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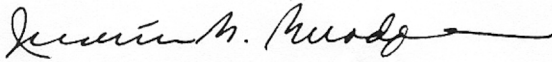
VIRGINIA COMMONWEALTH UNIVERSITY
L. Douglas Wilder School of Government and Public Affairs
Center for Public Policy

PH.D. IN PUBLIC POLICY AND ADMINISTRATION

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*"A Needs Assessment of Users of Psychiatric Services
In Saudi Arabia"*

has been approved by his committee as satisfactory completion of the dissertation requirement for the degree of Ph.D. in Public Policy and Administration.



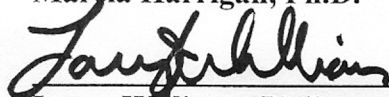
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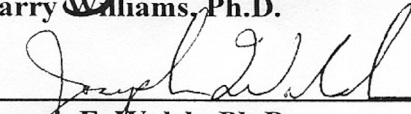
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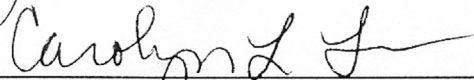
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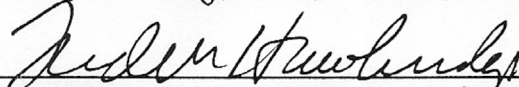
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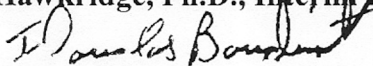
Joseph F. Walsh, Ph.D.



Carolyn L. Funk, Ph.D., Director, Ph.D. Program



Fred M. Hawkridge, Ph.D., Interim Dean, College of Humanities and Sciences



F. Douglas Boudinot, Ph.D., Dean, School of Graduate Studies

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Needs Assessment of Users of Psychiatric Services in Saudi Arabia

A dissertation submitted to the faculty of the

L. Douglas Wilder School of Government and Public Affairs

In partial fulfillment of the requirements for the degree of Doctor of Philosophy

By

Khaled Aldeham

Dissertation Directed by

Judith Bradford, Ph. D.

Director, Community Health Research Initiative

Center for Public Policy and Administration

L. Douglas Wilder School of Government and Public Affairs

Virginia Commonwealth University

Richmond, Virginia

USA

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Dedication

This work is dedicated to my mother Sehkah Al Nassar, for her incredible love and support during my studies in the United State of America.

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First, and for most, I thank Almighty, Allah for bestowing unlimited favors on me, including good health, knowledge, and patience, all of which helped me to accomplish this endeavor.

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Contents

Dedication.....	i
Acknowledgment.....	ii
List of Tables.....	viii
List of Figures.....	ix
Abstract.....	1
CHAPTER 1: PROBLEM TO BE STUDIED.....	2
Background.....	2
Statement of the Problem.....	7
Purpose and Significance of the Study.....	7
Research Aims.....	8
Research Assumption.....	9
Research Questions.....	9
CHAPTER 2: SAUDI ARABIA OVERVIEW.....	10
Geography.....	10
Political System.....	11
Economy.....	12
Population and Health Status.....	15
Health Care Services.....	17
History of Mental Health Services in the Middle East.....	20
Mental Health History in the United States of America and Europe.....	24
Mental Health Care Services in Saudi Arabia.....	27
Al-Amal Complex for Mental Health.....	32
CHAPTER 3: LITERATURE REVIEW.....	35
Definition of Mental Illness.....	35
Definition of Need.....	36
Demographic Characteristics of the Mentally Ill in the Literature.....	38
Age.....	40
Gender.....	42
Income.....	45

Education	47
Empirical Research Related to Saudi Arabia.....	49
Needs Research.....	52
Conceptual Framework for the Proposed Study Based on the Literature Review	54
CANSAS.....	56
CANSAS and the Study.....	57
Policy Analysis: The Theoretical Framework	57
Incremental Model.....	58
Rational Choice Model	59
Stage Model	61
Public Policy Models and the Study.....	62
Stage Model and Saudi Arabia's Decentralization Policy.....	63
CHAPTER 4: STUDY METHODOLOGY.....	69
Hypothesis	69
Operational Definition of Terms.....	70
Study Variables.....	71
Study Design.....	73
Survey Instruments	74
Sample Size.....	77
Data collection Procedures	78
Statistical Analysis.....	82
The Statistical Analysis for Each Hypothesis.....	84
CHAPTER 5: DATA ANALYSIS AND RESULTS.....	86
Section One: Demographic Characteristics of the Participants	87
Summary	92
Section Two: Testing the Study Hypotheses	93
Summary of Findings.....	102
Section Three: Post Hoc Analyses.....	102
CHAPTER 6: INTERPRETATION OF RESULTS AND IMPLICATIONS.....	104

Section One: Interpretation of the Participants' Demographic Characteristic	104
Section Two: Post Hoc Analyses	109
Section Three: Interpretation of the Results of Study With Regard to the Four Hypotheses.....	115
Study Implications	123
Limitations of the Study.....	127
Further Research	129
REFERENCES	132
APPENDIX A: APPROVAL TO CONDUCT RESEARCH.....	150
APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE (ARABIC VERSION)	151
APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE (ENGLISH VERSION).....	152
APPENDIX D: CANSAS INSTRUMENT (ENGLISH VERSION).....	153
APPENDIX E CANSAS INSTRUMENT (ARABIC VERSION).....	158
APPENDIX F: IRB APPROVAL LETTER	167
APPENDIX G: PSYCHIATRIST'S SCRIPT (ARABIC).....	170
APPENDIX H: PSYCHIATRIST'S SCRIPT (ENGLISH)	172
APPENDIX I: STUDY COORDINATOR SCRIPT (ENGLISH)	173
APPENDIX J: STUDY COORDINATOR SCRIPT (ARABIC).....	174
APPENDIX K: SURVEY COVER LETTER (ENGLISH).....	176
APPENDIX L: SURVEY COVER LETTER (ARABIC).....	177

List of Tables

Table 2-1 Economic Indicators	14
Table 2-2 Demographic Indicators	15
Table 2-3 Saudi 5-Year Health Development Plans	18
Table 2-4 Health Resources Indicators	19
Table 2-5 The Development of Mental Health Care Services in Saudi Arabia.....	29
Table 5-1: Number and Percentage of the Research Participants by Gender	87
Table 5-2 Number and Percentage of the Research Participants by Age Group	87
Table 5-3 Number and Percentage of the Research Participants by Marital Status	88
Table 5-4 Number and Percentage of the Research Participants by Level of Education .	88
Table 5-5 Number and Percentage of the Research Participants by Income	89
Table 5-6 Number and Percentage of Participants Identifying Met and Unmet Needs by Gender.....	89
Table 5-7 Number and Percentage of the Research Participants Who Knew Their Diagnosis.....	91
Table 5-8 Number and Percentage of the Research Participants by Diagnosis and Gender	92
Table 5-9 Reliability Statistics for 18 Questions	94
Table 5-11 Correlations Among Total Needs Score and Age (Pearson's <i>r</i>).....	97
Table 5-12 ANOVA Results for Mean of Total Needs Between Age Groups.....	97
Table 5-13 Correlations Among Total Needs Score and Income (Pearson's <i>r</i>)	99
Table 5-14 ANOVA Results for Mean of Total Needs Between Income Groups.....	99
Table 5-15 Correlations Among Total Needs Score and Education (Pearson's <i>r</i>)	101
Table 5-16 ANOVA Results for Mean of Total Needs Between Education Groups	101

List of Figures

Figure 1 Mental Health Outpatients and Inpatients in Saudi Arabia.....	31
Figure 2 Conceptual Framework.	55
Figure 3 Stage Model.....	61
Figure 4 Procedural Steps for Collection of Data.....	78

Abstract

Background: the aims of this study were to assess the outpatients needs among 155 patients at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia, and identifying the demographic variables that are associated with these needs. Method: the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) was used to assess the needs and the demographic questionnaire was used to identify the patient's demographic variables includes gender, age, income and level of education. Results: patient who meets any one of these criteria; being elderly, poor, and the uneducated are more likely to have higher total number of needs. Men and women are more likely to report similar met needs, but women are more likely expressed more unmet needs.

Chapter 1: Problem to Be Studied

Background

Saudi Arabia is a large country with a population of 27,019,731 as of mid-2006 (Library of Congress, 2006). It is a relatively new country, only united in 1932. The discovery of oil in 1934 marked the start of governmental efforts in health services. According to the Ministry of Health (MOH), health services began with limited resources and very small clinics scattered in some large cities, but gradually grew to include highly sophisticated hospitals, clinics, and medical centers (MOH, 2004).

The rapid growth of health services has shown the need for providing psychiatric services to the increased numbers of individuals suffering from mental illness. It has been estimated that one-third of primary health care patients in Saudi Arabia have reported some symptoms related to mental illnesses (Al-Khathami & Ogbeide, 2002). MOH reported detailed diagnoses for outpatients in 2004: about 26.3% of the outpatients were suffering from schizophrenia, schizotypal, and delusional disorders; 19.5% were diagnosed with mood disorder; 19.7% were suffering from neurotic, stress-related, and somatoform disorders; 4.5% were suffering from mental & behavioral disorders due to psychoactive substance use; 4.5% were diagnosed with mental retardation; 2.2% were suffering from organic, including symptomatic, mental disorders; 6.3% were diagnosed with epilepsy; 1.3% were suffering from behavioral syndromes associated with physiological disturbances & physical factors; 2.0% were diagnosed with disorders of adult personality and behavior; 0.6% had disorders of psychological development: 0.8%

had behavioral & emotional disorders with onset usually occurring in childhood & adolescent; 3.5% were diagnosed with unspecified mental disorders; 0.2% were diagnosed with migraine; and, finally, 8.4% had no mental and emotional disorders (MOH, 2004). For inpatients, MOH reported that 19.3% of the total number were diagnosed with schizophrenia and delusional disorders, whereas 14.6% were suffering mood disorders (MOH, 2004).

The growing number of mentally ill patients, coupled with the decreasing ability of the society to contain the mentally ill within the existing social structure, led to the establishment of organized psychiatric care (MOH, 1980). The first record of organized mental health services in the country was the establishment of Taif Mental Hospital in 1962, which was the only provider of mental health care in the country until 1983 (MOH, 1980).

After 1983, the government started to decentralize mental health services through the establishment of psychiatric hospitals and outpatient clinics all over the country (MOH, 2002). As a result of the decentralization of mental health services, many hospitals have been built, many outpatient psychiatric clinics have been established in most of major cities, and hundreds of millions of dollars have been allocated to provide adequate services to the mentally ill in order to help them stay in the community and contribute to the social and economic progress of the country (MOH, 1980). Thus, it can be seen that Saudi Arabia has made a major improvement from lacking psychiatric services before 1962 to the development of highly specialized psychiatric services throughout the country at present.

However, this study was set to examine whether this new decentralization policy has provided the mentally ill with more adequate services and met their needs or not. Furthermore, the number of the mentally ill in the country has grown considerably in recent years, as is shown below.

Such a study must begin, of course, with a definition of need, and various definitions have been suggested by theorists. For example, psychological theorists have used the concept of need as a basis for understanding behaviors, such as Maslow's hierarchy of needs (Maslow, 1954; Dinkmeyer, 1996). On the other hand, psychiatrists have used the measurement of need to inform service provision (Van Haaster, Lesage, Cyr, & Toupin 1994; Stevens & Gabby, 1991; Slade, 1994). In Britain, the National Health Service and Community Care Act (Slade, 1996) defines needs as "the requirements of individuals to enable them to achieve, maintain or restore an acceptable level of social independence or quality of life" (p.1).

Standardized assessments of the needs of the mentally ill were first developed by defining an operational concept of need and using information from patients, relatives, and staff to assess overprovision as well as underprovision (Wykes, Sturt, & Creer, 1985). This led to the development of the Medical Research Council (MRC) Needs for Care Assessment by Brewin, Wing, Mangen, Brugha, and MacCarthy (1987) to measure both health and social needs of psychiatric patients.

After that, the Camberwell Assessment of Need (CAN) was designed by Slade, Thornicroft, Loftus, Phelan, and Wykes, (1999). CAN is a comprehensive assessment tool; and a shorter instrument was introduced at about the same time, the Camberwell

Assessment of Need Short Appraisal Schedule (CANSAS; Phelan et al., 1999). One advantage of CANSAS is that it can be completed by the patients themselves. Needs are defined as what the subjects believe to be necessary for them to stay in the community and remain out of the hospital. For this reason, CANSAS was used in this study.

CANSAS assesses the existence of met and unmet needs in 22 health and social domains: Accommodation, Food, Looking After the Home, Self-Care, Daytime Activities, Physical Health, Psychotic Symptoms, Information on Condition and Treatment, Psychological Distress, Safety to Self, Safety to Others, Alcohol, Drugs, Company, Intimate Relationships, Sexual Expression, Childcare, Basic Education, Telephone, Transport, Money, and Benefits. For each domain, patient responses are scored on a 4-point scale: 0 = *no problem*, 1 = *met need* (no or moderate problem because of help being received), 2 = *unmet need* (current serious problem, regardless of any help received) (Phelan et al., 1999).

For the purpose of this study, needs were measured by creating a “Needs Score” for each subject based on the sum of his or her responses. In this way, we assumed that there was an “ordering” in response, with 0 representing no need, 1 representing a met need, and 2 representing a unmet need. Given that there are 18 items in the questionnaire, and each item can be assigned the value of 0, 1, or 2, this “Needs Score” would take on the values from 0 (no need at all) through 18 (the subjects has all the needs in the questionnaire and none of them have been met).

CANSAS was modified for use in Saudi Arabia. The questions concerning alcohol, drugs, sexual expression, and intimate relationship were eliminated. The

dominant social and religious mores in Saudi Arabia are such that these questions are not likely to be answered at all; and, even if they are answered, the responses are likely to be unreliable.

This study was designed to examine whether the decentralization policy has provided the mentally ill with adequate services and met their needs. That is, this study was conducted to identify outpatient needs of the mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia. Furthermore it identified the demographic variables that are most associated with these needs, such as age, gender, level of education, and income. The study gathered information directly from the mentally ill using the CANSAS developed by (Slade et al., 1999). This study hypothesized that needs would vary based on the patients' demographic variables. Obtaining this information directly from patients was believed to offer an important perspective on what necessary services and policies are needed to enable them to stay in the community and be part of the social and economic development of Saudi Arabia.

In the following sections of this chapter, a statement of the problem, purpose of the study, and significance of the study are introduced. The following chapter provides background information about Saudi Arabia so that the need for the study can be put in context. In the third chapter a review of the pertinent literature and the theoretical framework for the study are presented. The fourth chapter articulates the research methodology, statement of hypotheses, data collection procedures, and data analysis. The Fifth chapter presents the data analysis and the results of the survey. Finally, the sixth chapter contains the study's summary and conclusions.

Statement of the Problem

In 1983, the Saudi government started to decentralize mental health services and attempted to develop an effective mental health community support system through establishing mental health hospitals and outpatient units all over the country.

The decentralization of mental health services and the implementation of effective community support systems are goals of many public mental health authorities in Saudi Arabia, who are attempting to shift the focus and funding for mental health services from what had been the single centralized psychiatric hospital in Taif to an effective community mental health care system throughout the country. Therefore, this study was conducted to examine whether this policy has provided those mentally ill with more adequate services and meet their various needs.

Purpose and Significance of the Study

The specific purpose of this study was to identify the outpatient needs of the mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh and assess the demographic variables that are most associated with these needs, including age, gender, level of education, and income. The identification of social and health needs of this population is considered to be important in providing MOH with the information needed to improve the delivery of mental health care in Saudi Arabia. Specific recommendations, based on the population's demographic characteristics, were intended to be a significant component of the study's final report. This study was thought to be a significant because

it explored untapped territory in which neither exploratory nor analytical research has been conducted since the decentralization of mental health services.

The measurement of needs of the mentally ill has become an important methods of evaluating mental health services (Thornicroft, Brewin, & Wing, 1992; Thornicroft & Tansella, 1996; Phelan et al., 1999; Ochoa et al., 2003), particularly in Saudi Arabia, which lacks a well-established and effective community system, to carry out the decentralization of services (Okasha, 2003; Ranjith, 2001; Saravanan, 2001). Al-Faris et al., (1997) and El-Rufaie (1988) reported that the prevalence of mental disorders among Saudi patients attending the Primary Health Center was estimated to be 30–40% and that more than 90% of those disorders were missed (Al-Faris et al., 1997). In summary, the policy of decentralization, the growing need for mental health care, and the absence of any need assessments for this population all point to the significance of this study.

Research Aims

This study, as indicated, had two principal research aims:

1. To identify the social and health needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia, in order to examine whether the decentralization policy has provided this population with adequate services and whether their various social and health needs are being met.
2. To identify the demographic variables most associated with these needs.

Research Assumption

The research assumed that there was an inequity in the distribution of mental health services among the outpatient consumers at Al-Amal Complex for Mental Health, particularly that the elderly, women, the poor, and the uneducated would report more total number of needs than those who are young, men, rich, and educated. According to the research results, the research assumption was true that the poor, less educated, and elderly would report more total number of needs than the young, rich, and educated. Women had more total number of needs than men subjects, but the difference did not reach significance ($p = < .05$); women had more unmet needs than men.

Research Questions

The study was designed to answer the following questions:

1. What are the needs of the mentally ill outpatient consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia?
2. What is the relationship between the total number of needs and the demographic characteristics, specifically age, gender, income, and level of education?

Chapter 2: Saudi Arabia Overview

This chapter includes detailed descriptions of Saudi Arabia, including its geography, political system, economy, population, health care system in general, and mental health care system in particular, with special emphasis on Al-Amal Complex for Mental Health. The first part of the chapter introduces the reader to Saudi Arabia's geography, political system, and economy. Next, population and the health status of the Saudi population are described; also, the challenges that face the health system are articulated. After that, health services in Saudi Arabia are described in detail, including the history of health care services, the current health care delivery agencies, and the present human resources. Finally, the mental health services are discussed. The review covers the history of the mental health care system and the current situation and resources for psychiatric care.

Geography

Saudi Arabia occupies about 2,250,000 square kilometers (868,730 square miles). It is located in the southwest corner of Asia and at the crossroad of Europe, Asia, and Africa. It occupies almost 80% of the Arabia Peninsula, with the Red Sea and the Gulf of Ababa to the west and the Arabian Gulf to the east. Neighboring countries are Qatar, the United Arab Emirates, and Oman to the east, Yemen to the south, Jordan to the northwest, and Iraq and Kuwait to the north. Saudi Arabia contains five areas, including the Rub Al-Khli, or Empty Quarter, and the Central, Western, Eastern, and Northern Regions (Saudi Arabian General Investment Authority [SAGIA], 2004).

Political System

Saudi Arabia was founded by King Abdulaziz Al-Saud (1880-1953). In 1902, he successfully recaptured the City of Riyadh, which is the capital city of Saudi Arabia. King Abdulaziz succeeded in unifying the Kingdom of Saudi Arabia in 1932 and ruled till his death in 1953. After that, his sons succeeded to the throne (Saudi Embassy to the United States, 2006).

Saudi Arabia was an absolute monarchy until 1992, at which time the Saud royal family introduced the country's first constitution. The constitution is governed by Islamic law, which explains the government's rights and responsibilities. All laws and regulations are drafted from the Holy Qur'an and Sunnah (the teachings and sayings of the prophet Mohammed). The head of the state and Prime Minister is the King, who is chosen by princes of the royal family. The King rules through royal decree issued in conjunction with the Council of Ministers and with advice from the Consultative Council (Saudi Embassy to the United States, 2006).

The Council of Ministers was established in 1953. It consists of the Prime Minister (the King), the First Deputy Prime Minister (the Crown Prince), the second Deputy Prime Minister, 21 ministers with portfolio, and 6 ministers of state. The Council of Ministers, in conjunction with the King, shaped the executive and legislative branches of the government. It meets weekly to outline and implement internal, external, financial, economic, educational, and defense policies and for general affairs of the state (Saudi Embassy to the United States, 2006).

The Consultative Council (Majlis Al-Shura) is appointed by the King. It advises the King and the Council of Ministers on a regular basis on matters related to government programs and policies. It also functions to assess, interpret, and modify the Kingdom's system of laws, bylaws, contracts, and international agreements (Saudi Embassy to the United States, 2006).

The judicial system is based on Islamic law (Sharia). Currently, the Ministry of Justice administers the Sharia legal system through the Sharia courts. Sharia courts include courts of first instance and appeals courts. Minor civil and criminal cases are adjudicated in the summary courts of first instance. The general courts of first instance are responsible for all cases beyond the authority of the summary courts. One judge usually presides over cases in the general courts, but three judges sit in judgment for serious crimes, such as murder, major theft, or sexual misconduct. Decisions of these courts can be appealed to the Sharia appeals court. The chief justice and a panel of several judges preside over all cases. Finally, the decisions of all courts can be appealed to the office of the King or the Crown Prince, which turn the appeal over to the legal office of the Council of Ministers. A decision by the Council of Ministers, signed by the King, is final (Saudi Embassy to the United States, 2006).

Economy

Saudi Arabia has an oil-based economy. It has the largest reserve of petroleum in the world (25% of the proved reserves), ranks as the largest exporter of petroleum, and plays a leading role in the Organization of the Petroleum Exporting Countries (OPEC).

Petroleum revenue accounts for approximately 75% of budget revenues, 45% of gross domestic product (GDP), and 90% of export earnings. About 40% of GDP comes from the private sector.

The dominance of the public sector over the private sector plays a significant role in shaping the Saudi economy. In contrast to most countries in the West, where the government collects tax revenues in order to provide public services to the citizens, the main role of the Saudi government is to distribute state income to the people in the form of goods and services in the most reasonable way (SAGIA, 2004).

Over the past three decades, the Saudi economy has realized a transformation in the economic, social, and urban aspects of life. The transformation was formed by extensive government investment within the framework of 5-year development plans to lay down the social and physical infrastructure of the country. This included the construction of a massive road network, bridges, dams, airports, seaports, marine terminals, and electricity and communication systems. Huge amounts were also spent on health and education, as well as on projects involving the building of schools, universities, and general and specialized hospitals for the civilian and military sectors (SAGIA, 2004).

The development of the Saudi economic system can be understood by looking at the Saudi 5-year plans. The first 5-year plan (1970-1975) had three primary goals: (a) to preserve the basic Islamic religious and social values of the country, (b) to increase Saudi military defense capability, and (c) to prepare the country for economic diversification in the post-oil era. The second 5-year plan (1975-80) emphasized social welfare and

development projects, which included free medical services. The third 5-year plan (1980-85) involved a huge scaling back due to the greatly reduced oil prices that resulted from the extended oil glut of the 1980s. Both the fourth 5-year plan (1985-89) and the fifth 5-year plan (1990-95) emphasized strengthening the growth of the private sector and increasing the efficiency of the industrial sector. The sixth 5-year plan (1995-2000) was further constrained, and it continued to emphasize strengthening the private sector, including more privatization. Moreover, it also emphasized better rationalization of government expenditures, manpower training, and Saudiization. The seventh plan (2000-2004) also focused on increasing the role of the private sector and diversifying the Saudi economy. The 5-year plans also had a health-services component; these are discussed in the section on Health Care Services below.

Despite past successes, the Saudi government will face some challenges in the twenty-first century in seeking to maintain economic success and social harmony. Just to keep up the current level of development, the government has to use the most efficient means possible in all its activities including mental health.

Table 2-1 shows some key economic indicators for Saudi Arabia, especially with regard to health care.

Table 2-1 Economic Indicators

Year		Indicator
2003	8,775	GDP per capital in US\$
2003	13%	MOH budget (% of government budget)
2003	179	MOH expenditures per capita in US\$

Source: MOH, 2004

Population and Health Status

The total population of Saudi Arabia was 27,019,731 in mid-2006, of which Saudi citizens were 74.2% and non-Saudi residents were 25.8% (Library of Congress, 2006). The country has a relatively high growth rate, estimated to be 3.4%, and about 45.2% of the population is below 15 years of age or above 65 years of age. (See Table 2-2 for a breakdown of the population by age and other demographic indicators.) The total labor force working in Saudi during 2002 stood at 7.4 million, of which 3.7 million (or 49.7% of the total), were Saudis. Foreign labor accounted for 50.3%, or 3.7 million, of the total labor force. The government provides free medical care to all citizens and foreign residents (SAGIA, 2004).

Table 2-2 Demographic Indicators

Year		Indicator
2003	27,019,731	Estimated population
2000	27. %	Crude birth rate per 1,000 population
2003	3.9%	Rate of natural increase
2003	14.5%	Population under 5 years
2003	45.2. %	Population under 15 years
2003	56.7%	Population 15-64 years
2003	3%	Population from 65 & above
2000	4.3	Total fertility rate
2001	71.4 years	Life expectancy at birth
	69.9 years	Men
	73.4 years	Women

Source: MOH, 2004

The health status of the Saudi population has been raised sharply in a short period of time (Mufti, 2000). The life expectancy at birth is currently 71.4 years (69.9 years for men and 73.4 for women), an increase of almost 62% compared with 1960, when the estimated life expectancy was 44 years (MOH, 2004; Mufti, 2000).

