 10 percent of the total in 1990, 13 percent in 2002, and 15 percent in 2020 (WHO). This trend is alarming because it shows that unless we prepare to tackle mental health problems properly, well-being and productivity of people worldwide will be affected.

Table 1.1 shows that among the ten leading causes of disability in the world, five are mental health disorders. They are depression, obsessive compulsive disorder, alcoholism, bipolar disorder and schizophrenia which account for 10.7 percent, 3.3 percent, 3 percent, 2.6 percent, and 2.2 percent of all disabilities, respectively (Murray and Lopez, 1996).

Table 1.1: Leading Causes of Disability. Underlined Causes are Mental Health Disorders.

All Causes	Total Population (In Millions)	Percent of total
<u>Unipolar Major Depression</u>	50.8	10.7
Iron-deficiency anemia	22	4.7
Falls	22	4.6
<u>Alcohol use</u>	15.8	3.3
Chronic obstructive pulmonary disease	14.7	3.1
<u>Bipolar disorder</u>	14.1	3
Congenital anomalies	13.5	2.9
Osteoarthritis	13.3	2.8
<u>Schizophrenia</u>	12.1	2.6
<u>Obsessive-Compulsive Disorder</u>	10.2	2.2

Source: Murray and Lopez, 1996

From this viewpoint, mental health problems are seen as a big concern worldwide because they can disable people, especially when they get worse and become disorders. They can affect people's cognition, emotion and behavior regardless of gender, age, social classes and races. Mental health disorders will interfere with the ability of children to learn and the ability of adults to function in their family, at work and in the society as a whole. Poor school performances and school drop-out are commonly seen among children who are under stress

or have poor psychosocial health. In the United States, the economic impacts of mental health disorders yearly cost US\$ 148 billion which is equal to 2.5 percent of Gross National Product (GNP) (Kleinman, 2003).

With underlying psychosocial causes, patients sometimes exhibit psychosomatic symptoms in a way to express their distress, to mask their problems of concern and/or to gain attention from others. In psychoanalytic theory, this is explained as a primary gain. Using data on lifetime history collected in the baseline interview in the prospective study on Post Traumatic Stress Disorder (PTSD) and psychosomatic symptoms, persons with a history of PTSD were over three times more likely than those without PTSD to have a history of abridged somatization (Andreski, Chilcoat & Breslau 1997).

In low-income countries, there may still be considerable differences in the way people perceive or express their plight or illness. Usually cultures, traditions, environments and individuals themselves play an important role on how they interpret their problems both physically and mentally. For example, stress and depression are often described as "thinking too much"; distress can be expressed in a variety of dissociative patterns such as a hysterical state or a possession trance. A person may have a number of physical sensations such as heat, cold, prickling sensations in some parts of the body, pulsating experiences, discomfort of the heart or creeping sensations under the skin (de Jong, 2001b). Consequently, all these symptoms, although they have resulted from mental health related problems, very much disturb people's life and work performances. Daily stresses at work or home environment including often stressful marital and family relationships were found to have a close link with coronary heart diseases (CHD), (Schnall, Landsbergis, & Baker, 1994). Through the sympathetic division of the autonomic nervous system, stress can produce the effects that would increase the heart rate which results in high blood pressure, difficulty breathing that can create a slight headache or may create muscle contraction which leads to aches or pains. They also develop a sensation of cold spells including blushing, sweating, numbness and tinkling, increase blood glucose levels and dilate pupils (Rosch, 1994 & Sloan et al, 1994).

In observations made over 20 years working in mental health clinics in the United States amongst patients from non-Western countries, people primarily expressed their depressed feelings through physical complaints (Mollica & colleagues, 2006). As a result, improper treatments for these conditions due to an ignorance of underlying mental health causes, through self medication or consulting with many general practitioners from one to another in a doctor-shopping process resulting in a waste of time (opportunity cost) and resources (medical cost), and damage to their health because of adverse side effects. For example, when a patient having chest pain or a palpitation which is due to psychosocial problems goes to meet a general practitioner, he or she may be prescribed medication for heart problems; these medicines will never cure the problems because the suspected organ is all right although it works improperly because of mental distresses.

Psychosocial health problems also make people turn to alcohol as a way to cope with stress. The effect of alcohol may make the person temporally happy but it has never solved the problems. Consequences of alcoholism are a waste of money, poor work performances and damage to health.

Directly, psychosocial health problems create a lot of domestic violence or sometimes indirectly as a result of alcohol over consumption. Domestic violence is caused directly by

psychosocial problems among the dysfunctional families, and also is frequently seen to be associated with alcohol abuse.

Psychosocial health is one component of overall health. Amongst the priorities in the public health worldwide, mental health is one that we all should deal with, according to WHO. Furthermore, among the top ten diseases causing disabilities in the world, five are due to mental health problems. Additionally, the disease burden of total Disability Adjusted Life Years (DALYs) lost worldwide attributed to mental and behavioral disorders has been increasing from year to year. Taking these into consideration, mental health plays an important role in individuals' health as well as their productivity. On the whole, mental health is a concern worldwide. Its impacts on individuals and families through physical and mental pathways create a big loss for families and societies because of physically chronic conditions (CVD) or disabilities.

1.2 Community Mental Health in Cambodia

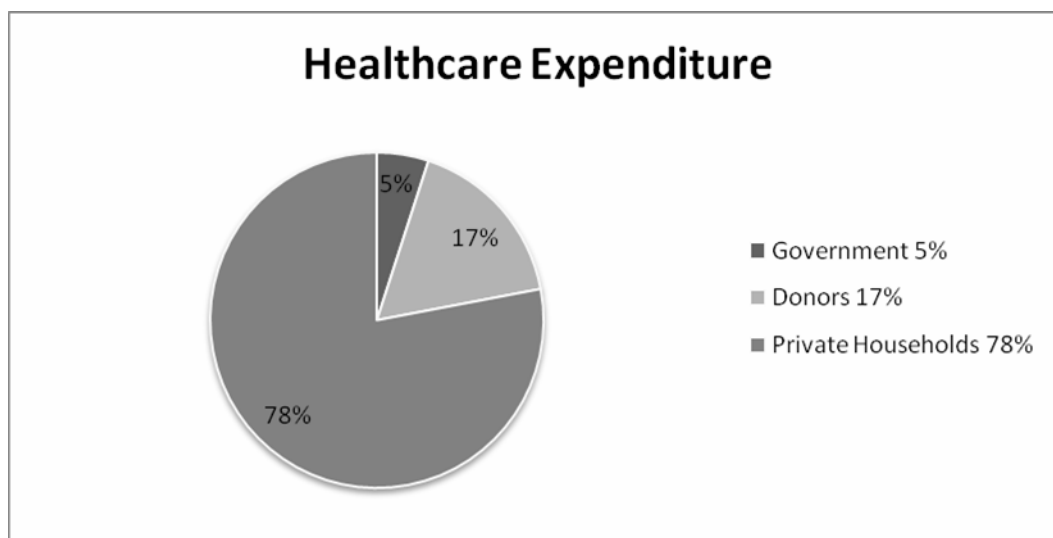
1.2.1 An Overview of Health and Mental Health in Cambodia

1.2.1.1 Healthcare Services and Health Status in Cambodia

Cambodia is located in south-east Asia, bordering with Thailand and Laos on the north, Vietnam on the east and south, and the Bay of Thailand on the south-west. With a population of 14,074,000 in a land area of 181,035 square kilometers, the population density of this country is relatively low (74 inhabitants per square kilometer). Because most of the land areas are flat plains for agriculture, people are widely distributed over the country. About 85 percent of the population lives in rural areas, earning their income mainly from agricultural work and small businesses after the raining season. This shows that the majority of the poor are living in remote communities. Cambodia is the poorest country in the region compared to neighboring countries. The Gross Domestic Product (GDP) per capita was US\$ 440 in 2007 with the exchange rate of US\$ 1=4000 Riel (local currency). Thirty four percent of the population earn less than US\$ 1 a day (the World Bank, 2005). Life expectancy at birth is 51 years for men and 57 years for women - 20 years shorter than American people and about 25 years shorter than Japanese people. The fertility rate is 3.9 with an infant mortality rate of 143 per 1,000 live births, and a maternal mortality ratio of 440 per 100,000 deliveries (UNDP Report 2007).

There is a very high burden of disease in Cambodia, and a very weak infrastructure to address it. Seeking care in government facilities is unattractive for most patients, especially if they are poor, because of its time-consuming (long waiting time) and unpredictable character of healthcare providers. Staff is often absent, the waiting time is long, and when people are seen by health staff they often face disrespectful attitudes and unpredictable costs because of under-the-table payments (Van de Put, 1992).

Figure 1.1: The Distribution of Healthcare Expenditure of Cambodian Government



Source: International Monetary Fund, 2006

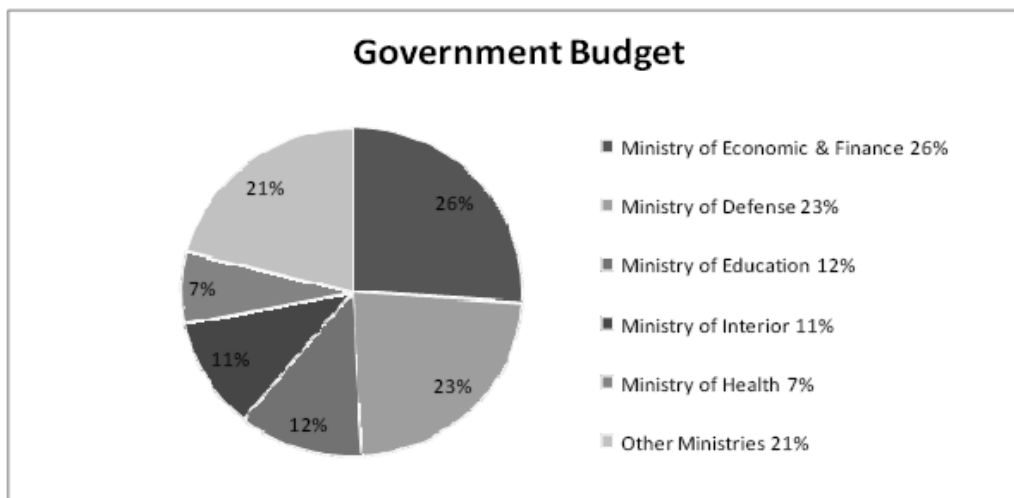
Cambodians privately spend a lot of money to seek healthcare. This out-of-pocket contribution amounts to 82 percent of the total healthcare expenditure, or US\$ 33.3 per capita (World Bank, 1999), and constitutes 13.2 percent of GDP, far more than many households can afford (34% of the population are living below poverty line). In 2005, when the economic situation was improved, the out-of-pocket payment by individual households was reduced. Figure 1.1 shows that the government spends 5 percent of total healthcare expenditures, individual households share about 78 percent (out-of-pocket payment) and 17 percent is received from donors (IMF, 2006).

Utilization of public health facilities throughout Cambodia was in average 0.35 contacts per capita per year, which was dramatically below the WHO international standard of 0.60 for rural areas, and well below the contact rates as observed in the region (World Bank, 1999). Later in 2005, the average of contact per capita per year increased to 0.50, but still did not meet the minimum requirement by the WHO. The number of patients admitted in government health facilities was low with a hospitalization rate of 0.02, due to the absence of staff, poor hygienic conditions, a lack of medicines, poor quality of services (technical and interpersonal), and etc (National Health Statistics, 2005).

The allocation of governmental budget to Public Health through the Ministry of Health (MoH) ranks fifth (7%) after the Ministry of Economy and Finance (26%), the Ministry of Defense (23%), the Ministry of Education (12%), and the Ministry of Interior (11%) (IMF, 2006). A lower priority in government budget allocation into the MoH can explain the poor infrastructure, lack of medicines and insufficient health staff in public health services.

The government expenditures are very much dependent on external community donors. Unfortunately, the revenue received from external donors is mainly spent on infrastructure and gross capital, which means that all civil servants in the country – including those who work in public health sectors - get a much less salary (US\$ 15 to 30 per month). To survive, most of them spend time doing other businesses or run their own private practices in order to generate extra income.

Figure 1.2: The Governmental Budget Share for the Five Main Ministries. The Ministry of Health is in the Fifth Rank



Source: International Monetary Fund, 2006

They spend very little time working in the government hospitals. Unofficial charges (under-the-table money) to clients in public settings are another way that service providers can get more income. Low incentives and poor infrastructure can be seen as the reasons for health staff to have less motivation and commitment and not to be in a good mood to serve their clients effectively and respectfully.

To improve the quality of services in public healthcare, two things have been thought of – an incentive for service providers and an additional resource (other than government budget) for hospitals. Thus, to generate income for public health providers and revenues for public hospitals on all levels (primary, secondary and tertiary), a user fee system was introduced in 1997. Upon the agreement of many stakeholders in the MoH, revenues collected from the user-fees were decided to be used for the running costs (50%), for staff supplementary salary (49%), and for the MoH budget (1%).

The fixed set fees for services (user-fees) in public healthcare settings have been pasted on the walls of each hospital's ward, according to the agreement made by many stakeholders in the MoH. The fees seem to be reasonable prices for the middle-class income and better-off populations, however, the poor, who account for one third of the population in the country, find it very hard to afford healthcare expenditure when they seek help in government hospitals. Usually, they do not have savings for healthcare as most of them live poorly on a day by day basis. When there is a need to spend for medical fees, they have to borrow money from relatives or money lenders, which have very high interest rates, or they are in pressure to sell their own assets, particularly cattle or arable land. According to the study of landlessness in Cambodia, 30 percent of new landlessness is attributed to ill health (Oxfam Great Britain, 2000).

Alternatively, some poor patients have tried other ways to treat their ill health or injuries, which are less expensive and available locally in their areas, although the results are very much uncertain and sometimes harmful. A health survey examined the patterns of treatment

as in this example: "if a child was sick, first he will be given a remedy by a Kru Khmer or traditional healer; this was recorded as **the first treatment**. If the parents later observed that the child was still ill, and they went to a shop in the market for medicine, this was recorded as **the second treatment**. If the drugs did not work and the parents took the child to a doctor at a private clinic or public services, this was recorded as **the third treatment**" (National Geographic Health Survey, 2005). As shown in Table 1.2, when members in a family get slight or moderate sicknesses or injuries, they seek help almost 90 percent at a first treatment, 25 percent at a second treatment and only 10 percent at a third treatment. If the problems are too serious, the percentage is still high at the first treatment by 96 percent compared to 40 and 16 percent at the second and the third treatment, respectively.

Table 1.2: Percentage of Ill or Injured Population who sought Treatment

Background characteristics	Treatment for Illness or Injury			Total
	First Treatment	Second Treatment	Third Treatment	
Severity of Illness or Injury				
Slight	87.9	23.1	9.8	4,803
Moderate	93.8	26.7	9.4	4,709
Serious	96.2	40.1	15.8	1,327

Source: National Geographic Health Survey, 2005

Indeed, due to the influences of traditions and cultural factors, health seeking behavior at first treatment among rural community members for mental health problems might be much higher because of strange behavior exhibited by patients during an aggressive state of illness. Relatives or families of a mentally ill person may think of black magic, spiritual powers or ritual possessions on him or her and accordingly provide treatment in a different way which is sometimes harmful. Burnings and beatings are frequently used to treat this kind of patients with the hope to kick out bad spirits possessed in them. Taking this into consideration, working at community level to help people deal with problems properly are very essential and effective.

For middle-class or better-off families, because of the poor quality in medical healthcare in the country, those who can afford to pay for medical care abroad go to Viet Nam or Thailand for annual health checks, consultations, or inpatient care.

In conclusion, because of many reasons public healthcare in Cambodia is not high quality and as a result the health status of Cambodian people is poor compared to the countries in the region as shown in basic health indicators in Table 1.3.

Table 1.3: A Comparison of the Population, GDP, Poverty Level, Literacy Rate and Basic Health Indicators in Cambodia Compared to the Countries in the Region

Indicators	Cambodia	Lao	Viet Nam	Thailand
Population (in millions)	14	5.7	85	63
GDP per capita (US\$)	440	485	631	2750
People living below US\$ 1 per day (%)	34.1	27	---	---
Adult (>15yrs) Literacy Rate (%)	73.6	68.7	90.3	92.6
Life expectancy both M and F (in years)	58	63.2	73.7	69.6
Infant Mortality Rate (per 1,000 live births)	98	62	16	18
Children Under 5 Mortality Rate (per 1,000 live births)	143	79	19	21
Fertility Rate (per woman)	3.6	3.6	2.3	1.8
Maternal Mortality Rate (per 100,000 deliveries)	440	410	170	24

Source: UNDP Report, 2007

1.2.1.2 Mental Health in Cambodia

Looking back to the 1970s, Cambodia experienced the civil war from 1970 – 1975¹, genocide of the Pol Pot regime from 1975 to 1979² and the civil war again from 1979 – 1996. Although Cambodia has just emerged from a long period of conflict and violence during which the country was isolated from the rest of the world, the prolonged civil unrest could directly lead to psychosocial health problems among survivors. Although the Paris Peace Accords organized by the United Nations was followed by the first national election in 1993, the civil war between the government and the Khmer Rouge continued until 1996. Since then, the country has gradually become stable and somewhat peaceful. Despite this, the country still faces a big problem – poverty, particularly among people living in remote communities, most of whom are not stable psychologically. The United Nations classifies Cambodia as one of the world's least developed countries, and it ranks low on the Human Development Index (HDI) with over three-fourths of the population living on less than US\$ 2 a day (Ministry of Planning, 2003). Poor socio-political situations resulting in human rights violations, corruptions and injustice in the society have been seen all over the country, and these drown the nation into deep poverty. Cambodia was ranked 130th out of 158 countries in transparency and corruption according to the Transparency International's 2005 Corruption Perceptions Index. The gap between the rich and the poor is very big with the Gini-coefficient of 0.417 compared to 0.249 in Japan (CIA, 2004). Again, from poverty and wealth inequality, people have poor psychosocial health. Undesirable sociopolitical condition and poverty in the nation

¹ The coup by Lun Nol in 1970 started a 5-year civil war that killed at least 10 percent of the population (7.1 million). Many deaths were the effects of the American bombing campaigns that served little strategic purpose (Shawcross, 1979).

² During the Pol Pot regime from 17th April 1975 to 7th January 1979, approximately 1.7 million Cambodian people (about one-fifth of the country's total population) died from execution, starvation, illnesses without medical care and forced labor. Most of them were intellectual individuals (Documentation Center of Cambodia).

are essential factors influencing on people's mental health. Add to this, the acute stresses caused by recent social problems, seemed to increase and have an impact on people's life from day to day. The land disputes between rich and powerful people, police officers, military personnel, and high ranking government officials, and local people who were marginal groups in the society were hot issues in the country. Because law enforcements were too weak and corruption was very high, a group of people who were in power formed a fake document and took over the poor's properties, whose lives depended on those only. There is also a relation to security problems. Local people are facing robberies, murders and other types of violence including the fights among gangsters or the revenges due to past conflicts. Also, as the Khmer Rouge (KR) tribunal has continued to prosecute the five-top KR leaders organized by the Extraordinary Chambers in the Courts of Cambodia (ECCC), the past memories of traumatic events have triggered people's memory and produced certain symptoms of PTSD such as re-experiencing, hyper-arousals and flashbacks of horrible experience. The border disputes, which occasionally lead to gun fires between the Cambodian and Thai troops, also produce fear among villagers who have already experienced wars for decades in the recent past. As a result of a long response to psychological problems and current acute distresses related to life events happening around and in the communities, people would suffer from psychosomatic symptoms or other types of physical conditions such as CHD or diabetes.

