

**Comparative Study in Quality of Life:
Substance Abuse versus Schizophrenic Patients**

**Thesis submitted for partial fulfillment of
M.D. Degree in Psychiatry**

By

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2008

ACKNOWLEDGEMENT

*Praise to "Allah", the Most Gracious and the
Most Merciful Who Guides Me to the Right Way*

First and foremost, I wish to express my deep thanks and profound gratitude to Prof. Dr. Afaf Hamed Khalil, Professor of Psychiatry, Faculty of Medicine, Ain Shams University for choosing this interesting topic, meticulous revision of this work, constructive criticism, faithful guidance, and tremendous support that enable me to accomplish this work. I am deeply grateful to her that no words are ever enough to express.

I am deeply indebted to Prof. Dr. Tarek Asaad, Professor of Psychiatry, Faculty of Medicine, Ain Shams University. Who gave me much of his effort, experience and close supervision throughout the work. He provided me continuous encouragement and support. His generous assistance and meticulous guidance had a pivotal role in the completion of this study.

I would like to express my sincere thanks to Dr. Ghada Refaat,, Lecturer in Psychiatry, Faculty of Medicine, Ain Shams University, for her valuable suggestions, supply of literature and without her support this work was impossible to be done.

Also I would like to express my feelings of gratitude to all my professors and colleagues in Al Amal Mental Hospital for their cooperation.

Last but not least, I would like to express deep thanks to my lovely wife and my family for their support and unfailing love.

Elfateh Amr

2008

List of Abbreviation

AIDs	: Acquired Immune Deficiency Syndrome
ASI	: Addiction Severity Index
BPRS	: Brief Psychiatric Rating Scale
CCU	: Continues Care Unit
DSM-VI	: Diagnostic and Statistical Manual of Mental Disorders
HAM-A	: Hamilton Anxiety Scale
HAM-D	: Hamilton Depression Scale
HBV	: Hepatitis B
HCV	: Hepatitis C
HIV	: Human Immunodeficiency Yirus
HRQOL	: Health Related Quality Of Life
ICD-10	: International Classification of Diseases
IDUs	: Injection Drug Users
MRI	: Magnetic Reasoning Image
NIDA	: National Institute on Drug Abuse
QOL	: Quality Of Life
SUDs	: Substance Use Disorders
UK	: United Kingdome
USA	: United State of America
WHO	: World health organization
W-QOL	: Wisconsin Quality Of Life Index

INTRODUCTION

In the developed world, with the emphasis on affluence and with the increasing longevity of populations, there is a general interest in how to achieve the 'goodness' of life, sometimes called life satisfaction or quality of life. But what is quality of life? Dictionary definitions of quality indicate that it implies the degree of excellence of a characteristic. However, the quality of life may mean different things to different people. The theoretical definitions of related concepts of happiness, life satisfaction, well-being, the 'good life' and 'quality of life' have attracted much conceptual confusion, and have preoccupied a wide range of disciplines (**Bowling, 2001**). It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, and level of independence, social relationships, and their relationships to salient features of their environment (**Thornicroft, 1990 and Nathan, 1993**). It results from the interaction of the social, psychological, and physical domains of an individual's function. Quality of life measures typically include assessment of physical functioning, social and emotional functioning, and work-role functioning (**Testa and Simonson, 1996**).

WHO (1991) has a working party on quality of life under its umbrella, the World Health Organization Quality of Life Group (**Mckirnan and Peterson, 1989**) who are involved in international investigation into health-related quality of life and has provided a definition of quality of life which also takes

individual perception and relationship to the environment into account. According to WHO, quality of life is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (**Thomas et al., 2003**).

Health status, functional status and quality of life are three concepts often used interchangeably to refer to the same domain of "health". The term "health related quality of life" (HRQL) was preferred because many widely valued aspects of life are not generally considered as "health-related" including income, freedom and quality of the environment (**Chassin and Galvin, 1998**). The Health-related quality of life analyses measure the impact of treatments and disease processes on these holistic aspects of a person's life (**Miadi et al., 2005**).

In general, the concept of quality of life is not defined in a uniform way, lacks clarity and even creates confusion. It seems that in medicine, the term has become a bandwagon concept for all those human needs which are often neglected in a health care field increasingly dominated by technology. It is justifiable to say that it is a term describing a field of interest rather than a single variable (**Palmer et al., 1995**). Quality of Life (QOL), as a general concept, has its roots in daily and momentary experience. The core components of quality of life; objective functioning, subjective well-being, mental and physical health all derive from an interest in understanding a patient's daily and momentary experience (**Celeste, 2004**).

Quality of life analyses are particularly helpful for: investigating the social, emotional and physical effects of treatments and disease processes on people's daily lives; analyzing the effects of treatment or disease from the patient's perspective; and determining the need for social, emotional and physical support during illness (**Bullinger et al., 1993; Gill and Feinstein, 1994**). It evaluates directly the impact of a disease or treatment on people's ability to function in life, not the value that they place on a particular health state (**Khantizian, 1985**). The concept of Quality of Life (QOL) has become an important parameter for measuring outcome in modern medicine especially in mental health (**Steven et al., 1995**). It is important not to confuse quality of life measures with utility measures, which are used to calculate quality-adjusted life years (QALYs) (**Thomas et al., 2003**). Quality of life (QOL) assessment has many apparent merits in the measurement of outcome in chronic illness. It can be used to measure incremental improvements rather than complete cure. it takes account of a wide range of aspects of daily living. It places the consumer at the centre of the picture, and it can be used across various disciplines of medicine (**Oliver et al., 1996**).

Recently, the clinicians, clinical investigators and policy markers in the field of mental health have recognized that quality of life is an important measure of outcome in patient management, cost effectiveness evaluations, clinical trials, and treatment outcome studies (**Francois, 1996**). This interest in the measurement of QOL in the field of psychiatry was stimulated by the plight of deinstitutionalized individuals with mental illness and by a parallel interest in assessing such dimensions of daily life as personal safety, isolation, poverty and transience of accommodation. The QOL measures have shown success in comparing different populations of people with mental illness in different circumstances and treatment conditions (**Warner and Huxley, 1998**). It remains an open question, however, whether the approach will prove effective in assessing change over time (**Lehman, 1999**). Since its introduction in psychiatry, the concept of quality of life has been investigated in several psychiatric illnesses including depression, anxiety and others psychiatric illness. Because of the undesirable outcome, specific attention was paid by the researches to investigate quality of life in chronic mental illness. Of these, they found poor quality of life especially in schizophrenic patients as well as substance abuse patients (**Florez, 2003**). Despite that a big proportion of mental health budget is directed to improve the outcome of substance abuse patients, yet, still researches show poor outcome and poor quality of life (**Dorothy et al., 1990**).

On one hand, substance abuse disorders are primary chronic relapsing disorders with neurobiological, genetic, psychosocial and environmental factor influencing its development and

manifestation. It is characterized by behavioral changes such as impaired control over drug use, compulsive use, continued use despite harm and craving. To be considered addicted, a patient must demonstrate behavior that shows compulsion to use substance (**Sidney et al., 2003**). The annual prevalence of illicit drug use taking all illicit drugs is only 5 per cent of the world population (age 15-64) i.e. around 200 million people. Tobacco consumption is eight-fold more than illicit drug consumption (**Peggy, 2006**). According to the World Health Report 2002 (**Goldsten and Volkow, 2002**), 8.9% of global disease burden expressed in disability adjusted life years lost (DALYs) is attributed to psychoactive substance use. Tobacco and alcohol are responsible for a major part (8.1%) of the disease burden, with alcohol being the top risk factor for health in low mortality developing countries. Tobacco, alcohol and illicit drugs are responsible for 12.4% of all deaths worldwide. In some countries of Europe, like Scotland and Spain, deaths related only to opioid use account for as many as 25-33% of deaths in young (15-39 years) males (**Lie, 2003 and Dom, 2005**).

In recent National Institute of Drug Abuse survey in USA (NIDA), 37% of population reported using one or more illicit substance in their life time. Of these, more than 90 percent used marijuana or hashish, and approximately 30 percent tried cocaine (**Akil et al., 1998 and Huws, 1998**). 15% of USA population older than 18 years of age have serious substance use problem, two thirds of this group abuse primarily alcohol (**Harold, 1998**). While estimated rates of chronic drug as 4.4 million chronic drug users in the United States in 1995 showed 3.6 million were

chronic cocaine users, and 810,000 were chronic heroin users (**Koe, 1997**). Whereas in 1997, there were 13.9 million current users of illicit drug at age 12 years and older, representing 6.4 percent of the total population (**Jerome, 1998; Brain, 2001**).

On the other hand, schizophrenia is one of chronic disabling mental illness with poor quality of life that affects about 1% of the population during their lifetime. Schizophrenia is a disease affecting the young adults (**Miadi et al., 2005**). It is a major contributor of global burden of disease in any society. According to a study of the World Health Organization, schizophrenia accounts for 5% of all years lived with a disability in the 15-44 year-old age-group worldwide (**Thornicroft et al., 2003**). Schizophrenia is a heterogeneous disorder with variable etiological, prognostic and treatment response patterns. Its course is generally long term, with acute psychotic exacerbations that may require hospitalization and that may impact negatively on the functional status of the individual and also their quality of life (**Awad et al., 1997**).

These chronic psychiatric disorders as substance abuse and schizophrenia impose severe hardships on patients and their families and challenge society in the development of public policies that both preserve the public welfare and afford patients a decent quality of life. Among the various conceptual challenges inherent in evaluating services for persons with schizophrenia has been the development of appropriate outcome measures reflecting the broad range of problems faced by these patients (*Schulberg and Bromet, 1981; Lehman et al., 1982*). Relevant outcome domains include psychiatric symptoms, functional status, access to resources and opportunities, subjective well-being, family burden, and community safety. Because of this broad array of relevant outcomes and because of a prevailing concern that outcome assessments should include the patient's perspective, there has been increased attention paid over the past decade to the development of measures of patient "quality of life". The quality of life in persons with severe and persistent mental illness is often poor. Most treatment programs have the goal of increasing the quality of their life (*Becker et al., 1993*).

Changes in the general QOL of schizophrenia patients over time is associated with anergia, and paranoid symptoms, emotional distress, side effects, self-esteem, emotion and avoidance related coping styles, expressed emotion, and other social support. Determinants of change in QOL of patients were different being in hospital or out of hospital in the real world. No significant association of age, education, and follow up duration, with general QOL (*Ritsner et al., 2006*).

Moreover, the unrivalled role of conventional antipsychotic medications has been continuously challenged by the wide range of adverse effects of these medications and their lack of usefulness in the treatment of neurocognitive deficits as well as deficit and negative symptoms. In addition, the lack of subjective tolerability of these agents and their negative impact on quality of life has complicated management for a large number of patients (*Awad and Voruganti, 2004*). In addition, the non-compliance to the antipsychotic treatment is a major problem with people suffering from schizophrenia. Indeed the lack of compliance to the treatment, estimated at 20 to 40%, is a major handicap for schizophrenic patient stabilization. The poor level of compliance is due to many various causes: adverse effects that are considered unbearable, medicine viewed as persecutory, negation of the disease, nostalgia for the productive phases of the disease, lack of social support, complexity of the prescription, relapse itself. Compliance is thus influenced by the patient's clinical features, local provision of health care and the specific nature of the drug (*Lehman, 1996*).

By the way, recently all health care fields using quality of life (QOL) measures become more focused on evaluating the efficacy and effectiveness of new treatments strategy, medications, measure the outcome and determine the human and financial costs and benefits of new interventions especially on schizophrenic and substance abuse patients (*Ware, 1995 and Testa, 1996*).

Rationale for the study:

The researches of quality of life with chronic mental health problems such as substance abuse and schizophrenia are still scarce and sporadically investigated in Arab community. Despite the financial efforts of Arab governments towards these patients, they have poor quality of life. With such concerns in mind, this study was designed to investigate the relationship between QOL and chronic mental health disorders as substance abuse and schizophrenia in Saudi Arabia in order to role out the impact of these disorders on quality of life and to reevaluate and redirect mental health budget towards benefit of these patients.

Subjects and Method

I- Design of the study

This study is a cross sectional comparative study involving two groups of patients with substance use disorders and patients with schizophrenia.

II- The site of study

This study was conducted in Al Amal complex for mental health which is a big complex in Kingdom of Saudi Arabia subdivided into two big hospitals; Addiction Hospital and Psychiatry Hospital. The addiction hospital is about 300 beds, divided into five inpatient units; two units as acute wards, three units as rehabilitation wards and an outpatient unit (Continuous Care Unit) to follow up the recovery of the patients. The program for addiction treatment includes one month inpatient program followed by program for one year as an outpatient inside the Continuous Care Unit (CCU). The psychiatric hospital is about 150 beds, divided into three general psychiatric units, two of them for males and one for females, outpatient clinics and child psychiatry department and clinic. The hospital accepts patients from all Gulf regions e.g. Bahrain, Qatar, Kuwait, UAE, etc.

III- Selection of the subjects

Two groups of patients were selected:

1- The first group: Addiction group

Group of patients with SUDs were selected from the inpatient rehabilitation wards according to following inclusion and exclusion criteria:

Inclusion criteria

1. Patient diagnosed by ICD-10 research diagnostic criteria as substance use disorders.
2. Age range from 18-60 years.
3. No comorbid schizophrenia or bipolar disorder.
4. All patients must be from Arab nationality.

Exclusion criteria

- 1- Patients with comorbid organic brain syndrome.
- 2- Patients with comorbid acute physical illness.
- 3- Non Arab patients.

2- The second group: Schizophrenic group

Group of schizophrenic patients were selected from psychiatric units and were matched as regard sex and sociodemographic factors of the first group, with the following inclusion and exclusion criteria.

Inclusion criteria

1. Patient diagnosed by ICD-10 research diagnostic criteria as schizophrenia.
2. Age range from 18-60 years.
3. Absence of history of another Axis I psychiatric disorders such as substance abuse, anxiety or depression.
4. All patients must be from Arab nationality.

Exclusion criteria

1. Patients with history of another Axis I psychiatric disorders such as substance abuse, anxiety and depression.
2. Patients with comorbid acute physical illness.
3. Non Arab patients.

The methods of sample selection

Both samples were selected randomly as follows:

1. Substance abuse patients:

Patients were selected from the rehabilitation wards, admitted on every Saturday from each week; every third patient was taken during the period from February 2006 till April 2007.

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
No of patients admitted	113	84	79	66	98	85	94	82
No of patients accepted in research	15	17	17	14	16	15	17	12
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
No of patients admitted	105	101	99	95	87	88	93	1369
No of patients accepted in research	19	19	17	17	18	19	15	247

2. Schizophrenic patients:

Patients were selected from the psychiatric units, admitted on every Monday from each week, every sixth patient was taken during the period from February 2006 till April 2007.

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
No of patients admitted	45	34	42	26	37	36	41	38
No of patients accepted in research	9	8	8	9	7	8	9	8
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
No of patients admitted	45	55	54	53	49	47	41	643
No of patients accepted in research	7	11	11	10	9	9	8	131

VI- Selection of the tools

The following tools were selected and applied to both groups as follows:

1- ICD- 10 symptom checklist sheet:

The ICD-10 Symptom Checklist for Mental Disorders (version 1.1) is a semi-structured instrument intended for clinicians' assessment of psychiatric symptoms and syndromes. It was designed for clinician assessment of mental and behavioral disorders according to ICD-10 criteria. It allows the quick determination of a preliminary diagnosis from an initial brief interview. The instrument consists of a face sheet and screener. These Checklists can be used to make a careful evaluation of the symptoms and classification criteria, and thus help to arrive at precise diagnoses according to the ICD-10 classification.

2- Addiction Severity Index (ASI):

Goals

The ASI is a semistructured interview designed to provide an administrative assessment of problems presented by patients with substance use disorders to guide initial treatment planning and allow monitoring of patient progress over time. It is designed for use in inpatient and outpatient alcohol and drug abuse treatment settings.

Description

The Addiction Severity Index is the most widely used instrument for assessing severity of substance use disorder through administration of a 30 minute semi structured interview. The ASI was developed in 1980 by A. Thomas McLellan and colleagues at the University of Pennsylvania (***McLellan et al., 1980***) and translated into Arabic by Dr. Mohd Zahrani (2004). The ASI gathers information in seven important areas of a patient's life: medical, employment support, drug and alcohol use, legal, family history, social relationships and psychological problems (***Deni and Thomas McLellan, 1999***). It has good reliability and validity and used for both clinical and research purposes (***Lesieur and Blum, 1992***).

It is not only assesses drug and alcohol abuse, but also screens for problems in other areas (***Brown, 1995; Samhsa, 1997***). On a 10-point scale from 0 to 9, interviewer severity ratings indicate the extent of a client's problems in seven areas. These severity ratings emphasize a client's unmet need for treatment. The person who administers the ASI has the option of developing a Severity Profile, which can be used to flag clients' specific problem areas. A high severity rating indicates that the client needs additional treatment or intervention (***Urshel, 1996; Morales, 1997***).

Interviewer severity ratings, which are adjusted slightly to take into account the client's own, rating of the problem's severity, are based on the following scale:

0–1 No real problem, treatment not indicated.

- 2–3 Slight problems, treatment probably not necessary.
- 4–5 Moderate problem, some treatment indicated.
- 6–7 Considerable problems, treatment necessary.
- 8–9 Extreme problems, treatment absolutely necessary.

3- Wisconsin Quality of Life Index (W-QLI):

Goals

The Wisconsin Quality of Life Index (W-QLI) is a multidimensional model for measuring quality of life. Is a promising group of scales with unique characteristics originally designed for measuring quality of life and solicits information from clients, care providers and family members (*Sainfort et al., 1996*).

Description

This model assumes that quality of life is comprised of nine dimensions: life satisfaction, occupational activities, psychological well-being, physical health, social relations, economics, and activities of daily living, symptoms, and the patient's own goals. The W-QLI takes into account the different perspectives of the patient, the patient's family, and the clinician, both currently and over time. An accompanying taxonomy and patient outcome report can be used in clinical practice to group the patient's goals and to track the attainment of the goals over time, as well as to show the agreements and disagreements between the patient and clinician in terms of how satisfied each is with the patient's progress. The W-QLI, taxonomy, and outcome report can also incorporate the service provider's goals and can be used to examine program results. It can be self administrated by the client

or by care provider and allows identifying treatment goals. Furthermore, the W-QLI has been used for program evaluation as well as for the purpose of comparing outcomes of different service models (*Becker et al., 1993*).

Practical issues

The client questionnaire takes mostly 20 to 30 minutes in administration. The score of each domain ranges from 3 to -3 regarding to the state of the domain.

Cultural Translations

The W-QLI has been culturally adapted, translated and harmonized for use in 12 countries using accepted international guidelines. Arabic translation is also done in this work as will be discussed later.

Conceptual Framework

The Wisconsin Quality of Life Index is made up of the following nine domains: **1)** general life satisfaction, **2)** activities and occupations, **3)** psychological well-being, **4)** physical health, **5)** social relations/support, **6)** economics, **7)** activities of daily living, **8)** symptoms, and **9)** goal attainment. There are two mental health status indexes, one unweighted and one weighted for patient preferences. The unweighted scale was based on the average of nine dimensions standardized scores representing better health on measures corresponding to each of the nine preference domains. In the weighted version of the index, each of the nine standardized component scores was multiplied by the preference weight on that domain for that particular individual.

These individual weighted scores were then averaged and divided by the average of all the weights. Thus if all the weights were the same, the weighted index would have the same value as the unweighted index. If the areas of high current well-being are those given greater priority, the weighted index would be greater than the unweighted. If the areas of lowest current well-being are given greater priority, the weighted index would be lower than the unweighted.

Domains (see appendix)

General Satisfaction Level

This domain measures the client's overall life satisfaction about a broad array of issues such as satisfaction with their living environment, housing, food, clothing, and mental health services.

Activities and Occupations

These questions focus on the client's day-to-day activities related to work, school or day programming. Other items in this domain relate to client's capacity to work in his/her usual manner and how satisfied they are with the way they spend their time.

Psychological Well-Being

Among other things, this domain uses to measure the client's sense of emotional well-being. This domain also includes a global question asking the client to rate their overall mental health during the past four weeks.

Symptoms/Outlook

Questions in this domain focus on client's mental health and subjective assessments of how his/her mental health symptoms affect their QOL and functional abilities.

Physical Health

This domain measures the client's perceptions about his/her physical health and about how satisfied they are with their physical health.

Social Relations/Support

These questions measure the client's social relations and social skills and asked about the amount of support they experience from their relationships and also their satisfaction with social relations.

Money

This section focuses on the economic aspects of the client's QOL. Domain questions ask about the adequacy of client's financial support and satisfaction with the amount of control done by those financial resources.

Activities of Daily Living (ADL)

This domain measures the client's functional status in accomplishing independent living tasks such as preparing meals, doing laundry, running errands or practicing adequate personal hygiene.

Goal Attainment

This section focuses on the client's personal mental health treatment goals. Clients are asked to specify three of the most important goals or hopes related to their treatment

4- Hamilton Depression Rating Scale (HAM-D):

Goals

The Hamilton Depression Scale (HAM-D) was designed by Max Hamilton in 1960 to measure the severity of depressive symptoms in individuals, often those who have already been diagnosed as having a depressive disorder.

The HDS-D is used to assess the severity of depressive symptoms present in both children and adults. It is often used as an outcome measure of depression in evaluations of antidepressant psychotropic medications and is a standard measure of depression used in research of the effectiveness of

depression therapies and treatments. It can be administered prior to the start of medication and then again during follow-up visits, so that medication dosage can be changed in part based on the patient's test score. The HDS-D often used as the standard against which other measures of depression are validated.