Saudi Arabia was recently ranked by the World Health Organization as 26th out of 179 countries in providing the best health care for their populations. There has been a considerable decline in infant morbidity and mortality in Saudi Arabia (Shawky et al., 2001). Infant mortality was reduced from 68 per 1,000 to about 30 per 1,000 in a period of 20 years, and it now stands at 19.1 per 1,000 (MOH, 2001). The Expanded Program of Immunization (EPI), which was initiated by the World Health Organization (WHO) in the 1980s to combat major childhood diseases worldwide, has been very successful in Saudi Arabia, with coverage of more than 90% among infants (MOH, 2001).

Despite the major improvement in the health status of Saudi society, Saudi officials face the need to defeat many health care problems. The major problem that the country faces is the misdistribution of health care services, which results in health disparities between urban and nonurban areas. The nonurban areas suffer from poor sanitary conditions and a shortage of specialized health care personnel. Another major public health problem is related to the annual Muslim pilgrimage, the Hajj, to the Holy City of Makkah. Every year, over two million pilgrims arrive in Makkah from over 50 countries to perform the Hajj. Some of these countries have communicable diseases in epidemic proportions, which could make Makkah a conduit for the spread of contagious diseases like plague, cholera, yellow fever, smallpox, and typhus (MOH, 2004).

Furthermore, the rapid socio-economic change in Saudi Arabia in the last three decades has been accompanied by an increase in other types of public health problems, like cancer, hypertension, diabetes, cardiovascular disease, and mental disorders (Long, 1979).

Health Care Services

Because the core of this study is mental health in Saudi Arabia, this section looks more closely at health care services, including mental health. Modern healthcare in Saudi Arabia began with the establishment of the primary health care centers of Taif and Makkah in 1926. This led to the founding of the Health Department in Makkah in the same year. This department was charged with establishing hospitals and clinics at Makkah, Madinah, Jeddah, and Taif. In 1927, the Health Department was renamed the General Directorate for Health Aid and was appended to the Bureau of the Attorney General. A health council was set up under the presidency of the Attorney General (Mufti, 2000). The council included the Director of Health, the Inspector General, the Director of Quarantine, Commander of Makkah Police, the Director of Endowments, the Mayor of the Holy Capital, and the Chairman of the Eid Zubaidah Commission.

By 1928 the Health and Emergency Services Department was formed. This became a Department of the Ministry of Interior in 1931. Then, the MOH was established in 1951 as an independent agency. After the formation of the MOH and the beginning of commercial oil production in 1938, health services expanded greatly and now include

highly sophisticated hospitals, clinics, and medical centers all over the country (Al-Yousuf, Akerele, & Al-Mazrou, 2002).

However, the most rapid growth was between 1970 and 1990, with the implementation of Saudi-wide 5-year health development plans (MOH, 2004). Table 2-3 gives the emphasis of each of the 5-year plans.

Table 2-3 Saudi 5-Year Health Development Plans

Plan	Years	Health Emphasis
First	1970-75	Preventive health services.
Second	1975-80	Integration of preventive and curative care to provide comprehensive care.
Third	1980-85	Improvement of medical standards and health centers to deliver basic services.
Fourth	1985-90	Balancing the growth of PHC services according to regional and special groups needs
Fifth	1990-95	Improve the quality of health care.
Sixth	1995-2000	Achievement of certain outcome criteria of health care, such as complete immunization coverage of children, and increase the effectiveness of various health services, including preventive health services.
Seventh	2000-2005	Provide basic health services and open 250 primary health care centers.

Source: MOH, 2004

An obvious and clearly recognizable major development of health care services was realized through the establishment of health care delivery agencies. There are 14 independent health care delivery agencies under MOH providing free health care services to all citizens and all religious pilgrims (who average about 2 million a year) based on the principle that health care is a right for everybody (MOH, 2004).

As of 2006, the expenditures for health and social services accounted for 13% of the government's budget (Library of Congress, 2006). MOH is considered the main health care provider and has overall responsibility for health policies and planning for the entire population (Library of Congress, 2006). It accounts for about 62% of health care facilities in the nation; and it employs about 53% of the total health care workforce.

Other governmental health care agencies provide free health care to their respective demographic populations, including the National Guard, the Ministry of Defense and Aviation, the Ministry of Interior, the Arab American Company (better known as ARAMCO), and the Royal Commission for Jubilee and Yanbu (MOH, 2004). The ratio of hospital beds and primary health centers was 22.4 and 0.8 per 10,000 people, respectively, in 2004. The ratios of physician and nurses per 10,000 population were 18.6 and 33.7, respectively, in 2004 (MOH, 2004). Table 2-4 summarizes these and other health resources indicators.

Table 2-4 Health Resources Indicators

Year	Ratio per 10,000 population	Category
2004	18.6	Physicians
2004	1.9	Dentist
2004	3.1	Pharmacist
2004	33.7	Nurse
2004	19	Allied health personal
2004	22.4	Hospital beds
2004	0.8	Health centers
2004	17.8	Governmental hospital beds rate
2004	4.6	Private hospital beds rate

Source: MOH, 2004

The following section discusses the history of mental health care in the Middle East, the United States of America, and Europe in order to provide a background for the description of mental health services in Saudi Arabia, which will be the focus of this study.

History of Mental Health Services in the Middle East

The term Middle East is used to refer to an enormous area and more than a billion people. According to one source, all the following countries are included in the term: India, Pakistan, Afghanistan, Iran, Iraq, Turkey, Jordan, Lebanon, Saudi Arabia, Qatar, Bahrain, Kuwait, Oman, the United Arab Emirates, Sudan, Syria, Egypt, Libya, Morocco, Algeria, and Tunisia (Mohit, 2001).

People who live in this area obviously have many differences, including history, geography, economic conditions, art, culture, and the concepts of illness (Mohit, 2001). However, despite these differences, there are some similarities that can be used to cluster these people together as one entity. Among these similarities, two elements seem to be the most important. One is the religion. These religions are Islam, Christianity, and Judaism. They are considered the most important practiced religions in the world today. Other faiths, including Manichaeism, Zoroastrianism, Buddhism, and Hinduism, also started in the region and have some influence, especially the last two decades (Mohit, 2001). All these religions have been important factors in shaping the way of life in the region. For example, Islam is practiced by more than 90% of the population in the countries of the region, excluding India, and has great impact on many aspects of life,

including personal, family, and social activities (Murad, 2002). The other important factor in the region is its exposure to cultural influences from both the East and the West, mainly the United State of America in the case of Saudi Arabia since the discovery of oil. These two elements are considered the most important factors shaping the way of life, including mental health philosophy, in the region (Mohit, 2001).

In the pre-Islamic era (from ancient times to the seventh century CE), medicine in general and mental health in particular was also naturally influenced by religion. For example, ancient Egyptians believed that diseases were due either to evil spirits or the anger of the gods. Therefore, religious practice was considered the most effective treatment for diseases (Mohit, 2001). In ancient Mesopotamia, people believed that diseases were due to preexisting spirits and ghosts. Each disease was attributed to one certain spirit (Avalos, 1995).

In ancient Iran, medicine was practiced. Physicians (*durustpat*) functioned as masters of health. Healers were divided between two different specialties: healers of the body (*tan-pezeshek*) and healers for the psyche (*ravan-pezeshek*). The healers for the psyche were considered to be equivalent to psychiatrists now days. Medical students were selected from the highest class of Iranians, and they studied both religion and medicine. After finishing their studies, they would become either a priest (*magi*) or a doctor (*athravan*). Psychiatric diseases were taught to the students in Jondi Shapur University (Mohit, 2001). However, with great respect to the efforts that took place before the seventh century, there is no evidence of well-planned community mental health services until the beginning of the Islamic era in the seventh century.

Islam is one of the most important religions in the Middle East (Mohit, 2001). When Islam was introduced in the area, different countries of the Middle East had different cultural characteristics and religions. The Persian and Byzantine empires were the main powers of that time, and their citizens made many contributions to science, philosophy, religion, and medicine. Christianity, Judaism, Zoroastrianism, and other faiths were also practiced in different parts of the region.

The corruption of the existing empires and the absence of social justice facilitated the spread of Islam in the area. After the Islamic empire was established, the stage was set for an increase in learning. Many books were translated into Arabic from Greek, Persian, Sanskrit, and Hindi, and many physicians from different countries appeared in different corners of the Islamic empire. This tremendous development in science in general and in medicine in particular led to the establishment of the psychiatric services in the Arab world (Mohit, 2001)

Indeed, around the ninth and tenth century, mental hospitals were built, this at a time when European civilization dealt with those severing from mental illness by condemnation and punishment (Youssef & Youssef, 1996). The most important of these hospitals were in Baghdad, Cairo, and Damascus. The first hospital was built in Baghdad in 705, followed by hospitals in Cairo in 800 and in Damascus in 1270 (Murad, 2002). The method of mental health treatment in this period was a mixture of psychotherapy and support. The common belief was based on the close relationship between the psychological disposition, mood, and the body. The Greek concept of attributing different

diseases to different temperament also existed, both in understanding the diseases and in developing treatment (Mohit, 2001).

Although the seeds of the establishment of the mental health care system had spread to different parts of the Middle East by the thirteenth century, the Mogul invasion destroyed all the developments in the Arab world, including medicine (Mohit, 2001). After the Mogul invasion occurred, and as development began in Europe, a period of decline started in many parts of the Middle East. However, the Ottoman Empire in Turkey and the Safavid dynasty in Iran were able to maintain a sense of central power; despite this, neither these two countries nor any other countries in the Middle East were able to take part in the industrial revolution that occurred in Europe and the United States in the eighteenth and nineteenth centuries.

Nevertheless, European medicine did become known in the Middle East during the eighteenth and nineteenth centuries. Doctors with European missions and colonial armies were the first ones who brought western medicine to the region. Then, some leaders in Middle East, like Seyed Jamal Asad Abadi, an Afghani, Mohammed Abdh, an Egyptian, and Amir Kabir, an Iranian, encouraged the development of science and technology through exchanges with the West (Mohit, 2001). Thus, the history of mental health services in the Middle East is associated with the development of mental health services in the United States of America and Europe. However, because the development of mental health in these two nations is beyond the scope of the discussion here, I will only mention some of the most important and relevant developments and then provide a more detailed description of health care and mental health services in Saudi Arabia.

Mental Health History in the United States of America and Europe

Generally in Europe, until the late eighteenth century, the mentally ill were described as criminals, beggars, and paupers (Isaac & Armat, 1990). They were treated as criminals and were isolated in special houses separated from the rest of the society. The work of Philippe Pinel in France and William Tuke in England broke the pattern and worked to remove the harsh stigma associated with mental illness at that time and to replace it with a model of disease and illness. Pinel's theory was based on the idea that the inappropriate behavior of the mentally ill was the result of mistreatment. This new perspective led to the creation of asylums and the moral treatment model. Moral treatment was based on the assumption that psychiatric illness could be treated if patients were treated in a warm, persuasive fashion, if they had the opportunity to discuss their problems, and if they were kept actively involved in life (Chacko, 1985). In the United States, local and state governments started to assume responsibility for the mentally ill during the nineteenth century. However, the real work was started by individuals such as Dorothea Dix (died 1887), who focused public attention on the mentally ill and urged their transfer from jails and poor houses to state hospitals (Isaac & Armat, 1990).

During World War II, there was a growth of public awareness of mental illness as a result of the rejection of large numbers of young men because they were mentally unfit for military duty. It was estimated that about 1,875,000 men among the 15 million examined were rejected for service because of alleged psychiatric disabilities (Mechanic, 1999). The awareness of the large manpower loss as a result of the high prevalence of mental illness in the screened population created great concern for the development of

public policy in relation to mental health. In response to this growing and visible problem, Congress passed the Mental Health Act, creating the National Institute of Mental Health in 1946 (Mechanic, 1999). This was the beginning of a series of mental health initiatives by the Federal government.

In 1955, the Mental Health Study Act was introduced into law. It resulted in the appointment of a Joint Commission on Mental Illness and Health to study and make recommendations concerning various aspects of mental health policy. In 1961, the commission published its report, Action for Mental Health, which strongly recommended an increased program of services and more funds for basic, long-term mental health research. It suggested the expansion of treatment programs for acutely ill patients in all facilities, including community mental health clinics, general hospitals, and mental health hospitals (Isaac & Armat, 1990).

John Kennedy, who became president in 1960, was personally interested in enacting legislation in the mental health area because his sister suffered from both mental retardation and mental illness (Isaac & Armat, 1990). In 1963, Congress passed the Community Mental Health Centers Act, which provided funds for the establishment of community mental health centers (CMHCs) as a tool to reduce the state hospital population. CMHCs were established to provide five essential services, including inpatient care, outpatient care, 24- hour emergency care, consultations, and education services.

The creation of CMHCs, along with introduction of Medicare, Medicaid, and Supplemental Security Income in 1965, was the most important factor in the

deinstitutionalization of mental health services in the United States (Isaac & Armat, 1990).

With increasing deinstitutionalization, most of the mentally ill were discharged to the community, but they did not have the support and services needed in the community to meet their needs. They continued to have problems, resulting in their becoming homeless, jailed, or re - hospitalized. One could conclude that the situation of mental health services in the United States at the time of deinstitutionalization of mental health services in 1965 was similar to the current situation in Saudi Arabia after the decentralization policy. In 1983 in both countries the mentally ill did not have the services needed in the community to meet their needs. By 1980, interest in the mental health centers and the idea of mental illness prevention was declining. Some of this was related to President Reagan's desire to decrease the scope of the Federal government's involvement and institute optional state block grants for social services. CMCHs became a lower priority among government officials, as they were costly and voters demanded lower taxes (Walsh, 2000).

In the 1990s, the cost of mental health services started to increase sharply. This could be related to the increase of services utilization due to the reduced stigma of mental illness, a continued high use of hospital beds, and the inclusion of substance abuse as a mental disorder. This led to increased pressure to control the cost of care for this population. The response to this problem was the launching of the managed care programs in many states, and this further motivated providers to focus on shifting the

provision of services to patients in outpatient rather than inpatient settings. This trend in mental health services still continues (Walsh, 2000).

Mental Health Care Services in Saudi Arabia

Mental health care in Saudi Arabia has had three stages in the past 100 years. Before 1962 and the establishment of the Taif Mental Hospital, mental patients were treated as prisoners with no proper care and were held in isolation in houses separated from the rest of the society. Mental illness was believed to be caused by an evil spirit, exposure to an evil eye, or magic (MOH, 1980). It is very interesting to note that the situation of mental health services in Saudi Arabia before 1962 was similar in some aspects to that in Europe in the late eighteenth century. As mentioned above, the mentally ill were described as beggars, paupers, and criminals; and they were isolated in special houses separated from the rest of the society (Isaac & Armat, 1990).

After 1962, the outlook changed, and mental illness was seen as a disease affecting the individual's mind. This change in outlook was mainly caused by wider changes in the society as a result of modernization under the influence of economic development. Also, this change was encouraged by the widespread educational and cultural development that was taking place in the society and by changing views on the Western school of medical thought in Europe and the United States.

Between 1962 and 1983, mental health care in the country was provided only by Shahar Mental Hospital in Taif. This hospital was built to provide free psychiatric care for all Saudis from all over the country as well as resident non-Saudis. It still offers a full

range of psychiatric services through several wards, including the psychiatric and long-stay wards, women wards, acute and rehabilitation wards, psycho-geriatric ward, forensic psychiatry wards, and acute admission wards (MOH, 2002).

In 1983, the government started to decentralize mental health services, initiating the third stage of care for the mentally ill. As an outcome of the decentralization of mental health services, the Saudi government started to establish psychiatric hospitals and outpatient clinics in most major cities around the country (WHO, 2001). We could conclude that decentralizing mental health services in Saudi Arabia in 1983, as a response to the increased number of the mentally ill was similar to launching the CMHCs in the United States in 1963. Table 2-5 outlines the development of mental health care services in Saudi Arabia from 1962 to the present

Table 2-5 The Development of Mental Health Care Services in Saudi Arabia

Date	Descriptors
Before 1962	<ul style="list-style-type: none">• No organized mental health services in the country. Mentally ill were treated as prisoners with no proper care.• Mentally ill were held in isolation in houses separated from the rest of the society.• Mental illness was believed to be caused by an evil spirit, exposure to an evil eye, or magic.
After 1962	<ul style="list-style-type: none">• Outlook changed and mental illness was seen as a disease affecting the individual's mind.
Between 1962-1983	<ul style="list-style-type: none">• Mental health care provided only by Shahar Mental Hospital in Taif.• All mentally ill patients in Saudi Arabia have to travel to Shahar Mental Hospital in Taif to get psychiatric services.• Number of mentally ill patients has increased.
1983-present	<ul style="list-style-type: none">• In response to the increased number of mentally ill and the decreasing tolerance for the society to contain the mentally ill with the existing social system, the government started to decentralize mental health services.• As a result of the decentralization of mental health services, psychiatric hospitals, psychiatric departments, and outpatient clinics were established in most major cities all over the country.• 2009, mentally ill patients can get psychiatric services all over the country.• Still, most mentally ill do not have support and services needed in the community to meet their social and health needs.

Nowadays, there are 19 psychiatric hospitals with a bed capacity between 30 to 120 beds in different cities in the country (MOH, 2004). There are also 165 beds for psychiatric inpatients in the facilities of other governmental health-care providers, including military hospitals, National Guard hospitals, and university hospitals (World Health Organization, 2001).

There are, in addition, 44 psychiatric clinics distributed all over the country (MOH, 2004). Moreover, there are about 146 beds in general private hospitals for providing psychiatric service (World Health Organization, 2001). Furthermore, there are four Al-Amal Complex for Mental Health Hospitals with a mean capacity of 280 beds. One is located in Riyadh, the second located in Jeddah, the third located on Dammam, and the fourth located in Qassiam. These hospitals are owned and operated by the MOH and Interior to provide treatment and services for persons with alcohol or drug dependence (World Health Organization, 2001).

There are about 349 psychiatrists, of whom 97 are Saudi nationals and 252 non-Saudis, working in the country in the MOH facilities (MOH, 2004).

Current statistical data for the mentally ill in Saudi Arabia are shocking. The most recent data of MOH shows that the number of mentally ill patients has increased rapidly from 10,245 patients in inpatients units in 2002 to 15,004 in 2004 (MOH, 2004). The number of outpatients has also increased, from 47,744 in 2002 to 278,500 in 2004. The percentage of outpatients diagnosed as psychiatric cases also increased, from 86.1% (41,094) to 91.6% (254,970) in 2004. Figure 1 shows these trends.

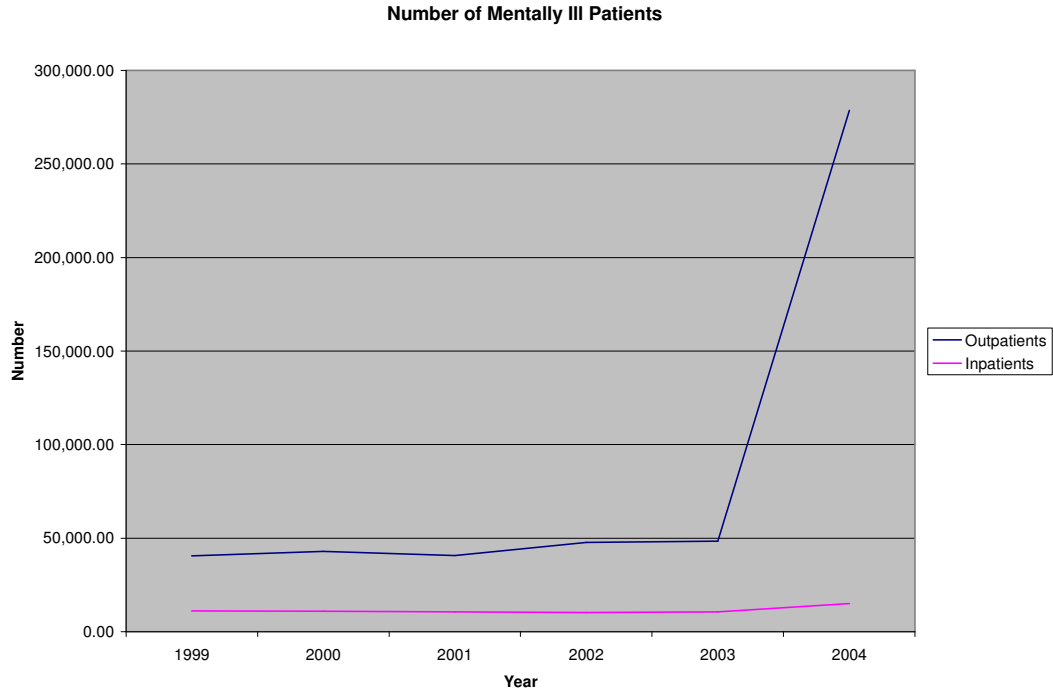


Figure 1 Mental Health Outpatients and Inpatients in Saudi Arabia

However, despite the fact that mental health care services in Saudi Arabia have made exceptional progress since the initiation of decentralization in 1983, there is still a gap in the service provision for the mentally ill that has resulted in a great number of unmet social and health needs. Therefore, this study was conducted to examine whether the decentralization policy has provided the mentally ill with more adequate services or not and whether it meets their various social and health needs. Specifically, this study was conducted to (1) identify the needs of the mentally outpatient consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia; and (2) to identify the demographic

variables that are most associated with these needs. Because the study was conducted at Al-Amal Complex for Mental Health, the following section describes it in more detail.

Al-Amal Complex for Mental Health

Al-Amal Complex for Mental Health was established in 2002 to provide intensive treatment to individuals with mental illness and patients with addiction problems living in Riyadh, Saudi Arabia. The hospital objectives are (a) to provide a healthy and safely therapeutic environment for those individuals with mental illness and addiction problems; (b) support the cooperating teamwork environment to achieve the objectives and goals for developing the skill for the staff that leads to an improved quality of work in the hospital; (c) contribute to the comprehensive rehabilitation programs organized to help patients to develop in their personal skills, hence return to normal life and join the community as productive members with their own goals and ambition; and (d) contribute effectively to local, regional, and international research and studies related to mental health and addiction, which leads to the improvement of the treatment of these diseases.

Al-Amal Complex for Mental Health comprises the following divisions: Psychiatric, Addiction, Emergency, Clinics, Laboratory, Pharmacy, Smoking Control and Chinese Acupuncture Center, and Rehabilitation. Other divisions not directly related to patient care include; the Admission Building, Medical Admission Building, Housing Compound, Main Mosque, and Food Section. The Psychiatric division and its subdivisions and the Addiction and Emergency divisions are briefly described below (Al-Amal Complex for Mental Health [ACMH], 2006).

The Psychiatric Division has a 230-bed capacity. It specializes in treating individuals with mental illness and social problems. It includes the following subdivisions. (a) Admissions: This division receives acute cases referred by the Emergency or Outpatient clinics. In this division, the patient is kept under constant supervision before the diagnosis of his or her case and given the appropriate medication. After stabilization, the patient is usually referred to the Recovery subdivision. (b) Recovery: these units receive stable cases after the patients have stayed for some time in Admissions. In this division, the patient has to stay for a more extended period. The staff of this division concentrates mainly on following up patient developments, recording changes in behavior, and monitoring psychological improvement. The medical team then undertakes finalization of the patient care plan, along with preparing the patient to be an effective member in the society. (c) Rehabilitation: These units receive improved cases that are ready for rehabilitation treatment. The patient has to stay here for the period needed to restore his abilities prior to being released to the Day Care Center. (d) Day Care Center: Patients in this unit spend part of the day in an environment similar to their normal daily life and far from the treatment program, which helps the patients acquire or regain the social skills they need to live in society (ACMH, 2006).

The Addictions Division has a total capacity of 273 beds. Patients are assigned to these units for treatment of, and rehabilitation from, addiction problems. It offers a variety of treatment programs; subdivisions include Detoxification, Early Rehabilitation, Recovery, Duplicated Diagnosis, Security, Women Ward, Juvenile, and Subsequent Care (ACMH, 2006).

The patients who enter the Emergency Division are usually received at the primary care room, where the medical staff determines whether the case is a psychiatric or addiction problem. Then, the patient is referred to a specialized physician to conduct a detailed diagnosis of the case and determine the physical examinations and tests required to confirm the diagnosis. Then, the physician decides whether the patient is to be admitted as an inpatient or to continue in following up with one of the outpatient clinics, the Day Care unit, or the Subsequent care unit, if the case does not require hospitalization (ACMH, 2006).

Chapter 3: Literature Review

The literature review begins with defining mental illness and discusses how the literature has categorized mental illness in different ways. Second, it describes the definition of need and the characteristics of the mentally ill. Third, the definitions of age, gender, income, and education are articulated. The discussions in this part focus on the relationship between these variables and mentally ill needs. Fourth, empirical studies that identify the needs of the mentally ill are presented. Finally, the conceptual framework for the Literature Review and the Policy Conceptual Framework are introduced.

Definition of Mental Illness

Most literature uses two main classification systems to define mental illness. The first system uses the definition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, commonly referred to as DSM-IV (American Psychiatric Association, 1994). In DSM-IV, each mental disorder is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is typically associated with painful symptoms (distress) or impairment in one or more important areas of functioning (disability). DSM-IV categorizes disorders by symptom clusters and differentiates between normality and psychopathology based on the duration and severity of symptoms (American Psychiatric Association, 1994). The second classification system conceptualizes mental illnesses as brain disorders and is based on the hypothesis that disruptions in brain function lead to mental illness (Peck and Scheffler, 2002).