A research was conducted on the post conflict sequelae in low income countries - Cambodia, Algeria, Ethiopia, and Palestine; the prevalence of psychiatric symptoms of mood disorders, somatoform disorders, post traumatic stress disorders (PTSD) and other anxiety disorders were very high (de Jong, Van Ommeren & Komproe 2003). When comparing between people with and without exposure to armed-conflict-associated violence, in the case of Cambodia for example, the risk ratio for PTSD, mood disorders, anxiety and somatoform disorders were 3.52, 1.78, 1.23, and 0.45, respectively. Another examination in other parts of the world linked war and violence to stress, anxiety, depression, and other mental health problems, which may subsequently contribute to the development of chronic health and functional disorders (Butera, Bultinck, & Mercier, 1999; Farhood et al. 1993; Pedersen, 2002).

In Cambodia, children who were affected by violence during the wars and genocide now have become adults with a great deal of difficulties in their livings as a sequential war trauma. As stated by Mollica and Jalbert, (n.d),

"... Many Khmer children and adolescents have been traumatized, especially the survivors of the Pol Pot children's group. These young people will attempt to mask their depression and intellectual deficits through denial, indifferences, poor school performance and antisocial behaviors. Unless their problems are adequately addressed, they will become dysfunctional adults and eventually place enormous social and economic burdens on their families and future communities."

Compared to the findings in other countries, the price of violence can be high both for the developing child and society. In a study on Chilean population, three core features of persistent fears were found: (1) a sense of personal weakness, vulnerability, and a feeling of powerlessness; (2) sensory perceptions remaining in a permanent state of alertness; and (3) the impossibility of testing subjective experience against reality (Salimovich, Lira, & Weinstein, 1992). Such "cultures of fear", as shown in the study in Latin America, former Yugoslavia, the Caucasian republic, Western Nepal and Sri Lanka, are not only produced by militia or police forces, but also by cults of violence and counter violence (Allen,1991;

Jeyaraja Tambiah, 1992; Wilson, 1992; de Jong, 2000). Since they have been affected by traumas, they are more susceptible to various kinds of violence later in life, especially while living in a devastated area, a refugee camp, or a repressive environment. Re-traumatization problems have shown to be more severe among people who were former victims compared to first-time-trauma victims.

According to experts, the effects of trauma on victims, whether they experienced directly or through witnessing the terrible events, will remain with them for years. They would suffer from severe symptoms of re-experiencing the event, flashbacks on what had happened, and sudden arousal, because of which the victims are not able to function normally in the society. Previous literatures have shown that, thirty to forty five years after a war, a large proportion of veterans were still suffering from PTSD and had a higher mortality from tuberculosis, accidents, or coronary heart diseases (CHD). Traumatized individuals have been found to be considerably more likely than others to have a high number of persistent physical problems and to account for a large consumption of healthcare services (de Jong, 2002).

In discussions with families throughout Cambodia, everyday problems are related to the events of the past (traumas) and roughly 20 percent of families in villages assessed were considered to be dysfunctional by their fellow villagers, and this included conditions from alcoholism to extreme poverty, from not being able to take care of children in the household to recurrent violence, abuse or chronic diseases (Van de Put & Maurice 2002). Evidently, these difficulties in working, maintaining relationships, problem-solving and preventing conflicts had a psychosocial basis (Somasundaram & Van de Put, 1999).

In a “Twelve-Year Follow-up Study of Khmer Youths Who Suffered Massive War Trauma as Children during the Khmer Rouge era”, as those children grew up in the United States, the symptoms of PTSD and depression were still as high as 50 percent and 47 percent respectively at the first interview in 1983 – 1984 (4 to 5 years after the event). At the fourth interview, 12 years after the Pol Pot regime, the percentage of individuals affected by PTSD and depression were still considerably high, as much as 35 percent and 34 percent, respectively. Among those children, about 14 subjects still had memories of the traumatic events. For example, one subject said, “I keep remembering the execution of my father. I was tied to a tree and tortured. I saw a cadre kill a baby by throwing it in the air...” (Sack, Him & Dickason, 1999).

Another study trying to assess the prevalence, co-morbidity and correlates of psychiatric disorders in the US Cambodian refugee community revealed that among the 490 respondents assessed, all of whom had been exposed to mass trauma of the Pol Pot regime before immigration, showed a high rate of past-year PTSD (60%) and depression (51%) despite the fact that two decades had passed since resettlement in the United States (Marshall et al, 2005). There have not been many studies so far investigating psychological impacts among Cambodian survivors in Cambodia. Much has been written about mental health problems of the hundreds of thousands of Cambodians who fled to other countries³, but not those who stayed in the country (Eisenbruch, 1990a,b, 1991; Boehnlein, 1985; Kinzie, 1997; Mollica, 1994). A few other researches have been conducted in the Thai-Cambodian border camps.

³ Cambodian Refugees after 1979: In USA = 104,000; In France = 30,000; In Australia = 11,000; and In Canada = 9,000 (Palling, 1984).

For instance, a study of 993 Cambodian refugees at the Thai-Cambodian border camps⁴ revealed that 55 percent qualified for a diagnosis of depression and 15 percent for PTSD (Mollica, Donelan, Svang, Lavelle, Elias, Frankel, & Blendon, 1993).

Similarly, within the population in the country, the impacts of traumatic events due to civil wars and genocide may be the same as those who fled the country. There are concerns that psychological problems may have impacts on individuals to impair their productivity in the communities. If it is true, they may have a role in poverty. Without aid, they may never come out of it.

Apart from the above, life events such as loss of properties, loss of loved ones, coercive internal displacements because of land disputes or experience of natural disasters, are also seen as causes of psychosocial health problems.

Just reflecting from the prevalence of mental health problems among the above said populations, many NGOs in the country have implemented mental health work to help people both in clinical settings and in communities. The Trans-cultural Psychosocial Organization (TPO Cambodia) is one among them that has established the community mental health since 1995. Its work in the communities for 13 years has shown the common mental health problems, which have manifested as psychiatric symptoms among community members to be depression, anxiety, somatoform disorder, post traumatic stress disorder, domestic violence, and alcoholism. Most of these problems have been ignored and left untreated.

Empirical research conducted by the Project Against Domestic Violence (PADV) in Cambodia showed that domestic violence usually occurs after a husband has a heavy drink (Sokhom, 2000). The study showed that 16 percent of all women surveyed reported that they had been physically abused by their spouses and 8 percent of those who reported being abused by their spouse had sustained injuries. More than 50 percent of reported injuries were head injuries. Generally, many factors can be involved in domestic violence, most of which are related to psychosocial and mental health problems. Alcohol abuse (as mentioned earlier) is one of them. Other factors, as observed by Gayford (1994), such as drug use, psychiatric disorders, personality problems, jealousy, stresses, social isolation and lack of coping skills also precipitate the violence. Certain behaviors resulting from the effects of psychological problems such as difficulty sleeping / early awakening, emotional outbursts / aggression, excessive drinking and smoking, trigger the violence.

In short, because of past traumatic experiences the prevalence rates of mental health problems among Cambodian refugees were relatively high, according to previous studies. Presumably, the people in the country due to the additional factors such as psychosomatic symptoms, alcohol abuse, poor socio-political situations and poverty, may have more psychological problems now. These problems may impede their daily life by poor or low functioning within themselves and families or violence among their own family members. They may not be able to function and work properly in their communities.

⁴ It was estimated that the cumulative number of Cambodians living in border camps before the repatriation was 350,000 (Myslewic, 1988).

1.2.2 The Development of Mental Health Services in Cambodia

Before 1975, there was only one mental asylum in the whole country, located on the outskirts of the capital of Phnom Penh about 12 km, named “Prek Tnot Hospital.” It was directed by a few French-trained Cambodian physicians who served mental health services mostly to inpatients from all over the country. The hospital was completely shut down from 1975 to 1979 and used as a prison⁵ during the Pol Pot regime. In 1979, after the Pol Pot regime was destroyed, among the 43 surviving medical doctors, none were psychiatrists. At the same time, Prek Tnot hospital was reopened with the new name of “Chey Chumneas Hospital” and was used as a general hospital for Kandal Province.

According to Savin (2000)⁶, from 1979 to 1992 there were no mental health services available in Cambodia, except for some basic services and short-term training courses on primary mental health care in the refugee camps alongside the Cambodian-Thai border. After the first national election, which was organized by the United Nations in 1993, the sociopolitical situation seemed to be stable, and reintegration processes were made to move refugees from the Cambodian-Thai border camps into the country. In the same year, the first national health system was established and made mental health one of its priorities.

Some mental health services from the refugee camps continued their services in the country, such as: (i) Dr. Marchel Charle Roy, whose foundation started mental health services for children at the former mental asylum (Prek Tnot Hospital), the Kandal Province; (ii) Harvard University’s School of Public Health, which started mental health services in Siem Reap Province; (iii) Transcultural Psychosocial Organization (TPO), which has started community mental health work in Kandal, Kampung Speu, and Battambang Province; and (iv) Social Services of Cambodia, which has started services in Kampung Speu Province.

The consultative group meeting on Cambodia stated that “the mental health system is not yet comprehensive or adequate, but planning steps have started.” In 2000, under the Coordinating Committee of the Ministry of Health, organizations active in mental health initiated the participatory discussion and planned to create a standardized mental health system which would include inpatient, outpatient, community-based services, human resource development, and a legal framework and mechanism for coordination between relevant ministries and organizations.

In 1994, the Norwegian-funded Cambodian Mental Health Development Program along with the Ministry of Health, the International Organization of Migration and the University of Oslo, Norway, jointly implemented a program to train ten Cambodian physicians and later ten Cambodian secondary nurses to become psychiatrists and psychiatric nurses. To coordinate the program, the Mental Health Subcommittee of the Coordinating of the Ministry of Health was formed and later became the National Program for Mental Health (NPMH) in the Ministry of Health. At present, under the NPMH there are mental health services, mostly outpatient consultations available at some referral hospitals, and inpatient care services for severe mental illnesses at national hospitals.

⁵ It was called S-2 prison, one among the four-main prisons in Cambodia used by the Khmer Rouge between 1975 to 1979 (Extraordinary Chambers in the Courts of Cambodia).

⁶ Dr. Daniel Savin’s experience in Cambodia began in 1991, when he spent two and a half years as a psychiatrist in the refugee camp at the Thai-Cambodian border and as a general physician in western Cambodia.

1.2.3 The Trans-cultural Psychosocial Organization (TPO Cambodia)

Established in 1995, the organization was supported by the International Institute for Psychological and Socio-Ecological Research (IPSER) in the Netherlands. In 1996, the organization changed its name to Trans-cultural Psychosocial Organization (TPO). The project was funded by the government of the Netherlands, and ran until November 2000. Since that time, the project has continued its activities emphasizing on non-pharmacological forms of treatment for common psychosocial problems and appropriate referral for severe problems, as an independent Cambodian NGO: TPO Cambodia. Since 2006, TPO Cambodia has been funded by the European Commission (EC) and has been implementing its work in four provinces in the country – namely Pursat, Battambang, Banteay Meanchey and Kampong Thom Province (refer to the map of TPO operation site).

Initially, the efforts of the project were to help install basic mental health skills in integrated primary and secondary care (Somasundaram, Van de Put, Eisenbruch & de Jong, 1998). The project aimed to support individuals, families and communities in coping with traumas. Beside the effects of the past traumas, the undesirable sociopolitical conditions and poverty in the nation which happen at the present time are essential factors influencing on people's mental health. Within complex socio-environmental conditions such as poverty, lawlessness, lack of social connectedness and the decline of morality, people are susceptible to act violently in order to express their anger and solve problems. Domestic crime, robberies, and human trafficking become big concerns for the society. Moreover, it is common for violence to occur within the family. Therefore, in addition to other social problems, a main concern in the community is domestic violence. Wherever it happens, females and children are the ones who suffer the most.

To mask the symptoms of depression or PTSD, individuals tend to turn to alcohol, just to be happy temporarily and escape from stressful situations. The effects of alcohol can suppress their worries, concerns or fears but at the same time, alcohol can severely affect people's health, relationship within the family and their socio-economic status at home, particularly when they are addicted to it. For example, drunken men tend to abuse their children or wives, or argue with neighbors following a heavy drink. The victims – wives of alcoholic/abusive husbands – also tend to turn to alcohol for its inhibitive effects on fear, to mask their depression or other burdens within the home, and to numb their body in preparation for an oncoming beating by their husbands. As can be observed from field work, there is a close relationship between alcoholism and domestic violence within the family and ultimately the whole family will end up with poverty. Another concern is the effect that adult alcoholism and easy access to alcohol has on teenagers and young adults in the villages. Frequently, they create a huge problem in rural areas – especially when there is a ceremony in a village; bloody or sometimes fatal fighting occurs.

In summary, three main problems as mentioned above – psychosocial problems, domestic violence and alcoholism – are the common drawbacks faced by many community members. Negative consequences of socio-economic situations and poverty can affect people's psychological and social well-being. In turn, an unhealthy mind and poor social relationships can severely cripple people economically. This vicious cycle will continue, unless proper interventions are set up to solve it.

At the community level, there are several projects such as the Northwestern Rural Development Project (NRDP) and Japan Fund for Poverty Reduction (JFPR), which support the rural poor in order to improve their living conditions⁷. Unfortunately, after getting a loan, grant or materials necessary to start their businesses, people cannot manage that finance properly and instead spend it in the wrong ways; on gambling, alcohol or initiating work that does not generate income. Therefore, psychological intervention is very much needed for them at the individual level as well as at the collective level to build confidence and trust, to improve social relationships and connectedness, and to enable individuals and communities to understand their problems and find suitable and positive ways to deal with them.

It was important to stress that people suffering from the psychological consequences of stress as well as the mentally ill, particularly at that time, only found relief within the traditional sectors (the first treatment), as described earlier. Therefore, the program was to implement the community mental health approach with the aim of identification, prevention and management of psychosocial problems (de Jong, 1997). The idea was to introduce community workers including teachers, health workers, and others to basic theoretical and practical knowledge in the field of psychological interventions, and to develop psychological care as an aspect of community work and general health policy. This strategy was thought to benefit community members the most, since most of them seek help locally at the first treatment while public healthcare was not available, especially in remote communities. Even if it did exist, it had a relatively poor quality both in technical and interpersonal views.

While being supervised and administered by the head office in the capital of Phnom Penh, the team in each province can accomplish the project activity smoothly in rural communities. Each team consists of a team leader, four to six core group members, and supporting staff (cooks and guards). Among the project staff, most of them are psychologists, medical assistants, social workers, teachers, psychiatric nurses, general nurses, midwives, or village health workers. More than 50 percent of its staff has worked for the organization for more than 5 years.

TPO Cambodia has offered culturally appropriate and relevant training, monitoring and supervision, based on the daily experience of assessing existing problems and identifying realistic solutions in the field of psychological problems in the community. Through the social context assessment, the project has developed, tested and evaluated culturally sensitive guidelines and manuals for improved detection, assessment, management and prevention of psychosocial problems on the basis of the reached understanding within the local population. Subsequently, the project has extended the training to other community workers called community resources or trainees. After getting trained and working with team members for one year, they become very important resources in continuing the project activities while TPO-Cambodia withdraws from their communities.

⁷ ADB 2001, The Report and Recommendation of the President to the Board of Directors on a proposed loan to Cambodia for the Northwestern Rural Development Project. Manila.

Figure 1.3: Operation Sites of TPO Cambodia



Source: TPO Cambodia

1.2.3.1 Community Based Psychosocial Interventions

Through the project works, team members have come across a lot of individuals in need of mental health services and in need to break their social isolation, or families in need of moral and basic material needs. To deal with these, TPO-Cambodia has set its goals to meet these needs and to improve the mental health status and psychological well-being among vulnerable individuals, as well as to help groups be aware of their own psychosocial problems and be able to cope with those problems in order to become productive members for families and communities.

There are four basic elements in the intervention model. First, the intervention is to create awareness concerning psycho-social and mental health problems, by producing culturally appropriate materials and training local health workers and NGO staff in psycho education. Second, it is to support community rebuilding and to strengthen the existing sectors on the basis of information on the right match between problems and available resources, by installing referral potential and collaboration between different sectors. Third, the model is to better equip the existing resources, by offering training, based on an especially developed manual, distributed to different groups such as teachers, health staff, healers and NGO community workers. Finally, the intervention model is to add appropriate new resources at different levels, including mental health clinics at the provincial and district level. Teams of trained villagers can refer families to those clinics or locally they can provide psycho-education, self-help groups where women and men find a niche in village life where they are allowed to talk about their emotions and find solutions.

TPO Cambodia has arranged and implemented a wide range of activities in such a way that benefits the poor most. Starting from general to specific (from basic mental health to specific problems), from collective to individual (from public awareness raising to individual intervention), and from mental health promotions to psychiatric interventions, these activities are; (i) Social Context Assessment, (ii) Training Community Resources, (iii) Psychosocial Awareness, (iv) Self-Help Groups, (v) Individual Counseling, (vi) Training on Primary Mental Health Care and Development of Mental Health Clinic, and (vii) Referral.

1.2.3.2 Social Context Assessment

Collaborating with local authorities – village and commune leaders – TPO staff (team leader and core group members) go to the project sites and meet with people to discuss about the issues, concerns and problems arising in their villages. There are two steps in conducting the social context assessment: first, meetings with village or commune leaders and other key persons in the village such as teachers, traditional healers, priests, fortune tellers, traditional birth attendants, health center staff if any, and the respected elderly in the villages; and second, meetings with ordinary people, on a different day. In these two meetings, staff facilitates the session and use guided questionnaires to initiate the discussion in a participatory manner. From the meeting, a lot of information can be obtained including specific problems occurring in the villages, people's main concerns and measures so far to deal with the problems, local resources (materials and human) that can be used as assets, and any help from other organizations. This information is very useful for the organization to use in planning and implementing its activities.

1.2.3.3 Training Community Resources

The second step is to select two or three people from each village to be trainees or community resource persons for their village in the future. There are some criteria which they have to fit from both sides: the organization and villagers. The persons to be recruited have to be active, helpful, respected and popular or liked by most people in the village, and with the potential to learn to help their people in the future in problems related to mental health. At the same time, they should have some education and literacy in order to learn the basics of mental health from the organization. The training is usually conducted within ten days in the community, focusing on psychosocial problems, stress, how to cope with stress and common basic mental illnesses. After the training, trainees will be actively involved in the program during the project period and be resource persons for the villagers when the program ends. After the program personnel gradually withdraw and move to another area, TPO staff still keeps track of community resources and activities to sustain the program by providing supervision, monitoring, and evaluation of what they have experienced and done so far.

1.2.3.4 Psychosocial Awareness

At this stage, with the help from trainees, TPO staff organize and conduct psychosocial awareness sessions in the village, using leaflets, posters and flipcharts containing pictures to convey information on mental health issues to illiterate villagers and to make them understand. They also use simple local language to explain them to the villagers. Participating in this, individuals who have problems related to the issues raised in the awareness-raising can come to the trainees or the staff of the organization for help later. The meetings can also function as a case finding strategy, where the staff are guided to severe cases by other villagers or trainees, of people that are not able to join the session.

1.2.3.5 Self-Help Groups (SHG)

Giving psychosocial education, members of the community are able to reflect on themselves, and whether they have similar problems in their daily life. Those who have problems – psychosocial concerns, alcoholic problems or domestic violence – are put in a group. Usually, those who have similar problems are put in a group together, in which they can share, discuss, and find solutions together. The groups meet once a week for around twelve weeks, in meetings conducted by the staff to initiate discussions, and facilitated by trainees. Group member's problems may be raised and discussed to identify their causes, consequences, ways to deal with them, how they have tried to solve the problems so far, and their outcome, and new strategies to overcome them. The number of sessions until completion can be flexible (less or more than twelve) based on the improvement of the group members. After the group meetings are over, four follow-up sessions are held over a period of one year, to review and monitor the progress of each group member.