Description

The HDS-D was developed by Max Hamilton in 1960 as a measure of depressive symptoms that could be used in conjunction with clinical interviews with depressed patients. It was later revised in 1967. Because the HDS-D is an interviewer-administered and rated measure, there is some subjectivity when it comes to interpretation and scoring. Interviewer bias can impact the results. For this reason, some people prefer self-report measures where scores are completely based on the interviewee's responses.

The 17-item version of the HDS-D is more commonly used. Examples of items for which interviewers must give ratings include overall depression, guilt, suicide, insomnia, problems related to work, psychomotor retardation, agitation, anxiety, gastrointestinal and other physical symptoms, loss of libido (sex drive), hypochondriasis, loss of insight, and loss of weight. For the overall rating of depression, for example, Hamilton believed one should look for feelings of hopelessness and gloominess, pessimism regarding the future, and a tendency to cry. For the rating of suicide, an interviewer should look for suicidal ideas and thoughts, as well as information regarding suicide attempts.

Practical issues

It takes about 15-20 minutes to administer HDS-D. In the 17-item version, nine of the items are scored on a five-point scale, ranging from zero to four. A score of zero represents an absence of the depressive symptom being measured, a score of one indicates doubt concerning the presence of the symptom, a score of two indicates mild symptoms, a score of three indicates moderate symptoms, and a score of four represents the presence of severe symptoms. The remaining eight items are scored on a three-point scale, from zero to two, with zero representing absence of symptom, one indicating doubt that the symptom is present, and two representing clear presence of symptoms. For the 17-item version, scores can range from 0 to 54. There has been evidence to support the reliability and validity of the HDS-D. The scale correlates highly with other clinician-rated and self-report measures of depression (***Birchwood, 1993***).

The scores of HDS-D

0-7	normal
8-13	mild depression
14-18	moderate depression
19-22	severe depression
Above 23	very severe depression

5- Hamilton Anxiety Rating Scale (HAM-A):

Goals

The HAS-A was developed by Max Hamilton in 1959. It provides measures of overall anxiety, psychic anxiety (mental agitation and psychological distress), and somatic anxiety (physical complaints related to anxiety). Hamilton developed the HAS to be appropriate for adults and children; although it is most often used for younger adults.

Description

The Hamilton Anxiety Scale (HAM-A) is a 14-item test measuring the severity of anxiety symptoms. The HAS-A is used to assess the severity of anxiety symptoms present in children and adults. It is also used as an outcome measure when assessing the impact of anti-anxiety medications, therapies, and treatments and is a standard measure of anxiety used in evaluations of psychotropic drugs. The HAS can be administered prior to medication being started and then again during follow-up visits.

Hamilton developed the scale by utilizing the statistical technique of factor analysis. Using this method, he was able to generate a set of symptoms related to anxiety and further determine which symptoms were related to psychic anxiety and which were related to somatic anxiety.

The test has been criticized on the grounds that it does not always discriminate between people with anxiety symptoms and those with depressive symptoms (people with depression also score fairly high on the HAS). Because the HAS is an interviewer-administered and rated measure, there is some subjectivity when it comes to interpretation and scoring. Interviewer bias can impact the results. For this reason, some people prefer self-report measures where scores are completely based on the interviewer.

Practical issues

The HAS-A is administered by an interviewer who asks a semi-structured series of questions related to symptoms of anxiety it takes from 15-30 minutes. The interviewer then rates the individuals on a five-point scale for each of the 14 items. Seven of the items specifically address psychic anxiety and the remaining seven items address somatic anxiety. For example, the third item specifically addresses fears related to anxiety, the fifth item addresses insomnia and sleeping difficulties related to anxiety, and the tenth item addresses respiratory symptoms related to anxiety.

For the 14 items, the values on the scale range from zero to four: zero means that there is no anxiety, one indicates mild anxiety, two indicates moderate anxiety, three indicates severe anxiety, and four indicates very severe or grossly disabling anxiety. The total anxiety score ranges from 0 to 56. The seven psychic anxiety items elicit a psychic anxiety score that ranges from 0 to 28. The remaining seven items yield a somatic anxiety

score that also ranges from 0 to 28. While there is a tendency for depressed people to also score high on the HAS, some researchers have suggested that anxiety and depression are so closely linked that people can easily score high on measures of both types of symptoms (**Bobbyp, 2003; Huppert, 2001**)

Sum the scores from all 14

14-17 = Mild Anxiety

18-24 = Moderate Anxiety

25-30 = Severe Anxiety

6- Brief Psychiatric Rating Scale (BPRS):

Goals

It was developed in the late 1960s as a short scale for measuring the severity of psychiatric symptomatology. Developed primarily to assess changes in psychotic inpatients. The BPRS has been the most frequently used psychiatric rating scale for the past four decades and only a highly selected number of studies that used the BPRS can be quoted. It has been successfully used to demonstrate efficacy of antidepressant, antianxiety and antipsychotic drugs, including the newer atypical antipsychotics. The BPRS has also been used in epidemiological studies, gero-psychiatric research and to compare diagnostic concepts between countries.

Description

The BPRS includes 18 items that address somatic concern, anxiety, emotional withdrawal, conceptual disorganization, guilt feeling, tension, mannerism and posturing, grandiosity, depressive mood, hostility, suspiciousness, hallucinatory behavior, motor retardation, uncooperativeness, unusual thought content, blunted affect, excitement and disorientation.

Validated translations into a large number of languages are available. There is also a children's version. The BPRS is most frequently used in schizophrenia. It is still considered to provide at least as good a measure of the deficit syndrome. The BPRS of course has not only been used in schizophrenia, it has been used successfully in geriatric studies, in depression, anxiety disorders and even in eating disorders and autism. It covers a broad range of areas including thought disturbance, emotional withdrawal and retardation, anxiety and depression, and hostility and suspiciousness.

Practical issues

The BPRS consists of 18 symptom constructs, each to be rated by well experienced raters in a 7-point scale of severity ranging from 'not present'(0) to 'extremely severe' (7). It can be administered in 30 minutes or less, with good interview and observation, reliability and validity (*Granholm, 2005; Hare, 1988*).

7- Socidemographic data sheet:

Semi-structured sheet of the hospital for substance abuse and for schizophrenia include identification data, mode of referral, chief complaints, present history, drug history in full details including the type of substance use, time of first dose, time of last dose, the continuity of use and way of use, past history of medical condition and psychiatric illness, personal history, psychosexual history, marital history, forensic history, premorbid personality, hobbies and habits, current social situation, family history and mental state examination.

V- Procedure

1- Approval and Consent

Hospital Approval

As the hospital may disclose personal health information without patient consent, if a written agreement with the researcher to protect the information is in place. so the hospital was provided with the written application, the written research plan including The objectives of the research and the anticipated public or scientific benefits, a description of the proposed research and the duration, a description of the personal health information required and potential sources, and a copy of the scientific committee approval of the research plan from the hospital.

Oral Informed consent

Informed consent is the process for giving research study participants the information they need to decide whether to volunteer for the study. The clinical investigator reviewed the information with them, discussing all known risks and answering questions. An oral informed consent was obtained from each research volunteer before that person can participate in the study. Throughout the study, the research team continued to answer any questions. Some of participants reviewed their decision to take part in the study and withdraw from the study.

2- Translation of Wisconsin Quality of Life Index

Translation into Arabic was done by two independent professional translators, native speakers of the target language and bilingual in the source language. A backward translation was done. Both groups were assessed together and reassessed (***Abdel Razek Y et al***). This was under supervision of Dr. Marion A. Becker (Quality of Life Assessment Project, Health and Human Issues, University of Madison, WI 53703).

3- Pilot Study

The pilot study was done during three months from October, 2005 till December, 2005 for number of reasons:

1. To know the number of the patients available in inpatient rehabilitation wards of addiction hospital and number of the patients available in psychiatric units per month in order to decide the number of patients included in study proper.
2. To examine the feasibility of the tools used.

3. To assess feasibility of including both sexes or not, as the number of female addicts were limited.
4. To decide whether the selection of schizophrenic patients will be from inpatient only or include outpatient also.

Results:

1. Female substance abuse patients were few in number, during the pilot study. Only one patient of substance abuse was admitted in female psychiatric unit during two months. Accordingly, female patients both addicts and consequently schizophrenics were excluded from this study for matching the samples regarding to sex.
2. Age range: was different in both groups. In substance use most patients' age range between 20-30 years while in schizophrenic patients the age range was between 30-40 years. This can be attributed to more family awareness to addiction problems thus bringing their patients for treatment program of addiction in early stages while the schizophrenic family awareness still inadequate so many schizophrenic patients presented later after many years from the start of illness.
3. Taking schizophrenic patients from the outpatient clinic caused many drop outs during the pilot study because of noncompliance. So it was preferred to include only the inpatient for both schizophrenics and substance use disorders groups.
4. The numbers of patients admitted in addiction hospital were ranging from 3 to 5 patients daily during the period of the pilot study. Accordingly, it was decided to include 200

patients in addiction group. At the same time, the numbers of patients were admitted in psychiatric units ranging from one to two patients daily during the same period. So the sample of schizophrenic patients was decided to be 100 patients.

The results of pilot study were not included in the statistics.

4- Study Proper

It was conducted in the period from February 2006 till April 2007. During this period, the sample of addiction group was 247 fulfilling the criteria of ICD 10 symptom checklist, 30 of them were discharged against medical advice before proceeding into the rehabilitation programs, 10 of them refused to continue the research, seven were excluded due to deterioration of their physical condition and 200 patients continued the research. The sample of schizophrenic group was 131 fulfilling the criteria of ICD 10 symptom checklist. Twenty of them were dropped out because their families refused to participate in the research, eleven of them were excluded due to deterioration of their physical condition and the rest of them continued the research. Each of the two groups; substance use disorders and schizophrenia were subjected to the following:

1. Socio-demographic data sheet
2. ICD- 10 symptom checklist sheet
3. Complete physical examination: Physical examination was carried out by the candidate and consultant internal medicine to detect any comorbid medical illness as hypertension, diabetes mellitus, IHD and hepatic disease as well as complications of substance use disorders. This is done in one session.

4. Laboratory investigation: Including toxicology screening was done at least once at time of admission for both groups.
5. Psychiatric interview
6. Psychometric battery for substance use disorder's group: Including ASI for assessment of severity of addiction, Hamilton Anxiety, Hamilton Depression scales for detection of comorbidity of anxiety or depression with addiction, done in separate sessions and Wisconsin Quality of Life Index for assessment of quality of life in this group.
7. Psychometric battery for schizophrenic group: Including, BPRS for assessment of severity of schizophrenic symptoms, done in separate session and Wisconsin Quality of Life Index for assessment of quality of life in this group.

5- Statistical Analysis

The findings were analyzed using the Statistical Package for the Social Sciences (SPSS) version 10.0. The following statistical procedures have been used in this work:

a- Descriptive Statistics:

All numeric values were expected as:

1. Mean ($\bar{x}$) is an average, describing the central tendency of observations.
2. Standard deviation (s.d) is a measure of dispersion of results around the mean (for quantitative variables).
3. Z score
4. Frequency (%) for qualitative variables.

b- Analytical statistics:

1. 1-Chi-Square (χ^2) was used to test the significance of difference between the frequency of the of the different observations i.e. qualitative data.
2. Mann Whitney test (U) was used to compare the differences between groups for non parametric values, when the dependent variable can not be assumed to be normally distributed.
3. Kruskal- Wallis test was used for comparison of multiple subgroups for non parametric variable.
4. Correlation coefficient using spearman' method for comparing non parametric variables.
5. Multiple regression analysis was used to determine the effect of various factors on dependent variable. The dependent variables were weighted QOL and unweighted QOL. The independent variables were age, nationality, residency, marital state, job state, level of education, number of admission, chronic illness, forensic history, Hamilton depression, Hamilton anxiety, diagnosis, BPRS and ASI.

N.B. P-value was used to indicate level of significance, where $p > 0.05$ =non significant; $p < 0.05$ = significant; $p < 0.01$ =highly significant and $p < 0.001$ = very highly significant.

AIM OF THE WORK

Theoretical part

1. Review the recent literature about quality of life.
2. Review the recent literature about quality of life in substance abuse patients.
3. Review the recent literature about quality of life in schizophrenic patients.
4. Review the recent literature about comparison between quality of life in SUDs and schizophrenic patients.

Practical part

This thesis was designed to verify the study hypothesis and answer the following questions:

1. What are the variables affecting quality of life in both groups of substance abuse and schizophrenic?
2. What is the relationship between severity of illness and quality of life in both groups of substance abuse and schizophrenic patients?
3. Does comorbidity of substance abuse with depression and anxiety have an effect on the quality of life of these patients?
4. 4-Which group its quality of life is more affected, substance abuse or schizophrenic group?

RESULTS

The final sample consists of two groups, addiction group including 200 patients and schizophrenic group including 100 patients. All included patients were male.

Results in this chapter were grouped to answer the following questions:

1. What are the variables affecting quality of life in both groups of substance abuse and schizophrenic?
2. What is the relationship between severity of illness and quality of life in both groups of substance abuse and schizophrenic patients?
3. Is there a relation between diagnostic subtypes in addiction group and quality of life?
4. Does comorbidity of substance abuse with depression and anxiety have an effect on the quality of life of these patients?
5. In which group is quality of life more affected, substance abuse or schizophrenic group?

SECTION 1

What are the variables affecting quality of life in both groups of substance abuse and schizophrenic?

In this section the socio- demographic data will be highlighted

The age in addiction group ranged from 18-63 years with a mean of 32.37 ± 8.57 years, while in schizophrenic group the age ranged from 26-57 years with a mean of 38.20 ± 8.99 years. In the addiction group the mean age of onset was 19.3 while in schizophrenic group the mean age of onset was 16.2. The duration of illness in addiction group ranged from 2 years to 19 years with mean of 3.5 ± 2.4 years while, in schizophrenic group the duration of illness ranged from 5 years to 17 years with mean of 5.9 ± 3.4 years. The difference in age between schizophrenia and addiction groups was statistically significant $Z = -5.16$, $p < 0.000$. The mean number of admission in addiction group was 2.89 ± 3.54 and in schizophrenic group, was 3.24 ± 1.17 (Table 1 & figure 1-A & 1-B).

Table1

Fig 1A

Fig 1B

The main nationality was Saudi patients in both addiction and schizophrenic groups (94% and 92% respectively). In

addiction group, other nationalities consisted of small percentage as Bahraini (2%), Kuwaiti (2.5%), Omani (1%) and Yemeni (0.5%). In schizophrenic group there was additional Yemeni patient (8%) (Figure 2-A, table 1).

The majority of residency among addiction group was from Eastern Province (54%) and only (19%) from Central Province, (83%) of the schizophrenic group was from Eastern Province (Figure 2-B). As regard marital state (57%) of addiction group was single, (26%) was married, and (12%) was divorced while in the schizophrenic group the majority was single (76%), (16%) was divorced and (8%) was married (Figure 2-C).

Fig 2-A

Fig 2-B

Fig 2-C

Fig 2-D

Both groups were similar in employment states (74.5%) of addiction group and (76%) in schizophrenic group were employed, (25.5%) of addiction and (24%) of schizophrenic were unemployed. Governmental job was the most common job in both groups (42.5% and 76% respectively). The high percent of governmentally employed patients from the addiction group were soldiers (Figure 2-D). As regard educational level (44%) of schizophrenic patients were educated up to intermediate school,

(28%) up to primary school and (20%) of patients reached high school, whereas, (36%) of addiction group reached intermediate school, (33%) high school and (8.5%) reached university degree(Figure 2-E).

Fig 2E

Chronic physical illness was more among the schizophrenic patients (40%) in comparison to patients of addiction group (22%) (Figure 2-F). Addiction group showed more exposure to serious infectious disease like hepatitis and sexual transmitted diseases (21.5%) while (4%) of schizophrenic group suffered from serious infectious disease (Figure 2-G). Moreover, the addiction group showed more forensic exposure (37.5%) than schizophrenic group (8%) (Figure 2-H). In addition, the positive family history for psychiatric illness was higher in schizophrenic group (12%) while positive family history of addiction was higher in addiction group (14%) (Figure 2-I). All sociodemographic data showed statistically significant difference between addiction group and schizophrenic group (Table 2).

Fig 2F

Fig 2G

Fig 2H

Fig 2 I

Family History

Table 2

SECTION 2

Does comorbidity of substance abuse with depression and anxiety have an effect on the quality of life of these patients?

What is the relationship between severity of illness and quality of life in both groups of substance abuse and schizophrenic patients?

In this section we investigated the effect of severity of illness and comorbidity of psychiatric illness on the quality of life in substance abuse and schizophrenic patients.

1- In Addiction group:

a- The distribution of diagnostic subtypes of addiction group:

The most common diagnosis in addiction group was amphetamine dependence (n= 70, 35%), followed by poly substance dependence (n= 46, 23%), then opioid dependence (n=42, 21%) and least diagnosis was benzodiazepine dependence and volatile substance dependence (n= 2, 1% for each) (Figure3).

Fig 3

b- Comorbidity of depression and anxiety in addiction group:

The mean score of HAM-A was 17.54 ± 6.44 and (59%) of sample had normal anxiety score while (40.5%) had moderate anxiety. Whereas, mean score of HAM-D was 13.21 ± 5.33 and (54.5%) of addiction group had mild depression score, (14.5%) had moderate depression (Table 3A, 4).

Table 3A

Table 4

c- The severity of illness in addiction group:

The worst domains of ASI was the drug abuse domain with mean 5.73 ± 1.72 and unemployed state with mean 3.87 ± 1.9 . The extremely and considerable problems were highest in alcohol abuse, drug abuse and family state and least problems were in medical, psychiatry and employed state (Table 3B).

Table 3B

In the medical state, (37.5%) had moderate problems and (4.5%) had considerable medical problems. In employment state, (63.5%) had moderate problems, (22%) had considerable problems and (0.5%) had extreme problems. In drug abuse, (37.5%) had moderate problems, (45.5%) had considerable problems and (12%) had extremely drug problems. In alcohol abuse, (23%) had moderate problems, (15%) had considerable problems and (14.5%) had extremely problems.

In legal state, (19.5%) had moderate problems, (20.5%) had considerable problems and (9.5%) had extremely legal problems. In family state, (34.5%) had moderate problems, (29%) had considerable problems and (10.5%) had extremely drug

problems. While in psychiatric state, (20%) had moderate problems, (13%) had considerable problems and (4.5%) had extremely drug problems (Table 5).

Table 5

2- Schizophrenic group:

The severity of illness in schizophrenic group:

The mean total score of the BPRS was 26.5 ± 8.92 . The highest scores were unusual thought content, disorientation, hallucinatory behavior and conceptual disorganization (Table 6).

Table 6

3- Quality of life in both groups:

In general, the quality of life (QOL) was better in the addiction group than in the schizophrenic group in the most of the life domains. The highest score among quality of life domains in addiction group was money& economics with mean 1.85 ± 0.25 , while the lowest score among quality of life domains was psychological well being with mean -0.119 ± 1.3 .

As regard schizophrenic group, the highest score among quality of life domains was activity of daily living with mean 0.91 ± 0.83 and the lowest score among quality of life domains was occupational activities with mean -1.56 ± 1.197 (Table 7 & figure 5).

Table 7

Fig 4

a- Comparison between quality of life in addiction and schizophrenic groups

Both groups showed statistically significant difference in all domains of quality of life except in physical health (Table 8).

Table 8

b- Quality of life in addiction group:

1- Relation between quality of life and sociodemographic data in addiction group:

In general, all domains of quality of life were significantly negatively correlated with serious infection and positively correlated with all diagnostic subtypes. At the same times, all domains of quality of life were negatively correlated with physical illness and positively correlated with marital state except in Social relations support and Activities of daily living (Tables 9, 10).

Table (9) shows that the (General) Satisfaction level and Occupational activities were negatively correlated with physical illness, serious infection, and forensic state. Whereas, Psychological well being, Symptoms outlook, Physical health, Money & economics, Weighted QOL and Unweighted QOL were negatively correlated with physical illness, serious infection, forensic state and job. Social relations support was negatively correlated with serious infection and forensic state. Activities of daily living were negatively correlated with serious infection. Conclusively, these finding indicate that presence of physical illness, serious infection, positive forensic state and

unemployment are associated with poor quality of life domains in addiction patients.

Table 9

Table (10) shows that, the (General) Satisfaction level, Psychological well being, Symptoms outlook and Money & economics were significantly correlated with marital state, family history and diagnostic subtypes. Occupational activities, Physical health, Weighted and Unweighted QOL domains were significantly correlated with nationality, marital state, family history and diagnostic subtypes. Social relations support was significantly correlated with family history and diagnostic subtypes. Activities of daily living were significantly correlated with residency and diagnostic subtypes.

Table 10

2- Relation between quality of life and comorbidity with depression and anxiety in addiction group:

All domains of quality of life showed significant negative correlation with Hamilton Anxiety and Hamilton Depression scores. This means that the presence of anxiety or depression is associated with poorer quality of life domains (Table 11).

Table 11

3- Relation between quality of life and severity of illness using ASI in addiction group

There were significant association between quality of life domains and addiction severity index. All domains of quality of life were scientifically correlated with medical state, employment state, drug abuse, legal state, psychiatric state and family support while alcohol abuse was significantly correlated to (General) Satisfaction level, Occupational activities, Money& economics, Unweighted quality of life and weighted quality of life (Table 12).

4- Relation between quality of life and diagnostic subtypes in addiction group:

All quality of life domains were significantly correlated with different diagnostic subtypes of substance abuse or dependence. Volatile and opioid dependence patients showed the poorest quality of life followed by polysubstance dependence patients (Table 13 & figure 6).