Some researchers define mental illness as having “three dimensions including disability, diagnosis, and duration of illness. Persons with mental illness are defined as those who are functionally impaired (disability) for an extended period of time (duration) because of their mental illness (psychiatric diagnosis)” (Hazel, Herman, & Mowbray, 1991, p. 518). According to Hazel et al., a degree of disability in two areas of life indicates severe mental illness. People are included in this category if they meet either of two conditions: First, at one time they required structured treatment environment, such as inpatient, nursing home, mental health group home, other supervised living assistance. Second, a person has problems in any two of the following five areas due to mental illness: social skills, self-care (bathing, feeding and dressing), meeting basic needs (obtaining food, clothing, housing, and financial problem), inappropriate behaviors, or employment.

Definition of Need

Although the concept of need is used internationally, there is no consensus about the precise meaning of the term. This is because needs are socially defined differently, and what may be a need for one group, may not be a need for another group. The perception of needs also changes over time as a person grows and interacts more with the social environment.

Various definitions of need have been used in the literature. The American psychologist Abraham Maslow established a hierarchy of needs when attempting to formulate a theory of human motivation (Maslow, 1954). He proposed that, as the

fundamental needs, such as hunger and thirst, are satisfied, more advanced psychological needs, such as affection and self-esteem, become the primary motivators. Maslow (1954) and Dinkmeyer (1965) clarified that individual's natural desires to satisfy their basic needs are essential to enable the development of their innate potential for self-actualization. Unmet needs may manifest themselves in emotional problems, such as frustration and anxiety, that lead to decreasing effectiveness in social development, self-concept, intelligence, motivation, emotion, and personality (Maslow, 1954).

Van Haaster et al. (1994) stated that a need is “present when a person's level of functioning falls below, or threatens to fall below, some specified level, and when there is some remediable, or potentially remediable, cause” (p.141). Stevens and Gabby (1991) defined need as the ability to benefit from the health care system and distinguished need from demand, defining demand as what a person is asked for and supply as what the system provided. Slade (1996) stated that the British National Health Service defines a need as “the requirements of individuals to enable them to achieve, maintain or restore an acceptable level of social independence or quality of life” (p. 1). This definition equates need with level of social functioning. Therefore, need arises as a result of social disablement, which occurs when a person experiences lowered psychological, social, and physical functioning in comparison with the norms in society.

Slade (1994) found that needs could be defined into several kinds: Needs related to social disability, access to psychiatric services, and action needs that are suggested by mental health interventions. To conclude, need is a subjective concept. Need could be defined by any one of these concepts and include a condition, situation,

want, request, necessity, or obligation. Therefore, for this study, it was defined by patients directly, following Slade (1994) and using the CANSAS (Phelan et al., 1999). The literature relating need to cultural context also points to the importance of patients' identifying their needs themselves rather than having those needs be identified by someone else.

Demographic Characteristics of the Mentally Ill in the Literature

The literature describes the basic demographics and characteristics of the mentally ill. The average age of participants cited in several adult studies in Saudi Arabia was 33 to 47 years of age, with a range of 18 to 81 years (Al-Khathami & Ogbeide, 2002; Qureshi, Al quraish, & Hegazy, 1991; Al-Fakeeh, 1994; Abu Madini and Rahim, 2002). This presentation matches the profile reported by international studies by Hazel, Herman, and Mowbray (1991), Van Haaster et al. (1994), and Postrado and Lehman, (1995).

Al-Khatham et al. (2002) reported that the majority the mentally ill patients in their study in central Saudi Arabia were likely to be younger, women, divorcees, and widows. El Rafaie and AbuMediny (1991) and Abu Madini and Rahim (2002) also reported that mentally ill patients in their study were more likely to be young and women. These findings are consistent with Western studies by Hazel, Herman, and Mowbray (1991), Saeed, Ouellette-Kuntz, Stuart, and Burge (2003), and Hurley, Folsten, and Lam (2003). These studies concluded that the majority of people with mental illness in their studies were more likely to be single, divorced, and unemployed. In line with these findings, Saeed et al. (2003), Lohrer, Green, Browning, and Lesser (2002) and Way and

Banks (1990) have shown that the mentally ill in their studies were typically more likely to be younger, were less likely to be married or have children, and were likely to have physical condition and lower rate of substance abuse and also were likely to be hospitalized more than those patients with no psychiatric diagnosis (Lohrer et al., 2002; Saeed et al., 2003).

The relatively higher use of the public mental health hospitals by men might be explained by the increased access to psychiatric services that men have in Saudi Arabia. For example, men substance abusers are treated in the specialized Al-Amal hospitals, military personnel go to military hospitals, and non-government expatriate men employees are treated in private hospitals, whereas their women counterparts, being predominately housekeepers, are eligible for treatment only in public hospitals.

Al Quraish and Hegazy (1991) reported other characteristics of the mentally ill in their studies in Saudi Arabia, including multiple admissions, high rates of relapse, family history of mental illnesses, poor drug compliance, and physical diseases. Furthermore, Abu Madini and Rahim (2002) examined the socio-demographic and clinical characteristics of admitted patients and the patterns of their service utilization over a decade from March 1988 to March 1998 in King Fahad Hospital in Al-khobar, Saudi Arabia. They reported that men were more frequently hospitalized for schizophrenia and women for mood and anxiety disorders.

Studies indicate that mentally ill patients have relatively as many physical problems as those of regular patients (Adler et al., 2000; Clifford et al., 1991). In support

of these findings, Atkinson, Zibin, and Chuang (1997) found no difference in physical problems between mentally ill patients and non-mentally ill patients.

The literature, as can be seen, indicates various demographic factors identified with mental illness. But, taken as a whole, the literature also shows that the mentally ill are a heterogeneous group, and therefore it is difficult to predict their services needs. Thus, one of this study's goals was to identify the demographic variables that are most associated with the needs of the mentally ill. These data are needed because the delivery of services can be made more efficient when a subsection of the population is addressed. For example, programs and policies designed to enable young men to return to society would have very different content than programs designed to return older women to society. The specific demographic characteristics to be identified in the study are discussed in the following paragraphs.

Age

Age is an important factor to understand the needs of the mentally ill in terms of life stage and course of illness (Test, Burke, & Wallisch, 1990; Mercier, Pelaeau, & Tempier, 1998). People of different ages have various expectations, attitudes toward mental health services, conceptions of appropriate social roles, and availability of formal and informal support (Cohen, 1992). Additionally, people of different ages are also members of different age groups that have varying attitudes toward the use of mental health services in the community. Furthermore, people of differing ages have access to

varying degrees of informal social support, which can also influence their use of formal mental health services (Cohen, 1992).

Gallo et al. (1995) found that people who are 45 years of age and under usually use mental health services more often than older adults. This result is consistent with a study by Jin et al. (2003), who studied 4,975 patients treated for schizophrenia in San Diego County's Adult Mental Health Services facilities. The study found that the use of hospitalization, emergency room, crisis house, and day treatment was highest among young-adult patients and lower among older individuals. This is in line with a study conducted by Horwitz and Uttaro (1998) that younger people with mental illness receive more help from both their informal social network and from mental health professionals. Older people with mental illness, especially those diagnosed with schizophrenia, usually express more satisfaction with their lives as they get older (Mercier et al., 1998; Kearns, Taylor, & Dear, 1987; Lehman, Slaughter, & Myers, 1992). It has also been recognized that for young adults with psychotic disorders, living conditions and relationships within the community are more challenging than they are for their elders (Pepper & Ryglewicz, 1982; Randolph, Lindenberg, & Menn, 1986).

In conclusion, research indicates that age significantly affects the services for, and the needs of, the mentally ill. This study's hypothesis was that there is no difference in the social and health needs identified by the outpatient mentally ill consumers based on age.

Gender

A number of studies have found no difference in the needs reported by the mentally ill based on gender (Van Haaster et al., 1994; Adler et al., 2000). Van Haaster et al. (1994), in their study of long-term in- and outpatients and short-term in-and outpatients at the Louis-Hippolyte Lafontaine Psychiatric Hospital in Montreal, Canada, found that there was no age or gender difference in the identified problems and unmet needs of the mentally ill. In support of these results, Wiersma, Nienhuis, Giel, and Sloof (1998), who conducted a longitudinal study of outpatients found no gender differences in service needs for those discharged psychiatric patients.

However, contrary to these findings, some studies have reported gender difference on the perceived needs, number of hospitalizations, and other variables related to the community (Test et al., 1990; Sood, Baker, & Bledin, 1996). In line with these findings, Cernovsky, Landmark, & O'Reilly (1997) found no gender differences in age of onset of schizophrenia, but they found that men were less likely to return to their normal level of functioning than women. This was supported by McGlashan and Bardenstein (1990) and Sood et al. (1996), who reported that women had better social and marital functioning and had better long-term outcomes in terms of social and work activity, as well as marital and parental status, but may have more depressive symptoms than men. Sood et al (1996), studying the social and living skills of the mentally ill found significant gender differences. The study assessed differences in social behavior skills and everyday living skills in two groups of psychiatric patients, hospital in-patients who stay between 6 months and 5 years (new long-stay patients) and discharged patients who had resided in

the community for a similar length of time. They found that men in the long-stay group had more social deficits than women in either group. The study also indicated that men patients may need more help in developing, enhancing, and maintaining self-care and domestic skills and that both men groups had a high degree of social isolation. The study indicates that men and women have sex-stereotyped, learned behaviors that affect their needs. This study was corroborated by Testet al. (1990), who found that men showed a trend toward greater recidivism and spent more time in the inpatient setting than women. They also reported that men have higher rates of suicide and substance abuse than women.

Studies comparing the social integration of men and women with schizophrenia revealed that women were able to find a place for themselves in society more easily than men; they were also more likely to adapt to the traditional women roles (Bachrach, 1984); and more likely than men to recognize and acknowledge that they have mental illness and that they also are more likely to seek help for health problems than men (Kessler, Brown, & Broman, 1981). Other studies assessed the sex differences based on the utilization of mental health services. For example, Kastrup (1987) assessed the sex differences of the utilization of mental health services in Denmark. The study found that men patients tended to have problems of addictive disorders and schizophrenia, showed violent or self-destructive behavior, needed repeated admissions, and frequently needed further institutionalization, whereas women patients suffered from depressive and neurotic disorders and needed fewer but longer lasting admissions. In line with this study Hazel, Herman, and Mowbray (1991) found that men patients are more likely to be

younger, more self-destructive, and demoralized than women, who were primarily the older patients, with more physical health needs and poorer skills in self-care in community living.

Other studies have reported significant gender differences in the prevalence of specific disorders, with some disorders being more common in women and others more common in men. For example, the Office of Population Censuses and Surveys of the United Kingdom surveyed 10,000 adults living in private households in the United Kingdom and found that women were more likely than men to suffer from a neurotic health problem and that men were three times more likely than women to suffer from drug dependence (Meltzer et al., 1995). These findings were consistent with a study by Brown (1998) and one by Ustun and Sartorius (1995), who found that women had a higher prevalence than men of most affective disorders and non-affective psychosis, whereas men had higher rates of substance use disorders and antisocial personality disorder. The most common mental illnesses were major depression and alcohol dependence, and both showed large gender differences in prevalence. For major depressive episodes, the lifetime prevalence rate was 21.3% for women and 12.7% for men, whereas the 12-month prevalence was 12.9% for women and 7.7% for men. Similar findings were reported from the epidemiological Catchments Area Program, a community survey of 10,000 individuals over three sites in the United States (Robins et al., 1984). Nicole, Lesage, and Lalonde (1992) reported in their study of 891 patients in Quebec, Canada, that the rate of schizophrenia was higher for men (39.8 per 100,000) than women (22.4 per 100,000). They also reported that a significant difference in mean

age at time of first admission, 26.9 for men and 34.2 for women, and in the number of days spent in the hospital after the first admission, 71.3 days for men and 38 days for women.

Bengtsson-Tops and Hansson (1999) reported that men more often expressed needs in area such as accommodation, food, looking after the home, intimate relationships, and drug abuse, whereas women were more likely to report needs in areas such as physical health. These findings are to some extent supported by McGlashan and Bardenstein (1990), who found that women presented with more depression and self-destructive behaviors and that men more often abused drugs.

In conclusion, gender differences in mental health continue beyond differences in the prevalence of various disorders, their time of onset or course, diagnosis, treatment, adjustment to mental disorder, and access to mental health services. Thus, determining the relationship of gender and needs is one aim of this present study. This study's hypothesis was that there is no difference in the social and health needs identified by the outpatient mentally ill consumers based on gender.

Income

It has been established that there is negative relationship of socioeconomic status with mental illness in which the lower the socioeconomic status of an individual, the higher is his or her risk of mental illness. For example, the U.S. National Comorbidity Survey (Kessler et al., 1994) found that for lifetime prevalence, those with the lowest income group were 1.6 times more likely to have an affective disorder, 2 times more

likely to have an anxiety disorder, 1.3 times more likely to have a substance use disorder, and 3 times more likely to have antisocial personality disorder than those in the highest income group. In line with these findings, Belle (1990) reported that single mothers with dependent children living at the poverty level are more likely than other women to develop depression. In line with this study, a large German study that used a cross-sectional design found evidence that poor single mothers showed higher values of psychological distress (Franz, Lensehe, & Schmitz, 2002). In addition, Muntaner, Eaton, Diala, Kessler, and Sorlie (1998) found that those individuals with lower social economic status are more likely to have a high risk of depression. Similar findings were made by Nahcivan and Demirezen (2005), who examined the relationship between depression among adults and income in Turkey. They found that depression is more likely to be common with older adults with low income. The same findings were reported by Lesser et al. (2005), who compared the demographic and clinical characteristics of 1,452 outpatients who have private insurance, public insurance, Medicaid and Medicare, or no insurance and who were seeking treatment for depression. They found that patients with public or no insurance were more likely to be members of a racial or ethnic minority group, unmarried, less educated, and unemployed and had greater severity of depression, more comorbid psychiatric symptoms, lower life satisfaction scores, and greater functional impairment.

A study by Thornicroft, Margolius, and Jones (1992) also reported a relationship between those who had been overcrowded, unemployed, and had low social class and psychiatric admission. These findings were also corroborated by Hazel, Herman, and

Mowbray (1991), who found that the majority of the mentally ill who using public mental health services live below the poverty level and also are often unemployed. Weich and Lewis (1998) found that poverty and unemployment usually increase the time to recover from mental illness but did not seem to be the cause of the illness itself. Walberg, McKee, Shkolnikov , Chenet, & Leon (1998) identified the socioeconomic factors associated with decreasing life expectancy in Russia between 1990 and 1994. They reported that early deaths were concentrated in the 30–60-year-old age group for both men and women. They found that the most important predictors of decreased life expectancy were the economic situation including high turnover of the labor force, large increases in crime, and unequal distribution of household income.

In summary, researchers indicate a negative relationship of socioeconomic status with mental illness and a significant effect of income on the needs of the mentally ill. This study's hypothesis was that Income is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the income goes up, the total number of needs goes down.

Education

Researchers have found that that there is negative relationship between education level and mental illness in which the lower an individual's education level, the higher his or her risk of mental illness. Many of these studies include education as a variable with other factors, such as income; nevertheless, the correlation of education level and mental illness is well established. For example, Andrade et al. (2000) found that the prevalence

of most psychiatric disorders increased among people with lower socioeconomic class (with regard to income, education, and employment) and was lower among the married than the unmarried. Consistent with these findings, Lorant et al., (2003) reported that some psychiatric disorders, such as depression, were reported more often among those individuals with a lower socioeconomic position (i.e., educational and income levels) than among those with a higher socioeconomic position. These findings were also corroborated by Al-Haddad, Al-Garf, Al-Jowder, Al-Zurba, (1999), who conducted a study to assess the prevalence of hidden psychiatric morbidity in Bahrain. They found that psychiatric prevalence usually common among those who were women, unemployed, had a low educational level, and were divorcees or widows. In line with these findings, Hazel, Herman, and Mowbray (1991) reported that the mentally ill are less likely to have finished school than the general population. Furthermore, Dohrenwend et al. (1992) and Regier et al. (1993) found that poor and less well-educated individuals have higher rates of mental disorders than those wealthy. Leaf, Bruce, Tischler, & Holzer (1987) examined the impact of socioeconomic status on the attitude toward the use of mental health services. They found that people with low financial resources and low educational level are less likely to seek mental health services. Similar results were reported by Howard et al. (1996), who found that demographic characteristics played a role in help-seeking behavior. They found that low income was inversely proportional to obtaining help, whereas a higher level of education led to higher use of mental health services.

As can be seen, the literature indicates a relationship between the level of education and mental illness in which the lower the level education, the higher the

individual's risk of mental illness. This study's hypothesis was that education is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the education goes up, the total number of needs goes down.

In conclusion, the fact that the empirical studies often describe differences in the needs of the mentally ill based on age, gender, income, and level of education, coupled with the fact that most of these studies concerned Western countries and cannot be assumed to represent the case of the mentally ill in Saudi Arabia, with its very different cultural conditions, indicates that a needs assessment of the mentally ill in Saudi Arabia should be conducted with demographic factors recorded as variables. Therefore, this study was designed to reveal the patterns of needs and assess whether there are differences in these needs based on the demographic variables.

Empirical Research Related to Saudi Arabia

Many studies in Saudi Arabia, which will be cited in the following paragraphs, have focused on particular aspects of mental health issues; however, none has discussed the social and health needs of the mentally ill.

For example, some studies have assessed the prevalence of depression and associated factors in elderly people in Saudi Arabia. One study reported that about 39% of the subjects have depressive symptoms and 8.4% have severe depressive symptoms (Al-Shammari & Al-Subaie, 1999). The study also found that education, unemployment, divorced or widowed status, old age, being a women, living in a remote rural area with poor housing arrangements, limited accessibility within the house, and poor interior

conditions were all correlated strongly with depression. Furthermore, limited privacy, such as having a particular room specified for the elderly, was associated with more depressive symptoms than sharing a room with another person. Incomes inadequate for personal needs and dependence on charity or relatives were associated with more cases of depression. Significant depression was associated with loss of a close relative, living alone, and limited participation in recreational activities. Perception of poor health and dependence on others for daily activities were associated with more depressive symptoms. Also health problems, especially bowel or urinary incontinence, were associated with more depressive symptoms.

Another study examined the prevalence of mental illness among adult primary care patients in Saudi Arabia using the Rahim Anxiety-Depression Scale (Al-Khathami and Ogbeide, 2002). It reported that the minor mental illness morbidity was 18.2% (30.5% when subthreshold mental illnesses are included). It was significantly higher in women (22.2%) than men (13.7%). The prevalence rate was higher in the younger age group. In patients aged 15 years to 29 years, it was 23.2%; in those aged between 30 years and 44 years, it was 17.8%; and in patients aged 45 years to 65 years, the prevalence was 7.1%. Also, the rate was high among divorcees (40%) and widows (43.8%). The prevalence rate in patients with diabetes mellitus was 16%; with hypertension, 22.2%; and with bronchial asthma, 28.3% (Al-Khathami and Ogbeide, 2002). Qureshi, Al-Habeeb, Al Ghamdy, Magzoub, and Schidt (2001) compared the psychiatric and physical morbidities among patients referred from primary health care (PHC) centers and general hospitals (GH) in the Al-Qassim region, Saudi Arabia.

Psychiatric referrals for 540 patients (GH = 138; PHC = 402) were selected randomly. Fifteen GH patients but no PHC patients were referred for admission. Psychiatrists made more diagnoses of dementia, affective and anxiety disorders, mixed anxiety-depression, and somatoform disorders than clinicians and general practitioners (GP). Clinicians made significantly more diagnoses of acute psychoses and somatoform disorders than GPs. Physical morbidity was noted in 38.4% and 17.2% of GH and PHC referrals respectively.

El-Rufaie, Albar, and Al-Dabal (1988) estimated the prevalence of depressive and anxiety disorders among a group of Saudis who attend the primary care center in Dammam, Saudi Arabia. They found that the total prevalence rate of depression was 17% and that of anxiety was 16%; and 7% of the sample suffered from both depression and anxiety, that is, the total percentage of patients with depression, anxiety, or both was 26%. Higher morbidity of depression was recorded among women and a higher morbidity of anxiety among men patients.

Shahin and Daly (1999) examined the knowledge, attitudes, and beliefs about medication in a sample of 76 Saudi hospitalized psychiatric patients. They found about 44% of the patients knew the name of their medication, 37% understood the side effects of their medication, and 49% of the patient can identify the dosage. The study also indicated that those younger and college educated were more likely to have knowledge about their medication doses than older patients and less educated patients. Wahass and Kent (1997) examined 281 patients about their attitudes towards auditory hallucinations in Saudi Arabia and the United Kingdom. The study indicated that Saudis were more likely to believe that Satan or magic caused hallucinations, whereas those in the U.K.

sample were more likely to cite schizophrenia or brain damage as the cause. Also Saudi patients reported that religious assistance would be most effective in treating hallucinations whereas the U.K. patients believed that medication and psychological are more effective in treating hallucinations.

Needs Research

Because there is a lack of the empirical research about the needs of the mentally ill in the Middle East, including Saudi Arabia, Western studies must be included to strengthen the foundation of our literature review. In Spain, Ochoa et al. (2003) identified the most common social and health needs of people with schizophrenia who live in the community. They found the most common needs to be those involved with psychotic symptoms, house keeping, food, company, daytime activities, and information about their conditions or treatment. This finding was supported by Rosales, Torres, Luna-Del-Castillo, Baca, and Martinez (2002) in Granada, southern Spain. Both the studies concluded that the most frequent needs among the mentally are those related to daytime activities, company, psychotic symptoms, psychological distress, basic education, money management, and information about their conditions or treatment. The same findings have been reported in a study in Sweden. Bengtsson-Tops and Hansson (1999) assessed the perceived needs of a sample of 120 outpatients with schizophrenia in Sweden using the CAN. They found that patients in their study had an average of seven unmet needs and those who had more unmet need has reported lower scores in a psychiatric rating, they also found more than one –third of patients had severe clinical and social problems

and that the more needs was associated with lower quality of life. The authors reported that the most severe unmet needs were related to information about their own condition and treatment, psychological distress, physical health, psychotic symptoms, social relations, and daytime activities, and emphasized the need for further intervention from both the health care system and social services.

In Italy, Ruggeri, Leese, Slade, Bonizzato, Fontecedro and Tansella (2004) analyzed a representative sample of 268 patients attending a community-based psychiatric service in order to create a profile of patients with higher needs for care by using a full range of potential demographic, clinical, and social and service needs, using CAN. They found that those patients who meet any one of several criteria are more likely to have higher needs; the criteria are men, being unemployed, having high symptomatology and disability, having low functioning and self-reported quality of life, and a high number of outpatient and community contacts over the past year. In England, Stansfeld, Orrell, Mason, Nicholls, and D'Ath (1998) assessed the needs of the mentally ill in acute psychiatric inpatient treatment centers in London. They found that unmet clinical needs included treatment of drug side effects and dangerous and socially embarrassing behavior. Unmet social needs included household shopping, cooking meals, occupation skills, and money management. Kallert and Leisse (2001) examined the needs of the mentally ill in Dresden, Germany, using the Needs for Care Assessment. They reported that the dominant needs included positive and negative symptoms, psychopharmacological side effects and psychosocial distress, problems dealing with

management of household affairs, recreational activities, household chores, and occupation and communication skills.

Having reviewed the most relevant literature, it is now appropriate to introduce the conceptual framework for the literature review.

Conceptual Framework for the Proposed Study Based on the Literature Review

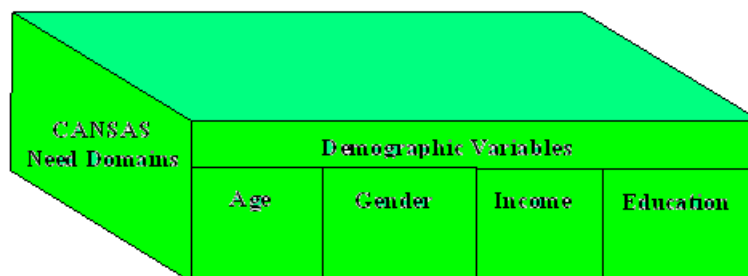
International studies in Western countries such as the United States of America, the United Kingdom, Spain, Italy, Germany, and Sweden show some similar needs among the mentally ill. According to the studies in Western countries, the most common needs concern physical health, psychotic symptoms, psychological distress, social relations, occupation, communication skills, house keeping, food, company, daytime activities, money management, and information about their conditions or treatment. Other studies have identified the demographic variables that are most associated with these needs. These are being men, unemployed, having high symptomatology and disability, having low functioning and self-reported quality of life, having a high number of outpatient and community contacts, having a low quality of life over the past year, not living with a life partner, having a low educational level, and receiving state benefits.

However, there is a lack on empirical research about the needs of the mentally ill in Middle East countries, including Saudi Arabia; and, although there is some consistency among the Western studies, the aforementioned models cannot be unequivocally assumed to represent the mentally ill in Saudi Arabia, with its very different social, cultural, and religious conditions. Therefore a study of the Saudi mentally ill was needed to identify

social and health needs and demographic characteristics of this population in order to improve the delivery of services to them.