1.2.3.6 Individual Counseling

Villagers who suffer from severe psychological problems, or the ones who are not comfortable in joining SHG, prefer individual counseling provided by counselors from the TPO staff. This kind of help seems to be convenient for some clients, because they receive direct intervention from a therapist, one-to-one at their home. On the other hand, the therapist also is able to understand the clients' problems better, since the environment where the clients live, their inter-household relationships with their family members, their living conditions, and their social interaction with neighbors tell them a lot. Usually counseling sessions are conducted between four and six times, according to the severity of the patient's conditions and on the progress made.

1.2.3.7 Training on Primary Mental Healthcare and Development of Mental Health Clinics

Of the staff members – most of team leaders and core group members are psychologists, social workers, midwives, or teachers. They are not able to provide psychiatric intervention to patients suffering from severe mental illnesses when they come across them in the communities. To fulfill the needs of the communities, TPO with the collaboration of the National Program for Mental Health, the Ministry of Health has organized a 10-day training program for general practitioners working at referral hospitals in these areas, covering basic mental health and common mental illnesses, including skills to identify and treat these cases. After the training, TPO has helped them to set up mental health clinics by providing infrastructure and medication for one to two years, before handing over the responsibility to the government. In this way, all cases of mental illness identified in the villages can be referred there for pharmacotherapy.

Summary

In Cambodia, people experienced civil wars, genocide of the Pol Pot regime, and live in poor socio-political conditions, from which hundreds of thousands of survivors are facing a great deal with the impacts of these devastating events. They live in fear, isolation and no hope with lack of support. Studies which were conducted among Cambodian refugees or Cambodians residing in foreign countries revealed that those who experienced traumatic

events during the civil wars and genocide of the Pol Pot regime have had significant problems related to psychosocial health such as PTSD, depression, anxiety and somatoform disorders. Reflecting from the above findings, survivors living in the country are assumed to have more problems. As the healthcare system in Cambodia has not reached the desired level yet, these problems have been left untreated and consequently, some people have turned to alcohol, masked their distress by violence, and exhibited stressful thoughts through psychosomatic symptoms. Above all they have not been able to take care of themselves and their families.

To deal with the needs of people in remote communities, the Community Mental Health Program (TPO-Cambodia) has set up their works using local resources available in order to facilitate community members to cope with the problems in proper manners with the hope that they would restore their functioning in daily living, creational activities, and in occupational tasks.

1.2.4 Conceptual Framework and Objectives of the Study

As noted earlier, many studies have been done on the mental health of Cambodian refugees in the Thai-Cambodian border camps or amongst the Cambodian immigrants seeking asylum in foreign countries. However, only few studies have been conducted inside Cambodia where the majority of survivors of the civil wars and genocide are living in (Van de Put and Maurice, 2002). To get more insight into psychosocial health and its relation to functional abilities among community members, this study was conducted in rural communities of four provinces in Cambodia.

Figure 1.4: Hypothesized Conceptual Framework

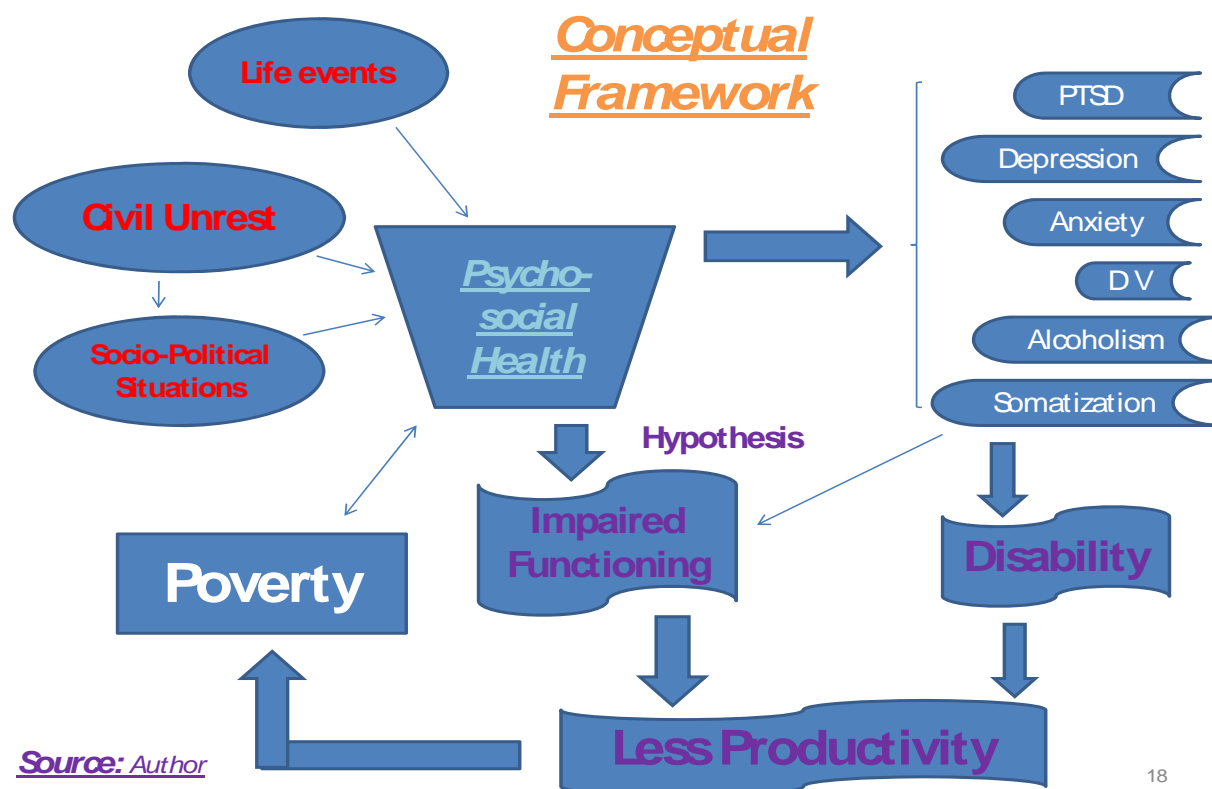


Figure 1.4 shows that psychosocial health can be affected by many factors such as life events which unexpectedly and unpredictably occur in people's daily life, civil unrest which create an enormous suffering directly to people or indirectly via poor social-political situations or poverty. Due to limited resources allocated to public healthcare services, which result in unavailability or poor quality of public health facilities, people do not know where to go for medical help or prefer not to use them. As noticed earlier, more than 90 percent of the general population who need medical attention choose the first treatment with Kruu Khmer or traditional healers as a mean to treat their ill health in all forms; slight, moderate, or severe. Dealing with problems improperly would result in severe complications due to adverse side effects of medications or procedures, or aggravate problems as a course of illness's development.

In the mental health perspective, if psychosocial health problems are not managed properly they may lead to disorders such as PTSD, depression, anxiety disorders, domestic violence, and somatoform disorders or people may turn to alcohol as a way to deal with stress or to suppress their distress feelings. Once the problems become disorders, people's functioning may be affected as defined in the diagnostic criteria by DSM IV or ICD 10, and as a result, their work performances will be impaired. Ultimately, the productivity may also be reduced. This process can be explained as one among many causes of poverty. Vice versa, poverty can contribute to poor psychosocial health as well.

The main hypothesis of this study is to investigate whether there is a relationship between psychosocial health problems (not turned into disorders yet) and functional disabilities among community members. To a certain level, if there is an association between the two, the first would contribute to the second that lead to less productivity and finally people may end up in poverty.

Thus, the objectives of this study were to investigate the levels of psychosocial health problems among community members in rural Cambodia and to compare them with the levels of functioning in three dimensions; daily activities, creational activities and occupational tasks. In short, this study was trying to answer the following questions:

1. What are the levels of psychosocial health problems among community members who have identified themselves as having mental health problems?
2. What are the levels of those people's functional abilities in work and daily life?
3. Are psychosocial health problems and functional disabilities correlated?
4. If psychosocial health problems are improved, will they enhance people's livelihood?

It is predicted that psychosocial health problems impede rural Cambodian people's abilities to function in their work and daily life and addressing these problems would restore their functional abilities and help to improve livelihood.

Section 2: Methodology

2.1 The Setting

The study was conducted in remote rural communities in four different provinces of Pursat, Battambang, Banteay Meanchey and Kampong Thom (Figure 1.3). These four provinces are the places where TPO-Cambodia has been operating, and providing community mental health services to community members. These locations are thought to be on or near former combat zones or war zones during the civil war between the Khmer Rouge and the government of Cambodia assisted by Vietnamese troops from 1979 until 1996. Some villages, which were controlled by the Khmer Rouge, were just reintegrated by the Cambodian government after the Paris peace agreement in 1991. As such, these provinces were the places where a majority of refugees from the Thai-Cambodian border camps were absorbed during the reintegration process in 1993.

People living in the devastated war zones who were frequently displaced from one place to another are believed to have more health problems compared to the rest of the country. To meet their needs; healthcare and development projects including TPO-Cambodia have been operating there to provide services which are most needed by the local people. It should be noted that, however, not the whole area of the four provinces are the target areas for operation of the organization; only certain communes at a time are selected for implementing the project activities by 5 to 7 team members. The process of operations will move to new areas after the works in old area are finished.

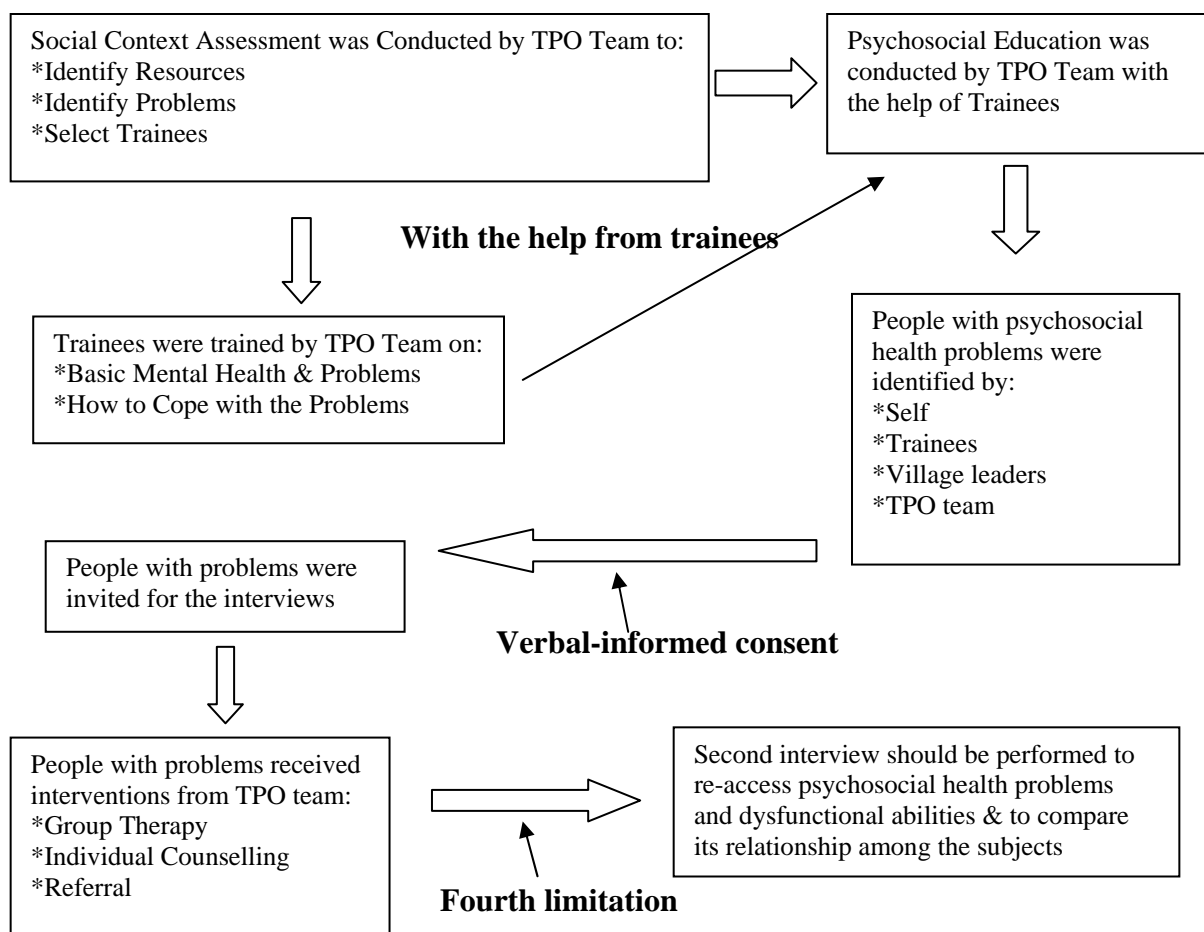
2.2 The Subjects (Study Participants)

Participants involved in the study were the beneficiaries of TPO-Cambodia. After attending the psychosocial education provided by the staff of organization (team members) and trainees (community resources), community members who realized that they had psychosocial health problems or those who were identified by village leaders, trainees or team members, were recruited for the interview. Because the interviews were done according to the number of troubled villagers in the project sites, and according to their willingness to participate in the study, the actual number of subjects varied from one province to another. Among the 186 subjects interviewed there were 30 from Pursat, 49 from Battambang, 46 from Banteay Meanchey and 61 from Kampong Thom province.

2.3 Inclusion Criteria

The study was intended to measure the psychosocial health problems of the people living in the communities and compare these levels of problems to their levels of functioning in daily life including household activities, creational activities and occupational tasks. Therefore, to achieve validated measurements, certain criteria were set to get accurate and reliable information. First, the participants recruited for the interview had just entered in the community mental health program without receiving interventions yet, but they knew the basic concepts of mental health problems (common psychological problems, its causes, signs, symptoms and means to deal with the problems).

Figure 2.1: The Basic Flowchart of the Sampling Process



It simply means that they had participated in the psychosocial education and after getting information related to mental health problems, they could realize that they had been under a certain level of distress, or other psychosocial health problems. We decided to interview them at this point in time because we wanted to measure their levels of functioning in relation with the levels of psychosocial health without intervention from the program. Second, the subjects had to be in a productive age of 18 to 60 years old. It is a fact that older people have lower functional abilities, particularly in occupational tasks. Third, the recruited participants would have no severe mental disorders (for example: schizophrenia, severe depression, bipolar disorder, PTSD, or heavy drug / alcohol dependence) or chronic physical conditions (for example: pulmonary disease including TB, high blood pressure, cardiovascular disease, or diabetes). They would also not have physical handicaps (for example: no arms no legs, no sight, or hearing impairment) or mental handicaps (for example: mental retardation, Down's syndrome and so on). These conditions are believed to have an impact on people's functioning, not psychosocial health problems.

2.4 Research Measures

2.4.1 Assessment of Psychosocial Health Problems

Psychosocial health problems of the subjects were measured using a questionnaire consisting of four main domains; (1) emotions, (2) feelings, (3) socializations and (4) somatization (psychosomatic symptoms). First, it was a tool used to measure the mental and physiological state associated with a wide variety of mood, temperament, personality, and disposition. It evaluated the state of anxiousness, boring, fears, and worries in terms of severity and frequency. Second, the tool was used to evaluate a state of consciousness, resulting from sentiments or desires. This part seems to be a subjective perception of subject mood's condition such as happy, sad, low self esteem, low self worth and suicidal ideation and so on. Third, socialization was measured to know individuals' participations within their community into its moral norms, attitudes, values, motives, social roles, language and symbols. Usually, socialization is the means by which social and cultural continuity is attained. This part is mostly used by sociologists and educationalists to refer to the process of learning one's culture and how to live within it (Clausen, 1968). For the individual, socialization provides skills and habits necessary for acting and communicating with others. It also refers to the interpersonal relationship of a person within the family and community ranging from communicating with others, sharing a problem, sadness or happiness with others, getting help or offering help from/to others, isolation or being too much pessimistic of others. And finally, the fourth domain was to evaluate the psychosomatic symptoms of subjects including a tendency to experience and communicate somatic distress in response to psychosocial stress and to seek medical help for its physical symptoms which disturb a person's well-being (Lipowski, 1988).

Each item (among the 38) of the second part of the questionnaire has a 4-point Likert scale indicating the frequency of the problems/conditions of the subjects ranked from 0 (not at all), 1 (sometimes), 2 (often) and 3 (always). During the interview, each item was read out loud by an interviewer along with the possible answers in the four categories (not at all, sometimes, often, or always). A respondent (subject) listened to the statement and told an interviewer about their current (within 4-week period) problems or conditions and was asked to choose the category (only one) that best described the conditions. If the subject did not comprehend the question's description, the interviewer would then explain in detail about the meaning of that question with additional examples if necessary.

2.4.2 Assessment of Dysfunctional Abilities

Within the same period of time (4 weeks), the functional ability questionnaire (third part) was used to assess the levels of the subjects' ability in performing their activities for daily living, mainly in three dimensions such as household activities, occupational tasks, and leisure activities. The 5-point Likert scale was used in all 15 items to indicate the levels of problems/conditions of the subjects. The pattern of response to each item varied according to the meaning of its statement. For example, it could be always, very often, sometimes, rarely or never to the question "during the past four weeks, how much have you spent the day lying down in order to rest?" or not at all, slightly, moderately, quite a bit, extremely to the question "during the past four weeks, how much have you been bothered by emotional problems such as feeling anxious, depressed, irritable, or downhearted and sad?" or no difficulty at all, a little bit of difficulty, some difficulty, much difficulty and could not

concentrate to the question "during the past four weeks, what was your concentration on what you were doing?" and so on.

The process of filling this part of questionnaire was similar to the psychosocial health problems part (Refer to the appendix, the second part).

2.4.3 Socio-demographic Information

To obtain information which was used to stratify the factors that could have influence on the relationship between psychosocial health problems and dysfunctional abilities, personal information of the subjects was set (first part of the questionnaire) to get data such as age, gender, educational background, marital status, family's size, main job, accessory jobs and status within the family. Educational background was divided into two categories; "not able to read and write" and "able to read and write". Marital status was classified into three categories; "married", "widowed" and "single". Main job referred to the main occupational task that subjects earned their income and accessory jobs referred to as extra work or activities people did to generate income other than their main job. Status within the family was the responsibility the subjects played in their family; whether they were a head or a member of the household. No identical information namely name and address was taken for the sake of confidentiality. Only a coding system to know the group of subjects from each province was used.

Before the actual interview, the questionnaires were sent to the project sites in Cambodia for field testing. This was to test whether or not each question was understood by local community people or wordings in each phrase were appropriately fit with the Cambodian culture and tradition. This questionnaire was adapted from the previous literatures using in the west, and translated into Cambodian (Khmer) language which was thought to pose a problem in understanding by the local people due to cultural differences. Each team received 3 questionnaires for field testing. After interviewing people, the Operation Manager of the program, four Team Leaders and Core Group Members who were involved in the interview gave feedback by taking notes on the side of the questionnaires' papers. Those questionnaires were scanned page by page and sent back to the author at APU via electronic mail for correction and improvement. Following the fruitful comments from people working in the field, the questionnaire was improved according to their notes.

2.5 Interviewers

The author went to the four teams in provinces and then to the project sites to interview people. He was also a former TPO staff member used to work with the team as a clinical supervisor from early 2004 until early 2007. As a part of his works, he used to visit each team to supervise and monitor field staff in all their activities.

With facilitations from team leaders and core group members, he was able to meet and conduct the interview with the subjects. They also helped to interview the subjects. In each team, there was a team leader and about five to seven core group members. Although they came from different background such as psychologists, educationists, psychiatric nurses, general nurses, midwives, and medical assistants, most of them had worked for the organization in the field of mental health at the grass-roots level for almost five to seven years. This asset could ease them to interview people smoothly and confidently without assistance. The content of the questionnaire was similar to what they were working and

talking to the people every day. Thus, they did not need to receive any instruction prior to the interviews. Usually the interview took about 60 to 90 minutes to complete the three parts; socio-demographic information, psychosocial health problems and dysfunctional abilities.