Table 12

Table 13

Fig 5

5- Relation between type of addictive substance and addiction severity index domains in addiction group:

Table (14) shows that there are significant relations between the type of addictive substance and each of the following domains, medical, employment, drug abuse, alcohol abuse and psychiatric states. Amphetamine dependence showed

significantly higher scores in drug abuse and psychiatric states domains. While, opioid and polysubstance dependences showed higher scores in medical, employment and psychiatric state domains in comparison to other substances though opioids and amphetamine showed more legal and family problems than the other types of substance.

6- Relation between type of addictive substance and comorbidity with Depression and anxiety in addiction group

It is apparent from table (15) that benzodiazepines, opioids and volatile substances are significantly associated with moderate and severe anxiety in comparison to other substances. Regarding depressive states, benzodiazepines and volatile substances are exclusively associated with moderate depression, yet, cases are very few. Polysubstance and opioids are associated with moderate and severe depression scores in comparison to other substances. However, these findings were statistically non-significant.

Table 14

Table 15

c- Quality of life in schizophrenic group:

1- Relation between quality of life and sociodemographic data in schizophrenic group

From tables 16 and 17, (General) Satisfaction level was significantly correlated with nationality, residency, marital state

and education. Occupational activities was significantly correlated with nationality, residency, chronic illness, education and job. Psychological well being was significantly correlated with marital state, family history, job and education. Symptoms outlook was significantly correlated with marital state, education, forensic state and family history. Physical health was significantly correlated with residency, education, chronic illness, and family history. Social relations support, was significant correlated with nationality, residency, marital state, job and education. Money & economics, was significant correlated with nationality, residency, marital state, forensic state and education. Activities of daily living were significantly correlated with physical illness, serious infection, family history, job and education. Both weighted and Unweighted QOL were significantly correlated with nationality, residency, chronic illness, family history and education.

Table 16

Table 17

2- Relation between quality of life and severity of illness in schizophrenic group using BPRS

From table (18), significant correlations were found between different quality of life domains and different items of BPRS as follows;

General Satisfaction level was negatively correlated with anxiety, emotional withdrawal, conceptual disorganization, uncooperativeness, blunted affect, excitement and disorientation. Furthermore, Occupational activities was negatively correlated with somatic concern, anxiety, tension, depressed mood, hostility, suspiciousness, hallucinatory behavior, blunted affect, excitement and disorientation. Psychological well being was also negatively correlated with somatic concern, anxiety, emotional withdrawal, conceptual disorganization, suspiciousness, excitement and disorientation.

Symptoms outlook, Physical health and Social relations support were negatively correlated with somatic concern while Symptoms outlook, Physical health were negatively correlated with anxiety, emotional withdrawal, guilt feeling, uncooperativeness. Furthermore, the Symptoms outlook and Social relations support were negatively correlated with grandiosity. Symptoms outlook, was also negatively correlated with conceptual disorganization, mannerisms and posturing, suspiciousness, unusual thought content and disorientation. While, Physical health was negatively correlated to depressed mood, hallucinatory behavior at the same time, Social relations support was negatively correlated with motor retardation, and blunted affect.

Money & economics, Activities of daily living were negatively correlated with anxiety, excitement and disorientation. The Money & economics was also negatively correlated with tension, depressed mood, blunted affect. While the Activities of

daily living was negatively correlated with emotional withdrawal, conceptual disorganization, mannerisms, posturing, grandiosity, suspiciousness, uncooperativeness.

Unweighted and weighted quality of life, were negatively correlated with somatic concern, anxiety, emotional withdrawal, conceptual disorganization, hallucinatory behavior, uncooperativeness, blunted affect, excitement and disorientation. Also weighted quality of life was negatively correlated with tension, mannerisms and posturing in schizophrenic group.

Table 18

SECTION 3

Which group its quality of life is more affected, substance abuse or schizophrenic group?

In this section we compared the quality of life in both groups and detect which group is more affected.

Regression analysis for Quality of life in both groups:

1- Regression analysis for weighted quality of life in addiction and schizophrenic groups:

The regression analysis for weighted quality of life was significant in both the addiction group and in schizophrenic group ($F = 22.736$, $p = 0.00$, $F = 19.526$, $p = 0.00$) respectively. The most significant factors affecting weighted quality of life in addiction group were nationality, numbers of admission, chronic illness, forensic History, Hamilton depression, Hamilton anxiety and ASI. While, the most significant factors affecting weighted

quality of life in schizophrenic group were age, nationality, job, education, forensic history and BPRS (Table 19).

Table 19

2- Regression analysis for unweighted quality of life in addiction and schizophrenic groups:

The regression analysis for unweighted quality of life was significant for both addiction and schizophrenic groups ($F=21.522$, $p = 0.00$, $F = 18.652$, $p = 0.00$) respectively. The most significant factors affecting unweighted quality of life in addiction group were age, nationality, numbers of admission, chronic illness, forensic history, Hamilton depression, Hamilton anxiety and ASI. Whereas, the most significant factors affecting unweighted quality of life in schizophrenic group were age, nationality, job, marital state, education, forensic history and BPRS (Table 20).

Table 20

For conclusion, the nationality had significant relation with QOL of SUDs patients the highest significant QOL was in Saudi patients and lowest was in Kuwaiti patients in the other hand schizophrenic Yemani patients showed highly significant increase of QOL than Saudi patients. As regard, residency in addiction group there was no significant relation while schizophrenic group had significant increase in QOL in Northern Province to Central Province and Western Province.

Marital state in addiction group there is significant increase in QOL in married patients while the divorced patients showed the lowest QOL but in the schizophrenic group marital state has no significant effect on the QOL. The type of job had significant effect on both groups. Governmental employees and students showed highest QOL also there was significant effect of education on QOL in both groups patients educated up to high school and university degree had highest QOL (Fig7-A & table 21).

Fig 6A

As regard chronic illness, infectious disease, forensic history and family history of psychiatric illness in addiction group all these factors caused significant decrease of QOL while all this factors except chronic illness had no significant effect on the QOL in schizophrenic group (Table 21 & fig 7-B).

Table 21

Fig 6B

The quality of life of addiction group was negatively affected by all types of addictive substances, it was found that patient dependent on cannabis had highest score and the lowest score was associated with volatile substance dependence (Fig 7C).

Fig 6C

DISCUSSION

In the new era, investigators have been strongly minded with the concept of quality of life. Their considerations come from the notion that quality of life is affected by physical health, mental health, social life, financial satisfaction and other factors which are reflected on individual's productivity and financial costs. Recent concerns were directed to quality of life (QOL) in patients with mental illness as those patients consume a large proportion of the health budget in western countries. In continuity with this world wide notion, this study was designed to assess the QOL in two groups of chronic mental disorders, the substance abuse and schizophrenia which are well known chronic debilitating long-term psychiatric disorders require ongoing management of physical, psychiatric, and social consequences. Overall, the available evidence suggests that the quality of life among either substance users or schizophrenic patients is generally poor (*Heniz, 2002*).

Quality of life is defined as the subjective assessment of the impact of disease and treatment across the physical, psychological, social and somatic domains of functioning and well-being. Some authors have suggested that a minimum of three domains – physical, psychological and social which are essential to any assessment of QOL. While others have indicated that physical and psychological domains alone are sufficient. Regardless of the specific assessment approach used, a comprehensive assessment of QOL consistent with the accepted

multidimensional definition of this construct is recommended because it offers a balanced evaluation of multiple areas of functioning and well-being (*Muritz-Klinikum et al., 2004*).

All over the world, substance abuse and its related problems represent the society's most pervasive health and social concerns. Each year, about 100,000 deaths in the United States are related to alcohol consumption. Illicit drug abuse and related acquired immunodeficiency syndrome (AIDS) deaths account for at least another 12,000 deaths. In 1995, the economic cost of alcohol and drug abuse was \$276 billion. This represents more than \$1,000 per year for every man, woman, and child in the United States to cover the costs of health care, motor vehicle crashes, crime, lost productivity and other adverse outcomes of alcohol and drug abuse with poor QOL (*Alexandre et al., 2006*).

On the other hand, schizophrenia is a chronic and disabling illness that affects approximately 1% of the population during their lifetime. According to a study of the World Health Organisation, schizophrenia accounts for 5% of all years lived with a disability in the 15-44 age group worldwide (*Thornicroft et al., 2004*). In U.S.A., schizophrenia accounts for about 2.5% of all health care costs, 20% of all Social Security disability days, and about 20-30% of the homeless. In the first ten years of the illness it is associated with about a 10% risk of suicide. On average, schizophrenia reduces the life span by about ten years. It also leads to under- and unemployment, resulting in poverty, and very often, reliance upon publicly funded health care (*Globe et al., 1999*). Thus schizophrenia imposes severe hardships on

patients and their families and challenge society in the development of public policies (*Klinikum et al., 2004*). That's why researchers recently focused their attention on quality of life to attain more comprehensive measure in outcome of schizophrenia. Quality of life allows one to understand the impact of schizophrenia on the patient's general well-being, role functioning, and community integration which was poorer among this category of patients.

Thus, this thesis hypothesized that the QOL in both substance use disorder patients and schizophrenic patients was poor but the QOL in substance use disorder patients are better than the QOL of schizophrenic patients. Two samples were selected, the addiction sample was selected from patients admitted to ALamal Mental Complex in Dammam in Eastern Province of Saudi Arabia. The final sample consisted of 200 male patients randomly selected from the rehabilitation units of addiction departments. All patients were taken within three weeks after passing at least one week withdrawal state. At the same time, 100 schizophrenic male patients were randomly selected from inpatient of the psychiatric unit. Female patients were generally excluded from the sample because female addicts were very few in number that could not be taken in comparison with the male addiction group. Al-Nahedh (1999) reported that the addiction of females in Saudi Arabia is generally limited resulting from social, religious and tradational prohibiton. Other study done by Abalkhail (2001) had documented a small percentage (2.7%) of female abusers in parts of Saudi Arabia, a finding that is consistent with the nature of the society and the

limited mobility of women. Similarly, female schizophrenic patients are less commonly admitted in Saudi psychiatric hospitals due to high tolerance of families as well as cultural attitude to keep females unexposed to any services. Consequently to keep the sample matched for age and sex, female schizophrenics were also excluded from this study. The two groups were assessed by the following BPRS and W-QOL for schizophrenics and ASI and HAM-A and HAM-D for addiction group.

Sociodemographic data in addiction and schizophrenic groups:

1- Addiction group:

The age range in addiction group was from 18-63 years and mean 32.37 ± 8.57 . mean age at onset of regular use was 19.3 years. Most studies done in addiction involved similar mean ages (*Žilvinas Padaiga et al., 2007; Edward Bernstein et al., 2005 and Weiner, 2001*) who reported the mean ages of study participants were around 32.6. They also reported that the mean age at onset of regular use was 19.9 ± 4.5 years. Whereas the Scottish Drug Misuse Database revealed that the median age of new drug treatment clients reported to them in 2001–2002 was 27 years (*Hons, 2004*). While Swift et al (2001) found that Cannabis use predominated among males and younger adults: use peaked among 18–24 years old and declined rapidly after the age of 34, with no use among those aged 65 years or elder. A similar study was done in Alamal complex in Riyadh. The ages of the patients ranged from 20 years to over 60 years and the

mean age was 29.5 years. Approximately 79% were 20-39 years of age. The mean age at first exposure was 19 years and the range was 10-32 years (*Al-Nahedh, 1999*).

Regarding the marital state, the majority of addict sample in this study were single (57%). Other studies reported similar findings. *Alexandre et al (2006)* found that 56% of his addict sample were single, 16% were married and 28% were widowers, separated or divorced. Also, *Malet (2006)* showed that 56% of his patients lived alone. While in another study by *Acharyya (2003)*, he found 31% of men and 33% of women are either married or coupled, whereas about 47% of the men and 42% of the women reported never being married. These similar results may reflect the poor long-term effects of addiction on social and marital lives of substance abusers which adds to the deleterious impact of substance use on the quality of life.

With respect to employment, (74.5%) of substance use patients in this study were employed, while the percentage of unemployed was (25.5%). In similar reports, *Swift (2001)* found that unemployed addicts constituted 25.6% of his sample. *Al-Nahedh (1999)* in AlAmal Mental Complex of Riyadh reported 50% unemployment in comparison to 45% were employed at the time of admission 51% of them had been employed for more than 5 years at the same job. Despite that the majority of addicts in this study were employed but there was significant effect on regularity and quality of work. *Acharyya (2003)* found that nearly 26% of substance users had full-time work during almost the whole year while 60% reported having full-time work in

limited time of the year before admission. Moreover, 42.5% of those employed in the current study had governmental jobs and the majority were soliders. As in most Arab countries, governmental jobs absorb a large number of patients who are irregular at work and that's why the percentage of employment especially governmental was high in this study. Another important point is that soliders were reported all over the world to have higher incidence of substance use than the general population. This may be related to the nature of their stressful work. Jedrzejczak (2001) reported that 11.8% of solidiers informed that they have been using drugs and 2.1% showed symptoms of addiction and that the main causes of drug taking, listed by the soldiers, included stress of work associated with the service and noticeable pleasure.

On the other hand, the majority of substance abusers in this study were educated up to intermediate school (36%) or high school (33%). While in other studies, the majority of addicts reached higher levels as college (**Acharyya, 2003; Alexandre, 2006; Looby and Earleywine, 2007**). Inconsistent with this study, Al-Nahedh (1999) found that 47% had 12 years of schooling and 34% were university educated. This difference in results may be related to lower age at start of substance use in the current study and type of substance commonly used which may reflect the negative impact of substance abuse on continuity of education and quality of life. While in Al-Nahedh (1999) study, it was done in Riyadh (the capital of Saudi Arabia) which has different culture from the place of the current study, having high

level of education of the parents, high income, low poverty and high employment state.

Furthermore, as expected, a high percentage of addiction group (37.5%) showed positive forensic history. The association between substance use and legal problems has been consistently reported. Drug abuse is linked to many problems as road traffic accidents, sexual abuse, fires and injuries. William et al (2007) found that the prevalence of criminal convictions, particularly for violent offenses among the patients with substances abuse was much high especially in age 18 to 25 years. Roughly estimated, 95% of persons with a drug arrest also had an arrest for another type of offense, the nature of legal problems was also related to the type of substance abused. In a national survey, the prevalence rates for alcohol, cannabis and amphetamine use among youth in the eighth grade were 22.5%, 10.2%, and 2.6%, respectively. High school students who use alcohol and illicit drugs have been reported to be over three times more likely than nonusers to engage in physical fights and are twice as likely to bring a weapon to school (*Johnston et al., 2001*).

In addition, 21.5% of the substance dependence group developed serious infections, mainly hepatitis C virus. Chronic infection with the hepatitis C virus is a common growing problem, often affecting persons with psychiatric and substance use problems. The majority of acute hepatitis C cases are associated with illicit drug use including injectable drug use while sexual transmission of hepatitis C accounts for 21% of new cases among drug abusers (*Dieperink et al., 2002*). Also,

Dinwiddie et al (2003) found that 8.5% of patients admitted with psychoactive substance use disorders were positive for the hepatitis C virus and 27.8% were positive for Hepatitis B surface antibody. Although not found in the current study, the injection drug use behaviors are also reported to be associated with HIV transmission (23%) (*Susser et al., 1996*).

2- Schizophrenic group:

The age range in schizophrenic group were from 26-57 years and mean 38.2 ± 8.99 , and the mean age of onset was 16.2. Other studies done in schizophrenia usually report similar mean ages (*Law et al., 2001; García-Cabeza et al., 2001; Ochoa et al., 2003; Malla et al., 2006*). In most studies, the mean ages of schizophrenic patients are higher than that of addicts as addicts usually present early to mental health services while schizophrenics usually take longer time to present, may be due to stigmatization, lack of awareness by the family, cultural beliefs and attribution to genie, evil eye and black magic. Psychiatric patients are still considered to be unacceptable, unworthy and inferior (*Bromley et al., 2004*). These attitude can delay their presentation to psychiatric services and treatment which consequently imposes negative effect on the quality of life.

Regarding the marital status, the majority of schizophrenic sample were single. Almost all studies done on schizophrenia convey similar results (*Law, 2001; Wilkinson, 2000; Abdel Razek et al., 2001; Daradkeh and Al Habeeb, 2005*). This is related to the impact of illness on social relations of patients and quality of life. Marital status was identified as one of the best

predictors of evolution in schizophrenia. Being married and having adequate pre-morbid psychosocial adaptation are related to a more favorable prognosis. It has been described that the risk of hospitalization in single patients increases with age. However, this effect is not observed in married patients (*Cougnard et al., 2007*).

In contrast to substance dependence patients, the majority of schizophrenic patients were educated up to intermediate and primary school levels and few of them continued to high school or reached university. In other studies, Huppert et al (2001) reported 40% of schizophrenics completed high school and 31% had at least some college education. Malla (2006) found that 66.3% reached high school education or higher and only 18% received some college education. Whereas in an Arabic study performed by Daradkeh and Al Habeeb (2005) they found that 23.8% were illiterate or had less than 6 years formal education, 23.3% had 7–12 years formal education and 52.9% had more than 12 years formal education. The difference between this study and others may be related to poor cultural support for education, poverty and also due to early manifestation of cognitive deterioration which affects the continuity process of education. Cognitive deficits are critical determinants of schizophrenia morbidity and functional outcome (*Bertolino et al., 2004*). Other studies have also found an association between low schooling in schizophrenia and quality of life, whereby better educational level was associated with better psychopathological status in the disease evolution, better

adjustment in social functioning and greater satisfaction with life (*Cardoso et al., 2005*).

Similar to the addiction group, the majority of schizophrenics were employed mainly governmental as the governmental jobs absorbs and supports most of these patients. This is in contrast to western studies reporting unemployment in more than 79% (*Thornicroft et al., 2004; Erp et al., 2007*) and even though, those who were employed did not show regular work records (*Salkever, 2007; Cougnard et al., 2007*). Whereas Abdel Razek et al (2001) stated that 90% of schizophrenic patients in an Egyptian sample did not work and 70% did not work at all for the last 4 years. As the socioeconomic status and quality of life is related to the occupational domain, unemployed males showed lower quality of life when compared with employed ones (*Lehman et al., 1996*).

The positive forensic history was 8% only among the schizophrenic group in comparison to SUDs patients. Criminal acts and legal problems were reported to be higher among schizophrenic patients compared with the general population. Pandiani et al (2007) found that 6.6% of schizophrenics were identified by police as criminal offenders and 7.1% were identified as crime victims. While Fazel (2006) showed that people with a psychotic mental illness were responsible for 18.2% of murders or attempted murders, 15.7% of arson attacks, 6.3% of aggravated assaults, 4.9% of sex offences, 3.6% of robberies and 3.1% of common assaults. The increased risk for legal problems in schizophrenia patients may be accounted for by

several reasons; psychotic features, poor judgement and comorbid substance abuse. Wallace et al (2004) found significantly higher rates of criminal conviction in schizophrenic patients with substances abuse problems more than for those without substance abuse problems (68.1% versus 11.7%) which adds to the poor quality of life found in those patients.

Additionally, the finding of positive family history of schizophrenia more in schizophrenic group is consistent with previous reporting that increase risk for schizophrenia was associated with a family history of all major psychiatric disorders (*Byrne et al., 2002*).

Diagnostic subtypes of addiction:

The most common substance use and dependence found in this study was amphetamine (35%), followed by poly substance dependence (23%) then opioid dependence(21%), alcohol and cannabis dependence (9.5% for each) while the least diagnosis was benzodiazepine dependence and volatile substance dependence (1% for each). Amphetamine and amphetamine-like substances e.g. ecstasy are reported to be the most common substance used in almost all countries (*Survey, 2003*). More than 40 million people around the world or one in every 100 people aged 15 and elder used amphetamine-like substances in 2000-2001. The global use of ecstasy estimated to have risen by 70% between 1995-1997 and 2000-2001, while use of amphetamines increased by 40% in the same period (*Herald, 2003*).

Previous studies done on addiction showed wide range in the pattern of substance use and dependence. Acharyya (2003) found that a significantly large proportion of men (more than 14%) compared with women (9%) reported alcohol addiction as their primary problem. While, heroin which was the drug of choice in the 1980s, comes as the second main problem in about 18% of the men and 20% of the women. Although more men (about 4%) than women (about 2%) prefer marijuana, the proportion of substance abusers in the other drug categories as hallucinogen, narcotics, opiates, sedatives, amphetamines, inhalants, and others is small and roughly the same for the two sexes. In another study by Neale (2004) investigating the main drug used or abused (i.e. the drug they had used most often or that had caused them the most problems) in the past 3 months in 790 addicts, 79.8% reported heroin, 4.6% reported diazepam, 4.1% reported methadone and 2.4% reported cannabis.

The pattern of substance use and dependence was also investigated in Arab countries and in Saudi Arabia itself. In a study done in Al-Amal Mental Complex of Riyadh, alcohol was used by 23.7% of the patients, sedatives by 23.12%, heroin by 18.75%, hashish (cannabis) by 10.63% and glue-sniffing by 9.38%. The remaining 14.38% used a combination of two or more substances (*Al-Nahedh, 1999*). While in Jeddah, Abalkhail (2001) found in his study among 243 heroin addicts and 66 non-heroin addicts, all men of Saudi nationality hospitalized for detoxification in Jeddah Al-Amal Hospital, non-heroin addicts abused either volatiles (34.8%), amphetamines (37.9%) or alcohol (27.3%). Most heroin addicts (67.8%) preferred

intravenous administration to inhalation (5.9%). A combination of both routes was reported by 26.3% of heroin addicts. Non-heroin addicts took the drug orally and/or by inhalation depending on the substance abused. Although both studies and the current study were done in similar Saudi culture, there are differences between results of studies done in Jeddah, Riyadh and Dammam. This may be related to several reasons, as effect of residency on the availability and type of substance used as well as difference in socioeconomic and education status. Also, the timing of studies was different.