The conceptual framework for this study, based on the literature review, was a matrix including the demographic variables that are most associated with the needs to be researched (for example, age, gender, formal education, current income), and the Modified CANSAS domains of health and social needs, (for example, accommodation, food, looking after the home, self-care, daytime activities, physical health, psychotic symptoms, information on condition and treatment, psychological distress, safety to self, safety to others, company, child care, basic education, telephone, transportation, money, and benefits). Such a matrix will reveal both the demographic characteristics of the mentally ill and their social and health needs. The completed matrix will therefore show if there are any differences in the needs based on the demographic variables and also if there is an inequity in the distribution of health services, particularly mental health services, among the elderly, women, uneducated, and the poor. The completed matrix will also reflect the level of satisfaction with services received and other variables noted in the assessment instrument. A simplified version of the matrix is shown in Figure 2.

Figure 2 Conceptual Framework.



CANSAS

CANSAS is a tried and tested approach to assessing the needs of the mentally ill developed by the Royal College of Psychiatrists in the United Kingdom (Phelan et al., 1999). It records both staff and patient assessments of needs and help over the last month in 22 health and social domains: Accommodation, Food, Looking after the home, Self Care, Daytime Activities, Physical Health, Psychotic Symptoms, Information, Psychological Distress, Safety to Self, Safety to Others, Alcohol, Drugs, Company, Intimate Relationships, Sexual Expression, Childcare, Basic Education, Telephone, Transport, Money, and Benefits. For each domain, the goal is to identify whether service users have any difficulties and, if they do, to establish the level of help they are receiving, the level they think they should receive, and their satisfaction with the service they receive.

Two domains and two independent variables, those referring to education and money, appear to refer to the same factors. However, the CANSAS domains Basic Education and Money refer only to the ability of the individuals in question to read and write and manage their finances, if they need assistance with these domains, and if they are satisfied with the assistance they receive. The independent variables Education Level and Income Level, on the other hand, measure the actual educational and income level of the recipients of health services.

CANSAS and the Study

CANSAS was modified for the purposes of this study to eliminate questions concerning alcohol, drugs, sexual expression, and intimate relationship because the dominant social and religious mores in Saudi Arabia are such that these questions are not likely to be answered at all; and, even if they are answered, the responses are likely to be unreliable.

The result of the research has twofold: (1) The identification of specific demographic variables for the population whose social and health needs are not being meet and (2) recommendations to enable policymakers to more effectively direct resources to satisfy the shortcomings. The study validated or invalidated several hypotheses, mentioned above, with regard to demographic variables.

Policy Analysis: The Theoretical Framework

Public policymaking is difficult to exemplify, but it can be made easier to understand and analyze by explaining it through conceptual models or analytical approaches (Birkland, 2001; Kingdon, 1995; Dye, 2002). Policymaking approaches are simplified descriptions of complex, real world events that highlight significant political processes and simplify otherwise vague events (Kingdon, 1995). The policymaking approach offers more than just another way of looking at the same subject matter. It also offers a framework within which policymakers can understand and analyze how various political institutions actually work with specific issues (Dye, 2002).

To analyze the decentralization policy and establish a policy theoretical framework for this part of this study, three models were considered to describe public policymaking process: the Incremental Model, Rational Choice Model, and Stage Model.

Incremental Model

The incremental model is a descriptive approach to the policymaking process that was developed as an alternative to the rational model. It was first presented by Charles E. Lindblom, who views policy as a continuance of past government activities with only incremental changes. According to Lindblom in his 1959 article, “The Science of ‘Muddling Through,’” the public policy process is not rational but is an incremental process that is a function of timing and opportunity (Lindblom, 1959). Because of the political obstacles, decision-making needs to take small and incremental steps and then become public policy over time (Dye, 2002). Thus, Lindblom’s theory challenged the idea that policymakers set about problem solving in a comprehensive way; rather, they took a series of small steps along the way that accumulated to form a policy. In the incremental model, decision-makers usually use the current policy to start with, rather than agree on a definite goal. They consider a few small changes to the existing policy and rely on the record of the past experience with small policy steps (Birkland, 2001).

According to Longest (2002), “Incremental policymaking permits a minimum of economic dislocation or disruption and causes minimal alterations in the social system’s status quo” (p. 269). Minimum alterations are politically feasible because they require

less information to understand, typically cost less, and are easier to build collations around because they upset fewer vested interests (Dye, 2002).

The strengths of this model include the following: (a) It describes the development of policy and helps decision-makers take a number of short cuts (Birkland, 2001). (b) It also helps decision-makers take an action and make some changes (Hayes, 1992). Finally, (c) Incrementalism relies on previous experience for making policy judgments, which can help to minimize the real limitations on time and information (Birkland, 2001).

Among the problems with the model are the following: (a) Some goals simply cannot be achieved with incremental steps (Birkland, 2001). (b) Some problems demand bold decisions and need fast attention. (c) The model does not help policymakers focus on the overall picture because they do not have the time, information, or money to investigate all the alternatives to current policy (Dye, 2002). And (d) the best policy is defined as the one that most policymakers can agree on, regardless of whether or not they are pursuing the same objective or expect the same results (Birkland, 2001).

Rational Choice Model

The Rational Choice Model is rarely followed due to the difficulty of obtaining all the information needed to analyze the issue (Kingdon, 1995; Dye, 2002; Birkland, 2001). However, for a long time, the rational model was considered the primary method of decision-making in the field of public policy in both public and private organizations.

The main premise of the rational choice model is that decision-makers are presented with a problem. The decision-makers' role is to collect information about the societal and economic costs and benefits of the policy issue and then develop a comprehensive strategy to solve the problem (Birkland, 2001; Dye, 2002). In this model, policymakers usually first define their goals rather than define how they will achieve those goals, and then they evaluate many alternative ways to reach the goals. They would compare the alternatives systematically, assign their costs and benefits, and then would choose the alternative that would achieve the goal at the least cost (Kingdon, 1995).

To follow the rational choice model, Dye (2002) concluded that policymakers must (a) know all the society's value preferences and their relative weights, (b) know all the available alternatives, (c) understand the cost of each policy alternative, (d) calculate the ratio of benefits to costs for each policy alternative, and (e) chose the most efficient policy.

The strengths of the rational approach include the following: (a) It allows the policymakers to choose an optimal or satisfactory solution for the problem; and (b) it gives a clear indication of the society's values and gives weight for each value. It involves a calculation of all social, political, and economic values that can be achieved by a public policy, not just those that can be measured in dollar amounts (Dye, 2002).

The weaknesses of the rational choice approach are various. First, no societal benefits are usually agreed on; rather, only benefits to specific groups and individuals are recognized, and many of these conflict with each other. Second, there are many benefits and costs that cannot be easily quantified, such as individual dignity, and these are

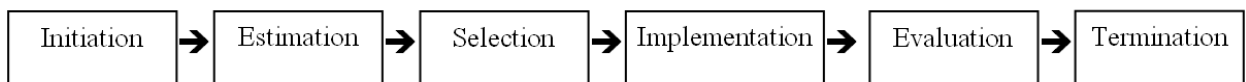
difficult to measure against purely economic choices, such as tax increases, which can be quantified. Third, policymakers tend to be rewarded (with reelection, power, and status) because of the short-term effect of their decisions rather than the long-term social benefits. Fourth, policymakers tend to seek the workable alternative and not necessarily seek for the best one. Finally, the sunk cost of any policy is costly enough to discourage policymakers from looking for other alternatives (Dye, 2002).

Stage Model

The basic premise of the stage model is that the policymaking process is assumed to proceed in stages from issue identification and agenda setting to implementation, evaluation, and feed back (Birkland, 2001). Harold Lasswell first established a theoretical map to have a comprehensive image of the major phases of any collective act and named seven stages of what he was later to call the decision process. The stages are intelligence, promotion, prescription, invocation, application, termination, and appraisal. These stages became the starting point for what later became known as “the policy process” approach (Birkland, 2001).

In the 1970’s, Garry Brewer (1978) modified Lasswell’s model, identifying six stages: initiation, estimation, selection, implementation, evaluation, and termination (see Figure 3). This framework, or stage heuristic, became the basis of several studies of the science of public policy.

Figure 3 Stage Model



The policy process framework as developed by Lasswell and later modified still has much strength. Its most important advantage is that it simplifies a complex system into steps that are more easily understandable, especially for students of public policy (Birkland, 2001). In addition, it allows students to conduct an empirical study of each of the stages, identifying the important issues at each stage. Furthermore, it helps the student identify the roles of different government institutions in the policy process. By bringing attention to the process stream, it crosses boundaries of specific institutions and shows interactions among individuals and groups. The weaknesses of the stage model include the following: (a) A policy idea may not reach every stage, and (b) evaluation cannot be easily separated from the other stages, such as implementation, because evaluation is continuous as a policy is being implemented (Birkland, 2001).

Public Policy Models and the Study

Any of the three models described could be used to organize a discussion of the policy of decentralizing mental health services implemented by Saudi Arabia in 1983, the evaluation of which was one of the aims of this study. However, not all three are equally appropriate. The Incremental Model is not a very good fit because the policy was not, in fact, implemented gradually. It was a sharp departure from the previous practice, which had relied on a single mental health facility for the entire country. The Rational Choice model would also be difficult to follow. Such an approach requires (a) information about alternative policies, (b) predictive capacity to foresee accurately the consequences of alternate policies, and (c) sophisticated data in order to calculate correctly the ratio of

costs and benefits (Dye, 2002). These factors are not available to a student analyzing the current Saudi decision-making system. Because the decentralizing policy has already been implemented, the Stage Model as presented by Harold Lasswell in 1956 and modified by Garry Brewer (1978) is the most appropriate one to use in organizing a discussion of the Saudi decentralization mental health policy. This model, particularly the evaluation stage, was used as the theoretical framework for the policy part of the study. Because this model was followed, the individual stages are discussed more fully in the following paragraphs.

Stage Model and Saudi Arabia's Decentralization Policy

Policy Initiation

The initiation stage of the policy process involves the identification of policy problems and the preparation of policy for recommendations. In Saudi Arabia, health problems, including mental health, are identified only after they have become severe and a concern for a significant number of people. In most cases, as in other developing countries, very slight information is available for the public to use to define the problem (Horowitz, 1989). Awareness of a proposed policy tends to be limited to a few professionals and almost absent among the general public and even top government authorities (Kingdon, 1995). In the case of the decentralization policy, the increasing number of the mentally ill in the country and the decreasing ability of Shahr Mental Hospital to care for them all highlighted the importance of initiating a decentralization policy.

After some time, the decentralization policy gained some attention from large people and became recognized as part of the policy agenda. After that, several committees of MOH debated the policy. Next, the committees approved the decentralization policy and passed it on to the Minister of Health to review. After that, the Minister of Health took the proposed legislation to the Council of Ministers for debate. Then, the Council of Ministers approved the legislation and sent it to the King to sign it into law. Finally, the King approved it, and it became policy in 1983.

Policy Estimation

The estimation stage includes the assessment of proposed alternative policies that deal with the proposed policy once it has become part of the public policy agenda (Kingdon, 1995). In Western countries, mental health professionals and government agencies usually collect the necessary empirical evidence to help estimate the likelihood of any policy proposal's being a success or a failure (Birkland, 2001; Horowitz, 1989). However, in developing countries, including Saudi Arabia, there is typically very little or no assessment of policy alternatives in terms of the estimated costs and benefits associated with the potential policy (Horowitz, 1989; Gilson et al., 2003), in part because the needed data are not available. The general condition is that evaluating policy alternatives is considered unnecessary and, even when they are introduced, the estimates are rarely used in the decision-making process (Horowitz, 1989), which is very similar to the decentralization policy case in Saudi Arabia.

Policy Selection

In developing countries, including Saudi Arabia, the policy selection stage usually involves a few top officials from the government making decisions about the proposed policy. During this part of the process, political preference, economic growth, and religious institutions are more important than empirical data and assessments (Lindblom & Woodhouse, 1993; Horowitz, 1989). Generally, the proposed policy will be sent back to committees for more studies, particularly if the issue is too controversial, strongly opposed by the government, or viewed as outside the public interest (Kingdon, 1995).

In the end, it becomes more important for policymakers in Saudi Arabia to try to find a satisfactory policy that can gain approval from the Council of Ministers, Majles Sura, the public, religion institutions, and, finally, the King. This closed-door approach reflects the fact that the Saudi legislative process lacks a systematic decision-making process, and the country also lacks organized interest groups that are acknowledged as legitimate political actors by high government officials.

Policy Implementation

Implementation is viewed as a process of interaction between the setting of goals and the actions geared to achieving them. However, implementation is not always simple; it may require more people, money, and organizational skills than are available (Jones, 1984). The implementation could be vertical, between different levels of government, or horizontal, within levels of government. Certain things facilitate implementation, like funding, the number of agencies, enforcement of existing laws or regulations, and the number and size of agencies involved and the limits of bureaucratic discretions. Things

that can block implementation are excessive bargaining, changes in priorities, lack of funds, lack of direction in goals, and, in the United States, poor congressional oversight (Gerston, 1997).

In developing countries, however, government appears to operate under a policymaking approach that views enactments of policies and laws as a central governmental activity (Bardach, 1977). Governments usually do not pay attention to planned implementation processes, assuming that the policies will be implemented one way or another by the government bureaucracy (Crosby, 1996).

In the case of Saudi Arabia, MOH operates under the assumption that health policies, including mental health policies, are rarely enforced sufficiently because of lack of political will or technical resources to monitor the policy implementation.

Evaluation

Evaluation is the activity designed to judge the merits of government programs or processes (Dye, 2002; Birkland, 2001). Evaluation plays an important role in public policy argument. It takes many forms and occurs at any level of government or outside the government (Birkland, 2001). (House and Howe (1999) emphasize that evaluation should meet three specific provisions: inclusion, dialogue, and deliberation. Evaluations should include all major stakeholders' interests and views. They should provide all the opportunity to be engaged in a comprehensive dialogue to ensure a legitimate representation for each one. Finally, they should allow for sufficient dialogue to reach a convincing conclusion. If these provisions are met in addition to the use of evaluation, proper techniques, and analysis, then the evaluation is objective.

This stage involves an assessment of the outcomes generated by the decentralization policy. It is important to stress that policy evaluations are not just technical but also inherently political exercises (Gilson et al., 2003). Estimating political support and ideological acceptability are often more important than measuring economic benefits and costs (Kingdon, 1995). In developing countries, policy implementation and evaluations are seen as expensive and time-consuming exercises (Morton, 1996). Governments seldom implement these evaluations except when pressured by external agencies that agree to fund such appraisals. Also, given the lack of information and technical expertise, policy evaluations in developing countries are more dominated by politics than in industrialized countries (Morton, 1996). For any policy, the evaluation process would be performed by interested agencies or an interested researcher, like myself. Even if an evaluation is desired, lack of empirical data and information often make a full evaluation impossible.

The decentralization policy was implemented in 1983, yet it has not been evaluated until now. Hence, this study was conducted to examine whether this policy has provided the mentally ill with adequate services or not and met their various social and health needs.

Policy Change or Termination

During this stage of the policy process, government programs and regulations that have not met the expectations of important interest groups and the public in general may experience programmatic modifications or, in very rare cases, they may be discontinued (Brewer, 1978). Here, we are returning to a dynamic similar to the initiation stage of the

policy process where government action is dependent on the salience of an issue and on how it is defined and shaped by different interest groups (Brewer, 1978).

Policy Change or Termination is the bridge between practice and theory. Policy adjustment is the art of thinking and reforming a public policy. For example, information regarding a change in public opinion that may affect the effectiveness and applicability of a public policy can be used to modify the policy. For the proposed study, the goal is to find information that will provide inputs for policy modification regarding the decentralization policy.

Chapter 4: Study Methodology

This chapter starts with statement of the hypothesis, followed by operational definitions of terms and a description of the study variables. Then, the study designs are discussed. Next, the target population is described and the method followed in selecting the sample is discussed. Finally, the survey instrument and statistical analysis is presented.

Hypothesis

The study was designed to test four hypotheses.

H1: There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on gender.

H2: There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on age.

H3: Income is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the income goes up, the total number of needs goes down.

H4: Education is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the education goes up, the total number of needs goes down.

These hypotheses assume correlations between the total number of self-reported health and social needs of the mentally ill patients on the CANSAS (Slade et al., 1999)

and their demographic characteristics. The demographic characteristics of patients in the study were age, gender, current income level, and education level. It is the purpose of this study to determine if the correlations found in studies of Western populations hold true within the target population in Saudi Arabia.

CANSAS was used to measure the dependent variable (health and social needs). A demographic characteristics questionnaire was used to determine the independent variables, that is, the patient's age, income level, gender, and education level.

Operational Definition of Terms

Outpatient mentally ill consumer:

For the purpose of the study, an outpatient mentally ill consumer is one who attends an outpatient clinic at Al-Amal Complex for Mental Health seeking treatment and meets the following criteria: (a) 18 years of age and older; (b) living independently in the community; (c) attending the outpatient department for regular psychiatric services; and 4) competent adult.

Patient's Needs:

For the purpose of this study, a need is any health or social need that a participant identified as being necessary for their ability to continue to remain in the community or that the patient judges as important. The participants identified only the needs in 18 of the 22 domains described in CANSAS: Accommodation, Food, Looking After the Home, Self-Care, Daytime Activities, Physical Health, Psychotic Symptoms, Information on Condition and Treatment, Psychological Distress, Safety to Self, Safety to Others, Company, Child Care, Basic Education, Telephone, Transportation, Money, and Benefits

(Slade et al., 1999). As explained above, patients were not surveyed concerning the domains of Alcohol, Drugs, Intimate Relationship, and Sexual Expression. For this study, we create a “Needs Score” for each subject based on the sum of his or her responses. In this way, we are assuming that there is an “ordering” in the responses, with 0 representing no need, 1 representing a “met needs” and 2 representing a “unmet need”. Given that there are 18 items in the questionnaire, and each item can be assigned the value of 0, 1 or 2, this “Needs Score” would take on the values from 0 (no needs at all) through 18 (the subject has all the needs in the questionnaire, and none of them have been met).

Mental Health Services:

Use of mental health services is defined as visiting an outpatient mental health clinic at (Al-Amal Complex for Mental Health) and having treatment provided by a psychiatrist, social worker, or psychologist.

Study Variables

Independent Variables

Gender is a dummy variable where men is assigned a value of 0, whereas women is assigned a value of 1.

Age is a categorical variable that was assigned a value of 0 for 18- to 27-year-olds, a value of 1 for 28- to 37-year-olds; a value of 2 for 38- to 47-year-olds, and a value of 3 for to 48- to 57-years-olds; a value of 4 for 58- to 67-year-olds, and value of 5 for those 68 years of age and over.

Education Level is also a categorical variable that was assigned a value of 0 for less than Middle school, a value of 1 for Middle school graduate, 2 for less than high school, a value of 3 for high school graduate, a value of 4 for some college, a value of 5 for college graduate, and a value of 6 for more than college graduate.

Mental Health Diagnosis is a dummy variable where “Yes” is assigned a value of 0 and “No Answer” is assigned a value of 1.

Income Level is a categorical variable for annual income in riyals (SR, the Saudi monetary unit) where 0 to 2,000 was assigned a value of 0; 2,001 to 4,000, a value of 1; 4,001 to 6,000, a value of 2; 6,001 to 8000 a value of 3; a value of 4 8001 to 10000 and over 10,000, a value of 5.

Dependent Variable

As noted in Chapter 1, patient responses to CANSAS are scored on a 3-point scale: 0 = *no problem*, 1 = *met need* (no or moderate problem because of help being received), 2 = *unmet need* (current serious problem, regardless of any help received) (Phelan et al., 1999). For this study, Need Score was created for each subject based on the sum of his or her responses. In this way, we are assuming that there is an “ordering” in the responses, with 0 representing no need, 1 representing a “met needs” level of need and 2 representing a “unmet need”. Given that there are 18 items in the questionnaire, and each item can be assigned the value of 0, 1 or 2, this “Needs Score” would take on the values from 0 (no needs at all) through 18 (the subject has all the needs in the questionnaire, and none of them have been met).

Study Design

The study used a cross-sectional survey design. The purpose of using this descriptive, quantitative study was to identify the needs of the outpatient mentally ill consumers and assesses the demographic variables that are most associated with these needs.

The subjects for this study were individuals who currently receive outpatient treatment services from Al-Amal Complex for Mental Health, a mental health hospital in Riyadh, who met the following criteria: (a) 18 years of age and older; (b) living independently in the community; (c) attending the outpatient department for regular psychiatric services; and (d) competent adult. Psychiatrists determined the competency of subject by reviewing the patient's medical file, which includes the patient competency assessment. Within this population, the following were excluded: patients with (a) substance abuse, (b) mental deficiency, (c) organic brain disorder, (d) active mental illness, (e) history of hospitalization for mental illness, or (f) moderate to severe cognitive limitations. Attending psychiatrists at the hospital identified potential participants who met these criteria and informed them of the study.

The cross sectional survey design allowed for collection of the data from a large number of patients in a relatively short period of time (Babbie, 2001). Permission to conduct the study granted before the proposal to conduct the research was made (see Appendix A). Also, IRB approval was obtained from VCU IRB office before collecting the data (see Appendix F).

Survey Instruments

Two questionnaires were provided to each subject; a demographic questionnaire (see Appendices B and C) and the CANSAS survey instrument (Appendices D and E). Both questionnaires used self-report (with no subject identifiers) and were designed to be completed in approximately 20 to 25 minutes.

The demographic survey was designed for the purpose of the study. It simply asks about gender, age group, education level and income level, and whether the participant has a mental health diagnosis and what type of mental health diagnosis the participants has and whether the participants knew their diagnosis.

The Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) was chosen as a means of measuring the outpatient social and health needs (Slade et al., 1999). The instrument was modified to fit the Saudi culture. All questions not relevant to psychiatric outpatient service users in Saudi Arabia were deleted. For example, questions regarding alcohol, drugs, sexual expression, and intimate relationships were deleted because it was expected that if the questions were to be answered at all, the answers would not be honest responses. CANSAS was used to assess 18 of its 22 domains for health and social needs. Questions were asked about each domain to identify (a) whether a need or problem was present in that domain and (b) whether the need was met or unmet. By definition, a need is met if a problem does not currently exist in the domain but would exist if the patient were not receiving help at present (that is, the patient is getting effective help); a need is unmet if there is currently a problem in the domain (whether or not any help is currently being provided).

Four principles shaped the development of the Camberwell Assessment of Need (CAN) and CANSAS: (1) Everyone has needs; although people with mental illness have some specific needs, most of their needs are similar to those of people not suffering from mental illness. (2) People with mental illness may have multiple needs that are not addressed by mental health professionals. Therefore, a priority of CAN is to identify, rather than describe in depth, serious needs, because more detailed investigations can be conducted in specific areas when required. (3) Needs assessment should be an integral part of both routine clinical practice and service evaluation. (4) Needs are a subjective concept and therefore staff and patients often have different views so that ratings of needs can be completed by staff, by patient, or by both (Slade et al., 1999). The CAN authors (Slade et al., 1999) developed CANSAS, which was designed to be used for research and clinical use.

Validity of CANSAS

CANSAS has been proven to have face validity, consensual validity, and content validity. Face validity was demonstrated when clinicians and researchers in Britain and other European countries consistently commented that CANSAS covers the range of difficulties faced by people with mental illness (Phelan et al., 1995). Consensual validity was proven when a draft version was sent to 50 professionals in the fields of social work, psychology, psychiatric nursing, and occupational therapy, all of whom replied that the instrument appeared to be useful and relevant. For content validity, Phelan et al. (1995) conducted a survey of 59 people with severe mental illness who were either current inpatients or attending a psychiatric day-hospital. All topics were rated as being at least

moderately important, indicating that the instrument is free from bias. No additional areas of need were identified by more than two respondents.

Reliability of CANSAS

Phelan et al. (1995) used mentally ill people and professionals to establish inter-test and test–retest reliability. Staff and patients identified the same number of needs, but they did not identify the same needs. There was a high level of agreement between raters at $t1$ ($r = 0.99$ and 0.98 for patient and staff ratings, respectively, $p < 0.01$), and moderate agreement between $t1$ and $t2$, ($r = 0.78$ and 0.71 for patient and staff rating, respectively, $p < 0.001$). There was good agreement between two rates at $t1$; and, although the percentage of agreement at $t2$ was somewhat lower, there was substantial agreement for the majority of items. The kappa coefficient for section 1 (assessment of need present) indicated a good inter-agreement at $t1$. The kappa coefficient for staff ranged from 0.74 for occupational need to 1.00 for safety to self, safety to others, alcohol, and basic education. The kappa coefficient for some of the test–retest items was very low; for example, telephone (0.21) and money (0.23), but this could be due to a substantial skew in ratings (Phelan et al., 1995).

For the purpose of the study, the CANSAS was been translated into Arabic using a back translation procedure. This procedure included having four specialists translate the instrument into Arabic. Then, after 1 week, the specialists were asked to translate the Arabic version into English. The specialists were not informed about the back translation. A comparison between the original English version and the new back-translated version was administered by the student, co-investigator and other experts in the field to avoid

any discrepancy in translation. The experts in the field include four Saudi individuals who have the Ph.D. degrees in Social Work from the United States and speak both Arabic and English. This well-known translation procedure is used for cross-language studies. Moreover, to meet the VCU IRB requirements for documents translated to a different language, both English and Arabic versions of the instruments were evaluated by an authorized office in Saudi Arabia to make sure the translation was accurate.