2.6 Study Design

This study was a cross-sectional study. It intended to study the recruited participants at one point in time, at the beginning of their involvement in the program, the community mental health. Most of them were the ones who had psychosocial health problems identified by themselves or were recognized by trainees, village leaders or staff of the organization after obtaining information and knowledge on basic mental health from the organization via psychosocial education. Once they agreed to participate in the study, they were interviewed using a questionnaire to examine the levels of psychosocial health problems and the levels of dysfunctional abilities within the period of four weeks prior to the interview time. The interviews took place at their home.

2.7 Ethical Issues

The study was approved by the ethical committee at the Ritsumeikan Asia Pacific University. Professor UCHIDA Yasuo, the Director of the Public Health Management at APU had issued a letter of request for field work to any institutions concerned for this study. Dr. Chhim Sotheara, the Managing Director of TPO Cambodia, accepted the request from APU and permitted the author to conduct the interviews with TPO's beneficiaries at the project sites.

Only the potential participants who gave a verbal-informed consent were interviewed. Aside from socio-demographic information, no information that could specify individuals such as name and address of the subjects, was taken, other than. The interview was performed separately from other family members and from the public. The interview was conducted face to face between the interviewer and a subject. The data collected from the interviews were kept confidential and used for only research purposes. After the interview, all subjects would receive interventions provided by the organization immediately or later according to the severity of their problems. If the problems were only mild, they were just reassured and given psychological supports from trainees or team members. If the problems were moderate or severe, those subjects were invited to join the group therapy (self-help group) or were provided individual counseling. More severe cases, which had a high score on the questionnaire, were referred to psychiatric units at referral hospitals for pharmacotherapy. No incentives were given to the subjects for their participation in the study, and no service was charged from them for receiving therapies from the organization.

2.8 Informed Consent

After identifying some villagers who were eligible to participate in the study, at the time of interviews, they received clear explanations on the process, purpose and aim of the study. Then, prior to the actual interview, a verbal-informed consent was made precisely to the subjects to obtain their acceptance. There were two reasons for this verbal-informed consent. First, most of the subjects who lived in the remote rural communities were not able to read and write. Second, according to previous experience with written-informed consent, if we tried to get from participants it would make them fear and result in refusal or withdrawal from the study. Under all circumstances, each subject was made clear and given a choice that he or she could or could not enroll in the study, could or could not answer to any question or

could stop the interview at any time if he or she encountered any problem or felt uncomfortable with the interview.

2.9 Data Analysis

Data, which were obtained via face-to-face interview with the subjects and took place in their homes, were analyzed using the Stata statistical software program, version 10.1. The socio-demographic characteristics including age, gender, educational level, role in the family, marital status, family size, main job and accessory jobs of the subjects were analyzed using descriptive statistics to identify the minimum, median, mean, maximum and percentage. This software also calculated and generated the correlation coefficient, a y-intercept and a slope between psychosocial health problems (independent variable) and dysfunctional abilities (dependent variable) along with graphs of the scatter plots which represented the subjects, and the regression lines which represented the linear regression between the two variables. To understand precisely the correlation of these two variables; psychosocial health problems and dysfunctional abilities, each characteristic was stratified, calculated, and a graph and a linear regression were made separately to compare between male and female subjects, between a group of subjects who could not read and write and a group who could read and write; a group of subjects who were the head of family and a group who were the member of family; a group of subjects who were married, widowed and a group who were single; and a group who had only one main job and a group who had accessory jobs. At the end, all these characteristics were summarized in one table compared with the over-all figure of the subjects.

2.10 Limitations

Although this study could get information from 186 subjects from four provinces, there are some limitations, particularly those related to methodologies. Six questionnaires were not filled in properly and were taken out from the analysis. First, the author who developed the questionnaire could not do field testing by himself due to the time and budget constraint for him to go to Cambodia during course work. The process of improving the questionnaire to be fit with local people in terms of the appropriateness to local language and Cambodian culture was made via E-mail and telephone conversations, between the author and TPO team in Cambodia. During the time of actual interview, the interviewers came across a problem in question number 36 (if you died would many people regret and miss you) of the part two of questionnaire (psychosocial health problems); this question seemed to insult the subjects or looked down on them according to local people's perspective. In Cambodian culture, assuming or referencing people to death is not culturally accepted. Therefore, following the discussion with the team members there, we decided to rephrase the sentence, while reading this question to the subjects, that "if you moved to other places, would many people regret or miss you".

The second limitation is related to sampling process, from which we chose only villagers who were willing to participate in the study. It seemed that most of the subjects who had psychosocial health problems and dysfunctional abilities were in a good mood to enroll in the study. We may not know the others who also had problems but they could not or were not able to participate in the study due to specific reasons.

The third limitation is related to settings where this study was conducted. Among 24 provinces and cities in Cambodia, the four provinces, where TPO Cambodia is operating,

were not randomly selected regardless of geographical locations (e.g. flat plain or mountainous areas, urban or rural areas), socio-economic status (poor or better-off), ethnical groups (e.g. Khmer majority or tribal populations), religious backgrounds (e.g. Buddhist, Muslim or Christian populations) and races (Khmer, Chinese, Vietnamese, Cham descendents). This limitation could hinder the result to be generalized to all Cambodian population in the whole country.

The fourth limitation is related to the second interview to know the progress of the subjects after receiving interventions from the organization (individual counseling or group therapy) in order to answer the research question number four. Limited budget and time was the reason why all subjects could not be traced and their progress of psychosocial health problems and functional abilities could not be re-evaluated (Figure 2.1). Of course, there was a report on the progress of the project implementation to show the impacts of the project activities on its beneficiaries, but it was very general to all villagers in the target areas, not the 180 subjects who were included in the study, and this report was at a different time from the interventions.

Section 3: Results

3. 1 Descriptive Profile of the Subjects

3.1.1 Socio-demographic Information

Among all of the subjects; sixty two percent (N=112) were women compared with only 37.77 percent (N=68) men. The minimum age of the sample was 18 years old and the maximum was 60 with the median of 39 and the mean of 39.19. Sixty five percent (N=117) of the subjects were able to read and write whereas 35 percent (N=63) were not. Half (N=90) of the subjects reported that they were the head of the household and another half (N=90) said they were a member of the family. Seventy six percent (N=136) of the sample were married, 12.22 percent (N=22) were divorced, and 12.22 percent (N=22) were single. Among the 180 subjects, the median of the family size (all members living within a home) was 5. The number of members living in households ranged from 1 to 13.

The majority of the sample (73.33%, N=132) worked mainly as farmers, the rest; 6.66 percent (N=12) worked as venders, 6.11 percent (N=11) as workers, 2.22 percent (N=4) as staff of Non-Governmental Organizations (NGOs), 2.22 percent (N=4) as tailors, and other 9.44 percent (N=17) worked as civil servants, house-wives, policemen, students, teachers, fishermen, motor-taxi drivers, nurses, security guards, and soldiers. Sixty six percent (N=109) of the subjects reported that they had only one main job (described above) while others had accessory jobs such as fishermen (11.11%, N=20), venders (10.55%, N=19), workers (7.77%, N=14), tailors (3.33%, N=6), and the rest were fortune tellers, migrant workers, hair dressers, and veterinarians. In rural communities in Cambodia, farmers are usually busy only during raining season which lasts for about 5 to 6 months. In the dry season, they are free and can do an accessory job to generate income.

Table 3.1 summarizes the 180 subjects in different characteristics; age, family size, psychosocial health problems and dysfunctional abilities. It also shows the minimum and maximum values, the standard deviations and means of each characteristic. Table 3.2 shows

the numbers and percentages of the subjects across gender, levels of education, role in the family and marital status.

Table 3.1: Summary of Age, Family Size, Psychosocial Health Problems and Dysfunctional Abilities among the Subjects

Characteristics	Observations	Mean	Std. Dev	Minimum	Maximum
Age	180	39.21	10.49	18	60
Family Size	180	5.11	2.05	1	13
Psychosocial Health Problems	180	41.72	12.87	17	72
Dysfunctional Abilities	180	40.2	7.49	21	57

Table 3.2: Summary of Gender, Education, Role in the Family and Marital Status among the Subjects

Variables	Characteristics	No.	%	Total
Gender	Female	112	62.22	180
	Male	68	37.77	
Levels of Education	Could Read & Write	117	65	180
	Could not Read & Write	63	35	
Role in the Family	Head	90	50	180
	Member	90	50	
Marital Status	Married	136	75.55	180
	Widowed	22	12.22	
	Single	22	12.22	

3.1.2 Psychosocial Health Problems among All the Subjects

The mean score of psychosocial health problems was 41.72 within the standard deviation of 12.87 (Table 3.1). The score ranged from 17 to 72. The higher score depicts more psychosocial health problems. Twenty eight percent (N=50) of the subjects scored ranging from 17 to 33 (from minimum score to 1st quartile), 23.88 percent (N=43) ranging from 34 to 39 (from 1st quartile to median score), 26.11 percent (N=47) ranging from 40 to 52 (from median score to 3rd quartile) and 22.22 percent (N=40) ranging from 53 to 72 (from 3rd quartile to maximum score). It can be said that among all the subjects participated in the study, 28 percent of them had mild, 24 percent had moderate, 26 percent had severe and 22 percent had more severe psychosocial health problems.

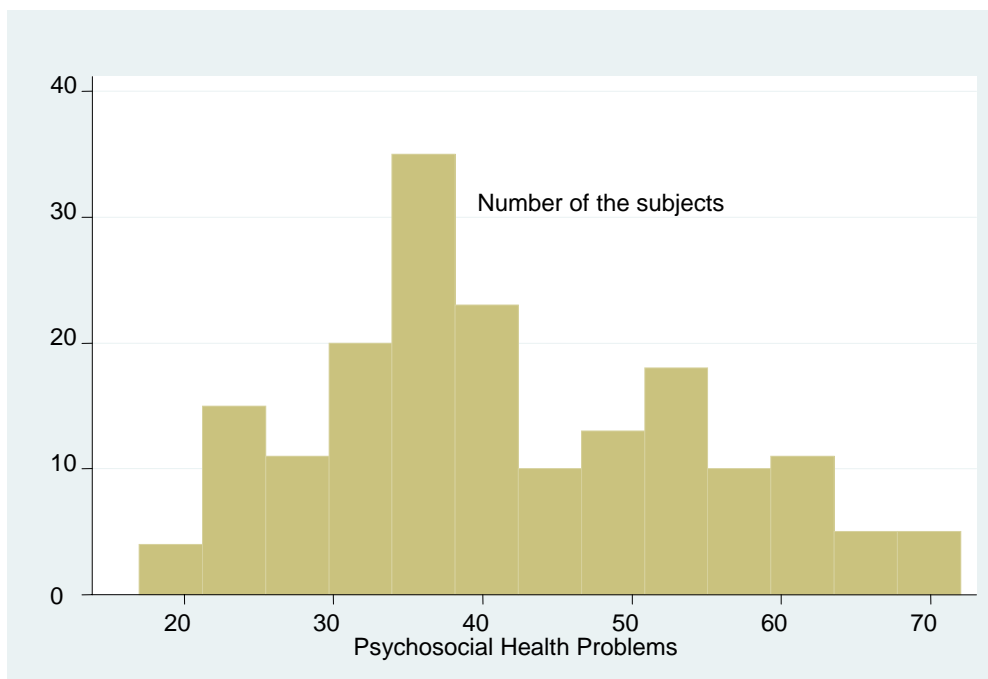
Table 3.3: Summary of Psychosocial Health Problems among All the Subjects

Variable	Min.	1 st Qu.	Median	3 rd Qu.	Max.
Psychosocial Health Problems	17	33	39	52	72

Figure 3.1 shows the distribution of the levels of psychosocial health problems among all the 180 subjects. From the graph we could see that the majority of the subjects had psychosocial

health problems ranging from first quartile to median, and fewer subjects had minimum and maximum scores.

Figure 3.1: Histogram of the Distribution of Psychosocial Health Problems among all the Subjects



3.1.3 Dysfunctional Abilities among All the Subjects

The scores of dysfunctional abilities ranged from 21 (minimum score) to 57 (maximum score). Similar to the psychosocial health problems, the higher score in dysfunctional abilities depicts poor performances in activities of daily living, leisure and occupations among the subjects. Twenty nine percent (N=53) of the subjects scored ranging from 21 (minimum score) to 35 (1st quartile), 21.11 percent (N=38) from 36 (1st quartile) to 40 (median score), 26.66 percent (N=48) from 41 (median score) to 46 (3rd quartile) and 22.77 percent (N=41) from 47 (3rd quartile) to 57 (maximum score).

Table 3.4: Summary of Dysfunctional Abilities among All the Subjects

Variable	Min.	1 st Qu.	Median	3 rd Qu.	Max.
Dysfunctional Abilities	21	35	40	46	57

These figures can be explained that the levels of dysfunctional abilities among the 180 subjects varied; 29 percent were mild, 21 percent were moderate, 27 percent were severe and 23 percent were more severe.

Figure 3.2: Histogram of the Distribution of the Dysfunctional Abilities among all the Subjects

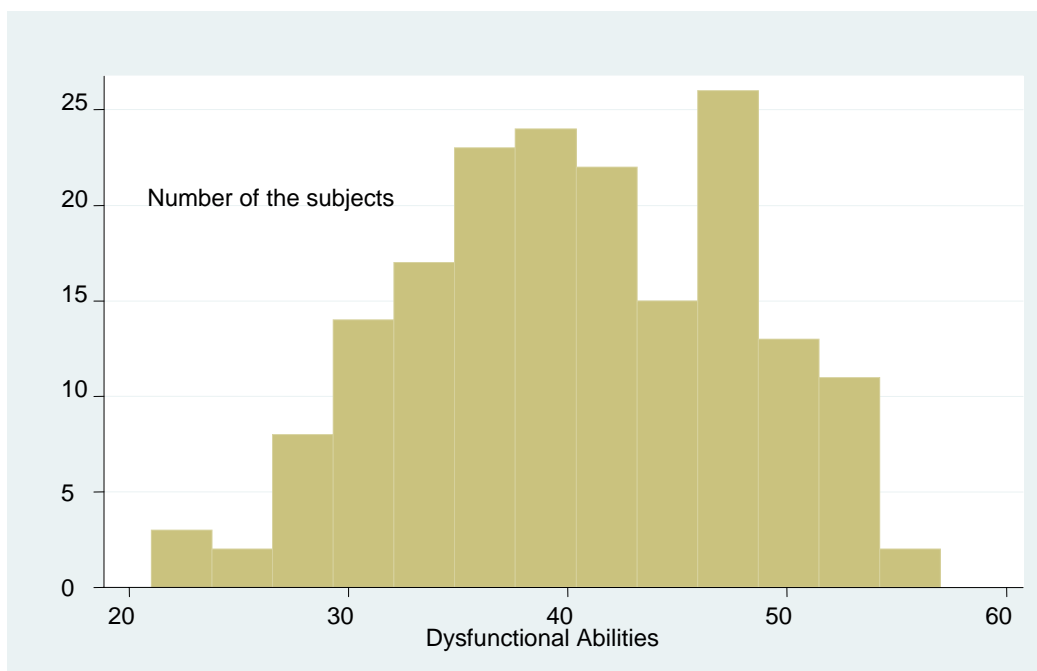


Figure 3.2 shows the distribution of the levels of dysfunctional abilities among all the 180 subjects. From the graph we could see that the majority of the subjects had dysfunctional abilities ranging from first quartile to third quartile, and fewer subjects had minimum and maximum scores.

3.1.4 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities among All the Subjects

From the analysis in Table 3.5, for all the 180 subjects, the correlation coefficient between the psychosocial health problems (independent variable) and the dysfunctional abilities (dependent variable) was 0.69 (R-square = 0.4780). A bigger number shows a larger correlation. From the results, we can conclude that the relationship between psychosocial health problems and dysfunctional abilities among all the subjects, without stratifying for other characteristics, was positively correlated. Although the correlation between the two variables was high, it does not show a cause and effect relationship between the two variables. Likewise, the psychosocial health problems were not necessarily the cause of dysfunctional abilities, but when people had mental health problems their functional abilities were affected as well; this is what we can say. The higher the mental health problems, the people suffered more and the dysfunction would be bigger.

According to Figure 3.3 and the analysis in Table 3.5, the linear regression had a y-intercept of 23.41 and a slope of 0.40. Generally, a y-intercept is a value of vertical axis "y" when a value of horizontal axis "x" equals zero. Since the value on the vertical axis represented the dysfunctional abilities and the value on the horizontal axis represented the psychosocial health problems, in this finding, the y-intercept of 23.41 means that when there were no psychosocial health problems the level of dysfunctional abilities was 23.41. This can be explained that subjects were not always active though they were doing well physically and

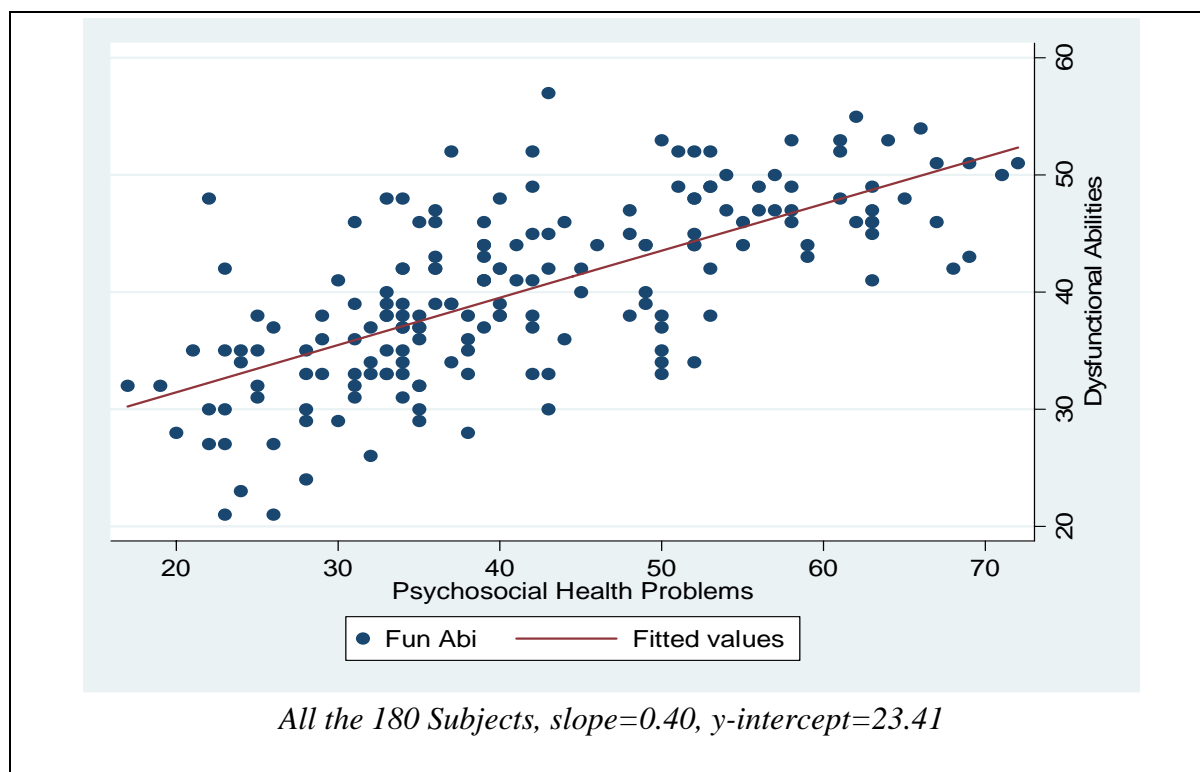
psychologically. They needed time to relax or take rest, which was a part of daily life as a human being.