Quality of life in substance use disorders versus schizophrenic patients

Quality of life results from the interaction of the social, psychological, and physical domains on an individual's functioning. Almost all studies investigating the QOL agree that both substance abusers and schizophrenic patients usually show poorer QOL domains when compared to general population. Similarly, the results of the current study showed the same findings. However, when comparing both disorders, the QOL was generally poorer in schizophrenics than in SUDs patients. Schizophrenic patients were generally worse than addiction group in all domains of quality of life especially in General satisfaction level, Occupational activities, Psychological well being, Symptoms outlook, Social relations support, Money economics, Activities of daily living. In another comparative study, patients with mental disorder were reported to have significantly poorer QOL in the physical and psychological

domains as compared with patients with opioid dependence. Both groups of patients with and without mental disorder showed significantly poorer QOL in the physical, psychological, and social domains with respect to healthy participants. The scores on the "relationship with environment" domain did not differ among opioid dependence, mental disorder (*Bizzarri et al., 2005*).

These findings may be related to several reasons. The general governmental policy is more directed towards and oriented with addiction problems than towards schizophrenia, which helped to improve QOL in substance abuser patients. Another reason may be attributed to selection of the sample itself. Schizophrenic patients were recruited mostly from those admitted in psychiatric wards while addiction group were recruited from those who were recently involved in rehabilitation programs. Studies on subjective quality of life among community-based patients with severe mental illness have indicated they have a better subjective quality of life compared to patients in hospital settings (*Daradkeh and Al Habeeb, 2005*). This may explain why QOL is better in addiction group in comparison to schizophrenic group. Also, the phase in which schizophrenics were evaluated affects quality of life. Although the course of schizophrenia is variable, psychotic symptoms tend to become less florid, whereas negative symptoms often predominate the chronic phase (*Bizzarri et al., 2005*). Therefore, this natural course of symptoms over time, together with the effect of maintenance neuroleptic treatment may add to poorer QOL. Moreover, the lack of female patients in both may relate to difference in QOL between both disorders.

Female addicts have poorer QOL than male addicts (*Peters et al., 2003*) while quality of life in female schizophrenics is better than in males as they are more protected by their families, better accepted and tolerated and less work burden is needed from them in comparison to male schizophrenics.

Kulkarni (2001) reported that women were found to have a higher quality of life than men as they are more likely to present with affective symptoms and have fewer negative symptoms compared with men. This finding was related to the effect of estrogen acting on brain maturation causing the delay of first-onset schizophrenia in females. Thus absence of female schizophrenics and female addicts from the current study may explain poorer QOL in schizophrenia in comparison to addiction.

Quality of life in the addiction group:

Recent investigators have shown that substance users were associated with impaired quality of life domains especially general satisfaction, daily activities, occupational state and general health compared to non-users (*Smith et al., 1999; Ventegodt et al., 2003*). Gossop et al (2006) found impaired quality of life in SUDs patients which mainly affected physical and psychological health; role functioning, emotional health, social functioning and self-perceived general health. While Falck et al (2000) reported that poorer health domains were associated with more frequent drug abuse. In contrast, the decrease in substance use or treatment of substance use led to improvement

in quality of life and increase in mean health status scores (*Greenfield et al., 1995; Smith et al., 1999*).

Results from the current study showed that the best quality of life domains in addiction were money and economics and activities of daily living while the worst quality of life domains were psychological well being, occupational activities and physical health. These domains: physical health, occupational and psychological states were frequently reported to be significantly affected by several studies (*Smith et al., 1999; Falck et al., 2000*).

The poor QOL reported in substance users by different studies have been attributed to several factors such as unstable housing, general satisfaction, involvement in the sex trade, sharing needles, daily use of heroin (*Hubley et al., 2005*). Carretero et al (1996) also reported that severe comorbidity (hepatitis B, depression, attempted suicide) and high scores on ASI were significantly related to worse health states and worse quality of life. Also, the negative effects of drug taking cause a rapid decline in quality of life domains scores (*Globe et al., 1999*). Substance intake leads the patient to develop maladaptive behavioral and psychological changes including apathy, assaultiveness or belligerence, impaired judgment and impaired job or social functioning (*Flanagan et al., 2007*). Being single or unmarried (*Globe et al., 1999*) or experiencing high levels of chronic medical and mental health problems adds to the negative effect of substance abuse on QOL (*Brogly et al., 2003*).

Although results of the current study showed that all QOL domains were significantly affected by substance abuse (table 13), yet, the type of substance used had variable effects on different domains of QOL. In this study, the poorest quality of life was found in patients having volatile dependence and opioid dependence followed by polysubstance. Similarly, studies investigating this issue showed that QOL is lower in heroin abusers than in controls affecting their physical, legal, psychological and social support more than other substance (*Fassino et al., 2004*). This is attributed to the common and frequent medical and psychiatric comorbidities which play an important role in their poor outcome. Antisocial personality disorder is one of the most common disorders, along with major depression and anxiety disorders as well as hepatitis C, HIV infections and acute bacterial endocarditis (*Krantz et al. 2004*). While in case of volatile dependence, Brouette (2001) reported that volatile substance use starts in early ages (5.9% in adolescents) and kills more children and young people aged 10-16 year than all other illegal drugs put together. Small doses can lead to euphoria, behavioral disturbances, delusions and hallucinations. Higher doses may cause life-threatening effects such as convulsions and coma. Chronic high-dose usage of solvents can produce severe organ damage, especially to the liver, kidneys and brain which explains the worst impact of volatile substance on QOL in comparison to other substance.

Other studies comparing QOL scores in the general population to the quality of life scores for alcohol-dependent patients and other illicit drugs showed that QOL scores were relatively lower in those patients, especially in the psychological and role dimensions but were closer to population values in the physical and functional dimensions. The quality of life dimensions were lower in patients with high "ASI alcohol" scores, indicating worse health related QOL profiles and also worse global quality of life with a higher severity of alcohol dependence. This was due to high correlation with HAM-D. The domains of quality of life were lower in patients with HAM-D greater than or equal to 19 (major depression) compared to those with HAM-D less than or equal to 7 (absence of depression) (**Daeppen et al., 1998**). McKenna et al (1996) and Malet et al (2006) found a clear and consistent relationship between domains of the quality of life and patients with alcohol drinking behavior, experiencing much poorer health than a 'normal' population for all dimensions of health considered. While in cases of amphetamine use, low self-confidence and self-esteem is statistically linked to low quality of life (**Silverstone and Salsali, 2003**). In case of poly substance dependence, the powerful synergy between substances abused lowers QOL score 15.9% below the average of general population (**Ventegodt et al., 2003**).

Effect of comorbidity with depression and anxiety on QOL in substance use disorders patients

Previous studies have reported increased incidence of psychopathological states in substance users which adds to the detrimental effects on the QOL in this group of patients (*Safren et al., 1997 and Mendlowicz et al., 2000*). In general, the comorbidity between psychiatric disorders and substance use disorder is quite high and complicates the poor effect of substance on the quality of life. Major depression and anxiety disorders are the most common comorbidities reported (*Conway et al., 2006*). In this study, (54.4%) of addiction group had moderate depression, (14.5%) had severe depression on HAM-D. Whereas (40.5%) of the sample suffered from moderate anxiety on the HAM-A. In other studies, 46% of substance abuse subjects reported moderate or high levels of depression on the HAM-D (*Dorus and Senay, 1980*). Deykin and his colleagues (1992) found in their study that 24.7% of the subjects met the DSM-VI criteria for anxiety.

Several studies have investigated the underlying relationship between substance use and psychiatric disorders. Comorbidity is greater in individuals who are dependent on illicit drugs, compared to alcohol-dependent individuals, and individuals with multiple dependencies experience the highest rates of psychiatric comorbidity. Roeloffs (2002) identified problems associated with substance use among 1,187 patients with either depressive symptoms (44%) or depressive disorders

(56%). Sedative abuse (reported by 14% of all patients) was associated with severe anxiety, social phobia and misuse of prescribed opioids. Cannabis use (11%) was associated with recurrent depression, agoraphobia, and hazardous alcohol use. Reversibly, hazardous drinking (11%) was significantly associated with cannabis use and depressive symptoms. While Shrier (2003) reported that the symptoms of anxiety were most common (60%), followed by symptoms of depression (51%) among a sample of 538 substance abuse adolescents.

Because acute intoxication and withdrawal from drugs of abuse can mimic symptoms of psychiatric disorders, the overlap of symptoms can be problematic in making an accurate diagnosis of a psychiatric disorder in an individual with a substance use disorders and associated with poor quality of life (**Kandel et al., 2001**). Rao et al (1999) found that major depression was associated with alcohol and illicit drug abuse in 32% to 54% respectively. Brook et al (2002) found that individuals with major depression are more likely to develop substance use disorders while individuals with substance use disorders are at greater risk for the development of major depression, compared to the general population. Clinical similarities depressive symptoms are commonly reported during withdrawal of drug abuse. Irritability, sleep difficulties, anxiety, trouble with attention and concentration are associated with both protracted withdrawal states and major depression (**Brook et al., 2002**). Whereas Riggs et al (2007) found that adolescents with substance use disorders (SUDs) have higher rates of depression (15%-24%) than adolescents in the general population (2%-8%). Comorbid

depression is also associated with more severe substance abuse, poorer drug treatment outcomes, increased suicidal rates and higher relapse rates.

In addition, the type of substance used also has an impact on the nature and severity of depression which adds to the poor quality of life. In the current study, benzodiazepines, opioids and volatile substances were significantly associated with moderate and severe anxiety in comparison to other substances. Also, benzodiazepines, volatile, polysubstance and opioids were associated with moderate and severe depression scores in comparison to other substances although this was statistically non-significant. Depression and substance dependencies are among the most prevalent and costly disorders confronting the health care system and affecting the quality of life and they tend to co-occur leading to greater overall severity and worse health-related outcomes including increased risk of suicide. Edward (2004) studied a sample of 848 patients depended on alcohol, opiate, cocaine and amphetamine. The mean baseline HAM-D scores ranged from 11.7 to 28.9, indicating moderate to severe levels of depressive symptoms. Other studies reported similar findings in amphetamine, benzodiazepine, opioid and polysubstance users (**Katherine, 2006; Russel, 2005 and Dorus, 1980**). Russel (2005) also argued that amphetamine dependence can cause serotonin depletion as well as serotonergic neurodegradation that may result in depression.

Other studies reported that clinical characteristics of alcohol dependence with comorbid depression include presentation with

multiple symptoms, increase risk of suicide, increase psychiatric comorbidity, increase medical comorbidity, increase risk taking behaviour and poor social and family function. Thus alcohol dependence has significantly negative effect on the course of major depression. It worsens the response to medication and reduce remission. The major depression is nearly twice prevalence in male alcoholics compared to general male population 24.3% and 12.7% respectively (*Kessler et al., 1994*).

Moreover, the relationship between anxiety disorders and substance use is complex and can vary greatly among individuals. In some cases, the substance use disorder may develop as an attempt to self-medicate of anxiety symptoms. In others, anxiety symptoms are often seen with the abuse of substances and during withdrawal states. In some individuals there is likely to be a cyclic interaction i.e. depressants, such as alcohol and opiates, may be used in an attempt to decrease anxiety but during withdrawal states, anxiety is increased leading to an exacerbation of the anxiety disorder and making relapse to substance use more likely (*Deykin et al., 1992*).

Many alcohol-dependent individuals and drug abusers demonstrate severe anxiety symptoms in the context of acute or protracted abstinence syndromes but it is unclear whether these anxiety conditions are independent psychiatric disorders or temporary syndromes that are likely to disappear on their own. Lifelong anxiety disorders are unusually prevalent among alcohol-dependent individuals. Anxiety syndromes are likely to disappear with abstinence. The rate of alcohol dependence among subjects with lifelong anxiety disorders is higher than normal population. Moreover, there is familial crossover between alcohol dependence and anxiety disorders. Alcoholism is often preceded by anxiety disorders (*Schuckit and Hesselbrock, 2004*). Whereas Roberts (1999) found that among 146 alcohol-dependent patients and poly substance abusers, 58% reported excessive anxiety on admission and 22% met DSM-IV criteria for specific anxiety disorders. After three to four weeks of abstinence, the scores of anxiety declined significantly and 10% met criteria for specific anxiety disorders. It is more likely that anxiety levels on admission were significantly related to severity of alcohol dependence or other substance abuse and recent life events rather than to severity of withdrawal symptoms (*Grant, 1997*).

Relation between addiction severity index and QOL:

The ASI is used to assess severity of problems in areas associated with substance abuse at treatment entry. High score of ASI indicates higher morbidity levels (*Daeppen et al., 1998*). In this study, the worst areas of ASI were drug abuse followed by

unemployed state and the less worse areas were medical and psychiatric states (table 3). Other studies showed different results, Dixon et al (1998) found that current substance abusers had significantly greater severity of legal problems, alcohol and drug problems while patients with past substance use disorders had greater severity of family problems than did the non-abusers. In accordance with the current study, Wertz et al (1995) found that substance abusers scores were higher on the alcohol abuse, drug abuse, medical and employment state than legal and psychiatric problems. While Sees et al (2000) found that five ASI problem areas: employment, family, psychiatric, legal, and alcohol use were 50% worse in addicts compared to intervention group.

Moreover, the severity of different ASI areas is related to the type of substance used. This may contribute to the difference in scores of ASI between this study and others. The current study showed significant relations between the type of addictive substance and each of medical, employment, drug abuse, alcohol abuse and psychiatric states only (table 14). Specifically, opioid and polysubstance dependence showed higher percentages of moderate and considerable problems in medical, employment and psychiatric state in comparison to other substances. Also, amphetamine dependence showed significantly highest percentages of considerable and extreme problems in drug abuse and psychiatric states. Although non-significantly, opioids and amphetamine showed more legal and family problems than the other types of substance. Similar to the current study, Karen et al (2000) found no significant effects of opioid dependence in the

ASI psychiatric state but high legal, family and social support, physical state problems. Whereas Metzger et al (1991) reported that alcoholic and drug abusers showed more severe alcoholic problems, legal difficulties, drug problems and higher levels of psychiatric symptoms. Generally, Mertens (2001) found that 91% of substance users had higher ASI scores especially in employment state, medical, family, psychological and legal associated with severe drug problems in comparison with normal population.

Furthermore, the severity of problematic areas in ASI has impact on each other and also related to quality of life. Craig et al (2004) reported that absence of illicit drugs was predicted by low ASI drug severity scores and missing fewer days of medication, full-time employment was predicted by low scores on ASI-employment severity, longer lengths of stay and a younger age. Better attendance at counseling sessions was predicted by low scores on ASI psychological and longer lengths of stay. Better ratings of patient progress were predicted by longer lengths of stay and lower ASI severity scores in the drug domain. ASI domain scores of both drug and alcohol appear to be reliable predictors of treatment outcome among rehabilitation maintenance programs, with higher severity scores predictive of poorer outcome associated with poor quality of life (*Craig et al., 2004*). In contrast, Smith et al (2003) found that overall QOL was negatively affected by ASI drug scores, but ASI alcohol scores had comparatively little impact.

Quality of life in schizophrenia group:

Recent studies done in schizophrenia focusing on the quality of life as an important measure of the impact of schizophrenia and its respective treatment converged on the fact that schizophrenia worsens QOL of those affected with it. In convenience with this finding, the current study showed that QOL is poor in schizophrenic patients and even poorer than substance dependent patients. The best quality of life domains were activity of daily living and physical health while the worst quality of life domains were occupational activities and psychological well being (see table 7). Unlike the addict group, there was difference between weighted and unweighted quality of life in schizophrenic group indicating marked discrepancy in quality of life between different life domains. This point to the unequal burden that schizophrenia causes in different life aspects.

Other studies evaluating the quality of life in schizophrenia showed similar results. Thornicroft (2004) found that the least satisfactory domains in QOL were job and financial situation, mental health and sexuality. While, Postrado and Lehman (1995) reported more dissatisfaction with family relations, mental and physical health, supportive relationships, meaningful occupations in rehospitalized patients with poor global quality of life. On the other hand, Choon et al (1998) found that schizophrenics at 2 years follow up after discharge had severe impairment in occupational functioning and were employed for only about one-third of the 6-month period. While, 60% of the patients were unemployed because of the illness, another 12% experienced

moderate to severe impairment in their capacity to work; 64% were financially supported by social service agencies and 44% experienced at least moderate impairment in their ability to perform household duties. Nowadays, medical treatment aims at controlling the symptoms of the disease. The patients receive little help in addressing issues such as how to find an adequate occupation or how to build social relations, taking their mental problems into consideration. Managing schizophrenia needs therefore to focus more on the personal aspects of the disease, rather than on the symptoms alone (*Thornicroft, 2004*). Long-stay patients have poorer quality of life especial in social functioning and size of the social network, dissatisfaction with family relations (*Leff et al., 1996*). This may explain the poorer QOL found in schizophrenic patients in the current study. While, patients outside psychiatric institutions were the most socially active and had the most satisfying contact with their families, subjective well-being and daily activities (*Borge et al., 1999*).

Many factors interplay to decline the QOL in schizophrenic patients. These factors include the nature and severity of schizophrenic symptoms as well as the social consequences of illness. Cardoso et al (2005) found that the variables associated with low quality of life score included age, gender, and treatment time, marital status, total hospitalization time and total psychiatric treatment time. Single marital status was three times more likely to be associated with low quality of life as compared to married. Patients using three or more psychoactive drugs showed low quality of life than whom using single medication. The greater the number of medications used by the patient, the

severity of symptoms and the adverse effect of antipsychotic medication, the worst the quality of life in the schizophrenic patients. Siegel et al (2006) reported that longer duration of illness had a negative effect on overall symptoms and was usually associated with more severe positive symptoms, poorer social and occupational function before presentation for treatment, poorer outcome and poorer quality of life.

Furthermore, a wide array of sociocultural factors were addressed by Choon et al (2000) such as educational level of patient and family members, socioeconomic status, availability and access to health care, beliefs and knowledge about mental illness, integrity of social support network and psychopathological factors (e.g., insidious mode at onset, bizarre and disruptive behaviors, level of insight into illness and the need for treatment). They stated that these factors may interact together to influence treatment-seeking behaviors. The net result of the interplay of these factors within the patient and between the patient and his or her environment (family members and sometimes with the legal system as well) could either shorten or lengthen the duration of untreated psychosis and affect the quality of life. Other factors that may contribute to low quality of life in schizophrenia: anxiety, depression, psychotic symptoms and substance especially alcohol abuse. Social aspects such as not having reliable friends or daily contact with family and having few leisure activities also affect QOL. Relatives often worry about the patient's health, their own future, safety and financial position (**Thornicroft, 2004**). Improving these aspects positively affects QOL. Penn and Mueser (1996) found that social skills

training produce improvement on specific behavioral measures. While, family interventions (i.e. family psychoeducation and behavioral family therapy) are highly effective for reducing families' expressed emotion and family burden and improves patients' relapse rates, outcomes and quality of life.

One of the important factors that adds to poor QOL in schizophrenia is comorbid substance abuse. Although excluded from the current study, the relationship between substance use and psychotic disorders is very complicated and debatable. Schizophrenia and substance use are connected by multiple potential links, including genetic vulnerability, medication side effects, negative symptoms, and psychosocial factors. Self-medication has been commonly used and this explain the high comorbidity. Specifically, self-medication of negative symptoms, such as social withdrawal and apathy and drug use in the attempt to decrease discomfort from the side effects of typical antipsychotic medications has been suggested as explanations for the high prevalence of substance use disorders in individuals with schizophrenia (*Dixon et al., 1990*). Other studies have demonstrated that up to 50% of individuals with schizophrenia have either alcohol or illicit drug dependence (*Regier et al., 1990*). Substance use in schizophrenic patients is associated with poor social function, symptom exacerbation, frequent hospitalization, medication noncompliance and poor treatment response with poor quality of life (*Dixon et al., 1990*).

Relation between severity of symptoms in schizophrenia and QOL:

The pattern of illness severity in schizophrenia differs according to the type of schizophrenia, in relapse or in remission and also whether inpatient or outpatients. McNiel and Binder (1995) reported that schizophrenic patients showed low levels of hostility, uncooperativeness, and suspiciousness and high levels of depression, guilt, and anxiety. In contrast, Lowenstein et al (1990) found that newly admitted schizophrenics who showed higher levels of thinking disturbance, hostile-suspiciousness, and agitation-excitement at the time of admission were at greater risk of becoming assaultive during the hospitalization. While, Gur (2006) reported that flat affect and other negative symptoms of schizophrenia were associated with poorer premorbid adjustment, worse current quality of life, and worse outcome at 1-year follow-up. Patients overall performed poorly on emotion processing tasks, one that required identification of happy and sad emotions and one that required differentiating among intensities within these emotions.

In the current study, schizophrenic patients showed higher scores on the BPRS in positive symptoms mainly unusual thought content, disorientation, hallucinatory behaviour and conceptual disorganization. This may be an additional cause to poor QOL in schizophrenics found in the current study. Similar to other studies, these symptoms and others showed significant correlations with the different quality of life domains (see table 18). In general, higher level of positive symptoms was found to

be associated with a longer duration of hospitalization, increased overall symptoms, decreased ability to meet basic needs, and decreased quality of work later in life. While, negative symptoms adversely affect later ability to meet one's own needs, ability to find work, social and occupational outcome and consequently associated with poor quality of life (*Siegel et al., 2006*). Daradkeh and Al Habeeb (2005) also reported the greater the psychotic symptoms, the worse the quality of life. Furthermore, patients with less-severe non-psychotic symptoms have better quality of life compared to those with severe non-psychotic symptoms. Additionally, Choon et al (1998) reported that the level of negative symptoms was moderately and significantly correlated with later occupational impairment, financial dependence on others, impairment in performance of household duties, impaired relationships with friends, impaired ability to enjoy recreational activities and global assessments of functioning. Severe negative symptoms were associated with poor quality of life. Also, poor treatment response had been correlated with symptom severity and social and occupational function with impairment of quality of life at 1-year follow-up (*Siegel et al., 2006*).