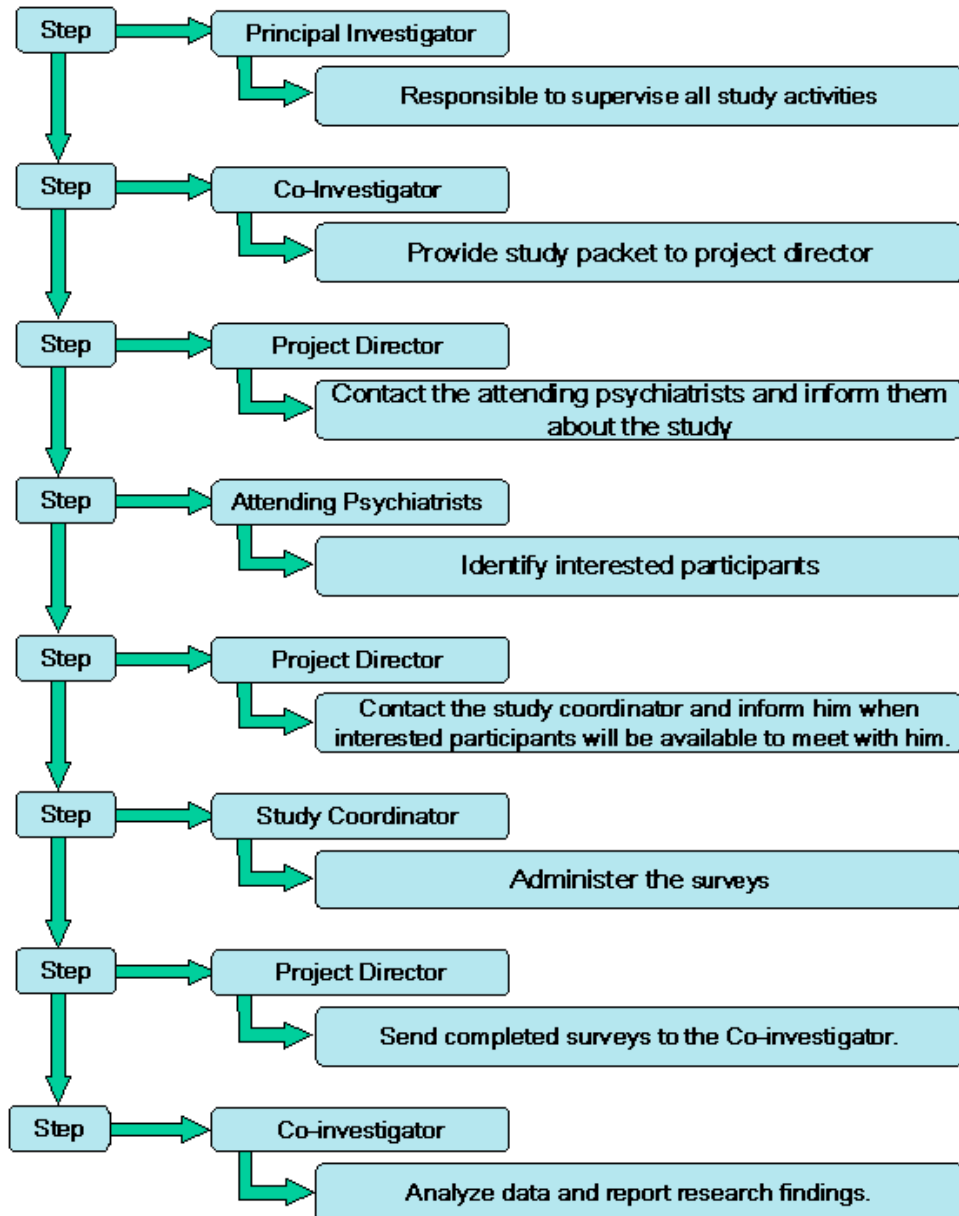
Sample Size

The study participants were 155. The sample size was determined on the basis of power analysis. The power of a statistical test refers to its ability to reject the null hypothesis when the null hypothesis is actually false (for example, to conclude that the means of two groups are unequal, given that they in fact are unequal). In order to achieve 80% power using a one-tailed unpaired ANOVA, assuming a “medium” effect size (as per Cohen’s conventions), the required sample size is 50 observations per group. Therefore, at least 50 men and 50 women subjects would be needed in order for the ANOVA to achieve at least 80% power. If Mann-Whitney U is used, then the sample size needed in order to achieve 80% power is slightly higher, at 58 observations per group. For the correlation analysis that will be carried out for Hypotheses 2, 3 and 4, assuming a target power level of 80%, and a relatively weak population correlation (0.25), the required sample size would be 97 observations.

Data collection Procedures

The procedures of collecting data can be described in eight steps, as outlined in the accompanying Figure 4.

Figure 4 Procedural Steps for Collection of Data



The steps are as follows:

Step One:

Responsible Individual: Principal Investigator

Task: responsible to supervise and manage all study activities which include the following:

1) Conduct the IRB approval of the project protocol (see Appendix F); 2) Review the study package before conducting the surveys; 3) Mentor and train the student co-investigator in the ethical conduct of human subjects' research and ensure that he achieves C.I.T.I certification; 4) Obtain approval for any changes or additions to the study from the IRB prior to implementation; 5) Report all unanticipated problems or injury to the IRB; 6) Assist the co-investigator to develop the study methodology that is appropriate for the study and setting.

Step Two:

Responsible Individual: Co-Investigator (Doctoral Student)

Task: Contact the Project Director and provide him with the study package, which will include the following: 1) Survey forms and information concerning the time needed to complete the survey and the need to provide help for those who cannot read; 2)

Information about study; 3) Selection criteria; 4) Psychiatrists' script (see Appendices G and H); 5) Study coordinator script (see Appendices I and J); 6) Survey cover letter (see Appendixes K and L).

Step Three:

Responsible Individual: Project Director (See Appendix J for agreement letter from him to manage the study).

Task: Contact the attending psychiatrists at the hospital and provide them information about the project procedures, including the following: (a) selection criteria; (B) The need to provide the project director with a list of interested participants (Master list).

Step Four:

Responsible Individual: Attending Psychiatrists

Task: Identify interested participants. This task involves the following (a) Identify eligible participants; (b) Inform the eligible participants about the study during their regular appointment; (c) Inform interested participants as to when they will meet with the study coordinator to fill out the survey; (d) Develop a list of interested participants; including the time they are going to be available in the hospital to complete the surveys; (e) Send this list to the project director.

Step Five:

Responsible Individual: Project Director

Task: Contact the study coordinator and inform him when interested participants will be available to meet with him.

Step Six:

Responsible Individual: Study Coordinator

Task: Administer the surveys.

The surveys were given to the participants to complete in a private room, one of the conference rooms located in the hospital. The cover letter that accompanied the surveys emphasized that subject's participation and responses were completely voluntary and

anonymous. The specific procedures for this step were as follows: (a) Met with participants; (b) Thanked them for their interest in the study; (c) Described the study and explained that participation was voluntary and that their names would not be on the survey forms; (d) Let interested participants complete the survey immediately if they wished, with instructions to return it to the project director's box located in the entrance of the outpatient department in the enclosed envelope; (e) Assisted any illiterate subjects in completing the questionnaires. To ensure the privacy and the confidentiality of their response, the study coordinator read the questions from his own copy of the survey and let the subject mark the appropriate answer without interference and respecting the subject's privacy; (f) For those who wished to think about participating, informed them to report to the psychiatrist at next appointment; (g) Recorded contact information for those who needed more time to think about participating and reported it to the project director for follow-up with them to learn if they were participating or not so that the correct number of participants was surveyed; (h) Immediately reported any serious adverse event that occurred to any participant as a consequence of participation in the study to the project director at the hospital, using the phone located in conference room where the survey was taken.

Step Seven:

Responsible Individual: Project Director

Task: Send the completed surveys to the co-investigator in the United States, taking the following steps: (a) Made a copy of all completed surveys and saved them in the project director's box in the hospital as a back up if the surveys were lost in the mail; (b) Sent the

completed surveys to the co-investigator by FedEx every two weeks; (c) Destroyed all surveys when the analysis was completed; (d) Monitored the data safety plan; (e) Reported to the co-investigator on a weekly bases about the data safety plan including any adverse events.

Step Eight:

Responsible Individual: Co-Investigator (Student)

Task: Stored and analyzed data and reported research findings, taking the following steps:

(a) Stored all completed survey forms in locked cabinets at the house of the co-investigator, with key access limited to him; (b) Analyzed the data using SPSS; (c) Destroyed the data when the analysis was completed; (d) Reported the data as aggregate information; (e) Reported any adverse event to the IRB by the Principal Investigator within 10 days.

Statistical Analysis

Correlation design methodology, specifically, Pearson correlation was selected because the two variables for which the correlation is being computed are interval scale. The computed coefficient is interpreted with values close to 1 indicating a very strong positive coloration, values close to -1 indicating a very strong negative correlation, and values close to zero indicating a weak or no correlation at all between all the variables

The Pearson correlation coefficient was used in analyzing the data to determine which responses on the independent variables (age, income, and level of education) have

significant correlations. Any significant correlations that may become evident may provide opportunities for further research.

The Pearson correlation coefficient detects the linear relationship between a dependent or criterion variable Y and a second variable X , usually referred to as an independent or predictor variable. Two important pieces of information are provided by the Pearson correlation: (a) The direction of variance (a positive coefficient indicates that X and Y vary in the same directions, whereas a negative coefficient indicates they vary in opposite directions), and (b) the strength of the relationship between the X and Y variables (Keppel and Zedeck, 1989).

The correlation matrix for all questions was generated in SPSS.16 and have three components. The first number is the actual Pearson correlation, which will range from -1.00 to $+1.00$ (George and Mallery, 2003). The further away from zero, the stronger the relationship (George and Mallery). The next number is the p value; a probability of less than $.05$ is needed in order to conclude that the correlation differs significantly for a correlation of zero (George and Mallery). The third number is the sample size; correlation coefficients that cannot be computed are represented as a dot (George and Mallery). All relationships with a probability of less than $.05$ are identified with a single asterisk (*); those less than 0.01 are identified with a double asterisk (**) and are considered notable, suggesting a significant relationship between the two variables (George and Mallery). It is important to remember that we can never infer cause-and-effect relationship on the basis of a correlation coefficient alone; simply put, correlation does not, in and of itself, indicate causation (Leedy and Ormrod, 2001).

An analysis of variance (ANOVA) was also conducted to inspect if there was a difference of mean total needs among different groups of age, income, and education. This analysis involves one nominal scale with more than two categories (age, income, level of education) and one interval scale (total number of needs). For the results to be statistically significant, F-score must be greater than 1.

In summary, the Pearson correlation coefficient and ANOVA were used to analyze Hypotheses 2, 3, and 4. ANOVA were used to analyze Hypothesis number 1.

The Statistical Analysis for Each Hypothesis

H1. There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on gender. ANOVA used to determine if there were difference in the mean of total number of needs among men and women. The decision to not to reject the null hypothesis or reject the hypothesis is based on the calculated F score and P-value. If the calculated F score is greater than 1 then we can conclude significant difference between these two groups if P value is equal or less than .05.

H2. There is no difference in the total number of social and health needs scores identified by the outpatient mentally ill consumers based on age. Pearson's correlation coefficient was used because the hypothesis involves ordinal scale variables. For this hypothesis, there will be two ordinal score, namely the subjects' total number of need scores and age. Also, an ANOVA was conducted to determine if there was a difference of mean total number of needs among the different age groups.

H3. Income is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the income goes up, the total number of needs goes down. The Pearson correlation coefficient was used because, like Hypothesis 2, this hypothesis also involves two ordinal scale variables. For this hypothesis, there will be two interval scores, namely the subjects' total number of need scores and income level. Furthermore, an ANOVA was conducted to inspect if there was a difference of mean total number of needs among different income groups.

H4. Education is negatively related to the total number of needs identified by the outpatient mentally ill consumers, that is as the education goes up, the total number of needs goes down. The Pearson correlation was used because the hypothesis involves two interval scale variables. For this hypothesis, there will be two interval score, namely the subjects' total number of need score and the educational level. An ANOVA was also conducted to inspect if there was difference of mean total number of needs score among different groups of education.

Descriptive statistics, such as means, was used to investigate the characteristics of the sample and to ensure that the data meet the requirements set for the proposed inferential tests. Frequency distributions, including percentage, are presented.

Chapter 5: Data Analysis and Results

This chapter presents the statistical findings on the personal demographic characteristics of the participants ($N = 155$) and test the hypotheses' of the study. Furthermore, post hoc analyses are included to answer the study questions and to assess the relationship between some selected variables. The data were analyzed using Statistical Package for Social Science (SPSS 16). All missing data was excluded from the analysis by using SPSS feature for excluding missing data. The results of the study are presented in three sections. In the first section, descriptive statistics are presented to describe the participants' demographic characteristics, including age, gender, education, income, marital statues, whether the patient knows their mental diagnosis, and what the mental diagnosis is.

In the second section; four hypotheses of the study (as stated in Chapter 4) are tested using Pearson's correlation coefficient (Pearson's r) or an ANOVA. Results are considered statistically significant if the probability value (alpha) is equal to or less than .05.

The third section presents the post hoc analyses, to answer the study main questions question: What are the needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia; what is the relationship between the total number of needs score and gender, age, education and income level, and also some other questions about other important relationships for which data were collected.

Section One: Demographic Characteristics of the Participants

The tables in this section show the frequency distribution percentage for both independent and dependent variables.

Table 5-1: Number and Percentage of the Research Participants by Gender

Gender	Number	Percentage
Men	79	51.0
Women	76	49.0
Total	155	100

As Table 5-1 shows, the gender distribution of research participants was virtually identical; 51 percent were men and 49 percent were women.

Table 5-2 Number and Percentage of the Research Participants by Age Group

Age (in years)	Number	Percentage
18-27	23	14.8
28-37	56	36.1
38-47	48	31.0
48-57	18	11.6
58-67	9	5.8
Over 68	1	0.6
Total	155	100

As Table 5-2 shows, the majority of participants were below 58 years of age (94%). The 28–37 age group was the largest (36.1% of the participants, $n = 56$), followed by the 38–47 age group (31% of the participants, $n = 48$), and the 18–27 age group (14.8%. $n = 23$). Less than 12 percent of the participants were over 58 years of age.

Table 5-3 Number and Percentage of the Research Participants by Marital Status

Marital Status	Number	Percentage
Married	77	49.7
Single	42	27.1
Divorced	21	13.5
Widow	15	9.7
Total	155	100

As Table 5-3 shows, the majority of the participants were remained married (49%, $n = 77$). Single participants were about 27.1 percent ($n = 42$); divorced participants were about 13.5 percent and about 9.7 percent were widows or widowers.

Table 5-4 Number and Percentage of the Research Participants by Level of Education

Level of Education	Number	Percentage
Less than Middle School	56	36.1
Middle School Graduate	33	21.3
Less than High School	13	8.4
High School Graduate	17	11.0
Some College	9	5.8
College Graduate	27	17.4
Total	155	100

Table 5-4 shows that most of the participants (65.8%, $n = 102$) had less than a high school diploma; 36.1 percent had less than a middle school education. High school graduates accounted for 11.0 percent of the participants and college graduates accounted for 17.4 percent of them.

Table 5-5 Number and Percentage of the Research Participants by Income

Income Level in SRs	Number	Percentage
0–2,000	71	45.8
2,001–4,000	26	16.6
4,001–6,000	24	15.5
6,001–8,000	20	12.9
8001–10,000	12	7.7
Over 10,000	2	1.3
Total	155	100

As Table 5-5 shows, almost half of the participants (45.8%) had incomes below 2,000 SR (\$534, $n=71$); about 32.3 percent had incomes below 6,000 SR, (\$1600), about 12.9 percent had incomes below 8,000 SR (\$2,134), and only 1.3% subjects had incomes over 10,000 SR (\$2,667).

Table 5-6 Number and Percentage of Participants Identifying Met and Unmet Needs by Gender

Variable	Men	Women
Accommodation		
Met needs	38 (49.4%)	15 (20.5%)
Unmet needs	4 (5.2%)	1 (1.4%)
Food		
Met needs	8 (11.0%)	15 (20.3%)
Unmet needs	0 (0%)	2 (2.7%)
Look after home		
Met needs	22 (28.2%)	33 (45.2%)
Unmet needs	0 (0%)	5 (6.8%)
Self Care		
Met needs	8 (10.3%)	9 (12.3%)
Unmet needs	0 (0%)	4 (5.5%)
Daytime Activity		
Met needs	22 (29.7%)	19 (26.8%)
Unmet needs	13 (17.6%)	19 (26.8%)

Table 5-6 (continued)

Variable	Men	Women
Physical Health		
Met needs	30 (40.0%)	28 (38.9%)
Unmet needs	1 (1.3%)	7 (9.7%)
Psychotic Symptoms		
Met needs	43 (55.8%)	52 (69.3%)
Unmet needs	12 (15.6%)	5 (6.7%)
Information on treatment		
Met needs	33 (42.9%)	22 (30.1%)
Unmet needs	4 (5.2%)	24 (32.9%)
Psychological Distress		
Met needs	43 (57.3%)	28 (41.9%)
Unmet needs	5 (6.7%)	4 (6.0%)
Safety Self		
Met needs	5 (6.8%)	3 (4.1%)
Unmet needs	3 (3.9%)	1 (1.4%)
Safety to Others		
Met needs	3 (3.9%)	3 (4.1%)
Unmet needs	3 (3.9%)	0 (0%)
Company		
Met needs	7 (9.2%)	1 (1.4%)
Unmet needs	6 (7.9%)	3 (4.1%)
Child Care		
Met needs	19 (25.0%)	22 (29.3%)
Unmet needs	0 (0%)	6 (8.0%)
Basic Education		
Met needs	24 (31.2%)	13 (17.3%)
Unmet needs	1 (1.3%)	26 (34.7%)
Telephone		
Met needs	2 (2.6%)	6 (8.1%)
Unmet needs	0 (0%)	26 (34.7%)
Transport		
Met needs	11 (13.9%)	22 (29.3%)
Unmet needs	0 (0%)	4 (5.3%)

Table 5-6 (continued)

Variable	Men	Women
Money		
Met needs	24 (30.4%)	14 (18.9%)
Unmet needs	3 (3.8%)	14 (18.9%)
Benefits		
Met needs	26 (32.9%)	28 (38.4%)
Unmet needs	17 (21.5%)	14 (19.2%)

As Table 5-6 shows the most frequently mentioned met needs for men were accommodation, food, look after home, self care, physical health, information on treatment, psychological distress, safety self, safety to others, company, child care, basic education, transportation, money. The most frequently mentioned unmet needs for men were benefits, psychotic symptoms, and daytime activity, each category being mentioned by at least 10 percent of the men participants. The most frequently identified met needs for women were accommodation, food, look after home, self-care, physical health, psychotic symptoms, psychological distress, and safety self, safety to others, child care, transportation. The unmet needs for women were daytime-activity, information on treatment, basic education, telephone, money, and benefits, each category being mentioned by at least 10 percent of the women participants.

Table 5-7 Number and Percentage of the Research Participants Who Knew Their Diagnosis

Know Diagnosis	Number	Percentage
Yes	142	91.7
No	13	8.3
Total	155	100

Table 5-7 shows that 91.7 percent of the participants knew their diagnosis and only 8.3 did not know their diagnosis.

Table 5-8 Number and Percentage of the Research Participants by Diagnosis and Gender

Type Diagnosis	Frequency		Percentage		
	Women	Men	Women	Men	Total
Anxiety disorder	21	25	30.4	34.2	32.3
Mood disorder	20	13	28.9	17.8	23.2
Schizophrenia	12	20	17.3	27.3	22.5
Delusional disorder	10	7	14.49	9.59	11.9
Eating disorder	3	4	4.3	5.4	4.9
Acute stress disorder	2	1	2.90	1.37	2.11
Sleeping disorder	1	3	1.4	4.1	2.8
Total	69	73	100%	100%	100%

Table 5-8 shows that about 29 percent of the women and 18 percent of the men participants had a diagnosis of mood disorder, about 17.3 percent of the women and 27.3 percent of the men participants had a diagnosis of schizophrenia, about 14.49 percent of the women and 9.59 percent of the men participants had a diagnosis of delusional disorder, about 30.4 percent of the women and 34.2 percent of men s has diagnosed of anxiety disorder, and about 4.3 percent of the women and 5.4 percent of the men participants had a diagnosis of eating disorder .

Summary

The demographic data show there was close to half men and women subjects in the study (51.0% men and 49% women), close to half subjects were married (49.7%).

The majority of subjects were below 58 years of age (94%). Almost half of the subjects

had an income below 2,000 SR (45.8%); only 1.3% subjects had an income over 10,000 SR. Most subjects (over 60%) had less than a high school diploma; college graduates only accounted for 17.4%. Moreover, the sample shows that about 29 percent of the women and 18 percent of the men participants had a diagnosis of mood disorder, about 17.3 percent of the women and 27.3 percent of the men participants had a diagnosis of schizophrenia, about 14.49 percent of the women and 9.59 percent of the men participants had a diagnosis of delusional disorder, about 30 percent of the women and 34 percent of men s has diagnosed of anxiety disorder, and about 4.3 percent of the women and 5.4 percent of the men participants had a diagnosis of eating disorder. The met needs for men were accommodation, food, look after home, self care, physical health, information on treatment, psychological distress, safety self, safety to others, company, child care, basic education, transport, money. The unmet needs for men were benefits, psychotic symptoms, and daytime activity. The met needs for women were accommodation, food, look after home, self-care, physical health, psychotic symptoms, psychological distress, and safety to self, safety to others, child care, transportation. The unmet needs for women were daytime-activity, information on treatment, basic education, telephone, money, and benefits

Section Two: Testing the Study Hypotheses

Participants' responses to CANSAS were scored on a 3-point scale: 0 = *no problem*, 1 = *met need* (no or moderate problem because of help being received), 2 = *unmet need* (current serious problem, regardless of any help received). For this study, we

create a “Needs Score” for each subject based on the sum of his or her responses. In this way, we are assuming that there is an “ordering” in the responses, with 0 representing no need, 1 representing a “met needs” and 2 representing a “unmet need”. Given that there are 18 items in the questionnaire, and each item can be assigned the value of 0, 1 or 2, this “Needs Score” would take on the values from 0 (no needs at all) through 18 (the subject has all the needs in the questionnaire, and none of them have been met).

In order to evaluate the validity of question, a reliability test was done for 18 questions and the results are summarized in Table 5-9. Also the variable total number of needs was created by adding unmet needs (Number of 2s) and met needs (number of 1s). The total number of needs was evaluated for normality; the results are summarized in Table 5-9. The internal scale alpha value for 18 questions was .80, which means the reliability of the testing scales of 18 questions is good. The total of number needs score was normally distributed with skewness value = .64. So all tests about total number of need score was conducted by parametric methods of ANVOA. Because the individual questionnaire scores were not distributed normally, Pearson’s *r* coefficient was obtained in the correlation analysis.

Table 5-9 Reliability Statistics for 18 Questions

Question Number	Alpha
18	.80

Four hypotheses were tested and decisions made as to whether to accept or reject the hypotheses, based on the statistical findings, either Pearson’s *r* coefficient or the

ANOVA depending on the variables involved in each hypotheses. Results are considered statistically significant at alpha (less than or equal) 05.

H1. There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on gender. ANOVA was conducted and the results were summarized in Table 5-10, which shows that men subjects had average total number of needs of 5.57 and that women subjects had mean total number of needs of 6.45. The *F* value for the difference between these two groups was .679, ($p = .811$), which indicates that women subjects had more total number of needs than men subjects; however, this did not reach significance ($p = <.05$). So Hypothesis 1 that there is no difference in the total number of social and health needs scores among mentally ill outpatient consumers based on gender was not rejected. However, by checking the met needs and unmet needs separately, the difference of the met needs between men and women was not significant ($p = .825$), but the unmet needs of women were significantly higher than those of men ($p = .002$).

Table 5-10 ANOVA results for Mean of Total Needs by Gender

Gender	Mean of total needs	<i>F</i>	<i>p.</i>
Total needs		.679	.811
Men	5.57		
Women	6.45		
Met needs		.602	.825
Men	4.66		
Women	4.44		
Unmet needs		3.43	.002
Men	.91		
Women	2.01		

H2. There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on age. A Pearson's correlation test was conducted to evaluate the relationship between age and total number of need score and individual response to each question are. Furthermore, an ANOVA approach was conducted to inspect if there were differences in the mean total number of needs among different age groups. The correlation analysis results ($r = 0.58$, $P = .476$) showed that age was not strongly associated with total number of needs and individual need, but age had a strong positive association with two needs, physical health and basic education, ($p = .05$; see Table 5-11), which means older people had more health needs and basic education needs. But the ANOVA showed that there was difference of mean total number of need score among groups of age ($F = 1.031$; $p = .429$ (Table 5-12). however, this did not reach significance ($p = < .05$). Looking into the data, the 48–57 age group had the lowest total number of needs; for both the three younger cohorts and the two older ones, the total number of needs increased with age. So the conclusion was reached that the hypothesis that the total number of social and health needs would not vary by age group was not rejected.