Figure 3.3 shows the regression line increasing upward from left to right across the 180 scatter plots which are representing the subjects. The position of the 180 plots seems to increase up to the value of 57 when the scores of the independent variable increase close to the maximum of 72. The slope of this line depends on the correlation between the two variables in the graph. In this study, the linear regression had a slope of 0.40 and a y-intercept of 23.41 with the 95 percent confidence interval. This value implies that when the psychosocial health problems increased one unit, the dysfunctional abilities increased 0.40 units. If we look at the analysis in Table 3.5 again, the value of R-squared was only 0.48 which equals 48 percent. This means that only 48 percent of the sample variation in dysfunctional abilities can be explained by using the values of psychosocial health problems to predict the values of dysfunctional abilities in the straight-line model.

Table 3.5: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among All the Subjects

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
180 (100)	23.41	0.40	0.69	0.48

Figure 3.3: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities among All the Subjects



Anyhow, the results explained above were based on the overall findings in all the subjects who participated in the study. We would be curious to know whether or not the relationship between psychosocial health problems and dysfunctional abilities would be different across

gender, the levels of education, marital status, the role in the family and the pattern of jobs. Next, each characteristic will be stratified and separately analyzed in order to figure out the association between the two variables.

3.1.5 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Gender

When gender among all the 180 subjects was split as shown in Figure 3.4, the group of 112 plots representing the female subjects appears in the graph on the left and the group of 68 plots representing the male subjects appears in the graph on the right. In the two graphs, each scatter plot represents each subject and the lines exhibit the linear regression resulting from the relationship between the psychosocial health problems scored on the horizontal axis and the dysfunctional abilities scored on the vertical axis. The analysis result in Table 3.7 shows that among 112 female subjects, the psychosocial health problems were positively associated with dysfunctional abilities, with a correlation coefficient of 0.70 (R-squared = 0.5047) in relation to a linear regression with a y-intercept of 24.00 and a slope of 0.39. Similarly, the analysis in the Table 3.8 for the 68 male subjects showed a correlation coefficient of 0.64 (R-squared = 0.4168) with a y-intercept of 22.80 and a slope of 0.40. The detailed explanation would be the same pattern with a correlation coefficient for all the subjects as explained in subtitle 3.1.4.

A T-test was performed to determine whether or not the mean score of psychosocial health problems and dysfunctional abilities between these dichotomous variables; the female and male subjects were statistically significant. Table 3.6 shows, between the female (112) and the male (68) subjects for psychosocial health problems, a mean score was 42.88 and 39.82, a standard error was 1.26 and 1.44, and a standard deviation was 13.36 and 11.88, respectively. For dysfunctional abilities, this table shows a mean score of 40.97 and 38.93, a standard error was 0.70 and 0.90, and a standard deviation was 7.74 and 7.74, respectively. The t-value of psychosocial health problems and dysfunctional abilities was 1.60 and 1.79 within the degree of freedom 154.50 and 141.55. Within the 95% confident interval, the mean score of psychosocial health problems of the female subjects was 0.72 less than and 6.84 more than the mean score of the male subjects, whereas the mean score of dysfunctional abilities of the female subjects was 0.22 less than and 4.31 more than the male subjects. The p-value for psychosocial health problems was 0.112 and 0.075 for dysfunctional abilities (> 0.05). Therefore, the 95 percent for the difference between mean score of these two characteristics was not statistically significant. Be noted that the explanation for the other two-sample t-test for other dichotomous variables will be similar to this above explanation.

Table 3.6: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the female and the male subjects

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Females	112	42.88	1.26	13.36
Males	68	39.82	1.44	11.88
DF = 154.50, t = 1.60, Pr (T > t) = 0.112, 95% CI for difference (0.72, 2.22)				
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev

Females	112	40.97	.70	7.44
Males	68	38.93	.90	7.44
DF = 141.55, t = 1.79, Pr (T > t) = 0.075, 95% CI for difference (0.22, 4.31)				

Figure 3.4: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Gender

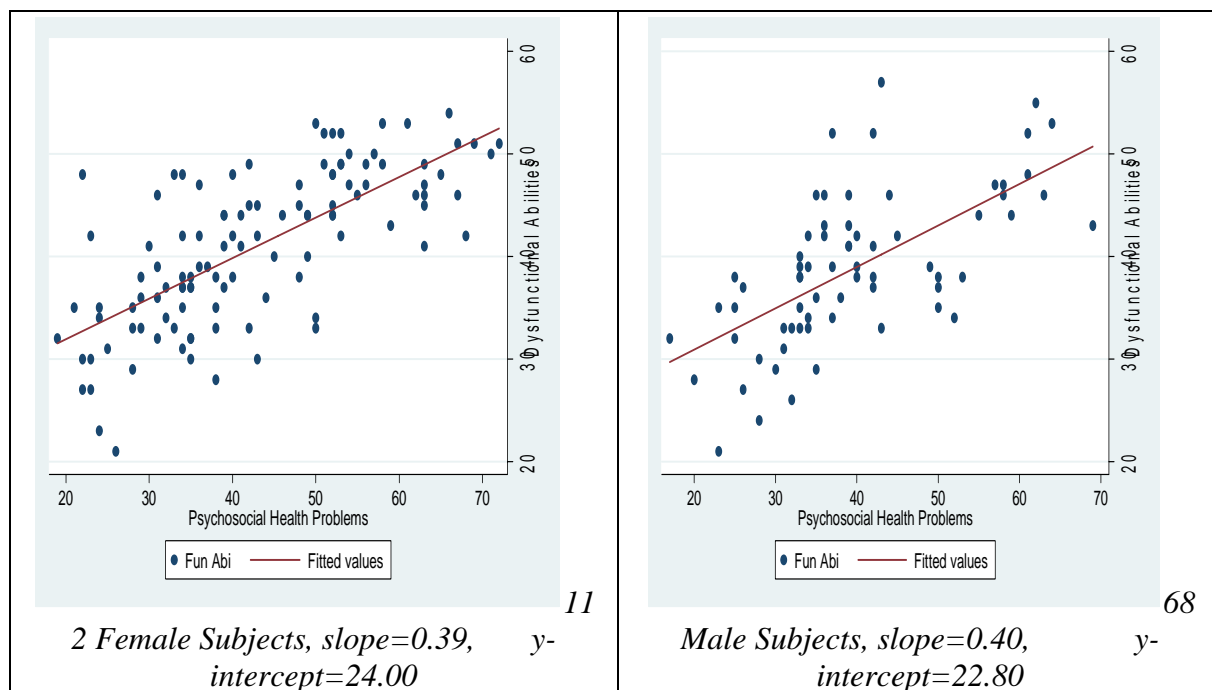


Table 3.7: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Female Subjects

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
112 (62.22)	24.00	0.39	0.70	0.50

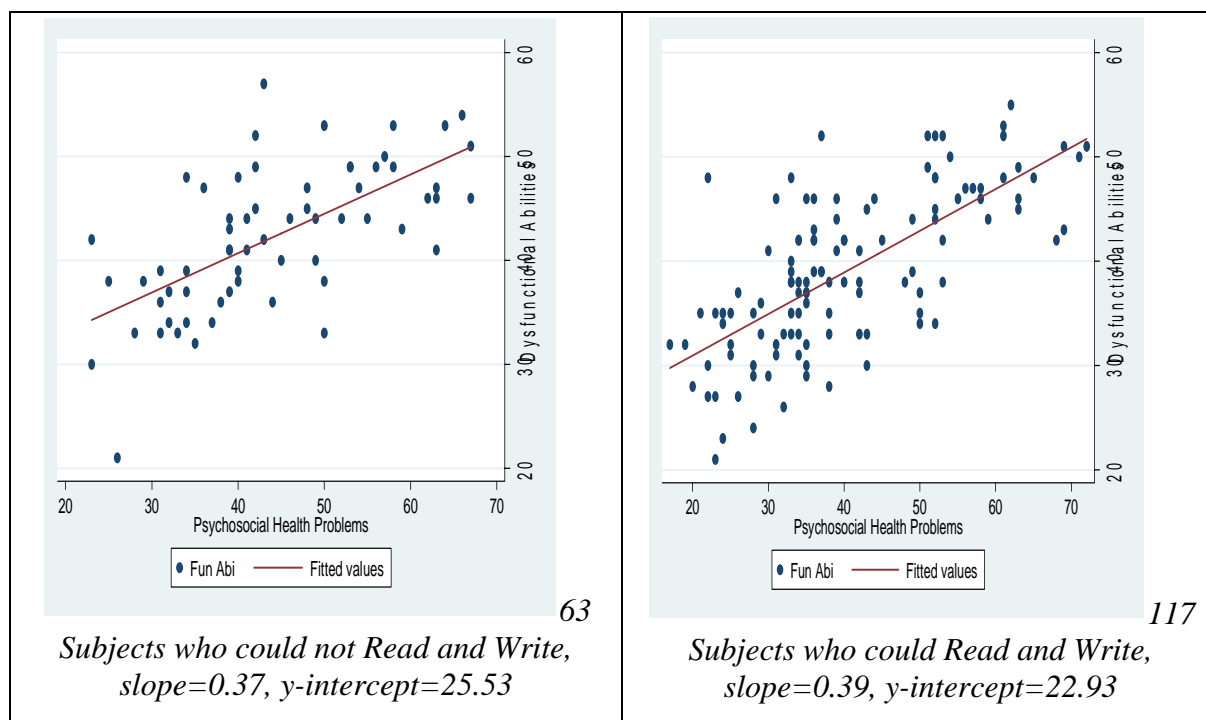
Table 3.8: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Male Subjects

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
68 (37.77)	22.80	0.40	0.64	0.42

3.1.6 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Levels of Education

Figure 3.5 shows two graphs grouped into scatter plots; one group represents the 63 subjects who could not read and write, appears on the left and the other group represents the 117 subjects who could read and write, appears on the right along with the regression lines. These lines show the linear regression between the two variables; psychosocial health problems and dysfunctional abilities.

Figure 3.5: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Levels of Education



As shown in Table 3.9, the relationship between psychosocial health problems and dysfunctional abilities among the 63 subjects who could not read and write was 0.64 (R-squared = 0.4213) along with a linear regression, which had a y-intercept of 25.53 and a slope of 0.37. Whereas Table 3.11 shows the analysis of 117 subjects who could read and write with a correlation coefficient of 0.69 (R-squared = 0.4885) and a linear regression, which had a y-intercept of 22.93 and a slope of 0.39.

Table 3.9: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who could not Read and Write

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
63 (35.00)	25.53	0.37	0.64	0.42

The different means between these two variables: the subjects who could not read and write and the subjects who could read and write was $t = 1.96$ for psychosocial health problems and $t = 2.85$ for dysfunctional abilities (Table 3.10). The P-value was 0.051 for psychosocial health problems and 0.005 for dysfunctional abilities. For these characteristics we could see that the mean score of dysfunctional abilities was statistically significant ($0.005 < 0.05$).

Table 3.10: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who could and could not read and write

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Could not	63	44.19	1.49	11.86

read and write				
Could read and write	117	40.40	1.22	13.25
	DF = 139.65, t = 1.96, 95% Pr (T > t) = 0.051, 95% CI for difference (-0.03, 7.61)			
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Could not read and write	63	42.27	0.87	6.92
Could not read and write	117	39.08	0.70	7.58
	DF = 137.33, t = 2.85, Pr (T > t) = 0.005, 95% CI for difference (-0.97, 5.40)			

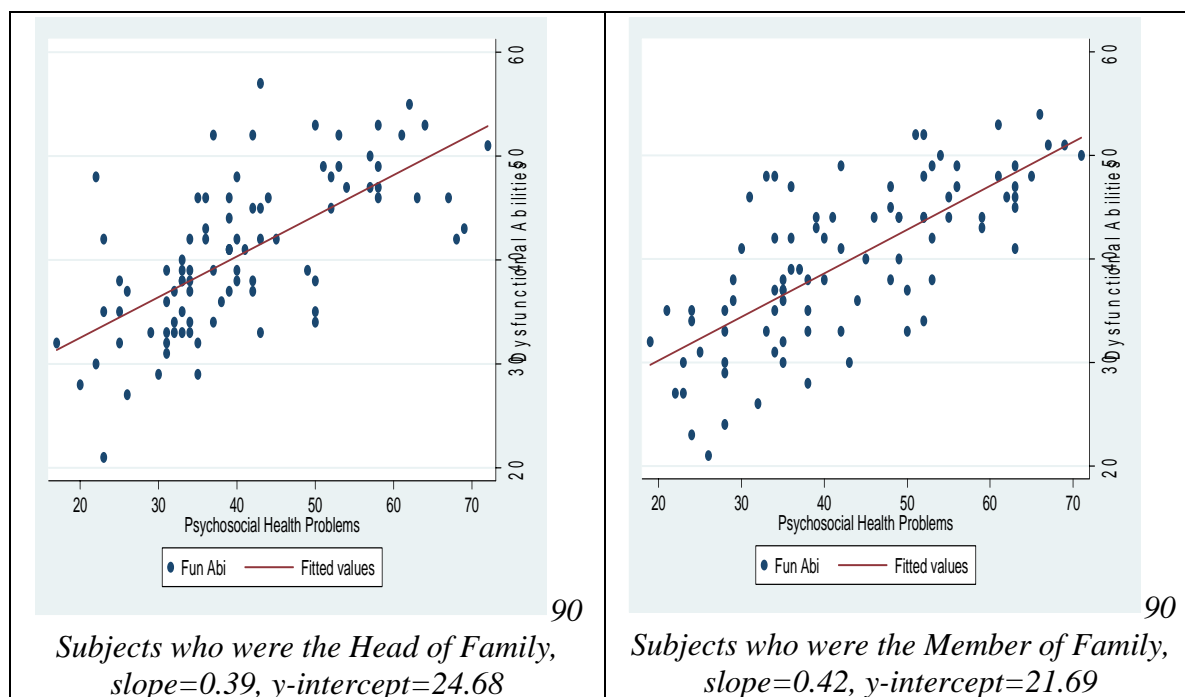
Table 3.11: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who could Read and Write

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
117 (65)	22.93	0.39	0.69	0.49

3.1.7 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Role in the Family

To understand any differences between a group of subjects who were the head of the family and a group of subjects who were members of the family, and the association of psychosocial health problems with daily functioning, look at Figure 3.6. It groups this characteristic (role in the family) and splits it into two graphs. The graph on the left side shows the scatter plots representing the 90 subjects who were the head of the family while the graph on the right side shows another scatter plots representing the 90 subjects who were members of the family.

Figure 3.6: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Role in the Family



Analyzing these two groups of subjects (Table 3.12 and 3.13) shows that among heads of the family, the correlation coefficient between psychosocial health problems and dysfunctional abilities was 0.66 (R-squared = 0.4427) and the linear regression had the y-intercept of 24.68 and the slope of 0.39 whereas among members of the family the correlation coefficient was 0.72 (R-squared = 0.5331), the y-intercept was 21.69 and the slope was 0.42. Table 3.14 shows whether or not these two characteristics were statistically significant. This is similar to earlier explanation.

Table 3.12: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who were the Heads of the Family

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
90 (50)	24.68	0.39	0.66	0.44

Table 3.13: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who were the Members of the Family

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
90 (50)	21.69	0.42	0.72	0.53

Table 3.14: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who were the head of the family and the member of the family

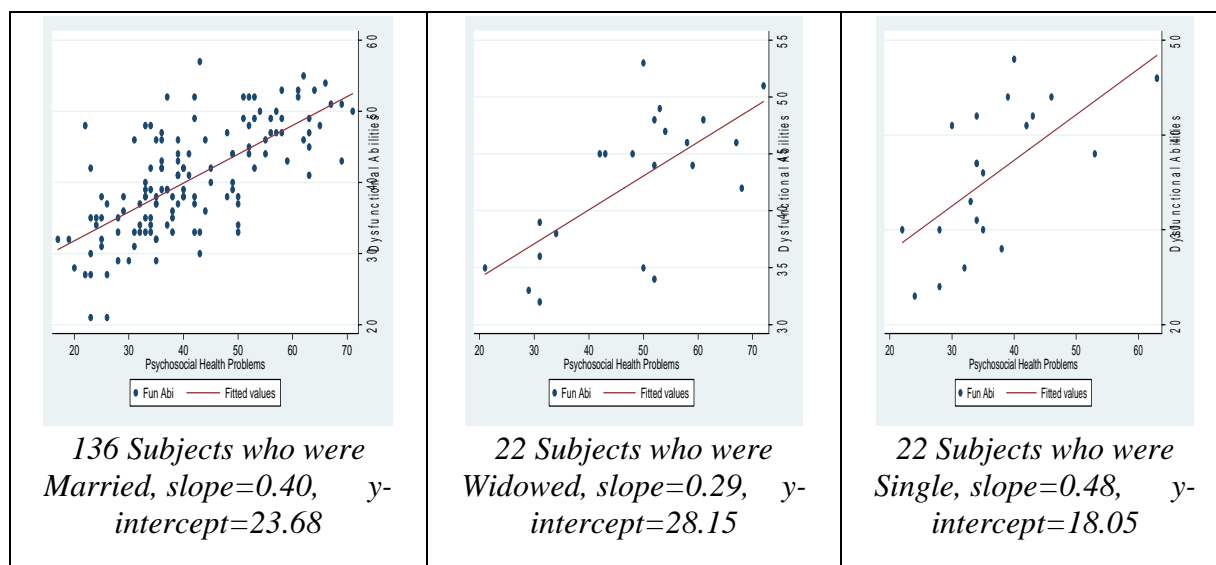
Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Head of the family	90	40.57	1.31	12.44
Member of the family	90	42.89	1.40	13.26
DF = 177.27, t = - 1.21, Pr (T > t) = 0.227				

Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Head of the family	90	40.57	0.77	7.32
Member of the family	90	39.83	0.80	7.68
DF = 177.58, t = 0.65, Pr (T > t) = 0.512				

3.1.8 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Marital Status

In the entire sample (N=180) we examined three characteristics in relation to the marital status; married, widowed and single. The analysis of each characteristic was done by comparing the correlation coefficient of the two variables between the specific status of each group of the subjects. Figure 3.7 shows the group of the 136 married subjects, which are represented by the scatter plots in the graph on the left, the 22 widowed subjects, represented by the scatter plots in the graph on the middle and another 22 single subjects, represented by the scatter plots in the graph on the right of the figure.

Figure 3.7: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Marital Status



The analysis in Table 3.15 among the group of subjects who were married reveals that the correlation coefficient between psychosocial health problems and dysfunctional abilities was 0.68 (R-squared = 0.4787), the y-intercept was 23.68, and the slope was 0.40. The analysis in Table 3.16 among the group of subjects who were widowed shows that the correlation coefficient between the two variables was 0.66 (R-squared = 0.4435), the y-intercept was 28.15 and the slope was 0.29. And Table 3.17 shows the correlation coefficient of 0.67 (R-squared = 0.4652), with the y-intercept of 18.05 and the slope of 0.48 among the group of subjects who were single. Table 3.18, 3.19 and 3.20 shows the statistical significance between the mean score of the different characteristics. It is similar to the earlier explanation.