Limitations

Although, our study is one of few studies whose interest is to compare the QOL in between addiction patients and schizophrenic patients. we investigated the associated sociodemographic, clinical variables, severity of illness

and comorbidity and their impact on QOL in both substance abuse and schizophrenic patients.

There have been major limitations encountered in this study that should be stated:

1. The schizophrenic sample included only male patients and excluded females which may differ in the results of quality of life. It has been previously reported (Kulkarni, 2001) that quality of life in female schizophrenics is better than in males as they are more protected by their families, better accepted and tolerated and less work burden is needed from them in comparison to male schizophrenics.
2. The addiction sample did not include any female patients which made results incomplete. It was previously reported that QOL is more poorer in female substance use patients than male patients.
3. The schizophrenic sample was mostly selected from inpatients units due to marked drop out from outpatients. Inpatients are commonly more disturbed with more positive symptoms in addition to chronicity, all of which add to the poor quality of life reported in the current study.
4. In this study the substance use patients were mainly cases of drug dependence either on single or poly substances whereas the pure cases of substance abuse were few in number and limited.
5. Also, the addiction sample was not equally distributed i.e. cases with volatile and benzodiazepine dependence were very few which made statistical comparisons difficult.
6. Smaller number of schizophrenic sample in comparison to addiction sample.

CONCLUSION

Quality of Life is a broad construct used in health planning, health economics, and medical decision-making. Quality of life (QOL) has become an important endpoint in clinical trials and studies for many chronic disorders as well as in many studies of medical and surgical interventions. Despite that, the concept of QOL has been recently introduced in the field of psychiatry and mental disorders in last decades. Specific attention was directed to measuring physical functioning, social and emotional functioning, and work-role functioning in chronic disabling mental disorders such as schizophrenia and substance dependence. The interest of our study is to explore the effect of substance abuse and schizophrenia on QOL. We hypothesized that the QOL in both substance use disorders patients and schizophrenic patients was poor but the QOL in substance use disorder patients are better than the QOL of schizophrenic patients. Thus we investigated the factors affecting the QOL of those patient including the sociodemographic differences, effect of comorbidity and severity of illness.

We conclude from the previously presented data that the Saudi patients had highest QOL while Kuwaiti patients had lowset QOL in substance use disorders patients. in the other hand schizophrenic Yemani patients showed highly QOL. As regard residency in addiction group there was no significant relation while schizophrenic group had significant increase in QOL in Northern Province to Central Province and Western Province.

Marital state in addiction group there is increase in QOL in married patients while the divorced patients showed the lowest QOL but in the schizophrenic group marital state has no significant effect on the QOL. The governmental employees and students showed highest QOL in both groups also there was significant effect of education on QOL in both groups patients educated up to high school and university degree had highest QOL. The quality of life of addiction group was negatively affected by all types of addictive substances, it was found that patient dependent on cannabis had highest score and the lowest score was associated with volatile substance dependence. The comorbidity with depression and anxiety affected QOL in addictive patients negatively. Increase scores of severity of addiction ASI or severity of symptoms of schizophrenia BPRS were associated with poor QOL in both groups.

Finally, as expected and previously reported, the results of current study showed poor QOL in both disorders and even worse in schizophrenics than addicts. This may be attributed to several factors; different nature of illness, sample selection and different effects of either disorder on social relations, socioeconomic status and physical health.

SUMMARY

The definition of health according to World Health Organization is "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". Quality of life is also defined as the subjective assessment of the impact of disease and treatment across the physical, psychological, social and somatic domains of functioning and well being. Quality of life is affected by and reflected on individual's productivity and financial costs and also defined as a complex and multidimensional construct. Individuals' subjective experience of life quality is impacted by interplay of objective circumstances which change over time.

Quality of life is now a more valued assessment, not only in psychiatry but also in many other areas, particularly those branches of medicine dealing with patients who suffer over relatively long periods of time. Patients are increasingly viewed as people and not just cases. This is indicative of a more consumer-oriented approach to medical care, in which the patient's own views are considered important rather than patients being solely the objects of expert opinion from professionals who themselves judge the effectiveness and relevance of what they do.

Quality of Life is a broad construct used in health planning, health economics, and medical decision-making. Quality of life (QOL) has become an important endpoint in clinical trials and studies for many chronic disorders as well as in many studies of medical and surgical interventions. Quality of life may be influenced by experiences which change over the lifespan and across various social roles as children, students, family members, employees, patients and religious members. Moreover, the quality of experience within each of these areas of life is affected by internal states of physical functioning, emotional well-being and personal values. Like external conditions in the physical and social environments, these internal states and value systems may also change and interact in complex, unpredictable ways.

Despite that, the concept of QOL has been recently introduced in the field of psychiatry in last decades. Specific attention was directed to measuring physical functioning, social and emotional functioning, and work-role functioning in chronic disabling mental disorders as schizophrenia and substance dependence.

The quality of life of the mentally ill has been a matter of concern for centuries. The great reforms of the past century were prompted by this, and more recently, there has been a move from institutional to community care. This implies that quality of life assessment must put patients first, and recognizes the importance of their opinions. This assessment is a response to patients desires not to be treated merely as cases but rather as human beings who have many other concerns. Frequently, their disease

or condition may not be the main factor affecting their lives; physicians at times have a tendency to reframe all problems as being related to the presenting disease.

The mental health services are the most important influences that affect the lives of persons with mental disorders and also the quality of life. Other fundamental components include the role of family and friends, other services (e.g., social services) and supports, and such things as housing, education, income and work. At the same time, quality of life assessments influence clinical decision making i.e. to use them as a basis for making choices about treatment. This can be effected by using measures to identify individual problems and priorities for treatment and then negotiating treatment goals based on them.

Substance abuse and schizophrenia are well known chronic debilitating long-term psychiatric disorders that require ongoing management of physical, psychiatric, and social consequences. Overall, the available evidence suggests that the quality of life among either substance users or schizophrenic patients is generally poor.

Addiction has been described as an 'equal opportunity' disease, affecting individuals across racial, ethnic, geographic and class lines. Although differences in pattern of use have been identified for specific demographic characteristics, current levels of knowledge about the functional meaning of these differences and their affect on access to treatment is insufficient for effective program and policy development. All over the world, substance

abuse and its related problems represent the society's most pervasive health and social concerns. Each year, about 100,000 deaths in the United States are related to alcohol consumption. Illicit drug abuse and related acquired immunodeficiency syndrome (AIDS) deaths account for at least another 12,000 deaths. In 1995, the economic cost of alcohol and drug abuse was \$276 billion. This represents more than \$1,000 per year for every man, woman, and child in the United States to cover the costs of health care, motor vehicle crashes, crime, lost productivity and other adverse outcomes of alcohol and drug abuse. More than eight million older adults are dependent on alcohol or medications, one third of them suffer from late onset addiction. By 2030, one-third of the population will be older adults. If trends continue at current rates, there will be millions more seniors by then with alcohol or other chemical addictions. Furthermore, in recent years, the role of substance use in criminal behavior has become increasingly appreciated. There is a growing mountain of evidence linking drugs and violent crime. For example, it has become generally accepted that 80% of homicides and 50% of suicides are associated with alcohol and drug use. Further, 80% of domestic violence and 25-50% of violent sexual offenses (e.g. rape) are associated with alcohol and drug disorders. Also those with substance abuse concerns, and particularly injection drug users (IDUs) are at a greater risk of HCV, HBV and HIV infection.

Higher levels of both mental and physical health-related quality-of-life were found in substance use patients who had no depressive symptoms, abstinent from drugs and experiencing few

drug related problems. Also patients on drug maintenance treatment who stopped injecting drugs had better mental health related quality of life than injectors but lower levels of mental health related quality of life than abstinent patients. While alcoholic patients have lower scores in the areas of role functioning and mental health. Whereas amphetamine or cocaine patients were strongly and negatively associated with decrease health related QOL. These effects, though, vary by dimension of functioning, the presence of substance dependence rather than abuse, and pattern of intake.

On the other hand, schizophrenia is a chronic and disabling illness that affects approximately 1% of the population during their lifetime. According to a study of the World Health Organization, schizophrenia accounts for 5% of all years lived with a disability in the 15-44 year old age group worldwide. In U.S., schizophrenia accounts for about 2.5% of all health care costs, 20% of all Social Security disability days, and about 20-30% of the homeless. In the first ten years of the illness it is associated with about a 10% risk of suicide. On average, schizophrenia reduces the life span of those directly affected by about ten years. No matter the status of family of origin, schizophrenia frequently leads to high under- and unemployment, resulting in poverty, and very often, reliance upon publicly funded health care. Thus schizophrenia imposes severe hardships on patients and their families and challenge society in the development of public policies that both preserve the public welfare and afford patients a decent quality of life.

This thesis was designed aiming at covering the following area in theoretical part: **(1)** Review the recent literature about quality of life. **(2)** Review the recent literature about quality of life in substance abuse patients. **(3)** Review the recent literature about quality of life in schizophrenic patients. **(4)** Review the recent literature about comparison between quality of life in SUDs and schizophrenic patients.

The practical part aimed at:

1. What are the variables affecting quality of life in both groups of substance abuse and schizophrenic?
2. What is the relationship between severity of illness and quality of life in both groups of substance abuse and schizophrenic patients?
3. Does comorbidity of substance abuse with depression and anxiety have an effect on the quality of life of these patients?
4. Is there a relation between diagnostic subtypes in addiction group and quality of life?
5. Which group its quality of life is more affected, substance abuse or schizophrenic group?

This study is a cross sectional comparative study involving two groups of patients with substance use disorders and patients with schizophrenia. This study was conducted in Al Amal complex for mental health which is a big complex in Kingdom of Saudi Arabia. Two groups of patients were selected: **(1)** Addiction group; 200 patients with SUDs were selected from the inpatient rehabilitation wards. **(2)** Schizophrenic group; 100 schizophrenic patients were selected from inpatient psychiatric units and were matched as regard sex and sociodemographic factors of the first group. Inclusion criteria were insured before

the study which included being from Arab nationality, all Patient diagnosed by ICD-10 research diagnostic criteria as SUDs or schizophrenia and age range from 18-60 years.

The tools were carefully selected to serve for the purpose of the study. They included **(1)** Socidemographic data sheet. **(2)** ICD-10 symptoms checklist sheet. **(3)** Complete physical examination. **(4)** Laboratory investigation. **(5)** Psychiatric interview. **(6)** Psychometric battery for substance use disorder's group: including ASI for assessment of severity of addiction, Hamilton Anxiety, Hamilton Depression scales for detection of comorbidity of anxiety or depression with addiction and Wisconsin Quality of Life Index for assessment of quality of life in this group. **(7)** Psychometric battery for schizophrenic group: including BPRS for assessment of severity of schizophrenic symptoms and Wisconsin Quality of Life Index for assessment of quality of life in this group.

The study proper was preceded by a pilot study to identify any problems that can face the study proper, determine the size of the sample, identify suitability of tools used and assess reliability of clinical diagnosis. The pilot study was performed for three months from October, 2005 till December, 2005. While the study proper was done from February 2006 to April 2007.

All data gathered were recorded, tabulated and transferred on Statistical Package and the suitable statistical parameters were used. Results were displayed to answer questions raised in the hypothesis of this study. The first group of results displayed sociodemographic data:

- The age in addiction group ranged from 18-63 years while in schizophrenic group the age ranged from 26-57 years. The difference in age between schizophrenia and addiction groups was statistically significant.
- Mean number of admission in addiction group was 2.89 ± 3.54 and in schizophrenic group, was 3.24 ± 1.17 .
- The main nationality was Saudi patients in both addiction and schizophrenic groups (94% and 92% respectively).
- The majority of residency among addiction group was from Eastern Province (54%) and only (19%) from Central Province, (83%) of the schizophrenic group was from Eastern Province.
- As regard marital state (57%) of addiction group was single, (26%) was married, and (12%) was divorced while in the schizophrenic group the majority was single (76%), (16%) was divorced.
- Both groups were similar in employment states (74.5%) of addiction group and (76%) in schizophrenic group were employed, (25.5%) of addiction and (24%) of schizophrenic were unemployed. Governmental occupation was the most common occupation in both groups (42.5% and 76% respectively).
- As regard educational level (44%) of schizophrenic patients were educated up to intermediate school, (28%) up to primary school and (20%) of patients reached high school, whereas, (36%) of addiction group reached intermediate school, (33%) high school and (8.5%) reached university degree.

- Chronic physical illness was more among the schizophrenic patients (40%) in comparison to patients of addiction group (22%). Addiction group showed more exposure to serious infectious disease like hepatitis and sexual transmitted diseases (21.5%) while (4%) of schizophrenic group suffered from serious infectious disease.
- The addiction group showed more forensic exposure (37.5%) than schizophrenic group (8%). In addition, the positive family history for psychiatric illness was higher in schizophrenic group (12%) while positive family history of addiction was higher in addiction group (14%). All sociodemographic data showed statistically significant difference between addiction group and schizophrenic group.
- The most common diagnosis in addiction group was amphetamine dependence (n= 70, 35%), followed by poly substance dependence and least diagnosis was volatile substance dependence (n= 2, 1% for each).
- The second group of results was displayed to investigate relationship between comorbidity and severity of illness on QOL.
- In the addiction group, (59%) of sample had normal anxiety score while (40.5%) had moderate anxiety. Whereas, (54.5%) of addiction group had mild depression score, (14.5%) had moderate depression.
- As regard the severity of the illness in addiction group, the worst domains of ASI was the drug abuse domain and unemployed state. The extremely and considerable problems were highest in alcohol abuse, drug abuse and family state.

While, in schizophrenic group, the highest scores of BPRS were unusual thought content, disorientation, hallucinatory behavior and conceptual disorganization.

- The third group of results was displayed to investigate and compare the QOL in between SUDs and schizophrenic patients.
- The quality of life (QOL) was better in the addiction group than in the schizophrenic group in the most of the life domains. The highest score among quality of life domains in addiction group was money and economics while the lowest score among quality of life domains was psychological well being. While, in the schizophrenic group, the highest score among quality of life domains was activity of daily living and the lowest score among quality of life domains was occupational activities. Both groups showed statistically significant difference in all domains of quality of life except in physical health.
- The nationality had significant relation with QOL of SUDs patients the highest significant QOL was in Saudi patients and lowest was in Kuwaiti patients. As regard, residency in addiction group there was no significant relation while schizophrenic group had significant increase in QOL in Northern Province to Central Province.
- Marital state in addiction group there is significant increase in QOL in married patients while the divorced patients showed the lowest QOL but in the schizophrenic group marital state has no significant effect on the QOL.

- The type of job had significant effect on both groups. Governmental employees and students showed highest QOL also there was significant effect of education on QOL in both groups patients educated up to high school and university degree had highest QOL.
- As regard chronic illness, infectious disease, forensic history and family history of psychiatric illness in addiction group, all these factors caused significant decrease of QOL while all these factors except chronic illness had no significant effect on the QOL in schizophrenic group.
- The quality of life of addiction group was negatively affected by all types of addictive substances. It was found that patient dependent on cannabis had highest score in QoL whereas the lowest score in QoL was associated with volatile substance dependence.
- All domains of quality of life showed significant negative correlation with Hamilton Anxiety and Hamilton Depression scores. This means that the presence of anxiety or depression is associated with poorer quality of life domains.
- There were significant association between quality of life domains and addiction severity index.
- Most of QOL domains were negatively correlated with BPRS items in schizophrenic group.

It was found that both groups had poor QOL, but especially QOL was poorer in schizophrenic patient in comparison with substance use disorders patients. This may be explained by the general governmental policy which is more directed towards and

oriented with addiction problems which helps to improve QOL in those patients. Another reason may be attributed to the stigma of schizophrenic patients leads to delayed in treatment with poor prognosis and poor QOL. Moreover, the recorded poor QOL in both groups were associated with different factors. In schizophrenic groups, poor QOL was related to increased age group, severity of illness, being single, unemployed, multiple hospital admission. While in substance use disorders patients, poor quality of life is related to increase severity of addiction, frequent of admission, long duration of addiction, presence of forensic history, comorbid depression or anxiety symptoms.

Generally, improvement in QOL primarily was predicted by improvements in psychiatric symptoms, physical health, legal and family problems. Number of months without alcohol and drugs and psychological problems were positively associated with improvement in QOL. In recent years, the goals of treatment in schizophrenia have evolved from objective improvements in psychotic symptoms to encompass patient-related factors such as subjective response and quality of life and more research is needed to address effective interventions to reduce patient and caregiver burdens and to improve outcomes and quality of life (QOL). Reduction in both negative symptoms and general psychopathology was associated with a better quality of life. In the same times researches found that quality of life in female schizophrenics is better than in males as they are more protected and supported by their families and community, better accepted and tolerated and less work burden. Moreover, quality of life assessment can help identify where a patient has problems or difficulties. In the case of long-term illness, overcoming any of

these difficulties may make the patient feel healthier, and as a result make fewer demands on health services.

REFERENCES

- Aaronson NK (1988).** Quality of life: What is it? How should it be measured? *Oncology*; 2:69-76.
- Abalkhail B (2001).** Social status, health status and therapy response in heroin addicts. *EMHJ*; (3) 465-472
- Abdel Azim E, Khashaba A, Sherra Kh and Shalendah A (2007).** Sexual dysfunction and relation to used drugs and smoking in a sample of chronic schizophrenic patients. *Current Psychiatry*; 14(2)193-204.
- Abdel Razek Y, Saad A, and Okash T (2001).** Quality of life of a sample of Egypt schizophrenic patients, *current psychiatry*; 11(3)24-34.
- Abdel Razek Y, Farouk H, Attar EA (2005).** Translation of Wisconsin quality of life questionnaire.
- Abdel-Aziem E (2007).** Substance use and cigarette smoking correlated with age at onset and severity of psychotic symptoms respectively in a sample of recent schizophrenic patients. *Current Psychiatry*; 14(2) 449-459.
- Abdel-Mawgoud M, Fateem L, Al-Sharif A (1995).** Development of a comprehensive treatment program for chemical dependency at Al Amal Hospital, Dammam. *J Subst Abuse Treat*; 12:369-76.
- Abdelmawla N and Mitchell A (2006).** Sudden cardiac death and antipsychotics. Risk factors and mechanisms. *Advan Psychiatr Treat*; 12: 35 - 44.
- Abou-Saleh M (2004).** Dual diagnosis, management within a psychosocial context. *Advances Psychiatric Treatment*; 10:352-360.

- Abraham R, Mark W, Michael A, Jonathan R et al., (2005).** Elaboration on Premorbid Intellectual Performance in Schizophrenia. Premorbid intellectual decline and risk for schizophrenia. Arch Gen Psychiatry; 62: 1297 - 1304.
- Aceijas C, Stimson G, Hickman M et al., (2004).** Global overview of injecting drug use and HIV infection among injecting drug users. AIDS; (17):2295-303.
- Adam F and Hasselot N (1994).** Khat from traditional usage to risk of drug addiction. Med Trop; 54:141-4.
- Adams C, Fenton M, Quraishi S et al., (2001).** Systematic meta-review of depot antipsychotic drugs for people with schizophrenia. Br J Psychiatry; 179:290–299.
- Adnet P, Lestavel P, and Krivosic R (2000).** Neuroleptic malignant Syndrome. Br J Anaesth; 85: 129 - 135.
- Al Akabawi A (2001).** Drug abuse in the Arab world. A country profile of Egypt. W P A; 1: 143 -150.
- Alden A, Brennan P, Hodgins S (2007).** Psychotic disorders and sex offending in a Danish Birth Cohort. Arch Gen Psychiatry; 64(11):1251-1258.
- Alexandre B, Morgen K and William L (2006).** The role of social supports, spirituality, religiousness, life meaning and affiliation with 12-Step Fellowships in quality of life satisfaction among individuals in recovery from alcohol and drug Problems. Alcohol Treat Q; 24: 33–73.
- Al-Jamal M and Al-Bahaey W (1998).** Positive and Negative Symptoms in Cross-Sectional Diagnosis of Schizophrenia and Schizoaffective Disorders. Egypt. J. Psychiat; 21:239 – 247.
- Allardyce J, Boydell J, Vanos J et al., (2001).** Comparison of the incidence of schizophrenia in rural Dumfries and Galloway and urban Camberwel.Br J Psychiatry; 179: 335 - 339.

Allardyce J, Gilmour H, Atkinson J, Rapson T et al., (2005). Social fragmentation, deprivation and urbanicity relation to first-admission rates for Psychoses. Br J Psychiatry; 187: 401 - 406.

Al-Zahrany M (2004). Measuring the severity and the outcome of substance dependence patients, MD Thesis. Menia University.

Amer H, Saleh H, Guirguis W (1986). Use of delphi technique in determining certain factors related to drug dependence among youth. Bulletin of the High Institute of Public Health; 16, 63-77.

Anderson R, Aaronson N, Bullinger M (1996). A review of the progress towards developing health related quality of life instruments for international clinical studies and outcomes research. Pharmacoeconomics; 10:336-55.

Angermeyer M and Katschnig H (1997). Theoretical models of quality of life for mental disorders. Quality of Life in mental disorders. Am J Prev Med; 419–430.