Table 5-11 Correlations Among Total Needs Score and Age (Pearson's *r*)

Variable	Correlation
Total Needs	.058
Accommodation	.13
Food	.03
Look after home	.02
Self Care	.10
Daytime Activity	.04
Physical Health	.37*
Psychotic Symptoms	-.07
Information on treatment	.09
Psychological Distress	-.16
Safety Self	-.02
Safety to Others	-.05
Company	-.04
Child Care	-.10
Basic Education	.18*
Telephone	.06
Transport	.04
Money	-.08
Benefits	.07

** Significant at .001 (two-tailed)

Table 5-12 ANOVA Results for Mean of Total Needs Between Age Groups

Age	Mean	<i>F</i>	<i>p</i>
18-27	5.04	1.031	.429
28-37	6.32		
38-47	6.52		
48-57	3.83		
58-67	7.44		
Over 68	13.0		

H3. Income is negatively related to the total number of needs that is as the income goes up; the total number of needs goes down. A Pearson *r* coefficient test was conducted to evaluate the relationship between income and total number of need and individual responses to each item. Furthermore, an ANOVA was conducted to determine if there was a difference in the mean total number of needs score among different income groups. The correlation analysis results ($r = -.67^{**}$; see Table 5-13) showed that income level was strongly negatively associated with total number of needs score at significance level .01, it was also noticed that income level was strongly associated with most question responses. The results indicate that subjects with lower income had more total number of needs and more need with regard to accommodation, food, look-after home, more self-care, daytime activity needs, physical health needs, psychological symptoms, information on treatment, basic education, telephone, money, transportation, and benefits. The ANOVA (Table 5-14) showed that there was significant difference of mean total number of needs among groups of income ($p = .001$) and F score was 13.4. Generally speaking, subjects with less income had a higher mean number of total numbers of needs. So the conclusion was reached that the hypothesis that Income is negatively related to the total number of needs, that is as the education goes up; the total number of needs goes down should be accepted.

Table 5-13 Correlations Among Total Needs Score and Income (Pearson's *r*)

Variable	Correlation
Total number of Needs	-.67**
Accommodation	-.29**
Food	-.31**
Look after home	-.48**
Self Care	-.27**
Daytime Activity	-.52**
Physical Health	.08
Psychotic Symptoms	-.26**
Information on treatment	-.37**
Psychological Distress	-.14
Safety Self	-.09
Safety to Others	-.13
Company	-.03
Child Care	-.12
Basic Education	-.58**
Telephone	-.32**
Transport	-.27**
Money	-.52**
Benefits	-.64**

** Significant at .001 (two-tailed)

Table 5-14 ANOVA Results for Mean of Total Needs Between Income Groups

Income Level	Mean	<i>F</i>	<i>p</i>
0-2,000	8.52	13.4	.001**
2,001-4,000	5.38		
4,001-6,000	4.25		
6,001-8,000	2.70		
8,001-10,000	2.08		
Over 10,000	3.00		

* Significance at .01 level

H4. Education is negatively related to the total number of needs that is as the education goes up; the total number of needs goes down. Pearson's r coefficient test was conducted to evaluate the relationship between education level and total number of needs and individual responses to each question response. Furthermore, an ANOVA was conducted to inspect if there was a difference of mean total number of needs among different groups sorted by educational level. The correlation analysis results ($r = -61^{**}$; see Table 5-15) showed that education level was negatively associated with total number of needs at significance level .001; it was also noticed that education level was strongly associated with most question responses, which showed that participants with lower education had a higher number of total number of needs; participants with lower educational levels had more needs with regard to accommodation, food, look-after home, daytime activity, psychotic symptoms, treatment information, basic education, money, transportation, telephone need, and benefits. The ANOVA results ($F = 6.471$; see Table 5-16) showed that there was a significant difference in the mean total number of needs among educational-level groups ($p = .001$). Generally speaking participants with less education had a higher number of total needs. So the conclusion was reached that the hypothesis that education is negatively related to the total number of needs that is as the education goes up; the total number of needs goes down was accepted.

Table 5-15 Correlations Among Total Needs Score and Education (Pearson's *r*)

Variable	Correlation
Total number of Needs	-.61**
Accommodation	-.25**
Food	-.26**
Look after home	-.40**
Self Care	-.30**
Daytime Activity	-.43**
Physical Health	-.16*
Psychotic Symptoms	-.20*
Information on treatment	-.45**
Psychological Distress	.06
Safety Self	.02
Safety to Others	-.09
Company	.04
Child Care	.01
Basic Education	-.65**
Telephone	-.33**
Transport	-.34**
Money	-.50**
Benefits	.53**

** Significant at .001 (two-tailed)

Table 5-16 ANOVA Results for Mean of Total Needs Between Education Groups

Income Level	Mean	<i>F</i>	<i>p</i>
Less than Middle School	8.93	6.471	.001**
Middle School Graduate	5.61		
Less than High School	5.08		
High School Graduate	3.88		
Some College	3.78		
College Graduate	3.00		

* Significance at .01 level

Summary of Findings

Based on the current study, there was a significant difference in the total number of needs identified by patients when grouped by age, education level, and income level. Women had more total number of needs than men subjects, but the difference did not reach significance ($p = < .05$); women had more unmet needs than men ($p = .001$); participants with higher level of education and higher income reported a lower total number of needs. Older participants generally reported more total needs than younger subjects, but the 48–57 age group of had the smallest number of total needs.

Section Three: Post Hoc Analyses

In addition to testing the hypotheses of the study, statistical analysis was used to answer the study two major questions and to answer some questions about other important relationships for which data were collected.

Question 1: What are needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia?

As we can see from Tables 5-6, the met needs for men were accommodation, food, look after home, self care, physical health, information on treatment, psychological distress, safety self, safety to others, company, child care, basic education, transport, money. The unmet needs for men were benefits, psychotic symptoms, and daytime activity. The met needs for women were accommodation, food, look after home, self-care, physical health, psychotic symptoms, psychological distress, and safety self, safety

to others, childcare, transportation. The unmet needs for women were daytime-activity, information on treatment, basic education, telephone, money, and benefits.

Question 2: What is the most common mental health diagnosis for the participants?

The study participants were diagnosed with various conditions (see Table 5-8). The most common, was mood disorder 29% of the women and 17.75% of the men. Mood disorder in table 5-8 includes Depressing and Bipolar disorder. Other frequently identified diagnoses were schizophrenia (women, 13.04%; men, 20.55%) delusional disorder (women, 14.49%; men, 9.5%), anxiety disorder (about 30% almost equally distributed between men and women). The anxiety disorders are Generalized anxiety disorder, Post traumatic stress disorder, Obsessive compulsive disorder, Panic disorder, Social phobia, Acute stress disorder and eating disorder (women, 2.90%; men, 1.37%).

Question 3: What is the relationship between age and physical health need?

The study showed that age had strong positive association with physical health need ($p = .05$; see Table 5-11), which means older people had more physical health needs.

Question 8: What is the relationship between age and basic education need?

The study showed that age had strong positive association with basic education needs ($p = .05$; see Table 5-11), which means older people had basic education needs.

Chapter 6: Interpretation of Results and Implications

This chapter is divided into five sections. The first section presents an interpretation of the participants' demographic characteristics that were drawn from descriptive part of the study. The second section presents an interpretation of the study's post hoc analyses. The third section interprets the results of study four hypotheses. The fourth section discusses some major limitations of the study. The fifth section presents some implications of the study results and introduces several recommendations based on the research findings.

This quantitative study was conducted to (1) to assess the needs among 155 outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia, and (2) to identify the demographic variables that are most associated with these needs, such as age, gender, level of education, and income. The Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) was used to assess the social and health needs, and a demographic questionnaire was used to identify the patients' gender, age, income level, and education level.

Section One: Interpretation of the Participants' Demographic Characteristic

Gender

The gender distribution of research participants was virtually identical; there were close to half men and women subjects in the study (51.percent men and 49 percent women). This differs somewhat from what may have been expected because generally speaking more women in Saudi Arabia use public hospitals, such as Al-Amal Complex

for Mental Health, than do men because men have access to additional psychiatric providers. For example, men substance abusers are treated in the specialized Al-Amal hospitals and military personnel go to military hospitals. Even among expatriates, the pattern of use varies; non-government expatriate men employees are treated in private hospitals, whereas their women counterparts, being predominately housekeepers, are eligible for treatment only in public hospitals. However, because the majority of the participants; both men and women, are poor, their treatment option was limited to the public hospitals, making members of this group equally likely to seek free treatment in public hospital such as Al-Amal Complex for Mental Health regardless of gender.

Age

The majority of participants were below 58 years of age (94%). Among those, the 28–37 age group was about 36.1 percent of the participants ($n = 56$), followed by the 38–47 year-old age group which was about 31 percent of the participants ($n = 48$), followed by the 18–27 year-old age group, which was about 14.8 percent of the participants ($n = 23$). Fewer than 12 percent of the participants were over 58 years of age. This result indicates that the majority of participants (more than 70 percent) were more likely to be young adults between the ages of 28 and 47 years. One explanation for these findings is that younger people generally are more likely want to improve their current life and look for better future, while older people with mental illness usually express more satisfaction with their lives as they get older (Mercier et al., 1998; Kearns et al., 1987; Lehman et al., 1992).

The result of this study with regard to age is supported by other studies conducted in Saudi Arabia by Al-Khathami & Ogbeide, 2002; Qureshi et al., 1991; Al-Fakeeh, 1994; and Abu Madini and Rahim, 2002. They reported that the vast majority of the mentally ill in their studies in central Saudi Arabia were likely to be younger and between the age of 33 to 47 years of age, with a range of 18 to 81. This presentation is also in line with the profile reported by international studies by Saeed et al. (2003); Lohrer et al., (2002); and Way and Banks (1990). They have reported that the mentally ill in their studies were more likely to be young adults.

Income

This study reported that almost half of the participants (45.8%, $n = 71$) had monthly incomes below 2,000 SR– (\$534).; about 32.3 percent had incomes below 6,000 SR–(\$1,600); about 12.9 percent had incomes below 8,000 SR–(\$2,134), and only 1.3 percent had incomes over 10,000 SR (\$2,667). That about half of the participants had monthly incomes below 2,000 SR is notable. This income is below the average monthly income that Saudi workers receive (2,260 SR,–\$603) and close to the poverty line in Saudi Arabia (1,660, \$442.60(Al-Baz, 2005).

This result correlates with other characteristics of the participants and may be related to other factors related to Saudi Arabia's economy. First, concerning the other characteristics of the participants, the majority of them (over 65%) had less than a high school diploma. It has been established that as education decreases, income is likely to decrease (Day & Newburger, 2002). Second, low income also is correlated with mental illness. Hazel, Herman, and Mowbray (1991), found that the majority of the mentally ill

in public mental health systems live below the poverty level and also are often unemployed. In the line with findings, Hazel, et al. (1991), Saeed et al., (2003), and Hurley et al. (2003) concluded that the majority of people with mental illness in their studies were more likely to be single, divorced, and unemployed. Third, with regard to the Saudi economy, the unemployment rate in the country is high. It is estimated about 8.1 percent among Saudi men and 16 percent among women. Fourth, poverty is becoming an alarming problem in Saudi Arabia. One study (Abdul Ghafour, 2009) reported that 13 percent of Saudi workers receive a monthly salary of 1,500 SR (\$400), while 44 percent get no more than 3,000 SR (\$800). The same study (Abdul Ghafour, 2009) found that there are about 106,000 families living below the poverty threshold in the country, with 46,900 of them in Riyadh, the site of the Al-Amal Complex for Mental Health, where the present study was conducted; for the country as a whole, 18.9 percent of the population was living under poverty. Another study reported that the average monthly income for Saudis is 3,200 SR (\$854; Al-Baz, 2005). All these factors together could contribute to an explanation for the relatively low income of the participants.

Education Level

The study shows that over 65 percent of the participants ($n = 102$) had less than a high school diploma; those with a high school diploma accounted for 11.0 percent of the participants and college graduates only accounted for 17.4 percent. These findings are consistent with the current education level in the country. It was estimated that about 66.2 percent of the Saudi population had less than high school diploma; those with a high school diploma accounted for 19.7 percent and college graduates only accounted for 9.6

percent (Central Department of statistics & information, 2007). Furthermore, the Arab News reported that more than 50 percent of the work force in Saudi Arabia is without a high school diploma, and college graduate make only 20% of the total population in Saudi Arabia (Arab News, 2005). Moreover, mentally ill patients are more likely to have less education than other individuals. Andrade et al. (2000) found that the prevalence of most psychiatric disorders increased as socioeconomic indicators, such as income and education, decreased. Consistent with these findings, Lorant et al., (2003) reported that some psychiatric disorders, such as depression, were reported more often among those individuals with a lower socioeconomic position (i.e., educational and income levels) than among those with a higher socioeconomic position.

Type of Mental Diagnosis

The study shows that about 29 percent of the women and 17.8 percent of the men participants had a diagnosis of mood disorder, about 17.3 percent of the women and 27.3 percent of the men participants had a diagnosis of schizophrenia, about 14.49 percent of the women and 9.59 percent of the men participants had a diagnosis of delusional disorder, about 30.4 percent of the women and 34.2 of the men has diagnosed of anxiety disorder, and about 4.3 percent of the women and 5.4 percent of the men participants had a diagnosis of eating disorder . Men in the study were more likely to have a diagnosis for schizophrenia and delusional disorder and women were more likely to diagnosis with mood disorders. This finding matches the finding of other Saudi studies. Abu Madini and Rahim (2002) examined the socio-demographic and clinical characteristics of admitted patients and the patterns of their service utilization over a decade from March 1988 to

March 1998 in King Fahad hospital in Al-khobar, Saudi Arabia. They reported that men were more frequently hospitalized for schizophrenia and women for mood and anxiety disorders. MOH reported that about 26.3% of the outpatients were suffering from schizophrenia, schizotypal, and delusional disorders and that 19.5% were diagnosed with mood disorder (MOH, 2004). In the line with this finding, Nicole, Lesage, and Lalonde (1992) reported in their study of 891 patients in Quebec, Canada, that the rate of schizophrenia was higher for men (39.8 per 100,000) than women (22.4 per 100,000). These results were collaborated by McGlashan and Bardenstein (1990) and Sood et al. (1996), reported that women had better social, and marital functioning and had better long-term outcomes related to social and work activity, as well as parental status, but they may have more depressive symptoms more than men.

Section Two: Post Hoc Analyses

What are the needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia?

In this study, the needs of the patients are identified by them as being met or unmet. Met need indicates no or a moderate problem because of help being received, and unmet need means that they have a current serious problem, regardless of any help received.

As Table 5-6 shows, the met needs for men were accommodation, food, look after home, self care, physical health, information on treatment, psychological distress, safety self, safety to others, company, child care, basic education, transport, and money. The

unmet needs for men were benefits, psychotic symptoms, and daytime activity. The met needs for women were accommodation, food, look after home, self-care, physical health, psychotic symptoms, psychological distress, and safety self, safety to others, child -care, transportation. The unmet needs for women were daytime-activity, information on treatment, basic education, telephone, money, and benefits.

The majority of participants in this study (men, 49.4%; women, 20.5%) indicated a met need related to housing. This is unexpected because the majority of Saudis do not have suitable housing. It has been estimated that about 40 percent of the Saudi retired workers do not own a house and that about 58 percent of them live in rental apartments or in unsuitable housing (Albaz, 2005). If retired workers, who work all their lives, do not have houses, it is likely that the young mentally have also housing problem. The housing need may not have been captured in this study because the participants may did not feel that they had a real problem or that they did not feel anything could be done to solve the problem. Another explanation for the finding might be that the participants did not understand the question related to housing. Housing need requires further research to identify it because housing is a problem for many Saudis and is likely to be a problem for the mentally ill.

The participants did not indicate any need related to food, self-care, safety to self, or safety to others and company. The majority of the participants felt that they were able to buy and prepare meals. This is not surprising because the majority of the participants are young and able to prepare food. Also, in Saudi Arabia, it is easy for the poor to have

free food from the charitable organizations that located everywhere; this may be why the participants did not indicate a need for food.

The majority of participants did not report any need related to safety to self and safety to others. This was anticipated because the participants are regular outpatient consumers who live in the community and just come to the hospital for regular outpatient mental health services. The mentally ill who have needs related to safety to self and safety to others are usually hospitalized and not released to the community; inpatients were not included in this study.

The participants did not report any need for self-care. This is probably related to the average age of the participants in that the majority of them were young, below 58 years of age (94%), and able to take care of themselves.

However, the participants reported an unmet need related to benefits (men, 21.5%; women, 19.2%), which means that they were not receiving all the benefits that they thought they were entitled to. This result could be related to their low income, because the majority of the participants were poor. The study indicates that about half of the participants had monthly incomes below 2,000 SR (\$534), which is below the average monthly income that Saudi workers receive (2,260 SR, \$603) and close to the poverty line in Saudi Arabia; (1,660 SR, \$442; Al-Baz, 2005). Therefore, the participants may need some financial support to meet their increased needs.

They participants also reported an unmet need related to daytime activity, which means that the participants have difficulty with regular, appropriate daytime activities.

This is also not surprising because the majority of the participants were poor and may not be employed or may be employed less than full time. Moreover, it is traditional in Saudi Arabia that the family satisfies its members social and economic needs. However, nowadays, with social and economic changes in the last few years, the family is no longer able to perform such a role, so such needs become unmet. Furthermore, day centers or employment centers are not common in Saudi Arabia; and, if such centers are available, they may be too expensive for this low-income population.

The men participants also reported an unmet need related to psychotic symptoms, which means that the participant have psychotic symptoms. This is may be because the majority of the men participants (20.5%) in the study were diagnosed with schizophrenia. The mentally ill who are diagnosed with schizophrenia are more likely to have such symptoms.

The women participants reported an unmet need related to information on condition and treatment. This means that the participants had no clear oral or written information about their condition and treatment. This finding is generally in the line with study by Shahin and Daly (1999). They examined the knowledge, attitudes, and beliefs about medication in a sample of 76 Saudi hospitalized psychiatric patients. They found that only 44% of the patients knew the name of their medication, 37% understood the side effects of their medication, and 49% could identify the dosage. That study also indicated that those younger and college educated were more likely to have knowledge about their medication doses than older patients and less educated patients. Although the participants in the present study were younger, only 17 percent of them were college

educated. Other explanation why women reported unmet need related to information on condition and treatment because women in the Saudi culture are not encourage to interact directly with male doctor without the present of her husband or male relative. Therefore, many times women do not completely understand medical information presented to them since they do not interact directly with male doctors.

The women participants also reported an unmet need related to basic education. That means that they cannot read and write and understand forms. Because 36.1% of participants had less than a middle school education and over 65 percent had less than a high school diploma. In addition, generally, illiteracy in Saudi Arabia is high among women. It was estimated that the illiteracy rate among women 20.1 percent; 7.3 percent among men (Central Department of Statistics and Information, 2007). Therefore, the finding that they report an unmet need related to education is not surprising.

The study reported that the women participants reported an unmeet related to telephone. That means that the participants have difficulty in getting access to or using a phone. This is unexpected because about 72.25% of the Saudi families have a land phone and about 89.81% have cell phones (General Department of Statistics and Information, 2007). The finding that the women participants reported this need may be because the majority of participants are poor and cannot afford a phone.

The study reported that the women participants had an unmet need related to money, which means that the participants have no money for essential items or bills. Again, because the study reported that about half of the participants had monthly incomes below 2,000 SR, (\$534), which is below the average monthly income that Saudi workers

receive (2,260 SR, \$603, Therefore, outpatient mentally ill consumers may need money for essential items or bills.

Generally, international studies have reported findings similar to those in the present study. Bengtsson-Tops and Hansson (1999) assessed the perceived needs of a sample of outpatients with schizophrenia in Sweden using the CAN. The authors reported that the most severe unmet needs were related to information about their own condition and treatment, psychological distress, physical health, psychotic symptoms, social relations, and daytime activities; they emphasized the need for further intervention from both the health care system and social services. In England, Stansfeld et al., (1998) assessed the needs of the mentally ill in acute psychiatric inpatient treatment centers in London. They found that unmet clinical needs included treatment of drug side effects and dangerous and socially embarrassing behavior. Unmet social needs included household shopping, cooking meals, occupation skills, and money management. Kallert and Leisse (2001) examined the needs of the mentally ill in Dresden, Germany, using the Needs for Care Assessment. They found that the dominant needs included positive and negative symptoms, psychopharmacological side effects and psychosocial distress, problems dealing with management of household affairs, recreational activities, household chores, and occupation and communication skills.

Section Three: Interpretation of the Results of Study With Regard to the Four Hypotheses

H1. There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on gender. ANOVA was conducted and the results were summarized in Table 5-10, which shows that men subjects had average total number of needs 5.57 and women subjects had mean total number of needs of 6.45. The $-F$ value for the difference between these two groups was .679 ($p = .811$), which indicates that women subjects had more total number of needs than men subjects; however, the difference did not reach significance ($p = < .05$). So Hypothesis 1, that there is no difference in the total number of social and health needs score among outpatient mentally ill consumers based on gender, was not rejected. However, by checking the met needs and unmet needs separately, the difference of the met needs between men and women was not significant ($p = .825$), but the unmet needs of women were significantly higher than those of men ($p = .002$).

This finding supports many current international studies that indicate no gender difference in the needs of the mentally ill (Van Haaster et al., 1994; Adler et al., 2000). Van Haaster et al. (1994), in their study of long-term in- and outpatients and short-term in- and outpatients at the Louis-Hippolyte Lafontaine Psychiatric Hospital in Montreal, Canada, found there was no age or gender difference in the identified problems and unmet needs of the mentally ill. In support of these results, Wiersma et al. (1998), who conducted a longitudinal study of outpatients in the Netherlands, found no gender differences in service needs for discharged psychiatric patients.

However, unmet needs were significantly higher among women and included daytime-activity, information on treatment, basic education, telephone, money, and benefits. This indicates that women were not able to meet these needs and need formal or informal interventions to help them meet these needs. It is understandable for the women in the study to report such unmet needs because they are poor and less educated.

H2. There is no difference in the total number of social and health needs score identified by the outpatient mentally ill consumers based on age. A Pearson's correlation test was conducted to evaluate the relationship between age and total number of needs score and individual response to each question. Furthermore, an ANOVA was conducted to determine if there was a difference of mean total number of needs among the different age groups. The correlation analysis results ($r = 058$) showed that age was not strongly associated with total number of needs and individual need, but age had a strong positive association with two needs, physical health and basic education ($p = .05$; see Table 5-11), which means older people had more health needs and basic education needs. But the ANOVA showed that there was a difference of mean total number of needs among age groups $F = 1.031$ with $p = .429$; see Table 5-12). However, the difference did not reach significance ($p = < .05$). Looking into the data, there was a decrease of total number of needs for the 48–57 year-old age group; both younger and older age groups had a higher number of total needs, the number increasing with age. So the conclusion was reached that the total number of social and health needs among outpatients would not vary by age group was not rejected.

The results of this study indicate that the number of total needs is not vary by age. Some studies supported this current study. For example, Van Haaster et al. (1994), in their study of long-term in-and outpatients and short-term in-and outpatients at the Louis-Hippolyte Lafontaine Psychiatric Hospital in Montreal, Canada, found there was no age difference in the magnitude of identified problems and unmet needs of those mentally ill. Nonetheless, most of the studies reported that needs are very by age. Studies indicate that older people with mental illness usually express more satisfaction with their lives as they get older (Mercier et al., 1998; Kearns et al., 1987; Lehman, Slaughter, & Myers, 1992) and also young adults with mental disorders usually have more challenges in their life and relation within community than those elderly (Pepper & Ryglewicz, 1982; Randolph et al., 1986).

Gallo et al. (1995) found that psychiatric patents under 45 years of age usually use mental health services more often than older adults. This result is matches with a study conducted by Jin et al. (2003), who studied 4,975 patients treated for schizophrenia in San Diego County's Adult Mental Health Services facilities. The study reported that the use of hospitalization, emergency room, crisis house, and day treatment were highest among young-adult patients and lower among older individuals. This is in line with a study conducted by Horwitz and Uttaro (1998) that younger people with mental illness receive more help from both their informal social network and from mental health system. This study also found that older participants had more health needs and basic education needs than those young. This finding is supported by study by Hazel et al. (1991); Test et al. (1990) found that elderly women with mental illness are more likely to

report more physical health needs and more medical hospitalization than those young mentally ill. Since 65 percent of the participants had less than high school diploma, it is more likely for those elderly to report education need. It is reported that the illiteracy rate in Saudi Arabia increases as age increases. For example, for those 65 and over, the illiteracy rate is 73.9 and 1.4 for those less than 14 years old (general department for statistics and information, 2007).

H3. Income is negatively related to the total number of needs that is as the income goes up; the total number of needs goes down. A Pearson r test was conducted to evaluate the relationship between income and total number of need and individual response to each item. Furthermore, an ANOVA approach was conducted to determine if there was a difference in the mean total number of needs among different groups of income. The correlation analysis results ($r = -.67^{**}$ see Table 5-13) showed that income level was strongly negatively associated with total number of needs ($p = .001$); it was also noticed that income level was strongly associated with most question responses. The results indicated that subjects with lower income had more total number of needs and more needs with regard to accommodation, food, look-after home, more self-care, daytime activity, physical health, psychological symptoms, information on treatment, basic education, telephone, money, transportation, and benefits. The ANOVA (Table 5-14) showed that there was significant difference of mean total number of needs among groups of income with ($p = 001$). Generally speaking subjects with less income had a higher mean number of total needs. So the conclusion was reached the hypothesis that

Income is negatively related to the total number of needs that is as the income goes up; the total number of needs goes down should be accepted.