Table 3.15: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who were Married

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
136 (75.55)	23.68	0.40	0.68	0.48

Table 3.16: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who were Widowed

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
22 (12.22)	28.15	0.29	0.66	0.44

Table 3.17: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who were Single

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
22 (12.22)	18.05	0.48	0.67	0.46

Table 3.18: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who were married and single

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Married	136	41.34	1.09	12.74
Single	22	37.72	2.30	10.78
DF = 156, t = 1.26, Pr (T > t) = 0.209				
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Married	136	40.47	0.64	7.47
Single	22	36.27	1.62	7.61
DF = 156, t = 2.46, Pr (T > t) = 0.014				

Table 3.19: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who were married and widowed

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Married	136	41.34	1.09	12.74
Widowed	22	48.09	2.96	13.90
DF = 156, t = -2.27, Pr (T > t) = 0.024				
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Married	136	40.47	0.64	7.47
Widowed	22	42.50	1.33	7.33
DF = 156, t = -1.21, Pr (T > t) = 0.229				

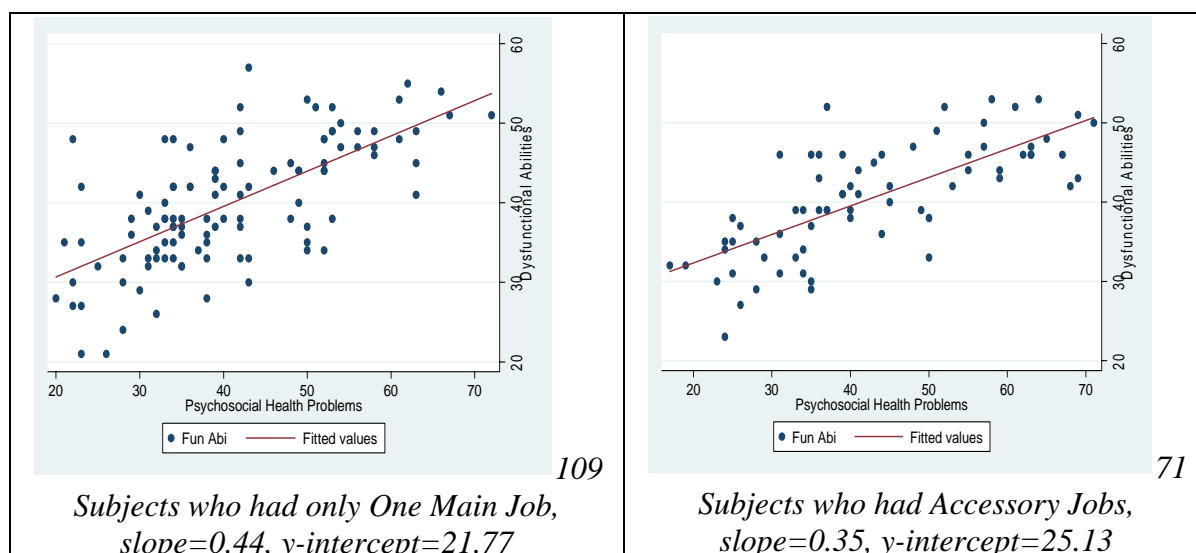
Table 3.20: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who were single and widowed

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Single	22	37.72	2.30	10.78
Widowed	22	48.09	2.96	13.90
DF = 42, t = -2.76, Pr (T > t) = 0.008				
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Single	22	36.22	1.62	7.61
Widowed	22	42.50	1.33	6.22
DF = 42, t = -2.99, Pr (T > t) = 0.004				

3.1.9 The Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Job Patterns

The levels of psychosocial health problems and the performances of daily activities are expected to vary in relation to the pattern of jobs. This analysis then is intended to calculate the association of the two variables among one group who had only one main job and another group who had accessory jobs. Figure 3.8 groups the 109 subjects in a scatter plot which represents the subjects who had only one main job, in the graph on the left, and the 71 subjects in a scatter plot representing the subjects who had accessory jobs, in the graph on the right.

Figure 3.8: Regression Line of the Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities Stratified by Job Patterns



The analyses in Table 3.21 and 3.22 show that psychosocial health problems among the group who had only one main job associated with dysfunctional abilities with a correlation

coefficient of 0.67 (R-squared = 0.4553) and the linear regression with a y-intercept of 21.77 and a slope of 0.44, whereas the group who had accessory jobs had the correlation coefficient of 0.72 (R-squared = 0.5344), a y-intercept of 25.13 and a slope of 0.35. Table 3.23 shows the statistical significance between the mean score of the different characteristics. It is similar to the earlier explanation.

Table 3.21: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who had only One Main Job

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
109 (60.55)	21.77	0.44	0.67	0.45

Table 3.22: Regression Model between Psychosocial Health Problems and Dysfunctional Abilities among the Subjects who had Accessory Jobs

No. Subjects (%)	y-intercept	Slope	Correlation(r)	R-squared(r ²)
71 (39.55)	25.13	0.35	0.72	0.53

Table 3.23: Two-Sample t-test with unequal variances for the means of score of psychosocial health problems and dysfunction abilities between the subjects who had only main job and subjects who had accessory jobs

Psychosocial Health Problems				
Subjects	Number	Mean	St Err	Std. Dev
Had main job	109	41.00	1.13	11.84
Had accessory job	71	42.38	1.70	14.33
DF = 129.53, t = -0.89, Pr (T > t) = 0.374				
Dysfunctional Abilities				
Subjects	Number	Mean	St Err	Std. Dev
Had main job	109	39.98	0.74	7.79
Had accessory job	71	40.53	0.84	7.05
DF = 160, t = -0.49, Pr (T > t) = 0.622				

3.2 Summary of the Results

Table 3.24 summarizes the values of the correlation coefficient (r) between psychosocial health problems and dysfunctional abilities, the values of the linear regressions of the y-intercept and the slope, and the multiple R-squared of all the subjects, of the female and male subjects, the subjects who could and could not read and write, the subjects who were the head or a member of the family, the subjects who were married, widowed and single, and the subjects who had only one main job and others who had accessory jobs. The second Column lists the numbers and percentages of the subjects of each characteristic. The third Column lists the values of the y-intercept of all the characteristics that explained the values of dependent variables (dysfunctional abilities) when the values of independent variables (psychosocial health problems) equaled zero. The fourth Column shows the values of the slope of linear regression of all the characteristics. These values have determined the slopes of the lines in the graphs or the increase in the number of units of the dependent variables when the values of the independent variables increased one unit. The fifth Column lists the values of the correlation coefficient between psychosocial health problems and dysfunctional

abilities among all the characteristics. The last Column shows the r^2 values of all the characteristics. These values show the variances of dependent variable (y = dysfunctional abilities) that could be "accounted for" by changes in the independent variable (x = psychosocial health problems) in the linear regressions between x and y . For example, if $r^2 = 0.48$ it implies that 48% of the sample variations in variable y could be explained by using the values of x variable to predict the values of y in the straight-line model.

Table 3.25 summarizes the mean score of psychosocial health problems and dysfunctional abilities of each characteristic among the 180 subjects in the first column. It also shows the degree of freedom (DF) in the middle column and the statistical significance (last column) between the dichotomous variables. The values (bold ones) in the last column show statistically significant between the two variables (P -value < 0.05).

Table 3.24: Summarizing the Relationship between Psychosocial Health Problems and Dysfunctional Abilities for All the Characteristics

Characteristics of the Subjects	(%) and Number (N)	y-intercept	Slope	r	r^2
All Subjects	100 (N = 180)	23.41	0.40	0.69	0.48
Female Subjects	62.22 (N = 112)	24.00	0.39	0.70	0.50
Male Subjects	37.77 (N = 68)	22.80	0.40	0.64	0.42
Subjects who could not R & W	35.00 (N = 63)	25.53	0.37	0.64	0.42
Subjects who could R & W	65.00 (N = 117)	22.93	0.39	0.69	0.49
Subjects who were the Head of the family	50.00 (N = 90)	24.68	0.39	0.66	0.44
Subjects who were the Member of the family	50.00 (N = 90)	21.69	0.42	0.72	0.53
Subjects who were Married	75.55 (N = 136)	23.68	0.40	0.68	0.48
Subjects who were Widowed	12.22 (N = 22)	28.15	0.29	0.66	0.44
Subjects who were Single	12.22 (N = 22)	18.05	0.48	0.67	0.46
Subjects who had only main Job	60.55 (N = 109)	21.77	0.44	0.67	0.45
Subjects who had Accessory Jobs	39.55 (N = 71)	25.13	0.35	0.72	0.53

Table 3.25: Summarizing the t-test of the mean score of Psychosocial Health Problems and Dysfunctional Abilities among Different Characteristics

Psychosocial Health Problems among:	DF	P-value
• Female (Mean= 42.88) vs. Male (Mean= 39.82)	154.50	0.1121
• Education No (Mean= 44.19) vs. Education Yes (Mean= 40.40)	139.65	0.0519
• Head (Mean= 40.57) vs. Member (Mean= 42.89)	177.27	0.2273
• Married (Mean= 41.55) vs. Single (Mean= 37.73)	156	0.2094

• Married (Mean= 41.34) vs. Widowed (Mean= 48.09)	156	0.0243
• Single (Mean= 37.73) vs. Widowed (Mean= 48.09)	42	0.0085
• Main job (Mean= 41.01) vs. Accessory job (Mean= 42.83)	129.53	0.3745
Dysfunctional Abilities among:	DF	P-value
• Female (Mean= 40.97) vs. Male (Mean= 38.93)	141.55	0.0759
• Education No (Mean= 42.27) vs. Education Yes (Mean= 39.09)	137.33	0.0051
• Head (Mean= 40.56) vs. Member (Mean= 39.83)	177.59	0.5129
• Married (Mean= 40.47) vs. Single (Mean= 36.23)	156	0.0148
• Married (Mean= 40.47) vs. Widowed (Mean= 42.5)	156	0.2293
• Single (Mean= 36.23) vs. Widowed (Mean= 42.5)	42	0.0046
• Main job (Mean= 39.98) vs. Accessory job (Mean= 40.54)	160.08	0.6890

Section 4: Discussion

This study tried to examine the levels of psychosocial health problems and their relationship to the levels of dysfunctional abilities among community members who had undergone civil wars, genocide of the Pol Pot regime, and have been living under unstable socio-political situations in Cambodia for decades.

4.1 The Prevalence and the Levels of Psychosocial Health Problems and Dysfunctional Abilities

As noted earlier in the literature reviews of previous studies, the findings were mostly about significant mental health disorders including PTSD, depression, anxiety and somatoform disorders among Cambodian survivors seeking asylum at the refugee camps or in other countries outside Cambodia. This study, by contrast, examined the levels of psychosocial health problems of the community members in Cambodia, resulting from the past traumatic events (wars and genocide) and the currently stressful situations (e.g. poverty, unstable socio-political situations), and related them to the levels of their daily functioning in the communities where they lived. Among the 180 subjects who voluntarily participated in the study within the four target areas where TPO Cambodia is operating, the levels of their problems and dysfunction in daily lives ranged from mild to very severe.

However, this finding may not represent all Cambodian populations across the country because these four provinces where the study was conducted were in the remote rural communities in which people lived in extreme poverty and were exposed to the wars longer (until 1996) than their counterparts who lived in the cities or other provinces. Not only these places were away from the capital, but were also located in remote areas away from headquarters of the provinces, main roads, markets and other public facilities such as schools, health centers, hospitals or governmental offices. Another factor which excludes this group of people from others was a low standard of living. Most of them were living in poverty on a day by day basis, far different from the better-off families. They could not be generalized with the rest of the population in the country because they lived in poverty or extreme poverty. Poverty is seen to be a constant stressor that can have an impact on health and psychosocial health, in particular among marginalized groups of the society (de Jong, 2002). This group of population would represent about one third of the country's population because

34 percent of Cambodian people are living with less than US\$ 1 a day (The World Bank, 2005).

Compared to the rest of the country, the subjects involved in the study were probably exposed more severely to traumatic events for a longer period of time. When the Khmer Rouge (KR) was defeated and thrown by the Cambodian government assisted by Vietnamese troops, the former KR soldiers regrouped in remote areas or alongside the Cambodian-Thai border to attack the government. The civil war between these two groups continued until 1996. Because of this, the four provinces where the study took place were amongst the areas where battles continued until the very end.

Nonetheless, our findings can tell the levels of psychosocial health problems and dysfunctional abilities among one group of population in the country at the present day, 13 years after the devastating events.

From all the 180 subjects who had problems and volunteered to be a sample for the study, 112 were women and 68 were men. These figures show that female subjects were twice as many as male subjects who had problems and accepted the interviews. There are many reasons explaining why women had more problems and were more willing to seek help compared to their male counterparts. First, women, although they lived within the same geographical and social context of their male counterpart, seemed to have more problems due to their many responsibilities in households with regards to a financial burden, caring for the households, looking after the children and the elderly. "Thinking too much, tiredness, could not sleep, etc" are phrases describing distress feelings usually used by many Cambodian women when asked about their health and overall well-being. More than that, wives were observed to be victims of domestic violence among dysfunctional families through their abusive or alcoholic husbands.

Second, among women and men who have a similar level of psychological problems, generally, women prefer to talk to someone for help in order to discharge their problems, while men are believed to be warriors, protectors and problem solvers, prefer to sit on the problems and file all the problems in their mind (Allan & Barbara, 2000). Men are seen to be more stoics to pain and other health problems than women. As noted in previous literatures, "women may place a higher value on health, and they may be more willing than males to admit to and acknowledge symptoms and attend to them as well as report them, which is consistent with role expectations (Weiss & Lonnquist, 1994). In Cambodian context, if a man complains about or shares his own problems to others, gets suggestions to solve problems, expresses stressful emotions or seeks help, he would be considered as a taboo of weakness or not qualified as a strong man. The phrase "If you fall you have to get up by your own and never cry, son" is the advice that Cambodian men heard since a very young age.

Third, when men encountered stressful situations, they would prefer to choose negative ways to mask their painful feelings or to temporally avoid those problems by going for gambling or karaoke, drinking alcohol, increasing cigarette smoking, or even visiting a brothel. Contrarily, all these behavioral patterns are considered to be very bad images for women and are not culturally accepted by community members. Thus, the suitable way for women to cope with the distresses is to find someone to share their problems by talking or seeking help from professionals.

Finally, during the study, the interviews with the subjects were conducted during a working hour at their residences, when by that time; most men including the ones who were qualified

to be the subjects had left to work in the field or were in long trips to work at other places (migrant workers). Interviewers frequently met only women, who were housewives doing household chores namely cooking, looking after the children or doing small businesses at or near their homes.

4.2 The Overall Correlation Coefficient between Psychosocial Health Problems and Dysfunctional Abilities

The result of the study demonstrated that the correlation coefficient between psychosocial health problems and dysfunctional abilities among the 180 subjects without stratifying of other characteristics, which are believed to have influences on this relationship, was positively large correlated. Cohen (1988) classified the value of correlation coefficient into three categories; small, medium and large. It is important to remember that "large" and "small" should not be considered as "good" and "bad" in terms of determining a correlation because the relationship between variables depends on their specific characteristics.

Although this does not prove a causal factor for dysfunction among the subjects who had psychological problems, when people had mental health problems to some extent, but were not classified as diseases, they reported that their performances in activities of daily living, in creational activities and occupational tasks were also correlated. This finding is supported by the previous study which found that "roughly 20 percent of families in villages assessed were considered to be dysfunctional by their fellow villagers and this included from alcoholism to extreme poverty, from not being able to take care of children in the household to recurrent violence, abuse or chronic disease" (de Jong, 2002). The higher the problems the subjects had, the greater their dysfunction would be. Another study which was looking at the relationship between health and income in four Latin American countries indicated that "health status does have a significant, although modest, impact on earning" (Savedoff & Schultz, 2000).

From the viewpoint of psychology, when people are under stress, their emotions will be affected, namely nervousness, tensions, panic or sadness, lowered self esteem, apathy, and fatigue. These kinds of feelings make people prone to a lack of motivation and commitment in doing things, even taking care of themselves. If psychosocial health is more affected, people tend to feel guilt and shame, become moody or feel lonely. They withdraw from society and prefer to be alone, away from all productive activities and occupational tasks. On the other hands, even if they are motivated to do things, when their mental health is not good, they would face some difficulties in concentrating or in making decisions, with frequent forgetfulness and distraction, increased sensitivity to criticism, negative self-critical thoughts, distorting ideas, and more rigid attitudes. Above all, these would negatively influence people's performances of daily activities.

4.3 The Impact of Gender on the Correlation Coefficient

In a comparison across gender between the female (N=112) and male (N=68) subjects, in terms of the correlation coefficient between psychosocial health problems and dysfunctional abilities, the analysis shows that they were slightly different. The coefficient of the correlation between these two variables was 0.70 for female subjects and 0.64 for male subjects. According to the linear regression model of the two groups, they had a slope of 0.39 and 0.40, respectively. This implies that as the psychosocial health problems increased 1 unit, the dysfunctional abilities increased 0.39 for the female subjects and 0.40 for the male

subjects. These figures show a slight difference of 0.01 of the dysfunctional abilities between male and female subjects. This may not be statistically significant because the P-value of these characteristics was 0.112 for psychosocial health problems and 0.075 for dysfunctional abilities (> 0.05). The 95% Confidence Interval for the difference between the two-mean scores was between -0.72 and 6.84 for psychosocial health problems and -0.22 and 4.31 for dysfunctional abilities. This means that the mean score of psychosocial health problems of the female subjects was 0.72 less than and 6.84 more than the mean score of the male subjects; and the mean score of dysfunctional abilities for the female subject was 0.22 less than and 4.31 more than the mean score of the male subjects (Table 3.6).

Looking back to the measurement of psychosocial health problems, this tool evaluated respondents' mental health in four dimensions namely emotions, feelings, socializations and somatizations (psychosomatic symptoms). When the villagers accepted the interview, both men and women would report their psychological states to the interviewers as what they were. And the assessment of dysfunctional abilities examined the performance of the subjects in three different dimensions namely daily activities, creational activities and occupational tasks. Considering the range of these activities, there was no difference between female and male subjects who reported them to the interviewers when they were affected due to psychological health problems. Therefore, within these target areas where most of the subjects were farmers living in the same socially environmental context and engaging in similar activities, the relationship between psychosocial health problems and dysfunctional abilities was not much different across gender. If the same tools which were used in this study measured subjects in different settings, let say in the urban area where most men were salary men and women were housewives, the coefficient of the correlation would be greatly different.

4.4 The Impact of Education on the Correlation Coefficient

The subjects who participated in this study were classified as a dichotomy, their levels of education, between the ones who could read and write, and the other who could not. In rural remote communities, people usually involve less in paper works or use less skills and knowledge academically. Stressors, both at home and at work environments among the subjects, were frequently linked to physical activities rather than intellectual. The analyses in Table 3.9 and 3.11 show the correlation coefficient of psychosocial health problems and dysfunctional abilities among the subjects who could read and write was 0.69 and the linear regression had a slope of 0.39, compared to the subjects who could not read and write, 0.64 (r) and 0.37 (slope). These figures are showing that when psychosocial health problems increased 1 unit, the difference of the dysfunctional abilities between the two groups of subjects from different educational background was only 0.02. This may not be statistically significant because the P-value of these characteristics was 0.051 for psychosocial health problems and 0.005 for dysfunctional abilities. The 95% Confidence Interval for the difference between the two mean scores was between -0.03 and 7.61 for psychosocial health problems and 0.97 and 5.39 for dysfunctional abilities. This means that the mean score of psychosocial health problems of the subjects who could not read and write was 0.03 less than and 7.61 more than the mean score of the subjects who could read and write; and the mean score of dysfunctional abilities for the subjects who could not read and write was 0.97 less than and 5.39 more than the mean score of the subjects who could read and write (Table 3.10).

Similar to the above explanation of gender, if the study was conducted among participants who used their intellectual abilities in occupational tasks (e.g. paper works), the differences would be greater. For example, in the study of multiple measures of socio-economic position and psychosocial health: proximal and distal measures (Manoux, Clarke & Marmot (2002), the findings showed that education had a stronger indirect effect on psychosocial health, which was due to the effect of education on proximal measures of social position, occupation and income.