Anita M, Lara B, and Palepu A (2005). Injection drug use qualities of life scale (IDUQOL).H Qual Life Outcomes; 3: 43.

Ann B and Fishman M (1998). Adolescents and illicit drug use. JAMA; 280:597-598.

Ann B (2001). A review of disease specific quality of life measurement scales; (12) 1147:1148.

Anna B, Hickman M, Carlo A, Schifan P et al (2006). Drug related mortality and its impact on adult mortality in eight European countries. Eur J Psc H; 16(2):198-202.

Appelbaum S (2006). Violence and mental disorders. Am J Psychiatry; 163:1319-1321.

Arday D, Milton M, Husten C et al., (2003). Smoking and functional status among medicare managed care enrollees. Am J Prev Med; 24(3):234-41.

Arseneault L, Cannon M, Witton J (2004). Causal association between cannabis and psychosis. Br J Psychiatry; 184(2): 110 - 117.

Awad A, Voruganti L and Heslegrave R (1997). Measuring quality of life in patients with schizophrenia. Pharmacoeconomics; 11:32-47.

Awad A, Voruganti L (2004). Impact of atypical antipsychotics on quality of life in patients with schizophrenia. CNS Drugs; 18:877-93.

Azayem A and Ez Eldin A (1996). Changing pattern of substance abuse and its reflection on management programs. Proceeding of First Egyptian International Conference on Addiction and Drug Abuse.

Barne T (2005). Why indeed? Invited commentary on why are not depot antipsychotics prescribed more often and what can be done about. Advan Psychiatr Treat; 11: 211 - 213.

BarnesT, Stanley H, Sam B, Hilary C (2006). Comorbid substance use and age at onset of schizophrenia. Br J Psychiatry; 188: 237 - 242.

Bartels S, Clark R, Peacock W (2003). Medicare and Medicaid costs for schizophrenia patients by age cohort compared with costs for depression, dementia, and medically ill patients. Am J Geriatr Psychiatry; 11: 648 - 657.

Becker M, Diamond R, Sainfort F (1993). A new patient focused index for measuring quality of life in persons with severe and persistent mental illness. Qual Life Res; 2:239–251.

Becker T, Leese M, Krumm S et al., (2005). Needs and quality of life among patients with schizophrenia in five European centers. What is the impact of global functioning scores? Soc Psychiatry Psychiatr Epidemiol; 40:628-34.

Belan W, Behan P (1991). The muscle findings in the neuroleptic malignant syndrome associated with lysergic acid diethylamide. J Neurosurg Psychiatry; 54:741.

Bellack S (2006). Scientific and consumer models of recovery in schizophrenia, concordance, contrasts, and Implications. Schizophr Bull; 32: 432 - 442.

Bellis V, Peter G, Yzermans J (2006). Health related quality of life and mental health problems after a disaster. Are chronically ill survivors more vulnerable to health problems? Biomedical and life science; (15) 615-632.

Ben Sessa (2005). Can psychedelics have a role in psychiatry once again? Br J Psychiatry; 186: 457 - 458.

Benedicto C, Sergio P, Nancy C et al., (2001). Neural mechanisms of anhedonia in schizophrenia. A PET study of response to unpleasant and pleasant odors. JAMA; 286: 427 - 435.

Bernice R, John S, Mark A et al., (2003). Depressive symptoms and health-related quality of life. JAMA; 290:215-221.

Bertolino A, Caforio G, Blasi G et al., (2004). Interaction of COMT, met genotype and olanzapine treatment on Prefrontal cortical function in patients with schizophrenia. Am J Psychiatry; 161:1798-1805.

Bindman J, Johnson S, Szmukler G et al., (2000). Continuity of care and clinical outcome. Soc Psychiatry Psychiatric Epidemiology; 959-969.

Birchwood M, Smith J, Macmillan F (1989). Predicting relapse in schizophrenia, the development and implementation of an early signs monitoring system using patients and families as observers. *Psychological Medicine*; 19, 649–656.

Birchwood M, Mason R, and Mac Millan F (1993). Depression, demoralization and control over illness, a comparison of depressed and non-depressed patients with a chronic psychosis. *Psychological Medicine*; 23, 387–395.

Birchwood M, Spencer E, and McGovern D (2000). Schizophrenia early warning signs. *Advan Psychiatr Treat*; 6(2): 93 - 101.

Bitton A, Fichtenberg C, Glantz S (2001). Reducing smoking prevalence to 10% in five years. *JAMA*; 286:2733-2734.

Bizzarri J, Paola R, Alessia V et al., (2005). Dual diagnosis and quality of life in patients in treatment for opioid dependence. *Use Misuse J.*; 457-479.

Blanchard J and Cohen A (2006). The structure of negative symptoms within schizophrenia. *Schizophr Bull*; 32(2): 238 – 245.

Brady K (2001). Clinical challenges: anxiety and substance abuse. Program and abstracts of the 154th Annual Meeting of the American Psychiatric Association.

Brady K and Sinha R (2005). Co-occurring mental and substance use disorders. The neurobiological effects of chronic stress. *Am J Psychiatry*; 162(8): 1483 - 1493.

Brewer W, Wood S, Phillips L et al., (2006). Generalized and specific cognitive performance in clinical high risk cohorts. *Schizophr Bull*; 32(3): 538 – 555.

Bridget M (2006). Link between smoking and mental illness may lead to treatments. *JAMA*; 295: 483 - 484.

Bridget M (2006). Shift seen in patterns of drug use among teens. JAMA; 295:612-613.

Bridget M (2006). Treatment key to reducing cost of crime. JAMA; 296: 1222.

Brogly S, Mercier C, Bruneau J (2003). Towards more effective public health programming for injection drug users. Development and evaluation of the Injection drug user Quality of life scale. Substance Use & Misuse; 291-294.

Bromley J, Cunningham S (2004). You don't bring me flowers any more, an investigation into the experience of stigma by psychiatric inpatients. Psychiatric Bulletin; 28:371-374.

Brook W, Zhang C, Cohen D (2002). Drug use and the risk of major depressive disorder, alcohol dependence, and substance use disorders. Arch Gen Psychiatry; 59:1039–1044.

Brouette T and Anton R (2001). Clinical review of inhalants. Am J Addict.; 117-133.

Bruce J, Thomas R (2000). Treatment for opioid dependence, quality and access. JAMA; 283:1337-1339.

Bruce L, Francesca E, Donald R (2006). Diabetes risk associated with use of olanzapine, quetiapine, and risperidone in veterans' health administration patients with schizophrenia. Am J of Epidem; 164(7):672-681.

Buck J and Umland B (1997). Covering mental health and substance abuse services. Health Affairs; 16:120-126.

Buksten O (1997). Practice parameters for the assessment and treatment of children and adolescents with substance use disorder. J Am Acad Child Psychiatry; 36:140s-156s.

Bullinger M, Anderson R, Cella D (1993). Developing and evaluating cross cultural instruments from minimum requirements to optimal models. Qual Life Res; 2: 451-459.

Burgess A, Soler P, Soler M (1996). Reliability and validity of an HIV specific health related quality of life measure for use with injecting drug users. *AIDS*; 10(14):1699-705.

Burmeister M (2006). Genetics of psychiatric disorders. *Focus*; 4(3): 317.

Burton S (2006). Symptom domains of schizophrenia, the role of atypical antipsychotic agents. *J Psychopharmacol*; 20(6): 6 - 19.

Byren M, Agerbo E, Mortensen P (2002). Family history of psychiatric disorders and age at first contact in schizophrenia, an epidemiological study. *Br J Psychiatry*; 181(43): s19 - 25.

Cabeza I, Sacristán J, Edgelland E and González M (2001). Subjective response to antipsychotic treatment and compliance in schizophrenia. A naturalistic study comparing olanzapine, risperidone and haloperidol. *JAMA*; 280:1194-1195.

Cacciola J and McLellan A (1994). Problem severity index. Administration manual. Philadelphia, PA. Treatment Research Institute and the Department of Psychiatry at the University of Pennsylvania.

Cahn W, van Haren N, Hulshoff Pol E et al., (2006). Brain volume changes in the first year of illness and 5-year outcome of schizophrenia. *Br J Psychiatry*; 189: 381-382.

Carol A, Kenneth B, Douglas Z (2002). Problem substance use among depressed patients in managed primary care. *Psychosomatics*; 43:405-412.

Caron J, Tempier R, Mercier C (1998). Components of social support and quality of life in severely mentally ill, low income individuals and a general population group, *Community Ment Health J*; 34(5):459-75.

Carsten B and Preben M (2006)• Are the Causes responsible for urban-rural differences in schizophrenia risk rooted in families or in individuals? Am J of Epidem; 163(11):971-978.

Celeste O, Charla N, and Kathleen M (2004). Ethnic Differences in substance abuse treatment retention, compliance, and outcome from two clinical trials. Psychiatric Services; 55; 167-173.

Charles M (1999). Illicit drug users not idle; Report Says 70% goes to work. JAMA; 282:1320-1321.

Charles P (2005) Anticraving medications for relapse prevention: A Possible New Class of Psychoactive Medication. Am J Psychiatry; 162:1423-1431.

Charnaud B and Griffiths V (2000). Drug dependence and child abuse. Br J Psychiatry; 177: 84.

Chassin M and Galvin R (1998). The urgent need to improve health care quality. Institute of Medicine National Round table on Health Care Quality. J Am Med Assoc; 280: 1000–1005.

Chen Y and Storr C (2006). Alcohol use and health related quality of life among youth in Taiwan. J Adolesc Health; 39(5):752.

Choon B, Nopoulos P, Michael F, Stephan A et al., (1998). Two year outcome in first-episode schizophrenia. Predictive value of symptoms for quality of life. Am J Psychiatry; 155:1196-1201.

Choon B, Nancy C, Michael F et al., (2000). Untreated initial psychosis. Its relation to quality of life and symptom remission in first-episode schizophrenia. Am J Psychiatry; 157:808-815.

Choon B et al., (2004). Two year outcome in first-episode schizophrenia. Predictive value of symptoms for quality of life; Focus; 2: 131 - 137.

Christine B, Gillian H, Fiona L et al., (2006). Group cognitive behavioral therapy for schizophrenia. Br J Psychiatry; 189: 527 - 532.

Christos P, Murat Y, Stephen J et al., (2005). Structural brain imaging evidence for multiple pathological processes at Different stages of brain development in schizophrenia. Schizophrenia Bulletin; 31(3):672-696.

Chue P (2006). The relationship between patient satisfaction and treatment outcomes in schizophrenia. J. Psychopharmacol; 20(6): 38 – 56.

Clareci S, Waleska T, Marina B et al., (2005): Factors associated with low quality of life in schizophrenia. Cad Saude Publica; (1):21-27.

Clinton D (2004). The neural correlates of cue induced craving in cocaine dependent women. Am J Psychiatry; 161:233-241.

Clive E, Prathap T, Evandros F (2006). The schizophrenia drug treatment paradox, pharmacological treatment based on best possible evidence may be hardest to practice in high income countries. Br J Psychiatry; 189: 391 - 392.

Coate D and Grossman M (1988). Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use. Journal of Law and Economics; 31:145-171.

Connolly M and Johnson J (1999). Measuring quality of life in pediatric patients. Pharmacoeconomics; 16(6):605-25.

Conway K, Compton W and Stinson F (2006). Lifetime comorbidity of DSM-IV mood and anxiety disorder and specific drug use disorders. Results from the National Epidemiologic Survey on alcohol and related conditions. Journal of Clinical Psychiatry; 67:247-257.

Cook P and Tauchen G (1982). The effect of liquor taxes on heavy drinking. Bell Journal of Economics; 13(2):379-390.

Cook P and Moore M (1993). Economic perspectives on reducing alcohol related violence. National Institutes of Health; 93-3496.

Corrigan P and Buican B (1995). The construct validity of subjective quality of life for the severely mentally ill. J Nerv Ment Dis; 183(5):281.

Cougnard A, Goumilloux R, Monello F (2007). Time between schizophrenia onset and first request for disability status in france and associated patient characteristics. Psychiatr Serv; 58:1427-1432.

Crawford M (2004). Suicide following discharge from inpatient psychiatric care. Advan Psychiatric Treat; 10(6): 434 - 438.

Crystal M, Winnie W, Mak S (2006). Quality of life of mental health consumers in Hong Kong. Qual Life Res; (1)181-183.

Csernansky J, Mathew K, Reagan N, Lei W et al., (2004). Abnormalities of thalamic volume and shape in schizophrenia. Am J Psychiatry; 161: 896 - 902.

Cuffel B, Jeste D, Halpain M (1996). Treatment costs and use of community mental health services for schizophrenia by age cohorts. Am J Psychiatry; 153: 870 - 876.

Curran C, Neetha B, and Andrew M (2004). Stimulant psychosis, systematic review. Br J Psychiatry; 185: 196 - 204.

Daepfen B, Krineg A, Burnand B (1998). MOS-SF-36 in evaluating health related quality of life in alcohol dependent patients. Am J Drug Alcohol Abuse; 24(4):685-94.

Dalgard O, Egeland A, Skaug K (2004). Health related quality of life in active injecting drug users with and without chronic hepatitis C virus infection. Hepatology; 39(1):74-80.

Dana W, Melissa E and John L (2001). Clinical characteristics of youths with substance use problems and implications for residential treatment. *Psychiatr Serv*; 52:793-799.

Daniel R (2004). Catatonia, a clinician's guide to diagnosis and treatment. *Br J Psychiatry*; 184: 550.

Daniel W (1995). Biostatistics, a foundation for analysis in the health sciences. 6th edition. John Wiley and sons, Inc., New York.

Daradke T and Al Habeeb T (2005). Quality of life of patients with schizophrenia. *Arab journal of psychiatry*; 14(1):10–18.

Daumit G, Crum M, Guallar E et al., (2003). Outpatient prescriptions for atypical antipsychotics for African Americans, Hispanics, and whites in the United States. *Arch Gen Psychiatry*; 60(2): 121 - 128.

David A, Miklos F, Chris K et al., (2002). An analysis of cue reactivity among persons with and without schizophrenia who are addicted to cocaine. *Psychiatr Serv*; 53: 1612 - 1616.

David B (2004). Genetic approaches to alcohol dependence. *Br J Psychiatry*; 185: 449 - 451.

David R (2005). Physician substance abuse and recovery. What does it mean for physicians and everyone else? *JAMA*; 293: 1513 - 1515.

David S, Mustafa C, Eric S et al., (2007). Measures and predictors of community based employment and earnings of persons with schizophrenia in a multisite study. *Psychiatr Serv*; 58:315-324.

Deborah B, Caecilia T, John G (2000). Substance misuse as a marker of vulnerability among male prisoners on remand. *Br J Psychiatry*; 177: 248 - 251.

Dedic G (2003). The soldier's quality of life during the years of military service. *Psychiatr Serv*; 60(3):305 -14.

Delawalla Z, Barch D, Fisher E (2006). Factors mediating cognitive deficits and psychopathology among siblings of individuals with schizophrenia. *Schizophr Bull*; 32(3): 525 - 537.

Deni C and McLellana A (1999). Increasing cultural sensitivity of the addiction severity index (ASI). Center for Substance Abuse Treatment.

Denise K (2003). Does marijuana use cause the use of other drugs? *JAMA*; 289:482-483.

Dervaux A, Goldberger C, Laqueille X, and Krebs O (2004). Cannabis and psychosis. *Br J Psychiatry*; 185: 352.

Deykin Y, Buka L and Zeena H (1992). Depressive illness among chemically dependent adolescents. *Am J Psychiatry*; 149:1341-1347.

Din H (1994). Abuse of inhalants. *Br J Psychiatry*; 89:925.

Dishion T Andrews W, Kavanagh K and Soberman H (1996). Preventive interventions for high risk youth. *Br J Psychiatry*, 184-214.

Dixon A, McDaid D, Knapp M, and Curran C (2006). Financing mental health services in low and middle income countries. *Health Policy Plan*; 21(3): 171 – 182.

Dixon L, Haas G, Weiden P, Sweeney J and Frances A (1990). Acute effects of drug abuse in schizophrenic patients, clinical observations and patients' self-report. *Schizophr Bull*; 16:69–79.

Dixon L, McNary S and Lehman A (1995). Substance abuse and family relationships of persons with severe mental illness. *Am J Psychiatry*; 152:456-458.

Dixon L, McNary S, and Lehman F (1998). Remission of substance use disorder among psychiatric inpatients with mental illness. *Am J Psychiatry*; 155:239-243.

Dom G, Sabbe B, Hulstijn W (2005). Substance use disorders and the orbitofrontal cortex. *Br J Psychiatry*; 187: 209 - 220.

Dorus W and Senay E (1980). Depression, demographic dimensions, and drug abuse. *Am J Psychiatry*; 137:699-704.

Dumais A, Lesage D, Lalovic A et al., (2005). Is Violent Method of Suicide a Behavioral Marker of Lifetime Aggression? *Am J Psychiatry*; 162: 1375 - 1378.

Edward B, Judith B, Katherine T et al., (2005). Racial and ethnic diversity among a heroin and cocaine using population. *ScD J Addict Dis.*; 357-368.

Edward V and Frances R (2004). Treatment of depression in Patients with Alcohol or Other Drug Dependence. *JAMA*; 472-473.

Egbert S, Gerlinde B, Helga H et al., (2002). Quality of life and other characteristics of Viennese mental health care users. *International Journal of Social Psychiatry*; 48 (1), 59-69.

Eklund M, Backstrom M, Hansson L (2003). Personality and self-variables, important determinants of subjective quality of life in schizophrenia out-patients. *Acta Psychiatr Scand*; 108(2):134-43.

Elizabeth B (2004). Hepatitis C in patients with co-occurring mental disorders and substance use disorders. *Am J Addict*; 13:46–52.

Elizabeth W, Alec Buchanan A, and Thomas F (2002). Violence and schizophrenia. *Br J Psychiatry*; 180: 490 - 495.

Eric D, Mark W and Samuel B (2000). Neuropsychiatric symptoms associated with hepatitis C and interferon Alpha. *Am J Psychiatry*; 157:867-876.

Erlangsen A, Steven H, Yeates C (2006). Suicide among older psychiatric inpatients. *Am J Geriatr Psychiatry*; 14:734-741.

Evans S, Huxley P (2005). Adaptation response-shift and quality of life ratings in mentally well and unwell groups. Qual Life Res; 14(7):1719-32.

Evans W (1991). Cost effectiveness analysis of early treatment of HIV infected patients. Quality of life; 338: 363.

Fabian T, Anneke K, Maria P (2005). Long-term outcome of chronic drug use the Amsterdam cohort study among drug users. Am J Epidem 161(3):271-279?

Fabian T, Dolores M, Fabrice D et al., (2005). Facial expressiveness in patients with schizophrenia compared to depressed patients and nonpatient comparison subjects. Am J Psychiatry; 162: 92 - 101.

Falck R, Jichuan W and Robert G (2008). Depressive symptomatology in young adults with a history of MDMA use. Journal of Psychopharmacology; 22 (1), 47-54.

Falck R, Wang J, Carlson R and Siegal A (2000). Crack-cocaine use and health status as defined by the SF-36; Addictive Behaviors; 25, 579– 584.

Fanous A, Gardner C, Walsh D, and Kendler S (2001). Relationship between positive and negative symptoms of schizophrenia and schizotypal symptoms in nonpsychotic relatives. Arch Gen Psychiatry; 58(7): 669 - 673.

Fanous H and Kendler S (2006). Genetic heterogeneity, modifier genes, and quantitative phenotypes in psychiatric illness. Focus; 4(3): 423.

Farrell M and Boys A (2002). Psychosis and drug dependence results from a national survey of prisoners. Br J Psychiatry; 181: 393-398.

Fassino S, Abbate G, Delsedime N et al., (2004). Quality of life and personality disorders in heroin abusers; Drug and Alcohol Dependence; 76, 415-455.

- Fayek M, Flowers C, Signorelli D (2003).** Psychopharmacology: Under use of Evidence-Based Treatments in Psychiatry. *Psychiatr Serv*; 54(11): 1453 - 1456.
- Fazel S and Grann M (2006).** The Population Impact of Severe Mental Illness on Violent Crime. *Am J Psychiatry*; 163(8): 1397 - 1403.
- Felix P (2000).** Late onset schizophrenia. *Br J Psychiatry*; 177: 472.
- Fenton S, McGlashan H, Victor B (1997).** Symptoms, subtype, and suicidality in patients with schizophrenia spectrum disorders. *Am J Psychiatry*; 154: 199 - 204.
- Fisher W, Nancy W, Albert J et al., (2007).** Drug-related arrests in a cohort of public mental health service recipients. *Psychiatr Serv*; 58:1448-1453.
- Flanagan D and Browne S (1999).** Subjective and external assessments of quality of life in schizophrenia, relationship to insight. *Acta Psychiatr Scand*; 99:466–472.
- Flórez A (2003).** Mentally ill aren't major contributors to violence. *Acad Psychiatry*; 27: 223 - 224.
- Frecka E and Luna L (2006).** The adverse effects of hallucinogens from intramural perspective. *Neuropsychopharmacol*; 8(4):189-200.
- Freeman D and Philippa G (2006).** Helping patients with paranoid and suspicious thoughts, a cognitive behavioral approach. *Advances in Psychiatric Treatment*; 12: 404-415.
- Gabi P, Stefan L, Josef B (2004).** The effect of family interventions on relapse and hospitalization in schizophrenia. *Focus*; 2: 78 - 94.
- Gail L, Peter J, Christopher B et al., (2006).** Adverse events during medical and surgical hospitalizations for persons with schizophrenia. *Arch Gen Psychiatry*; 63: 267 - 272.

Galea S, Nandi A, and Vlahov D (2004). The social epidemiology of substance use. *Epidemiol Rev*; 26(1): 36 – 52.