The study found that participants with less income had a higher mean number of total number of needs. The findings of this study are consistent with current literature which generally shows is negative relationship between socioeconomic status and the needs of the mentally ill, in which the lower the socioeconomic status of an individual, the higher are his or her needs. Ruggeri et al., (2004) analyzed a representative sample of 268 patients attending a community-based psychiatric service in order to create a profile of patients with higher needs for care by assessing a full range of potential demographic, clinical, and social and service needs using CAN. They found that those patients who meet any one of several criteria are more likely to have higher needs; the criteria are men, being unemployed, having high symptomatology and disability, having low functioning and self-reported quality of life, and a high number of outpatient and community contacts over the past year.

Furthermore, the U.S. National Comorbidity Survey (Kessler et al., 1994) found that for lifetime prevalence, those in the lowest income group were 1.6 times more likely to have an affective disorder, 2 times more likely to have an anxiety disorder, 1.3 times more likely to have a substance use disorder, and 3 times more likely to have antisocial personality disorder than those in the highest income group. In line with this study, a large German study that used a cross-sectional design found evidence that poor single mothers showed higher values of psychological distress (Franz et al., 2002). The same findings were reported by Lesser et al. (2005), who compared the demographic and

clinical characteristics of 1,452 outpatients who have private insurance, public insurance, Medicaid and Medicare, or no insurance and who were seeking treatment for depression. They found that patients with public or no insurance were more likely to be members of a racial or ethnic minority group, unmarried, less educated, and unemployed and had greater severity of depression, more comorbid psychiatric symptoms, lower life satisfaction scores, and greater functional impairment. Al-Shammari and Al-Subaie, (1999) found that education, unemployment, divorced or widowed status, old age, being a women, living in a remote rural area with poor housing arrangements, limited accessibility within the house, and poor interior conditions were all correlated strongly with depression. Furthermore, limited privacy, such as having a particular room specified for the elderly, was associated with more depressive symptoms than sharing a room with another person. Incomes inadequate for personal needs and dependence on charity or relatives were associated with more cases of depression. Significant depression was associated with loss of a close relative, living alone, and limited participation in recreational activities. Perception of poor health and dependence on others for daily activities were associated with more depressive symptoms

A study by Thornicroft, Margolius, and Jones (1992) also reported a positive relationship between those who had been overcrowded, unemployed, and had low social class and psychiatric admission. These findings were also corroborated by Hazel et al. (1991), who found that the majority of the mentally ill in public mental health systems live below the poverty level and also are often unemployed. Weich and Lewis (1998) found that poverty and unemployment served to increase the time to recover from mental

illness but did not seem to be the cause of the illness itself. Walberg, McKee, Shkolnikov, Chenet & Leon (1998) identified the socioeconomic factors associated with decreasing life expectancy in Russia between 1990 and 1994. They reported that early deaths were concentrated between 30–60-year age group for both men and women. They found that the most important predictors of decreased life expectancy were the economic situation including high turnover of the labor force, large increases in crime, and unequal distribution of household income.

H4. Education is negatively related to the total number of needs that is as the education goes up; the total number of needs goes down. A Pearson r test was conducted to evaluate the relationship between education level and total number of needs and individual response to each question response. Furthermore, an ANOVA was conducted to evaluate the relationship of mean total number of needs to education level. The correlation analysis results ($r = -.61^{**}$; see Table 5-15) showed that education level was negatively associated with total number of needs ($p = .001$); it was also noticed that education level was strongly associated with most question responses, which showed that participants with lower education had more number of total needs. Participants with lower educational level had more needs with regard to accommodation, food, look-after home, more self-care, daytime activity, physical health, psychological symptoms, information on treatment, basic education, telephone, money, transportation, and benefits. The ANOVA results ($F = 6.471$; see Table 5-16) showed that there was significant difference of mean total number of needs among groups with differing education levels ($p = .001$). Generally speaking participants with less education had a higher number of

total needs. So the hypothesis that education is negatively related to the total number of needs that is as the education goes up; the total number of needs goes down was accepted.

The result of this study matches the current literatures that the mentally ill with less education had a higher number of needs. Researchers have found that there is a negative relationship between education level and mental illness in general in which the lower an individual's education level, the higher his or her risk of mental illness. For example, Andrade et al. (2000) found that the prevalence of most psychiatric disorders increased among people with lower socioeconomic class (with regard to income, education, and employment) and was lower among the married than the unmarried. Consistent with these findings, Lorant et al., (2003) reported that some psychiatric disorders, such as depression, were reported more often among those individuals with a lower socioeconomic position (i.e., educational and income levels) than among those with a higher socioeconomic position. These findings were also corroborated by Al-Haddad et al. (1999), who conducted a study to assess the prevalence of hidden psychiatric morbidity in Bahrain. They found that psychiatric prevalence occurred among those who women, unemployed, had a low educational level, and were divorcees or widows. In line with these findings, Hazel et al. (1991) reported that the mentally ill are less likely to have finished school than the general population. Furthermore, Dohrenwend et al. (1992) and Regier et al. (1993) found that poor and less well-educated individuals have higher rates of mental disorders than the wealthy. Leaf et al., (1987) examined the impact of socioeconomic statuses on the attitude toward the use of mental health services.

They found that people with the fewest financial resources and least education are the least likely to seek mental health services. Similar results were reported by Howard et al. (1996), who found that demographic characteristics played a role in help-seeking behavior. They found that low income was inversely proportional to obtaining help, whereas a higher level of education led to higher use of mental health services.

Study Implications

A. Clinical Implications

Two of the goals of this study were (1) to assess the needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia and (2) to identify the demographic variables that are most associated with these needs, such as age, gender, level of education, and income.

The study indicates that the outpatient mentally ill consumers have ideas about their needs and about which ones are met and unmet. Many participants in the study even indicated needs that are not including in CANSAS, such as the need for work, the need to minimize the stigma of mental illness, the need for vocational training, and the need for involving the patients in the development of mental health policies. These responses underline the need for clinicians to view the mentally ill consumers in the perspective of their needs.

The study result indicates that the outpatient mentally ill consumers have several needs. For example, the met needs for men were accommodation, food, look after home, self care, physical health, information on treatment, psychological distress, safety self,

safety to others, company, child care, basic education, transport, money. The unmet needs for men were benefits, psychotic symptoms, and daytime activity. The met needs for women were accommodation, food, look after home, self-care, physical health, psychotic symptoms, psychological distress, and safety self, safety to others, child -care, transportation. The unmet needs for women were daytime-activity, information on treatment, basic education, telephone, money, and benefits.

These results should alert clinicians that they should consider these needs when developing appropriate therapeutic interventions. Including these important needs in the therapeutic interventions can help both therapist and patient to work together on shared goals that serve to achieve the intervention goals and meet the interest of the patient. The therapeutic interventions cannot be successful unless mental health care providers understand the real needs of the mentally ill and how those needs can be met in relevant interventions.

The study identifies a different unmet needs for women and men. This should alert therapists that they should address these needs with mentally ill consumers and individualize the intervention based on the patient's gender and link the patient with appropriate recourse in the community. For example men patients may need assistance in addressing some unmet needs such as psychotic symptoms and women patients may need assistance in meeting other needs, such as information on treatment, basic education, telephone, and money. Both men and women may have unmet needs with regard to daytime activity and benefits.

The results of the study indicate that patients in certain demographic groups, namely the elderly, the poor, and the uneducated, are more likely to have higher total number of needs. Also, the majority of mentally ill in the present study were young, poor, and less educated. Thus, the clinicians should understand these results when dealing the mentally ill consumers. Increasing clinicians' knowledge about the demographic characteristics of the mentally ill can eventually benefit both patient and clinicians.

B. Policy Implications

Needs assessments of the users of psychiatric services have become an important means of evaluating mental health services (Thornicroft, Brewin, & Wing, 1992; Thornicroft & Tansella, 1996; Phelan et al., 1999; Ochoa et al., 2003). Such an assessment is particularly important for Saudi Arabia, which lacks a well established and effective community system to meet the increased needs of mentally ill. This study is expected to benefit the health policy makers in Saudi Arabia, especially because no needs assessment had been conducted since the decentralization of mental health services. The results of this study can add to the understanding of the needs of mentally ill outpatients living in the community on the part of mental help policy makers and help them develop more effective mental health policies.

The result of this study indicate that the mentally ill outpatients at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia have numerous unmet needs, including information on psychotic symptoms, daytime activity, information on treatment, basic education, telephone, money, and benefits. Therefore, the decentralization policy that started in 1983 has not met all their needs. However, this is

not to say that the current situation is not better than it was before the decentralization of mental health services in 1983. It is very difficult, if not impossible, to compare the needs of mentally ill outpatients before and after decentralization because no base line assessment was performed prior to decentralization. One could, of course, assume that all the needs of the mentally ill had been met at Shahar Mental Hospital in Taif, the only facility in Saudi Arabia that provided treatment for the mentally ill before the inception of decentralization, but such an would not be based on any data. Therefore, instead of trying to compare the stated needs of current outpatients with what might have been the needs of such patients before decentralization, it is best to focus on the findings of the present study and use them to address the needs that have been defined by the outpatients.

Meeting the needs of the mentally ill outpatients is considered a way of increasing their stability in the community and decreasing the cost of treatment, because outpatient care is less expensive than inpatient hospitalizations and re-hospitalization is considered to be the most expensive type of mental health treatment (Caton et al., 1985). Hence, the Saudi ministry of health should consider funding mental health programs in the community that provide mentally ill patients with financial assistance, educational assistance, and education concerning their conditions so as to meet their needs and help them to remain in the community and be part of the social and economic structure of Saudi Arabia. For example, the government should consider initiating some financial programs such those in the United States and to increase the benefit of SSI to meet the financial needs of this population, particularly because the majority of the mentally ill outpatients can be considered to poor, based on the current study.

The results from the descriptive part of the study indicate that 36 percent of participants had less than a middle school education and about 65 percent had less than a high school diploma. This result should alert Saudi health policy makers that many mentally ill outpatients in Saudi Arabia lack basic education. Thus, health policy makers could use this result to advocate for the mentally ill to have educational opportunities in the community that meet their educational needs. For example, social development centers can provide such service for free. Furthermore, the results from the descriptive part of the study indicate that half of the participants are below 37 years of age and the vast majority of participants are below 58 years of age (94%). This result should make the Saudi mental health policy makers aware that mentally ill patients are more to be young. Young people are always seen as more optimistic about their life than elderly and they need more opportunities in the society. Therefore, mental health policy makers should guide the government efforts to establish more substantial programs that provide that group with services that meet their needs.

Limitations of the Study

One important limitation of the study is that the study focused only on the needs of the outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia. Hence, we cannot generalize the results to the entire Saudi mentally ill. This is because the study excluded inpatients, outpatients in private hospitals, the mentally ill in other parts of Saudi Arabia, and also the mentally ill who did not seek treatment.

Another limitation of the study is the sample selection process. The study excluded several mentally ill conditions, specifically substance abuse, mental deficiency, organic brain disorder, active mental illness, history of hospitalization for mental illness, and moderate to severe cognitive limitations. This may bias the results because it is possible that those patients may have needs different from those of the outpatients included in the study. Furthermore, since the psychiatrists at the hospital were responsible for selecting the eligible participants for the study, they may bias the results because it is possible that those psychiatrists may exclude participants who may be eligible for the study but not chosen by them.

Another limitation of the study is that the study was conducted in Saudi Arabia with no immediate supervision by the researcher, who was living in the United States at the time of collecting data. It would be more efficient if the researcher were in Saudi Arabia at the time of conducting of the study to observe the process of collecting data and to evaluate the interactions of participants when they complete the surveys. Being with participants may help the researcher to identify other important questions about their needs.

Moreover, participation of the study was limited to those who can read. A large number of potential participants were not included because they could not read. It is very important to include those who cannot read because it is possible that they may have different needs.

The study was cross sectional in design and collected data from participants at one point in time and did not include any longitudinal analysis. Collection of data from the

same participants at later time may show different type of needs. Also, the participants were examined in 18 areas of needs that listed on CANSAS, and it is impossible for such an instrument to include all the needs of mentally ill. There are other important needs that some participants indicated and are not included on CANSAS, such as the need for work, the need to minimize the stigma of mental illness, the need for vocational training, and the need for participation in developing mental health programs.

Another limitation of the study is that the majority of the mentally ill patients in Saudi Arabia who seek treatment in public hospitals are considered to be of a low socioeconomic class. Therefore, the result of this present study may not correlate to the needs of patients in private hospitals.

Further Research

The study was conducted (a) to assess the needs only among outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia. It would be interesting to assess the needs of those mentally ill who are inpatients in the hospital and to include outpatients in private hospitals, the mentally ill in other states of Saudi Arabia, and the mentally ill who did not seek treatment.

The survey instrument (CANSAS) was used to assess the social and health needs of the mentally ill in 18 areas of needs. It would be very helpful to conduct a qualitative study to enhance the quantitative results and to go into further depth in some areas that are not included in the instrument and that the participants feel are important for them.

The data in this study was obtained from the mentally ill and does not include the perspective of the health care providers. It would be very informative to conduct research on assessing the needs from the perspective of mental health care providers, such as psychiatrists, nurse, social workers, and others, as well as the point view of patients' families. These people may well have different perspectives on the needs of the mentally ill.

Further research can also consider investigating the housing needs among the mentally ill in Saudi Arabia because the current study did not capture this need. Housing is an alarming in problem in Saudi Arabia and may be a more challenging problem for the mentally ill than the survey revealed. Furthermore, it would be interesting to examine all the met needs to see whether these needs are being met by formal help, such as local agencies, or informal help, such as family or friends.

It would be very important to conduct CANSAS assessments on a regular base for all patient consumers at Al-Amal Complex for Mental Health, as well as other mental health institute in the country. CANSAS is one of the measures that could be used to evaluate the patient social and health needs. The results from the CANSAS instrument could be instructive for program mangers, administrators, and agency leadership to improve services delivery by providing data about what services the consumers feel could meet their needs.

Further research can also consider a longitudinal study of the consumers' needs, which may change over time. The longitudinal study could track the change over time

and help clinicians and policy makers make the necessary changes or adjustment of the service goal and tools.

This study used a need assessment instrument to assess the needs only among outpatient mentally ill consumers at Al-Amal Complex for Mental Health in Riyadh, Saudi Arabia. The results can be used as beginning of identifying the need of mentally ill in Saudi Arabia and providing logical interventions that are significant to help the mentally ill to stay in community and be part of the social and economic development in the country. If the results of this study are taken into consideration by mental health policy makers and Ministry of Health officials in meeting this population's needs, the result should be increased of use of outpatient services and compliance with treatment recommendations. This will lead to fewer hospitalizations and a more rewarding life for the mentally ill population in Saudi Arabia.

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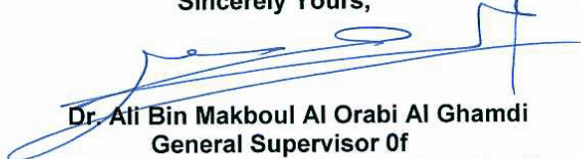
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Appendix A: Approval to Conduct Research

الرقم :	 وزارة الصحة Ministry of Health	المملكة العربية السعودية
التاريخ :		وزارة الصحة
المشروعات :		المديرية العامة للشؤون الصحية بالرياض مجمع الأمل للصحة النفسية إدارة التدريب والتطوير
Date: <u>26-6-1428</u> 11 July 2008.		
To :- Mr. Khaled Al Deham		
Dear Mr. Al Deham,		
In reference to your letter to the General Director of health affairs in Riyadh region, regarding making a research in Al Amal Complex for mental health,		
Please be informed that we approve to do this research in our Complex on the basis of the General Director of health affairs in Riyadh region approval. If you have any further inquiry please don't hesitate to contact Department of Training & Development phone No. 4804548 Ext. 7064 - 6734 Fax 4864588.		
 With my best regards.		
Sincerely Yours,		
		
Dr. Ali Bin Makboul Al Orabi Al Ghamdi General Supervisor Of Al-Amal Complex for Mental Health Riyadh		

Appendix B: Demographic Questionnaire (Arabic Version)

رمز:

الجنس:

أنثى

ذكر

السن:

57-48 سنة

47-38 سنة

37-28 سنة

27- 18 سنة

أكثر من 68 سنة

67- 58 سنة

الحالة الإجتماعية :

متزوج أعزب مطلق أرمل

المستوى التعليمي:

أقل من المتوسطة .

متوسطة .

أقل من الثانوية العامة.

ثانوية عامة.

أقل من الجامعة.

جامعي.

أكثر من جامعي.

التشخيص المرضي:

لا يوجد تشخيص غير معروف

يوجد تشخيص حدده

مستوى الدخل:

صفر - 2000 ريال.

2001 - 4000 ريال.

4001 - 6000 ريال.

6001 - 8000 ريال.

8001 - 10000 ريال.

أكثر من 10000 ريال.

Appendix C: Demographic Questionnaire (English Version)

Code Number:

Gender:

Male Female

Age: 18-27 28-37 38-47 48-57 58- 67 68 and over

Marital statues

Married Single Divorced Widow

Education Level:

- Less than middle school
- Middle school graduate
- Less than high school
- High school graduate
- Some college
- College graduate
- More than college graduate

Mental Health Diagnosis:

Have diagnosis Identify ----- No diagnosis

Income Level

- 0- to 2,000 (R.S)
- 2,001to 4,000 (R.S)
- 4,001 to 6,000 (R.S)
- 6,001 to 8,000 (R.S)
- 8,001 to 10,000 (R.S)
- Over** 10,000 (R.S)

Appendix D: CANSAS Instrument (English Version)

Accommodation:

Do you have a place to live in?

Rating	Meaning	Example
0	No problem	Person does have an adequate home.
1	No/moderate problem due to help given	Person does not have an adequate home, but, person is living with relative or friend.
2	Serious problem	Person is homeless, no body willing to help the person, or his/her home lacks basic facilities such as water and electricity.

Food:

Are you able to prepare your own meals and do your own shopping?

Rating	Meaning	Example
0	No problem	Able to prepare meals and does his / her shopping.
1	No/moderate problem due to help given	Unable to prepare food and does shopping but has meal provided.
2	Serious problem	Unable to prepare meals and does shopping and the meal provided inappropriate.

Looking after home:

Are you able to look after your home?

Rating	Meaning	Example
0	No problem	Home may be untidy but the person keeps it basically clean.
1	No/moderate problem due to help given	Unable to look after home but he has regular domestic help.
2	Serious problem	Home is dirty and potential health hazard.

Self-care:

Do you have problems keeping clean and tidy?

Rating	Meaning	Example
0	No problem	Appearance may be eccentric or untidy, but basically clean.
1	No/moderate problem due to help given	Needs and gets help with self-care.
2	Serious problem	Poor personal hygiene, smells.

Daytime activities:

Do you have difficulty with regular/appropriate daytime activities?

Rating	Meaning	Example
0	No problem	In full time employment, or adequately occupied with household/social activities.
1	No/moderate problem due to help given	Unable to occupy self, so attending day center.
2	Serious problem	No employment of any kind and not adequately occupied with household/social activities.

Physical health:

Do you have any physical disability or any physical illness?

Rating	Meaning	Example
0	No problem	Physically well.
1	No/moderate problem due to help given	Physical ailment, such as high blood pressure but receiving appropriate treatment.
2	Serious problem	Untreated physical ailment, including side-effects.

Psychotic symptoms:

Do you ever hear voices, or have problems with your thoughts?

Rating	Meaning	Example
0	No problem	No positive symptoms, not at risk from symptoms and not on medication.
1	No/moderate problem due to help given	Symptoms helped by medication or other help.
2	Serious problem	Not taking medications and refusing help most of the time.

Information on condition and treatment:

Do you have clear verbal or written information about your condition and treatment?

Rating	Meaning	Example
0	No problem	Has received and understood adequate information.
1	No/moderate problem due to help given	Has not received or understood all information
2	Serious problem	Has received no information.

Psychological distress:

Have you recently felt overly anxious or frightened?

Rating	Meaning	Example
0	No problem	No anxious or frightened feelings.
1	No/moderate problem due to help given	Feels anxious or frightened but get ongoing support from therapist or others.
2	Serious problem	Has expressed suicidal ideas during last month or has exposed themselves to serious danger.

Safety to self:

Do you ever have thoughts of harming yourself, or have you actually harmed yourself?

Rating	Meaning	Example
0	No problem	No suicidal thoughts.
1	No/moderate problem due to help given	Suicide risk monitored by staff, receiving counseling.
2	Serious problem	Thoughts of harming self affects life significantly, such as preventing person going out.

Safety to others:

Do you think you could be a danger to other people's safety?

Rating	Meaning	Example
0	No problem	No history of violence or threatening behavior.
1	No/moderate problem due to help given	At risk of losing temper and hit someone but reviving help with threatening behavior.
2	Serious problem	Recent violence or threats.

Company:

Do you wish you had more contact with others?

Rating	Meaning	Example
0	No problem	Able to organize enough social contact, has enough friends.
1	No/moderate problem due to help given	Unable to organize enough social contact, has not enough friends, but attends appropriate drop-in or day center.
2	Serious problem	Frequently feels lonely and isolated.

Child Care:

Do you have any difficulty in looking after your kids especially those under 18?

Rating	Meaning	Example
0	No problem	No children under 18 or no problem with looking after them.
1	No/moderate problem due to help given	Difficulties with parenting but receiving help.
2	Serious problem	Serious difficulty looking after children.

Basic Education:

Do you have difficulty in reading, writing or counting money?

Rating	Meaning	Example
0	No problem	Able to read, write, count money.
1	No/moderate problem due to help given	Difficulty with reading, writing, counting money but has help from relatives friends.
2	Serious problem	Difficulty with reading, writing, counting.

Telephone:

Do you have phone or it easy to find one that you can use?

Rating	Meaning	Example
0	No problem	Has working telephone in house or easy access to payphone.
1	No/moderate problem due to help given	Has access to telephone when he /she request it.
2	Serious problem	No access to telephone or unable to use telephone.

Transportation:

Do you have a car or are you able to use public transportation?

Rating	Meaning	Example
0	No problem	Has access to car or able to use public transport.
1	No/moderate problem due to help given	Has no access to car or public transportation but received help with transport from friend or others.
2	Serious problem	Has no access to car or public transportation and no help provided with transport.

Money:

Do you have problems budgeting your money?

Rating	Meaning	Example
0	No problem	Able to budget his /her money and pay bills.
1	No/moderate problem due to help given	Unable to budget his /her money but receiving help with budgeting.
2	Serious problem	Unable to budget his /her money and help provided with budgeting.

Benefits:

Are you sure that you are getting all the money you are entitled to?

Rating	Meaning	Example
0	No problem	Receiving full entitlement of benefits.
1	No/moderate problem Due to help given	Receiving appropriate help in claiming benefits.
2	Serious problem	Not sure/not receiving full entitlement of benefits.

Appendix E CANSAS Instrument (Arabic Version)

السكن:		
هل لديك مكان تسكن فيه حالياً؟		
التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	امتلك مكان مناسب.
1	لا/ مشكلة متوسطة نتيجة للمساعدة المقدمة.	أسكن في ملجأ أو في مكان تمتلكه الحكومة أو مؤسسة خيرية أو مع أحد الأقارب أو الأصدقاء.
2	مشكلة صعبة.	ليس لدي مسكن ، أسكن في الشارع ، المنزل غير متوفر فيه الخدمات الأساسية مثل الماء والكهرباء .

الطعام:		
هل تواجه صعوبة في الحصول على طعام كافي؟		
التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	قادر على شراء وتجهيز الطعام .
1	لا/ مشكلة متوسطة نتيجة للمساعدة المقدمة.	غير قادر على تجهيز الطعام ولكن أحصل على طعام من الغير .
2	مشكلة صعبة.	لدي حمية صعبة، والطعام المقدم إلى غير كافي وغير متناسب مع عاداتنا وتقاليدينا.

العناية بالمنزل:

هل تواجه صعوبة في العناية بمنزلك؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	قادر على العناية بالمنزل شكل المنزل قد يبدو مهملاً ولكن الشخص يحافظ على النظافة الأساسية للمنزل .
1	مشكلة متوسطة نتيجة للمساعدة المقدمة.	غير قادر على العناية بالمنزل ولكنة يحصل على مساعدة في تنظيف المنزل من الخادم .
2	مشكلة صعبة.	المنزل غير نظيف وهناك خطورة صحية بسبب عدم نظافة المنزل .

العناية الشخصية:

هل تعاني من صعوبة فيما يتعلق بالعناية الشخصية؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	أحياناً المظهر الشخصي غير مرتب ولكن بشكل عام المظهر نظيف .
1	لا مشكلة متوسطة نتيجة للمساعدة المقدمة.	يحتاج ويحصل على مساعدة دورية فيما يتعلق بالعناية الشخصية .
2	مشكلة صعبة.	المظهر الشخصي غير جيد والرائحة غير جيدة ورائحة الشخص غير جيدة..

الأعمال اليومية:

هل تواجه صعوبة في أداء الأعمال اليومية؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	لدي عمل أو وظيفة تشغل جميع وقتي أو مشغول تماماً بأعمال المنزل أو الأنشطة الاجتماعية .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	غير قادر على إشغال نفسي ولذلك التحقت بمركز اجتماعي لإشغال وقت فراغي .
2	مشكلة صعبة	الشخص ليس عنده وظيفة وليس مشغول بأعمال المنزل أو الأنشطة الاجتماعية .