4.5 Can Improvement of Psychosocial Health lead to Better Functional Abilities?

It can be stated as a limitation of this study that we could not conduct a second interview with the 180 subjects who participated in the study to compare the progress before and after psychological interventions, due to the limitations of budget and time. Fortunately, a previous study on "the effectiveness and cost-effectiveness of psychosocial intervention in Cambodia" conducted in 2004 by TPO Cambodia showed that 549 subjects who were interviewed at time two (T₂) after receiving interventions from the organization had a significant improvement. Compared to the previous month before the interventions, and compared to the control group who did not receive interventions, the subjects who joined group therapy or individual counseling got much better in terms of decreasing psychopathology, psychological distress, social, physical and mental limitations, and improving quality of life. They also gained productivity as a result of better functioning at the individual and family levels, reduced expenses for self medication, for other therapies at general practitioners or traditional healers for psychosomatic symptoms (de Jong et al., 2004).

Although this study was conducted a few years ago at different target areas, it had a lot in common with this current study such as the type of community mental health, the pattern of operations and interventions provided by the organization, and the same team members who offered services to community members. Reflecting from this finding, it could be implied that, after receiving individual counseling or group therapy (SHG), the psychosocial health of the 180 subjects would be better and subsequently, their levels of functioning would also improve.

Recently, a case study report (refer to the Appendix 2) of an alcoholic and abusive husband living in Pursat province has also shown a great improvement after he attended group therapy. Because of financial problems, his family was in trouble economically and lived in poverty. He was under stress and turned to alcohol later. Suffering from psychological stress and under the effect of alcohol, he was not able to work and frequently used violence on his wife and children. The trouble of this family was going on for years before he met with the organization, the community mental health. After participating in the SHG for a couple of sessions, his psychological health became stable. He later stopped drinking alcohol and abusing his family. With the support from the organization, he was able to start a business and could earn more money, save some and build a new house.

In summary, within the specific location of the rural remote communities in Cambodia, the prevalence of community members suffering from psychosocial health problems and dysfunctional abilities varied from mild to very severe. The levels of psychosocial health problems were associated with the levels of dysfunctional abilities. The numbers of female respondents who were willing to participate in the study were twice more than their male counterpart, reported as having psychosocial health problems. The subjects who were widowed or the head of the family seemed to have less dysfunctional abilities when the levels

of psychosocial health problems increased. Responsibilities and roles within the family were seen to be potential factors to keep them active for the sake of their family survival. The subjects who had only one main job were found to be more dysfunctional, when the levels of stress increased. No work after the raining season (planting season is over) was the reason that this group of subjects got higher scores on the dysfunctional abilities' section of the questionnaire. They simply reported that they just stayed at home and did nothing.

With stratifying of different characteristics such as gender and the levels of education among the subjects, the analysis shows that there was not much difference in terms of the correlation coefficient between psychosocial health problems and dysfunctional abilities. When the psychosocial health problems increased, the different groups across these two characteristics showed a slight difference of dysfunctional abilities.

In addition, the improvement of psychosocial health as they participated in talk therapy (individual or group), showed a significant increase in their productivity at individual and family levels because of the better development of work performances in daily activities and occupational tasks. Furthermore, this improvement also reduced unnecessary expenses on self medication and traditional healers for treating psychosomatic symptoms.

Section 5: Conclusion, Policy Implications, and Recommendations

5.1 Conclusion

This study investigated the psychosocial health problems of rural community members and found that, due to past trauma experience, unstable sociopolitical conditions and life events, people in the target areas of TPO operation have been suffering mental health problems from mild to severe. The previous studies conducted among Cambodian refugees also have revealed that most of them had been affected by the consequences of wars and genocide even if they fled the country to the developed world. Taking this into consideration, survivors living in the country may continue to have more psychological problems, compared to their counterparts living outside the country because of poverty, corruption, human rights violations, insecurities etc. This finding answers the research question number one.

At the same time, the study also showed that the levels of dysfunctional abilities among community members range ranging from mild to very severe in relation with the levels of psychosocial health problems. The more psychosocial health problems, the greater dysfunctional abilities. This answers the research question number two and three.

Although we could not conduct a second interview with the same subjects to find out whether or not their levels of functioning and well-being improved if psychosocial health problems have been enhanced, the previous study on effectiveness and cost-effectiveness of psychological interventions and a recent case study, which was reported in the organization progress report would demonstrate the enhancement of people's lives after receiving interventions. This includes work performances, productivity and livelihood within the family. It also answers the research question number four. The finding is supported by the previous literature that found that "ill health impairs earning capacity, and the costs of medical care are high and continuously escalating people's economics" (Rose, 2008).

The results of this study cannot be generalized to the country's population since it was done within only one type of population in the remote areas; the sample size was relatively small; and re-interview with the same subjects could not be performed. Further research should be carried out to test the same hypothesis among various respondents randomly recruited from different backgrounds across geographical regions, religions, occupations and social classes.

5.2 Policy Implications

5.2.1 Community Work to Address Mental Health Problems

The best option for Cambodia, with little resources and structures in mental health other than the traditional sectors, and with 85 percent of its population living in rural areas, would be to adopt a community-based mental health program founded on a policy of decentralization and integration of services (Somasundaram & Van de Put, 1999). Although the study was conducted only in four provinces in Cambodia, its result, which showed the prevalence rates of psychosocial health problems among community members, should encourage policy / decision makers to consider the need of mental health services to address the issues. Though the sample size was small, among the 180 subjects, the psychosocial health problems ranged from mild (28%), moderate (24%), severe (26%) to very severe (22%). Number of people suffering from psychosocial health problems is underestimated, because many people who had problems were not willing to participate in the study. The reason for this, especially for men, was probably that they did not think it was a health related problem or a mental health problem but rather a social problem. If people were aware of mental health problems, and were willing to participate in the program the prevalence of psychosocial health problems would be more. Therefore, with this sample size, it shows that there were psychosocial health problems among community members in rural Cambodia, and there is a need to plan to provide mental health services at this level.

Unlike developed countries where mental health services have been integrated into the primary healthcare at health center levels, in Cambodia, the mental health program exists only at the national level and very little at the referral hospital levels. Psychologists, though they have graduated from a governmental institute, the Royal University of Phnom Penh (RUPP), they have not been employed by the government yet. Only if they take additional training for another year in pedagogy they will become educators employed by the government. Hence, policy makers and relevant institutions should train mental health professionals and integrate community mental health in the public health package.

At present, most community health services are left to NGOs, namely TPO, Social Services of Cambodia (SSC) and Supportive Mental Health (SUMH) to operate mental health programs in certain provinces. Even in the provinces which are served by these organizations, only small target areas and target populations in part of districts would receive services depending on their minimal funding. In other 20 more provinces, there are almost no such services offered to people. If the government wants to offer psychological interventions to the majority of the population in the country, it cannot count on NGOs alone. Only the government through the Ministry of Health can extend services to the other parts of the country by introducing mental health services into the minimum package of activities (MPA) at health centers. Following the health coverage plan, which has been introduced since 1996, all the 924 health centers are situated in geographically fitted locations where people from surrounding areas can access to them within a similar distance (Ministry of Health,

Cambodia). This means that, if mental health services did exist in health centers, the majority of people in the country would receive care and get more benefits from such services.

Just a few years ago, tuberculosis treatment using direct observed therapy (DOT) method and home care for people living with HIV/AIDS was handed over to health centers to transfer direct activities to local people in the communities. This reform has been seen to be more effective in treating, monitoring, and supporting patients. A drop-out rate has been also reduced since patients do not need to spend on travelling cost from their homes to referral hospitals or national hospitals. Similarly, if policy makers were convened to see the essential and necessary needs for community members for a higher quality of life, primary mental health would be possibly integrated into health centers.

To address the psychosocial health problems at community levels, there are less works needed to operate in terms of medical expertise and high tech equipments compared to other medical problems such as maternal child care, vaccination, tuberculosis, malaria, dengue fever, STD, HIV/AIDS and so on. The primary mental health interventions, as explained before (TPO operational activities), are mostly about mental health promotions and talk therapies either with individuals or in groups. They can be easily carried out by the health center staff. Empirical observations indicate that, after receiving a 13-day training on basic primary mental health, stress related problems, common mental health disorders, and how to deal with psychosocial health problems, community resources (trainees) could help a lot in handling of mental health related problems in their communities when the organization withdrew or stopped the program (TPO Cambodia).

Thus, to address the issues of psychosocial health problems in rural communities with the hope to reduce morbidity and prevent further mental disorders and social problems, human resources and suitable services for community mental health should be organized and set up.

5.2.2 Early Identifications

In the public health perspective, there are two-part packages of healthcare: public health and clinical services. The former, the public health package includes immunization, micronutrient supplements, school health programs to treat worms, and micronutrient deficiencies and provide health education, programs to increase public knowledge for family planning and nutrition, self care and indications for seeking additional care, programs to reduce consumption of tobacco, alcohol and other drugs, and HIV/AIDS prevention programs with a strong sexually transmitted disease (STD) component. The latter, the clinical service package consists of antenatal and delivery care, family planning services, management of the sick child, treatment for tuberculosis, and case management for STDs (World Bank, 1993). The first package is very essential to improve health of the people because it deals with ill health effectively and efficiently. It can reduce both morbidity and mortality, prevent disabilities, and prolong life expectancy if illnesses are detected early and treated. In the developed world, more emphasis has been put on public health programs.

In the two packages described above, no activities related to psychosocial problems are included. Similar to physical conditions, mental health also has its course starting from primary, secondary and tertiary stage. If the problems, which are occurring at the primary level, are not addressed, they will become more serious problems at the secondary or tertiary level that would need enormous efforts in terms of materials and resources. Treating and rehabilitating the problems at the later stages of illness are believed to be limited or

unsatisfying compared to preventing or treating them early. For this reason, early intervention and primary prevention of mental health problems in the communities would be easily achieved if mental health programs were integrated in the first component of public health package.

Unfortunately, access to public healthcare in Cambodia, especially in rural communities, is limited. Many factors contribute to this limitation. First, available health services are poor in both technical and interpersonal quality, and the main problems that service consumers are not willing to buy public healthcare services. Many public health facilities lack staff and equipments. The farther they are away from headquarters or cities, the fewer the staff and equipments which are available. Although some public health settings have staff, minimal salary discourages government staff to work full time and offer sincere work to patients. They, including the ones who work in healthcare settings, usually steal government time to work at other places to generate extra incomes, and leave government offices unattended. Second, the cost for service use or in other words user fees is another reason for declining of utilizations of healthcare services by many Cambodian families. About 34 percent of the population are living under the poverty line (earn less than US\$ 1 per day) as defined by the United Nations (The United Nation Development Program, 2003). This is an obstacle for the poor populations to buy health services when there is a need to treat their ill health. Third, terrible roads to referral hospitals or other healthcare facilities are a constraint (geographical constraint) that can prevent villagers from seeking help at government hospitals (Hardeman et al, 2004). Rather, they prefer to find the alternative ways to treat their problems including seeking help with traditional or spiritual healers or self medication locally in the communities. Fourth, the household burdens make family members unable to spare their time to go to hospitals when they need healthcare or to take care of relatives in hospitals when their family members are sick.

As a result, if healthcare services were provided within the communities itself, it would be great to lessen the burdens on villagers and enable them to have more contact with health service providers, by which most problems will be detected early or prevented and helped with.

5.2.3 Mental Asylum and Community Mental Health

In line with the concept that many countries have followed a policy of hospital run-down and closure, community mental health as TPO Cambodia is operating in four targeted provinces, is a fit strategy to address mental health problems occurring among community members at the very beginning of onset of illnesses. In Britain, between 1954 and 1982 the deinstitutionalization could reduce residents in the hospitals from 154,000 to 100,000 and in Italy, between 1968 and 1978 the asylum population fell from 100,000 to 50,000 (Busfield, 1986). Focusing more on community work is cost-effective and cost-efficient for the service providers to deliver services and easier for the service consumers to receive services, especially at the present situation in Cambodia. Because of these benefits, there have been rapid developments of certain community resources to make it possible to deliver mental health services to community members via the primary healthcare. Serving as a non-hospital-based provision that appeared on the British mental health scene, between 1977 and 1987, community mental health centers expanded from 1 to 54 (Sayce, 1989).

Furthermore, it is recognized by the World Health Organization that adequate healthcare for all can be provided only by shifting the emphasis to communities. As mentioned in the

bulletin of the World Health Organization, although mental healthcare cannot be given top priority, it could be made part of an integrated service at the periphery (Somasundaram & Van de Put, 1999). Referring to the WHO's definition of health, well being has clearly interconnected and interdependent physical, mental, social and spiritual dimensions, and a holistic approach to health is necessary so that most mental health problems can be solved in the community (WHO, 1999).

The operational work at the target areas where the study took place could show that beginning with the local grass-roots populations (social context assessment) to know people's problems, their local resources and their needs, starting from health promotions with general population (psychosocial education) to let people know about the problems and to find cases, and providing interventions at patients' places (individual counseling or group therapy) were good strategies that fitted very well with both team members and villagers. Service providers could understand clearly the people's problems, their underlying causes along with the precipitating, perpetuating, and predisposing factors, which were really happening in their daily life. And at the same time, during the course of interventions, they could use local resources, by encouraging family members or friends to offer psychosocial support or by adjusting behavior to the current environments, to solve those problems more effectively. Unlike medical conditions, mental health problems need a lot of emotional and social support from families, friends and communities. de Jong (1999) has assured that apart from psycho-emotional support, existing resources including the traditional healing sector, and rudimentary village structures cannot be neglected in the rehabilitation of the community, or in interventions to help the individual patient. The same problems will not be possible to solve, if patients go to hospitals to meet a doctor for treatment because the interaction between the two parties is just only words via complaining and advising and prescribing medication at the end. As noted earlier in the study, patients were not comfortable or could not access public healthcare facilities; this kind of community operations could easily identify most cases occurring in the areas from mild to very severe and it could appropriately arrange for interventions.

According to the previous literature, even in severe problems, patients still needed family and community participation and support along their courses of treatments. Drug compliances, nursing care, social interactions and rehabilitation, all these were best provided by close family members and friends than anyone else.

In summary, as shown in this study, health-policy decision makers should pay more attention on community mental health starting from identifying the problems, raising the awareness, providing interventions at the primary level, and refer only severe cases to higher level at referral hospitals, for example if talk therapies cannot help.

The National Poverty Reduction Strategy (NPRS) recognized that hospitals at district level (referral hospitals) appear to provide the greatest benefit to the poorest group. In other words, rather than enhancing national hospitals or institutions for mental health patients, where only the non-poor would use them more, by strengthening services at the grass-roots level or hospitals close to them, the poor will get more benefits (NPRS, 2005). Therefore, when adequate referral become available in Cambodian villages and the knowledge, skills and attitudes needed for managing most psychosocial health problems in the community are acquired, a clear enhancement of self-sufficiency, self-esteem, and motivation can be expected to develop, and productivity, healthy behaviors, and quality of life can be expected to improve (Somasundaram & Van de Put, 1999). Study has shown that almost 40 percent of

cases can be handled by community nurses who can provide education, coping strategy enhancement, and developing problem solving skills to community members (John, 2002).

5.2.4 Mental Health and Poverty

The result of this study showed remarkably the relationship between psychosocial health problems (independent variable) and dysfunctional abilities (dependent variable) among the 180 subjects. The statistical analysis of these two variables, without control over other characteristics, indicated that mental health problems were positively largely correlated with dysfunctional abilities. According to a slope of the regression line, when psychosocial health problems increased 1 unit, dysfunctional abilities increased 0.40 units. This figure explains the relationship between mental health and work performances for productivities, which subsequently led to poverty.

Indirectly, the psychosocial health problems may also cause other problems namely psychosomatic symptoms that can make people take rest or seek help in order to restore health, abuse alcohol as a way to cope with distress, and act with violence in their home and community. Second, these problems affect the abilities of people to work both at home and in the fields. As a result, people's productivity would be declined and poverty would follow.

Another link to poverty which results from poor mental health is that it relates to the imbalance of the state of mind to handle works or businesses. Poor health is the major cause of impoverishment and other forms of social deprivation including loss of opportunities or discriminations in education and employment. Ill health with high healthcare expenditure beyond the ability to pay and poverty form a vicious circle, for which many Cambodian families become poorer and extremely poor ultimately (National Poverty Reduction Strategy, 2005). Vice versa, materialistic explanation argues that a person's socio-economic position and material deprivation in particular, lead to poorer health through psychological rather than material pathways (Pilgrim & Rogers, 1999). These include factors such as behavior, stress, access to health services, locus of control, and social support that are found to mediate the association between socioeconomic status and health. Studies on poverty, wealth inequality, and health among older adults in rural Cambodia have also shown that those in bottom quartile of wealth report more health problems than those in the second and higher quartile (Zimmer, 2004).

Usually, mental health patients live far from where healthcare services are offered or they just withdraw and isolate themselves from a society. As a nature of illness, certain disorders such as depression, phobia, schizophrenia and panic disorder have a huge impact on socialization. The poorer the mentally disordered person, the greater burden they often suffer (Feuerstein, 1997). Being away from the public means they are far away from media and information. Lack of information is closely linked to the ignorance in taking care of themselves and/or wrong help-seeking patterns for healthcare. Unaware of underlying psychosocial causes and concern with only psychosomatic symptoms, people may seek help with only general practitioners. Treatment for the wrong causes of the problems would never help, and even harm their health in the short and long run by producing side effects because of medications or procedures. This can also push people to the poverty trap.

There has been more interest in social problems of the poor than psychological and emotional states with the hope and assumption that attention to basic material needs would change or solve psychological aspects of individuals, families, but this is not always the case

(Feuerstein, 1997). Empirical observations in the study areas found that financial and material support to people to enable them to start their businesses locally would fail if those individuals had poor psychosocial health. Instead of using money or materials for generating incomes, they spent money on alcohol or gambling. Some of them sold bicycle, cows, or rice seeds, which were provided by the organization and used that money in the wrong ways. In fact, this was because they were deeply resented by the problems which led to the frequent feelings of hopelessness, helplessness, a sense of inferiority and lack of self-esteem.

Hence, in order to reorient people's mindset to their businesses in the right direction and to improve their work performances with the hope to achieve high productivity, mental health should be care for and enhanced before starting any businesses. Policy makers should take these into consideration when they want to reach the goal of poverty alleviation in remote communities.

5.2.5 Prevention of Further Problems

From the findings we could see that among the community members who participated in the study the scores on psychosocial health problems and dysfunctional abilities varied from mild to very severe (Table 3.3 and 3.4). These problems, if not properly addressed, will become more serious into mental disorders (refer to the hypothesized conceptual framework, Figure 1.4). Mental disorders, as defined in the diagnostic criteria by DSM IV⁸ or ICD 10⁹, mean that people are almost dysfunctional.

As a part of life, psychosocial problems, stressful situations, and distresses surround people's daily life. Up to the abilities of the people who are able to handle them, no ones can escape from these kinds of resentments if they live in a society. If left unresolved whether by self or others, those problems and situations will accumulate and make people more anxious, depressed or even psychotic (stress induced psychosis). Helping people at the early point in time of disease onset is much easier than treating them at a later stage. Psychosocial education such as raising of the awareness of basic mental health, positive coping strategies or just providing talk therapies, both individual and group, will produce good outcomes (TPO's experiences). By contrast, if left untouched and when these problems become disorders, they must need pharmacotherapy that requires higher health professionals to deal with.

On the other hand, as a way to cope with stress, people tend to turn to alcohol, increase cigarette smoke or mask their problems by gambling or violent acts. This would drive their life deeper into poverty since they waste money on bad habits and have no time to work. Top on that, negative ways of dealing with psychosocial problems by consuming alcohol and cigarettes would worsen their physical health from time to time.

⁸ The Diagnostic and Statistical Manual of Mental Disorders version IV (DSM IV) is a guide of diagnostic criteria to provide diagnosis for [mental disorders](#). It was published by the [American Psychiatric Association](#) and used in the [United States](#) and in varying degrees around the world among professionals in the field of psychiatry.