Galletly C, Clark C, McFarlane A (1997). Relationships between changes in symptom ratings, neurophysiological test performance and quality of life in schizophrenic patients treated with clozapine. *Psychiatry Res*; 10; 72(3):161-6.

Garfien R, Vlahov D, Galai N et al., (1996). Viral infections in short-term injection drug users. The prevalence of the hepatitis C, hepatitis B, human immunodeficiency, and human T-lymphotropic virus. *Am J Publ H*; 86:655-661.

Garfien S (2006). The evolving randomized controlled trial in mental health, studying complexity and treatment process. *Advances in Psychiatric Treatment*; 12: 404-415.

Gerard E, Sander J, Deborah G et al., (2004). Three-year trials of personal therapy among schizophrenic patients living with or independent on family. Description of study and effects on relapse rates. *Focus*; 2: 146 - 157.

Geurtsen B (2005). Quality of life and living with HIV/AIDS in Cambodia. *Journal of Transcultural Nursing*; (16)41-49.

Gill M and Feinstein R (1994). A critical appraisal of the quality of life measurements. *Journal of the American Medical Association*; 272:619-626.

Gladis M, Gosch E, Dishuk N and Crits P (1999). Quality of life, expanding the scope of clinical significance. *Clin Psychol*; 67,320-331.

Globe R (1999). Associations of clinical parameters with health related quality of life in hospitalized persons with HIV disease. *AIDS*; (11) 71 – 86.

Globe R, Hays D and Cunningham E (1999). Associations of clinical parameters with health-related quality of life in hospitalized persons with HIV disease. *AIDS* ;(12)117-133.

Goldman D and Andrew B (1998). General and specific inheritance of substance abuse and alcoholism. Arch Gen Psychiatry; 55:964-965.

Goldman D, Gabor O (2006). The Genetics of addictions. Uncovering the genes. Focus; 4:401.

Gossop M and Strang J (2000). Price cost and value of opiate detoxification treatments. Br J Psychiatry; 177: 262-266.

Gossop M, Stewart D and Marsden J (2006). Effectiveness of drug and alcohol counselling during methadone treatment, content, frequency and duration of counselling and association with substance use outcomes. Addiction; 101: 404–12.

Graa f, Bijl R, Filip S, Wilma A and Spijker J (2002). Risk factors for 12-Month comorbidity of mood, anxiety, and substance Use disorders. Am J Psychiatry; 159:620-629.

Granholm E, McQuaid R, McClure S et al., (2005). A randomized, controlled trial of cognitive behavioral social skills training for middle-aged and older outpatients with chronic schizophrenia. Am J Psychiatry; 162(3): 520 - 529.

Grant F (1998). The impact of a family history of alcoholism on the relationship between age at onset of alcohol use and DSM-IV alcohol dependence. Alcohol Health and Research World; 22(2):144-148.

Grant F, and Dawson A (1997). Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence; Journal of Substance Abuse; 9:103-110.

Green B, Ross Y, David K (2005). Cannabis use and misuse prevalence among people with psychosis. Br J Psychiatry; 187: 306-313.

Greenberg S, Knudsen J, and Aschbrenner A (2006). Prosocial family processes and the quality of life of persons with schizophrenia. Psychiatr Serv; 57(12): 1771 - 1777.

Greenfield L, Besteman K, Clark C et al., (1994). The SF-36 as a measure of substance abusers' health perceptions. *Psychiatr Serv*; 153– 157.

Greer S (1984). The psychological dimension in cancer treatment. *Soc Sci Med*; 18: 345-349.

Griffiths P, Gossop M, Wickenden S et al., (1997). A transcultural pattern of drug use, qat (khat) in the UK. *Br J Psychiatry*; 170: 281 - 284.

Grunebaum F, Oquendo A, Harkavy F et al., (2001). Delusions and Suicidality; *Am J Psychiatry*; 158 (5): 742 - 747.

Gruzelier J and Manchanda R (1982). The syndrome of schizophrenia, relations between electrodermal response, lateral asymmetries and clinical ratings. *Br J Psychiatry*; 141: 488 - 495.

Guichard A, Lert F, Calderon C et al., (2003). Illicit drug use and injection practices among drug users on methadone and buprenorphine maintenance treatment in France. *Addiction*; 267 - 272.

Gur E, Mozley D, Resnick M et al., (1991). Relations among clinical scales in schizophrenia. *Am J Psychiatry*; 148(4):472-8.

Guyatt H, Deyo A, Charlson M et al., (1989). Responsiveness and validity in health status measurement: a clarification. *Clin Epidemiol*; 42:403-408.

Guyatt H (1993). Measurement of health-related quality of life in heart failure. *JACC*, 22(4):185A-91A.

Haddad P (2005). Weight change with atypical antipsychotics in the treatment of schizophrenia. *J Psychopharmacol*; 19(6): 16 - 27.

Haddock G and Lewis S (2005). Psychological interventions in early psychosis. *Schizophr Bull*; 31(3): 697 - 704.

Haggag W, Soliman H, and El Raie L (1998). A Study of Symptoms complexes/Syndromes in Schizophrenia an Out-patient Sample. Egypt J. Psychiat; 21: 159- 169.

Hamilton M (1959). The assessment of anxiety states by rating. Br J Med Psychol; 32: 50-55.

Hamilton M (1960). A rating scale for depression. J Neurol Neurosurg Psychiatry; 23: 56-62.

Hansen W (1992). School-based substance abuse prevention. Health Education Research; 7(3):403-430.

Harder S and Reitbrock S (1997). Concentration effect relationship of delta-9-tetrahydrocannabinol and prediction of psychotropic effects after smoking marijuana. International Journal of Clinical Pharmacology and Therapeutics; 35(4): 155-159.

Hare E (1988). Schizophrenia as a recent disease. Br J Psychiatry; 153: 521 - 531.

Harith S (2000). Substance misuse in adolescents. Advan Psychiatr Treat; 6: 201 - 210.

Harkavy M (2006). Can early detection of psychosis prevent suicidal behavior? Am J Psychiatry; 163(5): 768 - 770.

Harrison A, Fulkerson A and Beebe J (1997). Multiple substance use among adolescent physical and sexual abuse victims. Child Abuse and Neglect. Advan Psychiatr Treat; 6:529-39.

Harwood H, Fountain D and Livermore G (1992). The economic costs of alcohol and drug abuse in the United States; Journal of Substance Abuse; 98-4327.

Hasanah C and Razali S (2002). Quality of life, an assessment of the state of psychosocial rehabilitation of patients with schizophrenia in the community; The Journal of the Royal Society for the Promotion of Health; 122, (4) 251-255.

Hassan M, Gunaid A and Lyon M (2007). Health aspects of khat chewing. Health Journal; 13 (3)85-89.

Hassan M, Gunaid A, El Khally M, and Lyon M (2002). The subjective effects of chewing qat leaves in human volunteers. Ann Saudi Med; 22(1-2):34-7

Haukka J, Jaana S, and Jouko L (2003). Fertility of patients with schizophrenia, their siblings, and the general population. Am J Psychiatry; 160: 460 - 463.

Headey B, Holstrom E and Wearing A (1984). The impact of life events and changes in domain satisfaction on well-being; Br. J. Psychiatry; 15: 203-227.

Healey M Knapp, Astin J et al., (1998). Economic burden of drug dependency. Br J Psychiatry; 173: 160-165.

Heila H, Isometsa T, Henriksson M et al., (1997). Suicide and schizophrenia .Am J Psychiatry; 154: 1235 - 1242.

Heinrichs W, Hanlon E, Carpenter T (1984). The quality of life scale, an instrument for rating the schizophrenic deficit syndrome. Schizophrenia Bull; 10:388–398.

Heinz K and Monika K (2002). Quality of Life: A New Dimension in Mental Health Care. Psychiatr Serv; 40:1182-1189.

Helen K (2002). What is wrong with addiction? JAMA; 288: 3170 - 3171.

Henquet C, Murray R, Linszen D (2005). The environment and schizophrenia. The role of cannabis use. Schizophr Bull; 31(3): 608 - 612.

Henry R (2003). Psychiatry in Britain one hundred years ago. Br J Psychiatry; 183: 292 - 298.

Henry R (2003). Sweet taste preference as a risk factor for alcohol dependence. American Journal of Addiction; 12,559-564.

Henry R (2005). Types of alcoholic insanity.Br J Psychiatry; 186: 169 - 170.

Henry R (2006). Evidence-based treatments for alcohol dependence, new results and new questions. JAMA; 295:2075-2076.

Herald S, (2003). Australians world's biggest ecstasy users. National Drug and Alcohol Research Centre; 24, 966-976.

Hickey A, Barker M, McGee H (2005). Measuring health-related quality of life in older patient populations, a review of current approaches. Pharmacoeconomics; 23:971-93.

Hingson R (1996). Prevention of drinking and driving. Alcohol Health and Research World; 20(4): 219-226.

Hirvonen J, Huttunen J, Aalto S et al., (2006). Brain dopamine D1 Receptors in Twins discordant for schizophrenia. Am J Psychiatry; 163(10): 1747 - 1753.

Hogarty E, Anderson M and Reiss J (1991). Family psychoeducation, social skills training and maintenance chemotherapy in the aftercare treatment of schizophrenia II. Two-year effects of a controlled study on relapse and adjustment. Archives of General Psychiatry; 48, 340–341.

Holder H, Saltz R, Grube J, Treno A (1997). Summing community prevention trial. Addiction; 92: S293-S301.

Hollis C (2003). Developmental precursors of child and adolescent onset schizophrenia and affective psychoses, diagnostic specificity and continuity with symptom dimensions. Br J Psychiatry; 182(1): 37 - 44.

Horan P, Kring M, and Blanchard J (2006). Anhedonia in schizophrenia: A Review of Assessment Strategies. Schizophr Bull; 32(2): 259 – 273.

Howard L (2001). Women and Schizophrenia. Br J Psychiatry; 179: 85 - 86.

Hughes R, Goldstein M, Shiffman S (1999). Recent advances in the pharmacotherapy of smoking. JAMA; 281:72-76.

Hunt M, Kapur N, Robinson J et al., (2006). Suicide within 12 months of mental health service contact in different age and diagnostic groups. Br J Psychiatry; 188:135 - 142.

Huppert D, Weiss A, Lim R (2001). Quality of life in schizophrenia contributions of anxiety and depression. Schizophr Res; 51(2-3):171-80.

Huws M (1989). Benzodiazepine addiction in heroin addicts. Br J Psychiatry; 154:886.

Ichikawa J, Meltzer Y (1999). Relationship between dopaminergic and serotonergic neuronal activity in the frontal cortex and the action of typical and atypical antipsychotic drugs. Eur Arch Psychiatry Clin Neurosci; 249, 90–98.

Inch R, Crossley M, Keegan D and Thorarinson D (1997). Use of the Brief Psychiatric Rating Scale to measure success in a psychosocial day program. Psychiatric Services; 48:1195-1197.

Iqbal N (2001). Blems with impatient drug users in Jeddah. Ann Saudi Med; 21(3-4):196-200.

Ismail K, Molokhia T, and Saadani M (2006). Motives for Substance Use Disorders: A Trans-cultural Study. Current Psychiatry; 13(1) 15-23.

Ivan B, Sharon F and Christine S (1993). Client satisfaction and normalization of residential services for persons with developmental handicaps. Canadian Journal of Community Mental Health; 21:85-95.

Jacopo B, Rucci P, Vallotta A et al., (2005). Dual diagnosis and quality of life in patients in treatment for opioid dependence. Substance use and misuse; 137-147.

Jansen R (1999). Ecstasy (MDMA) dependence. *Drug Alcohol Depend*; 53:121.

Jason L (2006). What works in alcohol use disorders? *Advan Psychiatr Treat*; 12: 13 – 22.

Jedrzejczak M (2001). Drug addiction among service soldiers causes of phenomenon development, *Am J of Drug and Alcohol Abuse*; 378-391.

Jedrzejczak M (2001). Emotional states of army recruits on the day of their recruitment to the army. *Psychiatr Pol*; 35(6):1047-56.

Jeffrey F, Hong X, Kamini R et al., (2005). Effect of genes, environment, and lifetime co-occurring disorders on Health-related quality of life in problem and pathological Gamblers. *Arch Gen Psychiatry*; 62: 677 - 683.

Jeffrey W, Marvin S, Richard A and Eric B et al., (2006). A national study of violent behavior in persons with schizophrenia. *Arch Gen Psychiatry*; 63: 490 - 499.

Jennifer M, Sujaya P, Charles M (2001). Integrating primary medical care with addiction treatment. *JAMA*; 286:1715-1723.

Jeremy C, Min Y, Amanda R et al., (2006). Violence and psychiatric morbidity in the national household population of Britain. Public health implications. *Br J Psychiatry*; 189: 12 - 19.

Jibson M, Glick D, and Tandon R (2004). Schizophrenia and other psychotic disorders. *Focus*; 2(1): 17 – 30.

Joachim K, Martin H, Eckhard M (2001). Diagnosing schizophrenia in the initial prodromal phase. *Arch Gen Psychiatry*; 58: 158 - 164.

Joanne A (2004). Measuring the health of Scottish drug users. *Health & Social Care in the Community*. *JAMA*; 125, 202-210.

Johnson K, Gerada C and Greenough A (2003). Substance misuse during pregnancy. Br J Psychiatry; 183, 187 -189.

Jorgensen P (1998). Early signs of psychotic relapse in schizophrenia. Br J Psychiatry; 172, 327–330.

Judith L, Blumenthal J, Hamburger S et al., (1999). Progressive cortical change during adolescence in childhood onset schizophrenia. Arch Gen Psychiatry; 56: 649 - 654.

Kalivas P (2001). Drug Addiction: To the Cortex. And beyond. Am J Psychiatry; 158, (3) 668-673.

Kalix P (1990). Pharmacological properties of the stimulant khat. Pharmacol Ther; 48:397

Kanas N (2006). Group therapy with schizophrenia patients. Am J Psychiatry; 163(5): 937 - 938.

Kandel B, Davies M (1996). High school students who use crack and other drugs. Arch Gen Psychiatry; 53:71.

Kandel B, Huang Y, and Davies M (2001). Comorbidity between patterns of substance use dependence and psychiatric syndromes. Drug Alcohol Depend; 64:233–241.

Kane J M, Eerdekens M, Lindenmayer P et al., (2003). Long acting injectable risperidone: efficacy and safety of the first long acting atypical antipsychotic. Am J Psychiatry; 160(6): 1125 - 1132.

Kann L, Warren W, Collins J et al., (1993). Results from the national school-based 1991 youth risk behavior survey and progress toward achieving related health objectives for the nation. Public Health Rep; 106(1):47-55.

Karen L, Kevin L, Carmen M et al., (2000). Methadone maintenance psychosocially enriched detoxification for treatment of opioid dependence. JAMA; 283:1303-1310.

Karen L, Wesley J, Woolhandler S et al., (2000). Smoking and mental illness. A population-based prevalence study. JAMA; 284: 2606 - 2610.

Kasper S, Tauscher J and Kufferle B (1999). Dopamine and serotonin receptors in schizophrenia, results of imaging studies and implications for pharmacotherapy in schizophrenia; Eur Arch Psychiatry; 249:83–89.

Katschnig H and Sartorius H (1997). How useful are the concept of quality of life in psychiatry. Quality of Life in Mental Disorders. JAMA; 183:1510-1513.

Kaufman J, Levin M, Ross H et al., (1998). Cocaine induced cerebral vasoconstriction detected in humans with magnetic resonance angiography. Journal of the American Medical Association; 279:376-380.

Keith H, Sutton L, Haw C, Sinclair J, and Jonathan J (2005). Schizophrenia and suicide: systematic review of risk factors. Br J Psychiatry; 187: 9 - 20.

Kendler S, Masterson C and Davis L (1985). Psychiatric illness in first degree relatives of patients with paranoid psychosis, schizophrenia and medical illness. Br J Psychiatry; 147: 524 - 531.

Keshavan S, Berger G, Zipursky B (2005). Neurobiology of early psychosis. Br J Psychiatry; 187(48): s8 - s18.

Kessler C, McGonagle A, Zhao S et al., (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: results from the National Comorbidity Survey. Arch Gen Psychiatry; 51:8–19.

Khantizian J (1985). The self medication hypothesis of addictive disorder. Am J Psychiatry, 142:1259-1264.

Kimhy D, Friedman H, and Nelson E (2004). Identifying life stressors of patients with schizophrenia at hospital discharge. Psychiatr Serv; 55(12): 1444 - 1445.

Kirkbride B, Fearon P, Morgan C et al., (2006). Heterogeneity in incidence rates of schizophrenia and other psychotic syndromes. Arch Gen Psychiatry; 63(3): 250 - 258.

Kishner B and Guyatt G (1985). A methodological framework for assessing health indices. Journal of Chronic Disease; 38:27-36.

Kiss E, Piko B and Vetro A (2006). Frequency of smoking, drinking, and substance use and their relationship to psychiatric comorbidity in children and adolescents with depression. Psychiatr Hung; 21(3):219-26.

Knapp M (1997). Costs of schizophrenia. Br J Psychiatry; 171: 509 - 518.

Koch T (2000). Life quality vs. the 'quality of life. Assumptions underlying prospective quality of life instruments in health care planning. Addictive Behaviors ; 25(4), 579-584.

Koob F, Roberts J (1999). Brain reward circuits in alcoholism. CNS Spectrums. Arch Gen Psychiatry; 4:23–19.

Kraemer L, Maisto A, Conigliaro J et al., (2002). Decreased alcohol consumption in outpatient drinkers is associated with improved quality of life and fewer alcohol related consequences. J Gen Intern Med; 17(5):382-6.

Krantz D and Mehler H (2004). Treating opioid dependence, growing implications for primary care. Arch Intern Med; 164:277-288.

Kruijsaar E, Hoeymans N, Bijl V et al., (2003). Levels of disability in major depression: findings from the Netherlands Mental Health Survey and Incidence Study. J Affect Disord; 552-558.

Kuczkowski M (2004). Drug misuse in pregnancy. Br J Psychiatry; 184:182.

Kuipers E, Garety P, Fowler D et al., (2006). Cognitive, emotional and social processes in psychosis. Refining Cognitive Behavioral Therapy for Persistent Positive Symptoms. Schizophr Bull; 223-240.

Kumpfer L, Shaffer D, Philips I, and Enzer N (1992). Prevention of alcohol and drug abuse: A critical review of risk factors and prevention strategies. Prevention of mental disorders, alcohol and other drug Use in children and adolescents. Office for Substance Abuse Prevention (OSAP) 309-371.

La Puma J and Lawlor F (1990). Quality adjusted life years. Ethical implications for physicians and policymakers. JAMA; 263: 2917 - 2921.

Lambert T (2006). Olanzapine is associated with more rapid weight gain than haloperidol in people with first episode psychosis. Evidence Based Mental Health; 9(3): 72 - 72.

Lauer G (1999). Concepts of quality of life in mental health care. International Journal of Social Psychiatry; 45, (4), 247-258.

Laurent M, Pierre M, Berenice B, and Bruno F (2006). Measuring quality of life in alcohol dependence; J Alcohol and Alcoholism; 378-391.

Law K, Yau B, Wan Y et al., (2001). Relationship between perceived quality of life, social functioning, and life skills performance of patients with chronic psychiatric conditions in a Long Stay Care Home. Br J Psychiatry; 182 -185.

Leff J, Dayson D, Gooch C et al., (1996). Quality of life of long stay patients discharged from two psychiatric institutions. Am J Psychiatry; 47:62-67.

Lehman F (1988). A quality of life interview for the chronically mentally ill. Evaluation and Program Planning. Am J Psychiatry; 11:51–62.

Lehman F (1996). Measures of quality of life among persons with severe and persistent mental disorders. Soc Psych Epid; 31:78–88.

Lehman F (1999). Future research in quality of life in mental health care. In quality of life and mental health care. Soc Psych Epid; 18:52-65.

Lehman F, Ward C and Linn S (1982). Chronic mental patients, the quality of life issue. Am J Psychiatry; 139(10):1271-6.

Lenzenweger F and Dworkin H (1996). The dimensions of schizophrenia phenomenology. Br J Psychiatry; 168: 432 - 440.

Lesieur R and Blum B (1992). Modifying the addiction severity index for use with pathological gamblers. Am J Add; 1(3): 240-247.

Lewis A, Cruz D, Eggan S and Erickson S (2004). Postnatal development of prefrontal inhibitory circuits and the pathophysiology of cognitive dysfunction in schizophrenia. Ann. NY Acad Sci; 1021(1): 64 - 76.

Lewis W, Tarrier N and Drake J (2005). Integrating non-drug treatments in early schizophrenia. Br J Psychiatry; 187(48): s65-s71.

Li W (2004). Inhalant abuse and dependence among adolescents in the United States; Journal of the American Academy of Child and Adolescent Psychiatry; 29:46-52.

Lidz W, Hoge K, Gardner W et al., (1995). Perceived coercion in mental hospital admission. Pressures and process. Arch Gen Psychiatry; 52(12):1034-9.

Lieberman J (2006). Comparative effectiveness of antipsychotic drugs. A commentary on cost utility of the latest antipsychotic drugs in schizophrenia and clinical antipsychotic trials of intervention effectiveness. *Arch Gen Psychiatry*; 63:1069-1072.

Lindenmayer J (2001). Prenatal exposures in schizophrenia. *Am J Psychiatry*; 158: 831 - 832.

Linzer M, Spitzer R, Kroenke K et al., (1996). Gender, quality of life, and mental disorders in primary care. *Am J Med*; 101(5):526-33.