الصحة الجسمية:

هل تعاني من إعاقة جسمية أو من أي مرض جسدي؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	يتمتع بصحة جيدة .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	مرض عضوي مثل ضغط الدم ولكن أحصل على علاج مناسب له .
2	مشكلة صعبة.	مرض عضوي غير معالج وله أعراض جانبية .

الأعراض النفسية:

هل لديك أعراض للمرض النفسي؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	لا توجد أعراض للمرض النفسي، وليس هناك احتمال للتعرض لمرض نفسي، الشخص ليس يأخذ علاج نفسي .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	أعراض المرض النفسي تم معالجتها من خلال الدواء أو من خلال طرق أخرى للمعالجة .
2	مشكلة صعبة.	حالياً لديه أعراض المرض أو هو معرض له .

معلومات عن الحالة المرضية والعلاج المقدم:

هل حصلت على معلومات شفوية أو خطية فيما يتعلق بحالتك الصحية وعن العلاج المقدم لك؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	لدى معلومات كافية عن حالتني الصحية .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	لم أحصل على معلومات كافية ولم أفهمها كلها أيضاً .
2	مشكلة صعبة.	لم أحصل على أي معلومات تتعلق بالحالة الصحية والعلاج المقدم .

القلق النفسي:

هل تعاني حالياً من قلق نفسي؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	أحياناً قلق نفسي بسيط.
1	لا / مشكلة متوسطة نتيجة للخدمة المقدمة.	يحتاج ويحصل على مساندة مستمرة.
2	مشكلة صعبة.	التحدث عن أفكار انتحارية خلال الشهر الماضي أو ربما عرض نفسه للخطر .

المحافظة على النفس:

هل سبق أن فكرت في الإنتحار أو فعلاً قد حاولت الإنتحار؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	ليست هناك أفكار انتحارية .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	يوجد احتمالية للانتحار ولكن الشخص مراقب من قبل موظف مختص، الشخص يحصل على علاج نفسي لهذه المشكلة.
2	مشكلة صعبة.	هناك أفكار إنتحارية والشخص يعاني من مشكلة نفسية صعبة تؤثر على حياته وتمنعه من مخالفة الناس .

الخطورة على الآخرين:

هل تعتقد أنك تشكل خطر على حياة الناس الآخرين؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	ليس هناك أي اعتداء على الآخرين في السابق وكذلك ليس هناك أي سلوك خطير.
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	هناك احتمالية خطر على الآخرين بسبب تعاطي المخدرات، ولكن هذا الخطر محدود بسبب المساعدة المقدمة له.
2	مشكلة صعبة.	الاعتداء فعلياً على شخص ما في الفترة الأخيرة أو أن الشخص يشكل خطر على الآخرين.

المرافق (الصديق):

12 هل تحتاج إلى مساعدة في العلاقات الاجتماعية؟

التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	قادر على تنظيم علاقات اجتماعية ولديه عدد كافٍ من الأصدقاء.
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	الحضور في مركز اجتماعي.
2	مشكلة صعبة.	معظم الأوقات يشعر وحيد ومعزول عن الناس.

رعاية الأطفال:

هل توجد مشكلة في رعاية الأطفال؟

التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	لا يوجد أطفال أقل من 18 سنة , أو لا توجد مشكلة في رعاية الأطفال .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	صعوبة في رعاية الأطفال، ولكن هناك مساعدة في رعاية الأطفال .
2	مشكلة صعبة.	هناك مشكلة كبيرة في رعاية الأطفال.

التعليم الأساسي:

هل لديك نقص في المهارات الأساسية في القراءة والحساب؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	قادر على القراءة والكتابة وفهم النماذج أو الاستمارات باللغة العربية.
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	هناك صعوبة في القراءة ولكن هناك مساعدة من الأقارب بذلك الخصوص.
2	مشكلة صعبة.	غير قادر على القراءة والكتابة ولدي صعوبة في إتقان المهارات الأساسية وعدم توفير فصاحة باللغة العربية .

الهاتف:

هل تواجه صعوبة في الحصول أو استخدام الهاتف؟

التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	يوجد هاتف في المنزل أو إمكانية الوصول إلى هاتف عمله.
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	يجب عليه أن يأخذ إذن حتى يستخدم الهاتف .
2	مشكلة صعبة.	لا يستطيع أن يحصل على خدمة الهاتف أو غير قادر على استخدام الهاتف .

المواصلات:

هل لديك مشكلة في استخدام المواصلات العامة؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	قادر على استخدام المواصلات العامة أو أمتك سيارة .
1	لا / مشكلة متوسطة نتيجة للمساعدة المقدمة.	توفير بطاقة مجانية لركوب الباصات أو مساعدات أخرى .
2	مشكلة صعبة.	لا أستطيع أن استخدم المواصلات العامة.

النقود:

هل لديك مشكلة في ترتيب ميزانيتك؟

التصنيف	شرح التصنيف	مثال
0	لا توجد مشكلة.	قادر على ترتيب الميزانية وعلى شراء الأشياء الضرورية، وكذلك دفع الفواتير.
1	لا/ مشكلة متوسطة نتيجة للمساعدة المقدمة.	يحصل على مساعدة لترتيب الميزانية.
2	مشكلة صعبة.	غير قادر على ترتيب الميزانية وبعض الأحيان لا يوجد لدي نقود لشراء الحاجات الأساسية.

الاستحقاقات المالية:

هل الشخص حصل على جميع المستحقات المالية المفروضة له؟

التصنيف	شرح التصنيف	مثال
0	لا يوجد مشكلة.	حصل على جميع المستحقات المالية المفروضة له.
1	لا/ مشكلة متوسطة نتيجة للمساعدة المقدمة.	حصل على مساعدة في المطالبة بهذه المستحقات المالية.
2	مشكلة صعبة.	غير متأكد من مستحقاته المالية وغير مستلم جميع مستحقاته المالية.

Appendix F: IRB Approval Letter


VCU Memo

Virginia Commonwealth University

Office of Research Subjects Protection
BioTechnology Research Park
BioTech One, 800 E. Leigh Street, #114
P.O. Box 980568
Richmond, Virginia 23298-0568
(804) 828-3992
(804) 827-1448 (fax)

DATE: October 7, 2008

TO: Judith B. Bradford, PhD
Center for Public Policy
Box 843065

FROM: Elizabeth Ripley, MD, MS 
Chairperson, VCU IRB Panel B
Box 980568

RE: **VCU IRB #: HM11722**
Title: Needs Assessment of Users of Psychiatric Services in Saudi Arabia

The following study involving the research use of human subjects was **approved** by the VCU IRB on October 2, 2008, according to 45 CFR 46.108(b). The changes requested by the Panel received in the Office of Research Subjects Protection on September 23, 2008, satisfactorily meet the stipulations set forth in the August 7, 2008, IRB Panel meeting. This approval includes the following items reviewed by this Panel:

RESEARCH APPLICATION/PROPOSAL: None

PROTOCOL (Research Plan): Needs Assessment of Users of Psychiatric Services in Saudi Arabia, received 9/23/08, version date 9/19/08

- Demographic Questionnaire, received 7/3/08
- CANSAS Instrument (English Version – Appendix E), received 7/3/08

CONSENT/ASSENT (attached):

- Survey Cover Letter (Appendix D), received 9/23/08, version date 9/19/08
- **Waiver of Consent for Some Elements of Consent - 45 CFR 46.116(d):** All four conditions for waiver of consent have been met. The IRB Panel has waived the following elements of consent: Description of any reasonably foreseeable risks or discomforts to the subject, Description of any benefits to the subject or to others which may reasonably be expected from the research, Disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject, and explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs.
- **Waiver of Documentation of Consent:** One of the conditions set forth in 45 CFR 46 117(c) (1), (2) for waiver of documentation of consent has been met and the IRB Panel has waived documentation of consent.

(Continued...)

Page 1 of 3

ADDITIONAL DOCUMENTS (attached):

- Psychiatrist's Script (Appendix B), received 9/23/08, version date 9/19/08
- Study Coordinator Script (Appendix C), received 9/23/08, version date 9/19/08
- ❖ **Please Note:** At this time of review, only English versions of the study documents are being approved. For approval of the Arabic translated documents, the following must be submitted to the IRB office for review and approval: 1) The name and credentials of the individual doing the translation, and 2) A cover memo from the person doing the translation in which the translator stipulates that the attached documents have been translated using the VCU IRB approved study documents.

This approval expires on October 1, 2009. Federal Regulations/VCU Policy and Procedures require continuing review prior to continuation of approval past that date. Continuing Review report forms will be mailed to you prior to the scheduled review.

If you have any questions, please contact Dr. Elizabeth Ripley, Chairperson, VCU IRB Panel B, at bripley@vcu.edu and 828-1955; or you may contact Jennifer Rice, IRB Coordinator, VCU Office of Research Subjects Protection, at jlrice@vcu.edu and 828-3992.

Attachment – Conditions of Approval

Conditions of Approval:

In order to comply with federal regulations, industry standards, and the terms of this approval, the investigator must (*as applicable*):

1. Conduct the research as described in and required by the Protocol.
2. Obtain informed consent from all subjects without coercion or undue influence, and provide the potential subject sufficient opportunity to consider whether or not to participate (unless Waiver of Consent is specifically approved or research is exempt).
3. Document informed consent using only the most recently dated consent form bearing the VCU IRB "APPROVED" stamp (unless Waiver of Consent is specifically approved).
4. Provide non-English speaking patients with a translation of the approved Consent Form in the research participant's first language. The Panel must approve the translated version.
5. Obtain prior approval from VCU IRB before implementing any changes whatsoever in the approved protocol or consent form, unless such changes are necessary to protect the safety of human research participants (e.g., permanent/temporary change of PI, addition of performance/collaborative sites, request to include newly incarcerated participants or participants that are wards of the state, addition/deletion of participant groups, etc.). Any departure from these approved documents must be reported to the VCU IRB immediately as an Unanticipated Problem (see #7).
6. Monitor all problems (anticipated and unanticipated) associated with risk to research participants or others.
7. Report Unanticipated Problems (UPs), including protocol deviations, following the VCU IRB requirements and timelines detailed in VCU IRB WPP VIII-7:
8. Obtain prior approval from the VCU IRB before use of any advertisement or other material for recruitment of research participants.
9. Promptly report and/or respond to all inquiries by the VCU IRB concerning the conduct of the approved research when so requested.
10. All protocols that administer acute medical treatment to human research participants must have an emergency preparedness plan. Please refer to VCU guidance on <http://www.research.vcu.edu/irb/guidance.htm>.
11. The VCU IRBs operate under the regulatory authorities as described within:
 - a) U.S. Department of Health and Human Services Title 45 CFR 46, Subparts A, B, C, and D (for all research, regardless of source of funding) and related guidance documents.
 - b) U.S. Food and Drug Administration Chapter I of Title 21 CFR 50 and 56 (for FDA regulated research only) and related guidance documents.
 - c) Commonwealth of Virginia Code of Virginia 32.1 Chapter 5.1 Human Research (for all research).

[010507]

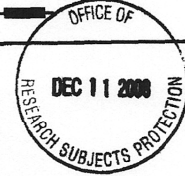
Appendix G: Psychiatrist's Script (Arabic)



MIDDLE EAST OFFICE
For Translation
Author: SALEH M. AL-REBDI
Licence No. 4



مكتب
الشرق الأوسط للترجمة
لصاحبه : صالح محمد الريدي
ترخيص رقم ٤



النص الخاص بالطبيب النفسي

السلام عليكم ورحمة الله وبركاته.

شكراً على حضورك للموعد.

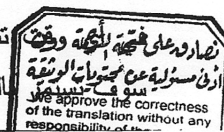
هل بالإمكان أن نأخذ من وقتك بضع دقائق لأحدثك عن دراسة نقام حالياً في قسم العيادات الخارجية بالمستشفى. نحن نقوم بدراسة نحدد حاجاتك الصحية والاجتماعية. هذه الدراسة سوف تساعدنا على تقديم خدمات أفضل لك وكذلك لجميع مستخدمي الخدمات النفسية في المملكة العربية السعودية. هذه الدراسة يقوم بها الدكتورة : جوديث برادفورد و / خالد بن محمد الدهام، طالب دكتوراه في جامعة فرجينيا الأمريكية، ونحن هنا في المستشفى نساعدكم على تعبئة الاستبيان من مراجعي العيادات الخارجية أمثالكم.

في حالة مشاركتك في هذه الدراسة، فسوف يطلب منك الإجابة عن مجموعة من الأسئلة والتي تتعلق بمعلوماتك الشخصية، مثل السن. وكذلك عن احتياجاتك الصحية والاجتماعية الغير مشبعة. هذان الاستبيانان سوف يستغرق إكمالهما حوالي ٢٠-٢٥ دقيقة.

المشاركة في هذه الدراسة تطوعية وليس هناك مجال لتحديد هويتك كمشارك في هذه الدراسة وذلك لأننا لا نسأل عن معلومات شخصية سرية.

هذه الدراسة سوف تكون سرية وأسمك لن يظهر في الاستبيان أو أي معلومة أخرى وذلك لأننا سوف نستخدم أرقام بدلاً عن استخدام الأسماء الحقيقية وذلك لضمان سرية المعلومات.

كما قلت لك، المشاركة في الدراسة تطوعية وأنه بإمكانك التوقف عن المشاركة، ونشأه والى متى لا تقرر التوقف عن المشاركة في الدراسة، الحصول على الخدمة التي تستحقها وكذلك الجودة التي تحصل



APPROVED

12-17-08 / 78 / 38

MIDDLE EAST OFFICE
For Translation
Owner : SALEH M. AL-REBDI
Licence No. 4



**مكتب
الشرق الأوسط للترجمة**
تصاحبه : صالح المحمد الريدي
ترخيص رقم 4

عليها حالياً في العيادات الخارجية (أي لن يؤثر ذلك على مستوى وجودة الخدمة المقدمة لك في المستشفى).
أيضاً مشاركتك أو عدم مشاركتك في الدراسة أو نوع إجاباتك في الاستبيانات لن يؤثر على الخدمة التي تستحقها الآن.
إذا رغبت التعرف على معلومات أكثر عن الدراسة، هل بإمكانني أن أحول معلوماتك إلى المسئول عن الدراسة، السيد صالح العبيد، رئيس قسم التطوير والتدريب في المستشفى. وهو بدوره سوف يقوم بالاتصال بمنسق الدراسة الذي سوف يقابلك ويعطيك معلومات أكثر عن الدراسة، إذا كنت ترغب في مقابلة منسق الدراسة فسوف يقابلك في قاعة الاجتماعات عندما تنتهي من موعدك القادم في المستشفى وذلك لتعبئة الاستبيانات.
لا يجب عليك الإجابة الآن، إذا رغبت في المزيد من الوقت للتفكير في المشاركة في الدراسة، بإمكانك إخباري عن قرارك عند حضورك للموعد القادم في العيادة.
شكراً لك على تفكيرك في المشاركة في الدراسة.



APPROVED

12-17-08 TE / JTK

Appendix H: Psychiatrist's Script (English)

(Appendix B) Psychiatrist's Script



Hi,

Thank you very much for coming for your appointment.

May I take a few minutes to talk about a study that is going on in the outpatient department? We are conducting a study to identify your unmet social and health needs. This study will help us to better serve you, and it will also help all the psychiatric service users in the Kingdom of Saudi Arabia. This study is conducted by Dr. Judith Bradford and Khaled Aldeham, a doctoral student at Virginia Commonwealth University. We are at the hospital helping them by recruiting participants for this study.

If you participate in the study, you will be asked to answer questions about yourself, such as how old you are, and about your social and health unmet needs. These surveys will take about 20 to 25 minutes to complete.

Participation in this study is completely voluntary and there will be no way to identify you as a participant because we are not asking for any identifying information. The study will be confidential and anonymous. It will be number coded, and your name will not be included on the surveys and other collected data.

As I said, participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, you will still receive the same services and benefits that you are entitled to now. Also, the quality of care you receive at the outpatient department will not be affected by your participation or non participation in this study or any answer that you give.

If you want to participate in this study, may I refer your information to the study director, Mr. Alobead, the Director of the hospital's Department of Training & Development. He will contact the study coordinator, the person who will meet you to tell you more about the study and administer the surveys. If you want to meet the study coordinator, he will meet you in the conference room after you finish your next appointment to fill out the surveys.

You do not have to answer now, if you need time to think about it, you may let me know when you come to your next appointment.

Thank you for considering participation in the study.

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10-2-08/EBR/JR

9.19.08

Appendix I: Study Coordinator Script (English)

(Appendix C) Study Coordinator Script



Hi

Thank you for coming. My name is Adel Bashatah, and I am the Study Coordinator.

As your Psychiatrist informed you, we are conducting a study about identifying your unmet social and health needs. This study will help us to better understand the needs of outpatients at this hospital and it may also help outpatients at other hospitals in the kingdom of Saudi Arabia.

This study will be confidential and anonymous, it will be number coded, your name will not be included on the surveys. All survey responses will be kept in a locked box in the hospital during the study, and once the surveys are analyzed, they will be destroyed.

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled.

If you decide to be in this study, I will answer all your questions about the study.

If you want to participate, I will give you to complete two questionnaires: 1) a brief questionnaire about your background; 2) a survey instrument concerning your outpatient needs. These forms will take about 20 to 25 minutes to complete. I will read the questions to you, if that is helpful.

Once you have completed the forms, please return them to the study director's locked box located at the entrance of the outpatient department in the enclosed envelope. I will show you where this is if you need assistance.

If you need more time to think about it, you will be asked to inform your psychiatrist about your decision at your next visit.

Thank you for participating in this study.

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9.19.08

Appendix J: Study Coordinator Script (Arabic)



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**مكتب
الشرق الأوسط للترجمة**
لصاحبه : صالح المحمد الربدي
ترخيص رقم 4



النص الخاص بمنسق الدراسة

السلام عليكم ورحمة الله وبركاته.

شكراً على حضورك، إسمي عادل باشطح، وأنا منسق الدراسة.

كما أخبرك طبيبك النفسي عن الدراسة التي نقوم بها حالياً. إننا نقوم الآن بدراسة تهدف إلى تحديد حاجاتك الصحية والاجتماعية الغير مشبعة. هذه الدراسة سوف تساعد المستشفى على تقديم خدمة أفضل لك وكذلك لعموم مستخدمي العيادات النفسية بالمملكة العربية السعودية.

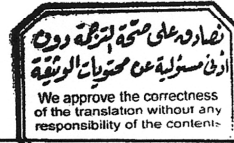
هذه الدراسة سوف تكون سرية وسوف تستخدم أرقام بدلاً من الأسماء الحقيقية لضمان عدم ظهور معلوماتك في الإستيبيانات.

جميع الإستيبيانات سوف تحفظ في صندوق في المستشفى خلال فترة الدراسة وبمجرد تحليل البيانات سيتم التخلص منها كلياً.

إن مشاركتك في الدراسة تطوعية بإمكانك التوقف عن المشاركة في الدراسة في أي وقت تشاء ولأي سبب. إذا قررت أن تشارك في الدراسة أو التوقف عن المشاركة فيها فإنه لن يكون هناك أي عقوبة أو فقد للخدمات الصحية التي تستحقها.

إذا قررت المشاركة في الدراسة، سوف أقوم بالإجابة على جميع استفساراتك المتعلقة بالدراسة.

إذا رغبت في المشاركة، فسوف أعطيك إستبيانان الأول يتعلق بمعلوماتك الأولية، والثاني يتعلق بإحتياجاتك الصحية والاجتماعية الغير مشبعة. سوف يستغرق إكمال تعبئة هذان الإستبيانان حوالي ٢٠-٢٥ دقيقة. سوف أقوم بقراءة الأسئلة عليك إذا كان هذا مفيداً لك.



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12-17-08 / ٤٤ / ٥٤

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**مكتب
الشرق الأوسط للترجمة**
لصاحبه : صالح المحمد الريدي
ترخيص رقم 4

عندما تقوم بإكمال تعبئة الإسيانات، سوف يطلب منك وضعها في الظرف المرفق
ومن ثم وضعها في الصندوق المحكم التابع للمسئول عن الدراسة والذي يقع في مدخل
العيادات الخارجية.
إذا كنت في حاجة لوقت إضافي للتفكير في المشاركة في الدراسة، سوف يطلب منك
إبلاغ طبيبك النفسي عن قرارك والذي بدوره سيقوم بإبلاغ المسئول عن الدراسة عن
قرارك.
شكراً لمشاركتك في الدراسة.

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12-17-08/TE/JTC



Appendix K: Survey Cover Letter (English)

(Appendix D) Survey Cover Letter



Dear Patient,

This is a study conducted by Khaled Aldeham, a doctoral student at Virginia Commonwealth University (VCU), and the faculty advisor Dr. Judith Bradford, Director of the Community Health Research Initiative in the Center for Public Policy at Virginia Commonwealth University (VCU).

A measurement of needs of psychiatric users is an important means of evaluating mental health services, particularly in Saudi Arabia, because no needs assessment has been performed since the inception of psychiatric services.

Therefore, this study will attempt to identify patients; unmet needs and assess the demographic variables that are most associated with these unmet needs, including age, gender, level of education and income. Participation in this study is completely voluntary, and there will be no way to identify you as a participant because we are not asking for any identifying information.

Furthermore, you will return the completed questionnaires to the study director's box located at the hospital in the enclosed envelope, so no one will know which forms you filled out.

You can be certain that the quality of care you receive at the outpatient department will not be affected by your participation or non-participation in the study or any answer that you give.

The data in this study will be confidential. Your name will not be included on the surveys. To ensure the study will be confidential and anonymous, it will be number coded, the subject's name will not be included on the surveys. No one will be identified with data and data analysis. No one will know which forms you filled out. All survey responses will be kept in a locked box in the hospital during the study; and, once the surveys are analyzed, they will be destroyed.

If you have any questions about the study, please call the Project Director, Mr. Salah Alobead. He may be reached at 480-4548 ext. 7064 or fax 4864588.

If you prefer not to participate in the study, you may leave now without any concern.

Thank you for your participation.

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10-2-08/EBR/JR

9.19.08

Appendix L: Survey Cover Letter (Arabic)



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مكتب
الشرق الأوسط للترجمة

لصاحبه : صالح المحمد الربدي

ترخيص رقم 4



تعريف بالدراسة

أخي المشارك في الدراسة،

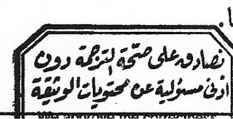
هذه الدراسة يقوم بها الطالب / خالد بن محمد الدهام، طالب دكتوراه في جامعة فرجينيا الأمريكية، وتحت إشراف الدكتورة / جوديث برافورد، مدير معمل الأبحاث والأستبيان في مركز السياسة المحلية التابع لجامعة فرجينيا.

إن تحديد الحاجات الصحية والاجتماعية الغير مشبعة لمستخدمي الخدمات النفسية بالمملكة العربية السعودية هام في تقييم الخدمات النفسية، خاصة في المملكة العربية السعودية وذلك لأنه ليس هناك تحديد مسبق لهذه الاحتياجات منذ بداية الخدمات النفسية في المملكة العربية السعودية. لذلك فإن هذه الدراسة سوف تحاول أن تحدد الحاجات الغير مشبعة وكذلك علاقة هذه الحاجات بالخصائص الديموغرافية للمشاركين مثل السن، الجنس، مستوى التعليم والدخل.

المشاركة في هذه الدراسة تطوعية، كما أنه ليس هناك أي مجال لتحديد هويتك كمشارك في الدراسة وذلك لأننا لن نسأل عن معلوماتك الشخصية السرية.

سوف تقوم بوضع الإستيبيانات في الظرف المرفق معه ومن ثم سيتم وضعه في الصندوق المغلق والخاص بالمسئول عن الدراسة في مدخل العيادات الخارجية، وبذلك لايمكن لأحد معرفة أي من الإستيبيانات الذي قمت بتعبئته.

يجب أن تتأكد أن جودة الخدمات المقدمة لك في العيادات الخارجية لن تتأثر مطلقاً سواء شاركت في هذه الدراسة أم لم تشارك أو حتى في نوع الإجابة التي أجببت عليها.



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12-11-08 / TE / JTR

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مكتب
الشرق الأوسط للترجمة
تصاحبه : صالح المحمد الربدي
ترخيص رقم ٤

هذه الدراسة سوف تكون سرية وأسمك لن يظهر في الإستيبيانات . سوف نستخدم أرقام بدلاً عن إستخدام الأسماء الحقيقية وذلك لضمان سرية معلوماتك الشخصية.

وتأكد أنه لن يتم التعرف على إسمك عند جمع هذه البيانات وكذلك عند تحليل الدراسة. كما أنه لا يمكن لأي أحد أن يعرف أي إستبيان قمت بتعبئته. الإستيبيانات سوف تحفظ في صندوق محكم داخل المستشفى خلال الدراسة ومن ثم سيتم التخلص منها عند الإنتهاء من الدراسة.

إذا كان لديك أي إستفسار عن الإستيبيان، من فضلك إتصل بالمشرف على الدراسة الأستاذ / صالح العبيد، على الهاتف رقم: (٠١-٤٨٠٤٥٤٨) تحويلة: (٧٠٦٤)، أو عن طريق الفاكس رقم: (٠١-٤٨٦٤٥٨٨).

إذا كنت لا ترغب في المشاركة في الدراسة فإنه بإمكانك الإنصراف الآن مشكوراً.

وشكراً على مشاركتك في الدراسة.



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١٤١٧-٥٨ / ٣٤ / JTC