⁹ The International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) is developed by the [World Health Organization](#) (WHO) to code the diseases and signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or diseases, mostly in the field of psychiatry. It was widely used in European countries.

At a policy level, if we can address mental health problems early at a primary level in the community itself, community members would get better benefits and this would cut off further consequences resulting from the developments to illnesses and the maladaptive behavior employed by them.

As the process of the KR tribunal continues to prosecute the top KR leaders who were responsible for the auto-genocide, millions of Cambodian survivors as well as perpetrators would be affected by past traumas. In order to encourage people to participate in national reconciliation, reconstruction and development, they must regain their mental health in a stable manner. Development and growth cannot be expected to occur unless members of the population are well motivated, possess self-esteem, or can maintain free relationships. Those at peace with themselves and the environment are first to gain enough confidence before achieving the next stage of national reconciliation (Somasundaram & Van de Put, 1999).

In summary, preventions have been seen as an important measure at any age of individuals. At the younger ages, prevention can prepare future potential citizens with good mental and physical health for the society. At the productive ages, there is an economic gain that can be obtained with prevention which may reduce morbidity, disability or improve working capacity. At the later ages, prevention can produce economic savings from the enhancement of independence and the reduction of the need for medical and social supports (Rose, 2008). Therefore, preventions are money savers.

5.3 Recommendations

Following the discussion above, in order to improve the capacity of community members and their abilities to perform in daily life and works for better income and fruitful productivity, the following recommendations should be considered:

- A. The National Poverty Reduction Strategy (2005) stated that "the priority poverty reduction actions are maintaining macroeconomic stability, improving rural livelihoods, expanding job opportunities, improving capabilities, strengthening institutions and improving governance, reducing vulnerability and strengthening social inclusion, promoting gender equity and priority focus on population." But, as discussed earlier, to improve productivity in rural remote communities, psychosocial health of the people has to be added to these strategic actions and properly organized for implementation because it has a large positive relationship with the levels of functioning of activities for daily living and for work. Having only materials and money is not sufficient to generate income for better living if psychological health is not stable. People would spend these resources on the wrong ways.
- B. Government, through the Ministry of Health or other relevant Ministries, should recognize the burden of mental health on people, and extend their work on mental and social issues to communities in order to examine local resources that can be used as assets, to investigate psychosocial health problems early, and to offer appropriate interventions. Integrating a primary mental health program into health centers is the best way to extend the activities to other parts of the country since the health coverage plan has located them in suitable geographical areas, where people can access them within the similar distances. Or, the government should

encourage more NGOs to operate community mental health to other provinces to address the issues widely. The implementation of primary mental health interventions requires less professional expertise, and does not need huge capital costs for high tech equipments. More resources will be saved compared to setting up mental health asylum or institutions.

- C. Mental health promotion should be raised more effectively among the public, particularly in remote communities so that people can realize their problems and seek help properly. The result of the study found that there was less number of male subjects who admitted that they have problems. Men are the main earners for household, and if they are dysfunctional the economic lost might be enormous. Furthermore, men are also perpetrators, and if their mental health problems were managed properly the violence would be reduced and the number of victims suffered from domestic violence and alcohol abuse would also be reduced

REFERENCES

- Allan, P. & Barbara, P. (2000). *Why men don't listen & Women cannot read maps*. Communication Psychology. Victoria: Maryborough.
- Allen, T. (1991). Understanding Alice: Uganda's holy spirit movement in context. *Africa*, 61(3), 370 – 400
- Andreski, P., Chilcoat, H., & Breslau, N. (1997). Post-traumatic stress disorder and somatization symptoms: a prospective study. *Journal of Psychiatry Research* 79 (1998) 131 – 138
- Boehnlein, J.K., Kinzie, J.D., Ben, R., & Fleck, J. (1985). One-year follow-up study of post traumatic stress disorder among survivors of Cambodian concentration camp. *American Journal of Psychiatry*, 142(8) 956 – 959
- Bonnewyn, A., Bruffaerts, R., Van Oyen, H., Demarest, S., & Demyttenaere, K. (2005). The impact of mental disorders on daily functioning in the Belgian community. Results of the study "European Study on Epidemiology of Mental Disorders". *Rev Med Liege*. 2005 Nov; 60(11): 849 – 54
- Burns, T. (2006). *Psychiatry: A Very Short Introduction*. New York: Oxford University Press.
- Busfield, J. (1986). *Managing Madness*. London: Hutchinson.
- Clausen, J.A. (ed.) (1968). *Socialization and Society*, Boston: Little Brown and Company.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.)
- Community Mental Health Project (2008). A case study of a self-help group member. TPO Cambodia.
- Deeg, D.J.H., Verbrugge L.M., and Jagger, C. (2003). "Disability measurement." *Determining Health Expectancies*. West Sussex, UK: John Wiley & Sons, Ltd.
- de Jong, J. T. V. M. (2000) *Psychiatric problems related to persecution and refugee status*. Berlin, Germany: Springer.
- de Jong, J. T. V. M., Komproe, I. H., Van Ommeren, M., El Masri, M., Mesfin, A., Van de Put, W. A. M., & Somasundaram, D. (2001b). Prevalence and co-morbidity of psychiatric disorders in traumatized communities from Algeria, Cambodia, Ethiopia, and Gaza. Manuscript submitted for publication.
- de Jong, J. T. V. M. (2002). *Trauma, War, and Violence. Public Mental Health in Socio-Cultural Context*. New York: Plenum

- de Jong, J. T. V. M., Van Ommeron. M., & Komproe, I. H. (2003). Common mental disorders in post-conflict settings. *The Lancet* 2003, Vol 361. www.thelancet.com
- de Jong, J. T. V. M., Komproe, I. H., & O'Connell, K. (2004). The Effectiveness & Cost-Effectiveness of Psychosocial Intervention in Cambodia. Phnom Penh: TPO Cambodia.
- Eisenbruch, M. (1990a). Classification of natural and supernatural causes of mental distress: Development of a Mental Distress Explanatory Model Questionnaire. *Journal of Nervous and Mental Disease*, 178(11), 712 – 719
- Eisenbruch, M. (1990b). Report of preliminary study of mental health in Cambodia. Document Submitted to UNHCR Geneva.
- Feuerstein, M. T. (1997). *Poverty & Health. Reaping a Richer Harvest.* London: Basingstoke.
- Gayford, J. (1994). Domestic Violence. *Violence in Health Care: A Practical Guide to Coping with Violence and Caring for Victims*, edited J. Shepherd, 117 – 34. New York: Oxford University Press.
- Hardeman, W., Damme, W. V., Pelt, M. V., Por, I., Kimvan, H. and Meessen, B. (2004). Access to healthcare for all? User fees plus a Health Equity Fund in Sotnikum, Cambodia. *Health Policy and Planning*; 19 (1): 22 – 32.
- Jadam, A. R., and O'Grady, L. (2008). How should health be defined? *BMJ* 2008; 337:a2900
- Jeyaraja Tambiah, S. (1992). *Buddhism betrayed? Religion, Politics, and Violence in Sri Lanka.* Chicago: University of Chicago Press.
- John, K. (2002). *The role of the community psychiatric nurse: practice perspective.* Buckinghamshire: Open University Press/MacGraw Hill Publications.
- Katz, S., Branch, L. G., Branson, M. H., Pasidero, J. A., Beek, J. C. & Greer, D. S. (1983). Active Life Expectancy. *The New England Journal of Medicine*. 309(20), 1218 – 1224
- Kleinman, A. (2003). *The Global Epidemic of Mental Health Problems in Developing Countries: Depression, Suicide & Violence.*
- Lipowski, Z. J. (1988). "Somatization: the concept and its clinical application". *Am J Psychiatry* 145 (11): 1358 – 68.
- Loustaunau, M. & Sobo, E. (1997). *The Cultural Context of Health, Illness and Medicine.* Connecticut, London: Bergin and Garvey.
- Manoux, A., Clarke, P. & Marmot, M. (2002). Multiple measures of socio-economic position and psychosocial health: proximal and distal measures. *International Journal of Epidemiology* 2002; (31): 1192 – 1199
- Marshall, G. N., Schell, T. L., Elliott, M. N., et al (2005). Mental Health of Cambodian Refugees 2 Decades After Resettlement in the United States. *American Medical Association*, Vol 294, No. 5
- Marshall, G. N., et al. (2006). Rates and Correlates of Seeking Mental Health Services among Cambodian Refugees. *American Journal of Public Health*, Vol 96, No.10
- Merriam-Webster, merriam-webster.com
- Ministry of Health, Cambodia (2005). *National Health Statistics Report 2006.* Department of Planning and Health Information. Phnom Penh.
- Mollica, R. F., Donelan, K., Svang, T., Levelle, J., Elias, C., Frankel, M., & Blendon, R. J. (1993). The effect of trauma and confinement on functional health and mental health status of Cambodians living in Thailand-Cambodia border camps. *JAMA*, 270(4) 581 – 586
- Mollica, R. F. (1994). *Southeast Asian Refugees: Migration history and mental health issues.* Washington, DC: American Psychological Association.

- Mollica, R. F. (2006). *Healing Invisible Wounds: Paths to Hope and Recovery in a Violent World*. Orlando: Harcourt, Inc.
- Murray, C. J. L. & Lopez, A. D. (1996). *The Global Burden of Disease*. Geneva, World Health Organization, Harvard School of Public Health, the World Bank.
- Myslewic, E. (1988). *Punishing the poor: The international isolation of Cambodia*. Oxford, England: Oxfam.
- National Poverty Reduction Strategy (2003 – 2005). Council for Social Development. Kingdom of Cambodia.
- NGO statement to the 2001 consultative group meeting on Cambodia. Retrieved December 12, 2007, from <http://www.ngoforum.org.kh>.
- Oxfam GB, (2000). *Health and Landlessness: A Mini Case Study*. Phnom Penh: Oxfam, Cambodia Land Study Project.
- Pilgrim, D. and Rogers, A. (1999). *A Sociology of Mental Health and Illness*. Philadelphia, USA: Open University Press.
- Polling, B. (1984). The aftermath. In *the Killing Fields* (Edited by Greenfield, F. and Locke, N.). Weidenfield & Nicolson, London.
- Rose, G. (2008). *Rose's strategy of preventive medicine*. New York: Oxford University Press.
- Sack, W. H. (1999). Twelve-year follow-up study of Khmer youths who suffered massive war trauma as children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38: 1173 – 1179.
- Salimovich, S., Lira, E., & Weinstein, E. (1992). *Victims of fear: The social psychology of repression*. Berkeley, CA: University of California Press.
- Savedoff, W. D., & Schultz, T. P. (2000). *Wealth from Health*. New York, Washington, DC: Inter-American Development Bank.
- Savin, D. (2000). *Frontline Reports: Developing Psychiatric Training and Services in Cambodia*. *American Psychiatric Association* 51: 935, July 2000.
- Sayce, L. (1989). *Community Mental Health Centers – rhetoric or reality?* in A. Brackx and C. Grimshaw (eds) *Mental Health Care in Crisis*. London: Pluto.
- Schneider, M. J. (2006). *The Introduction to Public Health* (2nd ed). London: Jones and Bartlett
- Schnall, P.L., Landsbergis, P.A., Baker, D. (1994). *Job Strain and Cardiovascular Disease*. *Annual Review of Public Health* 15:381-411.
- Shawcross, W. (1985). *The quality of mercy*. Glasgow, Scotland: William Collins Sons.
- Sokhom, H. (2000). *Domestic Violence in Cambodia: A Study of Healthcare Providers Perceptions and Response – Brief Article – Statistical Included*. WIN News, Wntr 2000.
- Somasundaram, D. V. & Van de Put, W. A. C. M. (1999). *Mental Healthcare in Cambodia*. *Bulletin of the World Health Organization*, 1999, 77 (3)
- The World Bank, Cambodia (2005). *Country Classification of Economies in Gross National Income (GNI) Per Capita*. Retrieved December 12, 2007, from <http://web.worldbank.org>.
- The UNICEF, Cambodia (2005). *Basic Indicators*. Retrieved December 12, 2007, from <http://www.unicef.org>
- The World Health Organization, Cambodia (2005). *Mortality Profile: World Health Statistics*. Retrieved December 12, 2007, from <http://www.who.int/countries/khm/en/>
- Van de Put, W. A. C. W. (1992). *Empty hospitals, thriving business: Utilization of health services and health seeking behavior in two Cambodian districts*. Amsterdam: Medecines sans Frontieres Holland.
- Van de Put, W. A. C. W., & Maurice, E. (2002). *The Cambodian Experience: Trauma, War, and Violence*. New York, Plenum.

Verbrugge, L.M., Jette, A.M. (1994). The disablement process. *Social Science and Medicine*. 1994: 38:1–14.

Weissman, M. M. (2000). Social functioning and the treatment of depression. *Journal of Clinical Psychiatry* 61, 33 – 38.

Weiss, G., & Lonnquist, L. (1994). *The Sociology of Health, Healing and Illness*. Englewood Cliffs, NJ: Prentice-Hall.

Wilson, K. B. (1992). Cults of violence and counter-violence in Mozambique. *Journal of Southern African Studies*, 18, 531 – 582.

Zimmer, Z. (2004). Poverty, Wealth Inequality, and Health among Older Adults in Rural Cambodia. Working Paper, the Population Council, 2006 No. 217

Appendix: Questionnaire on Psychosocial Health Problems and Dysfunctional Abilities

Part I: Socio-demographic Information

Date of interview: **Province:**

Age:years **Gender:** 1. Male 2. Female

Education: 1. Cannot read and write
2. Studied in grade

Marital status: 1. Married 2. Single 3. Widowed

Family's size (Number of family members in a household):

Main job: 1. Farmer
2. Fisher
3. Others What:

Accessory job: 1. Seller
2. Tailor
3. Others What:

Family Status: 1. Head of the family 2. Member of the family

Part II: Psychosocial Health Problems

(More score denotes more psychosocial health problems)

During the past 4 weeks, did you ever have or come across problems, symptoms, or activities as in the following statements. If so how often were they?

No	Problems / Conditions	Never	Sometimes	Often	Always
(Note: never = 0, sometimes = 1, often = 2, and always = 3)					
1	Difficult to fall a sleep at night				
2	Worries a lot about every little thing				
3	Restless, irritable or bothersome				
4	Trembling of hands, feet or mouth				

	while talking				
5	Feared of dying or becoming mad				
6	Afraid of everything not particular				
7	Had any reason to wonder if losing your mind				
8	Irritabilities or anger outburst				
9	Early woke up and not able to continue to sleep. Took medicine to help sleep				
10	Felt like crying, sad, blue or depressed				
11	No hope about the future				
12	Difficult to make decision				
13	Felt that life is not worth living. Had suicidal thought				
14	Quilt or loss of self confidence				
15	Had trouble with constipation, or had trouble with urinate				
16	Heart beats faster than usual, or had a chest tense				
17	Had a headache, body pain or dizziness for which you had to take medicine to release them				
18	Lost appetite				
19	Were tired all the time				
20	Did some traditional ways to restore health (coning, pinching, hair pulling, burning or stick pasting)				
21	Exaggerated startle to stimulus, such as sound, persons, or objects.				
22	Had a bad dream about traumatic events				
23	Had nightmares				
24	Avoided from certain stimulus such as activities, people, object or sound				
25	Recurrent distressing of images, thoughts, or perception that had happened				
	<i>Socializations</i>	<i>Always</i>	<i>Often</i>	<i>Some-times</i>	<i>Never</i>
(Note: always = 0, often = 1, sometimes = 2, and never = 3)					
26	Got along well within the family, or felt close to the members of the family				
27	Relied on family for emotional support, got help/care from family for personal needs, or got support from friends				
28	Helped certain members in the family when they had problems, or offered emotional support				

29	Met or chatted with people for fun				
30	Friends listened to what you thought. Had a deep and shared relationship with a number of friends				
31	Felt being in the center of circle of your friends				
32	Talked to trusted friends about thing that was very personal and private				
33	Got together with friends, or went out with them for creational social events				
34	Thought that you were important to others				
35	Thought that you are well liked by others or felt that what you did was liked by others				
36	Thought that if you died tomorrow, many people would miss you				
37	If you were sick, many friends would visit you				
38	Most people you knew thought highly of you				

Part III: Dysfunctional Abilities

(Please circle the number which best described you)

39. During the past 4 weeks, how often did you notice you were losing weight or felt too tired?

- i. Never 1
- ii. Rarely 2
- iii. Sometimes 3
- iv. Very often 4
- v. Always 5

40. During the past 4 weeks, what was the hardest physical activity you could do for at least 1 hour a day?

- i. Very heavy (e.g. worked in the field) 1
- ii. Heavy (e.g. worked around home) 2
- iii. Moderately (e.g. did house work) 3
- iv. Light (e.g. looked after the children) 4
- v. Very light (e.g. did cooking) 5

41. During the past 4 weeks, how often did you have pain in your body or headache that could disturb your functional abilities?

- i. Never 1
- ii. Rarely 2

- iii. Sometimes 3
- iv. Very often 4
- v. Always 5

42. During the past 4 weeks, how much were you bothered by emotional problems such as feeling anxious, depressed, irritable, or downhearted and sad?

- i. Not at all 1
- ii. Slightly 2
- iii. Moderately 3
- iv. Quite a bit 4
- v. Extremely 5

43. During the past 4 weeks, how much did you lose interest in things that you usually care and enjoyed?

- i. Not at all 1
- ii. Slightly 2
- iii. Moderately 3
- iv. Quite a bit 4
- v. Extremely 5

44. During the past 4 weeks, what was your concentration on what you were doing your usual activities / tasks, both inside or/and outside the house?

- i. No difficulty at all 1
- ii. A little bit of difficulty 2
- iii. Some difficulty 3
- iv. Much difficulty 4
- v. Could not concentrate 5

45. During the past 4 weeks, how much did you spend of the day lying down in order to rest?

- i. Never 1
- ii. Rarely 2
- iii. Sometimes 3
- iv. Very often 4
- v. Always 5

46. During the past 4 weeks, how much difficulty did you have in doing your usual activities or tasks, both inside and outside the house because of physical and emotional health?

- i. No difficulty at all 1
- ii. A little bit of difficulty 2
- iii. Some difficulty 3
- iv. Much difficulty 4
- v. Could not do 5

47. During the past 4 weeks, how did you think about what you were doing your usual activities / tasks, both inside or/and outside the house?

- i. Very good 1
- ii. Good 2
- iii. Fair 3
- iv. Poor 4

v. Very bad 5

48. During the past 4 weeks, how much did you think you needed people to talk about things that were very personal or private?

- i. Not needed 1
- ii. A little bit 2
- iii. Quite a bit 3
- iv. Needed 4
- v. Very much needed 5

49. During the past 4 weeks, did your physical and emotional health limit your social activities with family, friends, neighbors or groups?

- i. Not at all 1
- ii. Slightly 2
- iii. Moderately 3
- iv. Quite a bit 4
- v. Extremely 5

50. During the past 4 weeks, how often did you and your friends do things for one another?

- i. Always 1
- ii. Very often 2
- iii. Sometimes 3
- iv. Rarely 4
- v. Never 5

51. How would you rate your overall health now compared to 4 weeks ago?

- i. Much better 1
- ii. A little better 2
- iii. About the same 3
- iv. A little worse 4
- v. Much worse 5

52. During the past 4 weeks, how often did you have to stay indoors because of your health?

- i. Never 1
- ii. Rarely 2
- iii. Sometimes 3
- iv. Very often 4
- v. Always 5

53. During the past 4 weeks, how did you rate your health in general?

- i. Very good 1
- ii. Good 2
- iii. Fair 3
- iv. Poor 4
- v. Very poor 5

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