Lisbet B, Egil M, Torleif R et al., (1999). Quality of life, loneliness and social contact among long term psychiatric patients. *Psychiatr Serv*; 50:81-84.

Luciar V, Mark G, Nicholas T et al., (2005). Cognitive behavioral therapy for refractory psychotic symptoms of schizophrenia resistant to atypical antipsychotic medication. *Br J Psychiatry*; 186: 324 – 330.

Lydia A, Sion K, Martha K and John R (2003). Substance use problems and associated psychiatric symptoms among adolescents in primary care. *Pediatrics*; 111, e699-e705.

Lydia A, Robert A, Joseph P et al., (2006). Interrelationships of psychiatric symptom severity, medical comorbidity, and functioning in schizophrenia. *Psychiatr Serv*; 57:1102-1109.

Majella B, Esben A and Preben M (2002). Family history of psychiatric disorders and age at first contact in schizophrenia. *Br J Psychiatry*; 181: 19 - 25.

Maki P, Veijola J, Jones B et al., (2005). Predictors of schizophrenia. *Br Med Bull*; 73-74(1): 1 - 15.

Malla A and Payne J (2005). First episode psychosis. Psychopathology, quality of life, and functional outcome. *Schizophr Bull*; 31(3): 650 – 671.

Malla A, Williams R, Kopala L et al., (2006). Outcome on quality of life in a Canadian national sample of patients with schizophrenia and related psychotic disorders. *Acta Psychiatr Scand*; 113 (430): 22–28.

Manon H, Lydia K, Vollebergh W (2005). Role of distress in delusion formation. *Br J Psychiatry*; 187: 55 - 58.

Maosheng R, Mengze X, and Youhe S (2001). Natural course of schizophrenia: 2-year follow-up study in a rural Chinese community. *Br J Psychiatry*; 178: 154 - 158.

March D and Susser E (2006). Taking the search for causes of schizophrenia to a different Level. *Am J Epidemiol*; 163(11): 979 - 981.

Marion F, Vicki M, Ubolrat P et al., (2006). Technology dependence in home care impact on patients and their family caregivers. *Focus*; 6, 544-556.

Marlatt A, Baer S, and Larimer M (1995). Preventing alcohol abuse in college students. *National Institute on Alcohol Abuse and Alcoholism* 29 - 357.

Martha S, Debra S, Harry J et al., (2002). Insight into illness and attitudes toward medications among inpatients with schizophrenia. *Psychiatr Serv*; 53:1319-1321.

Matcheri S, Gregor B, Robert B et al., (2005). Neurobiology of early psychosis. *Br J Psychiatry*; 187: 8-18.

Matson J (1998). Towards a comprehensive therapy for schizophrenia. *Am J Psychiatry*; 155: 1293.

Matthew F, Steven D, Janine D and Stephen B (1998). What is a quality of life measurement measuring? *BMJ*; 316:542-545.

Maxine X and Anthony S (2005). Why depot antipsychotic prescribed more often and what aren't can be done about it. *Advances in Psychiatric Treatment*; 11: 203-211.

Mayou R (1990). Quality of life in cardiovascular disease. *Psychother Psychosom*, 54:99-109.

McArdle A (2006). Cannabis use by children and young people. *Archives of Disease in Childhood* 91:692-695.

McCloud A, Barnaby B, Omu N (2004). Relationship between alcohol use disorders and suicidality in a psychiatric population. *Br J Psychiatry*; 184: 439 - 445.

McCreadie G (2003). Diet, smoking and cardiovascular risk in people with schizophrenia. *Br J Psychiatry*; 183: 534 - 539.

McGinnis M and Foege H (1993). Actual causes of death in the United States. *Journal of the American Medical Association*; 270:2207-2212.

McGlashan T (2006). Schizophrenia in Translation. Is active psychosis neurotoxic. *Schizophr Bull*; 32(4): 609 - 613.

McGovern M, Wrisley B and Robert E (2005). Special Section on Relapse Prevention. Relapse of substance use disorder and its prevention among persons with co-occurring disorders. *Psychiatr Serv*; 56:1270-1273.

McGrath J (2006). Variations in the incidence of schizophrenia. Data versus Dogma. *Schizophr Bull*; 32(1): 195-197.

McKenna J, Lund E, Mortimer M, and Biggins A (1991). Motor, volitional and behavioral disorders in schizophrenia. The conflict of paradigms hypothesis. *Br J Psychiatry*; 158: 328 - 336.

McKenna M, Chick J, Buxton M et al., (1996). The costs and consequences of alcoholism. Health economics research group UK. *J Alcohol Alcohol*; 31(6):565-76.

McKevitt C, Redfern J, La Placa V and Wolfe D (2003). Defining and using quality of life, a survey of health care professionals. *Clinical Rehabilitation*; 17, (8), 865-870.

McKirnan J, and Peterson L (1989). Alcohol and drug use among homosexual men and women. Epidemiology and population characteristics. Addictive Behaviors; 14:545-553.

McLellan T, Druley A, O'Brien P and Kron R (1980). Matching substance abuse patients to appropriate treatments. J Drug and Alcohol Dependence; 5(3): 189-193.

McLellan T, Erdlen L, and O'Brien P (1981). Psychological severity and response to alcoholism rehabilitation. J Drug and Alcohol Dependency; 8(1): 23-35.

McNiel E and Binder L (1995). Correlates of accuracy in the assessment of psychiatric inpatients' risk of violence. Am J Psychiatry; 152:901-906.

McNiel E, Eisner P, and Binder L (2000). The Relationship between command hallucinations and violence. Psychiatr Serv; 51(10): 1288 - 1292.

Melle O, Johannesen S, Haahr U et al., (2006). Early detection of the first episode of schizophrenia and suicidal behavior .Am J Psychiatry; 163(5): 800 - 804.

Meltzer Y (2001). Treatment of suicidality in schizophrenia. Ann NY Acad Sci; 932(1): 44 - 60.

Meltzer Y, Burnett S, Bastani B, Ramirez F (1990). Effects of six months of clozapine treatment on the quality of life of chronic schizophrenic patients. Psychiatry Serv; 41(8):892-7.

Mendlowicz V, Braga J, Marrocos P and Figueira I (2005). Comorbidity and disability in outpatients with schizophrenia. Am J Psychiatry; 162(2): 400 - 400.

Mendlowicz V, Stein B (2000). Quality of life in individuals with anxiety disorders. Am J Psychiatry; 157:669–682.

Merikangas K, Stolar M, Stevens D et al., (1998). Familial transmission of substance use disorders. Arch Gen Psychiatry; 55:973-979.

Merrill J, Fox K, and Chang H (1993). The cost of substance abuse to America's Health Care System; Center on Addiction and Substance Abuse USA, NY.

Miadi H, Lancon C, Jasso G et al., (2005). Cost effectiveness analysis of schizophrenic patient care settings, impact of an atypical antipsychotic under long-acting injection formulation. *Encephale*; 31(2):235-46.

Michael D, Glick I, and Rajiv T (2004). Schizophrenia and Other Psychotic Disorders. *Focus*; 2: 17 - 30.

Michael G, Keith N, Kenneth L et al., (2004). Clinical outcome following neuroleptic discontinuation in patients with recent onset schizophrenia. *Focus*; 2: 122 - 130.

Michael G, Timothy W, Robert J (2004). Correlates of early substance use and crime among adolescents entering outpatient substance abuse treatment. *Am J of Drug and Alcohol Abuse*; 30, (1)664-668.

Michael L, Renee L Binder and McNiel D (1990). The relationship between admission symptoms and hospital assaults. *Psychiatry Serv*; 41:311-313.

Michael T, Andrew C, Kathleen K et al., (2003). Escalation of drug use in early-onset cannabis users. *JAMA*; 289:427-433.

Mike M, Jona C, Martin B et al., (1996). The cost and consequences of alcoholism. *Alcohol and Alcoholism*; 31(6). 565-576.

Mikkel A, Raben R, Leslie F, and Gurli P (2005). Cannabis induced psychosis and subsequent schizophrenia spectrum disorders. *Br J Psychiatry*; 187: 510-515.

Miller P (2004). Evidence in cannabis research. *Br J Psychiatry*; 184: 542.

Millson P, Challacombe L, Paul J et al., (2006). Determinants of health related quality of life of opiate users at entry to low threshold methadone programs. *Europ Add Res*; 12:74-82.

Miranda C, Jeffrey L, Elaine H et al., (2004). Effectiveness of second generation antipsychotic in patients with treatment resistant schizophrenia. *Focus*; 2: 111 - 121.

Miriam L, Frank V, Perry W, Lucy M (1999). Health related quality of life and symptom profiles of female survivors of sexual abuse. *Arch Fam Med*; 8: 35 - 43 ,

Miyamoto S, La Mantia S, Duncan E et al., (2003). Recent advances in the neurobiology of schizophrenia. *Mol Interv*; 3(1): 27 - 39.

Mohl K, Westlye S, Opjordsmoen A et al., (2005). Long acting risperidone in stable patients with schizoaffective disorder. *J Psychopharmacol*; 19: 22 - 31.

Moran P, Carolyn C, Anthony M et al., (2006). Patton. Personality and substance use disorders in young adults'. *Br J Psychiatry*; 188: 374 - 379.

Mori J and Mehler S (2004). Treating opioid dependence growing implications for primary care. *Arch Intern Med*; 164:277-288.

Moyer P, Oliver K, Ebnet E and Pruett B (1999). Drugs of abuse testing. An Overview of Tests Designed for Detecting Drugs Abuse. *Am J of epide*; 149(12):1113-1118.

Muldoon F, Barger D, and Flory D (1998). What are the quality of life measurements measuring? *British Medical Journal*; 316:542-545.

Mumola J (1997). Substance abuse and treatment, state and federal prisoners. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 1999.

Nahedh N (1999). Relapse among substance-abuse patients in Riyadh, Saudi Arabia. EMHJ; 5, (2)277-286.

Nasrallah A and Lasser R (2006). Improving patient outcomes in schizophrenia achieving remission. J Psychopharmacol; 20(6): 57 - 61.

Nehkant H, Mary W, and Alan F (2005). Heroin dependence in an English town. Br J Psychiatry; 187: 421 - 425.

Nestler J (1998). Relapse to drug seeking. Neural and molecular mechanisms. Drug Alcohol Dependence; 51:49.

Nestor D, Katrin K, Ines H et al., (2006). Epidemiology of substance use in a representative sample of 18 years old males. Alcohol and Alcoholism; 41(2):188-192.

Nicholas S (2003). What works in drug addiction? Advan Psychiatr Treat; 9: 287 – 288.

Nicholas S, Charles M and Paul E (2005). Stimulant use still going strong. Advan Psychiatr Treat; 11: 262 - 269.

Nicola J, Stanley Z, Bebbington P et al., (2006). Self-reported psychotic symptoms in the general population. Br J Psychiatry; 188: 519-526.

Nicole J, Femke G, Jaap W, Hans K et al., (2007). Multisite Study of Implementing Supported Employment in the Netherlands. Psychiatr Serv; 58:1421-1426.

Nordentoft M, Jeppesen P, Petersen L et al., (2002). Suicidal behavior, suicidal ideation and hopelessness among patients with first-episode psychosis. Br J Psychiatry; 181(43): s98 - 106.

Norman M, Malla K and McLean T (2000). The relationship of symptoms and level of functioning in schizophrenia to general wellbeing and the quality of life scale Acta Psychiat Scand; 102:303–309.

Ochoa S, Haro M, Autonell J, Pendas A et al., (2003). Met and Unmet needs of schizophrenia patients in a Spanish sample. *Schizophr Bull*; 29, (2)229-296.

Odejide O (2006). Status of drug use /abuse in Africa. *International Journal of Mental Health & Addiction*; 4(2), 87-102.

Ohnuma T, Augood J and Arai H (1999). Measurement of GABAergic parameters in the prefrontal cortex in schizophrenia, focus on GABA content, GABA (A) receptor alpha-1 subunit messenger RNA and human GABA transporter-1 (HGAT-1) messenger RNA expression. *Neuroscience*; 93:441–448.

Okasha A (1993). Psychiatry in Egypt. *Psychiatric Bulletin*; 17, 548 -551.

Okasha A (1996). A cultural psychiatric study of El-Zar cult in UAR. *Br. J Psychiatry*; 112, 1217 -1221.

Okasha A, Haggag W, Khalil A, Ghanem M and Kamel M (1990). A Study of 13 Diagnostic Systems (Criteria) For Schizophrenia on an Egyptian Sample: Frequencies, Agreements and Validity. *Egypt. J. Psychiat*; 13: 157-170.

Okasha A (1996). Combat and management of drug abuse, means and challenges. An Egyptian perspective. In *Proceedings of the First Egyptian International Conference on Addiction and Drug Abuse*. Cairo: Ministry of Health.

Okasha A (2001) History of mental health in the Arab world. *JWPA*; 1 -20.

Okasha A (2004) .Focus on psychiatry in Egypt. *Br J Psychiatry*; 185: 266 - 272.

Olfson M, Mechanic D, Boyer A and Hansell S (1998). Linking inpatients with schizophrenia to outpatient care. *Psychiatr Serv*; 49(7):911-7.

Olfson M, Marcus C, Wilk J, and West C (2006). Awareness of illness and nonadherence to antipsychotic medications among Persons with Schizophrenia. *Psychiatr Serv*; 57(2): 205 - 211.

Oliver J, Huxley J and Bridges K (1996). Quality of Life and Mental Health Services. *International Journal of Social Psychiatry*; 45, (4), 284-291

Oshima I, Yoshio M, and Yoshimasa I (2003). Institutionalization and schizophrenia in Japan, social environments and negative symptoms. Nationwide survey of inpatients. *Br J Psychiatry*; 183: 50 - 56.

Ostacher J and Sachs S (2006). Update on bipolar disorder and substance abuse, recent findings and treatment strategies. *J Clin Psychiatry*; 67(9): 10.

Palmer H, Lawthers G and Duggar B (1995). Understanding and choosing clinical performance measures for quality improvement. *International Journal for Quality in Health Care*; 15:287-299.

Pandiani J, Steven M, Barbara B, and Max R (2007). Crime victims and criminal offenders among adults with serious mental illness. *Psychiatr Serv*; 58:1483-1485.

Pankratz P and Bostwick M (2005). The lifetime risk of suicide in schizophrenia. *Arch Gen Psychiatry*; 62(3): 247 - 253.

Patrick L and Erikson P (1993). Health status and health policy. Quality of life in healthcare evaluation and resource allocation. *Journal of Chronic Disease*; 73-121.

Paul B, Sonia J and Graham T (2002). Community mental health care. *Psychiatry in Society*; 29:83-102.

Paula D, Gilbertson S, Robert D et al., (2007). A randomized controlled trial of fluoxetine and cognitive behavioral therapy in adolescents with major depression, behavior problems, and substance use disorders .Arch Pediatr Adolesc Med;161(11):1026-1034.

Pelonero L, Levenson J and Pandurangi K (1998). Neuroleptic malignant syndrome. Psychiatr Serv; 49(9): 1163 - 1172.

Penn L and Mueser T (1996). Research updates on the psychosocial treatment of schizophrenia. Am J Psychiatry; 153:607-617.

Perkins O, Gu H, Boteva K and Lieberman A (2005). Relationship between duration of untreated psychosis and outcome in first episode Schizophrenia. Am J Psychiatry; 162(10): 1785 - 1804.

Perkins O (2006). Longer duration of untreated psychosis is associated with worse outcome in people with first episode psychosis. Evid. Based Ment Health; 9(2): 36 - 36.

Peter B, Thomas R, Linda D et al., (2006). Randomized controlled trial of the effect on quality of life of Second vs first generation antipsychotic drugs in schizophrenia. Arch Gen Psychiatry; 63:1079-1087.

Peter H and Mahnaz S (2003). Low self-esteem and psychiatric patients. The relationship between low self-esteem and psychiatric diagnosis. JAMA; 261(1):61-5.

Peter S (2001). Substance misuse and violence, the scope and limitations of forensic psychiatry's role. Advan Psychiatr Treat; 7: 189 - 197.

Pfammatter M, Junghan U and Brenner D (2006). Efficacy of psychological therapy in schizophrenia. Schizophr Bull; 32:64 - 80.

Phelan M, Slade M, Thornicroft G et al., (1995). The Camberwell Assessment of Need, the validity and reliability of an instrument to assess the needs of people with severe mental illness. *Br J Psychiatry*; 167(5):589-95.

Pierce J, Fiore C, Novotny E, Hatziandreu J and Davis M (1989). Trends in cigarette smoking in the United States, projections to the year 2000; *JAMA*; 261(1):61-5.

Pierri N, Chaudry S and Woo U (1999). Alterations in chandelier neuron axon terminals in the prefrontal cortex of schizophrenic subjects. *Am J Psychiatry*; 156:1709–1719.

Platt J (1998). Cocaine addiction, theory, research, and treatment, Cambridge, Mass, Harvard University Press. *JAMA*; 279:479-480.

Pomarol E, Honey D, Murray K, Corlett R et al., (2006). Psychological effects of ketamine in healthy volunteers. Phenomenological study. *Br J Psychiatry*; 189: 173 - 179.

Postrado T and Lehman F (1995). Quality of life and clinical predictors of rehospitalization of persons with severe mental illness. *Psychiatr Serv.*; 46(11):1161-5.

Preau M, Protopopescu C, Spire B et al., (2006). Health related quality of life among HIV-HCV co-infected patients. *Epidemiol Sante Publique*; 54:1S33-1S43.

Procopio M (2004). Fertility and schizophrenia. *Am J Psychiatry*; 161(4): 761 - 762.

Puigdollers E, Domingo A, Brugal T et al., (2004). Characteristics of heroin addicts entering methadone maintenance treatment: quality of life and gender. *Subst Use Misuse*; 39(9):1353-68.

Pyne M, Patterson L, Kaplan M et al., (1997). Preliminary longitudinal assessment of quality of life in patients with major depression. *Psychopharmacol Bull*; 33:23–29.

Qin P and Nordentoft M (2005). Suicide risk in relation to psychiatric hospitalization. Arch Gen Psychiatry; 62(4): 427 - 432.

Rao U, Ryan D, Dahl E et al., (1999). Factors associated with the development of substance use disorder in depressed adolescents. J Am Acad Child Adolesc Psychiatry; 38:1109–1117.

Raquel E, Christian G, Daniel J et al., (2006). Flat affect in schizophrenia, relation to emotion processing and neurocognitive measures. Schizophrenia Bulletin; 32(2):279-287.

Rebecca E, Brian R and Janet G (2006). Effects on quality of life reports from mild cognitive impairment and Alzheimer's disease patients. Am J of Alzh and Other Dementias; 21, 4, 242-248.

Regier A, Farmer E, Rae S et al., (1990). Comorbidity of mental disorders with alcohol and other drug abuse. JAMA; 264: 2511 - 2518.

Regier A, Narrow E, Rae S et al., (1993). The US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. Arch Gen Psychiatry; 50:85–94.

Reid A, Lynskey M and Copeland J (2000). Cannabis use among Australian adolescents, findings of the 1998 National Drug Strategy Household Survey. Aust N Z J Public Health; 24(6):596-602.

Richard C, Jaap E, Anton J, Paul G et al., (2006). Strategies for discontinuing long-term benzodiazepine use. Br J Psychiatry; 189: 213 - 220.

Richard S, Claire E and Michael J (1998). Tobacco and alcohol use among 1996 medical school graduates. JAMA; 280: 1192 - 1195.

Rita Z and Nora D (2002). Drug Addiction and its underlying neurobiological basis. Neuroimaging evidence for the involvement of the frontal cortex, *Am J Psychiatry*; 159: 1642 - 1652.

Ritsner M, Gibel A, and Ratner Y (2002). Improvement of sustained attention and visual and movement skills, but not clinical symptoms, after Dehydroepiandrosterone augmentation in schizophrenia. *Journal of Clinical Psychopharmacology*; 26(5):495-499.

Rivara F (1997). Alcohol and illicit drug abuse and the risk of violent death in the home. *Journal of the American Medical Association*; 278 -569.

Robert B, Hongbin G, Alan G, Diana O et al., (2005). Course and predictors of weight gain in people with first episode psychosis treated with olanzapine or haloperidol. *Br J Psychiatry*; 187: 537 - 543.

Robert G (2005). Physicians with opioid dependence. *JAMA*; 293:294.

Robert J and Ronald E (2004). Predicting methadone maintenance treatment outcomes using the addiction severity index and the MMPI-2 content scales. *Am J of Drug and Alcohol Abuse* ; 292-296.

Robert K (2000). Distinguishing Between the Validity and Utility of Psychiatric Diagnoses. *Br J Psychiatry*; 177: 185 - 188.

Robert M, Flashman L, Andrew J, Thomas W et al., (2004). Apathy in Schizophrenia. Reduced frontal lobe volume and neuropsychological deficits. *Am J Psychiatry*; 161: 157 – 159.

Roberts C, Robin A, Willem P, and Dan J (1999). Anxiety Disorders among abstinent alcohol dependent patients. *Psychiatr Serv*; 50:1359-1361.

Roberts H, Kewman G, Mercier L and Hovell M (1993). The power of non-specific effects in healing, implications for psychological and biological treatments. Clin Psychol Rev; 13: 375-391.

Rockville D (2002). Secondary school students, National Institute on Drug abuse. Am J Drug Alcohol Abuse; 29(2):323-35.

Ross E, Glaser B and Germanson T (1988). The prevalence of psychiatric disorders in patients with alcohol and other drug problems. Arch Gen Psychiatry; 45: 1023 – 1031.

Ross K, Frommelt G, Hazelwood L and Chang W (1987). The role of expectations in patient satisfaction with medical care. J Health Care Marketing; 7: 16-26.

Rossau D and Mortensen B (1997). Risk factors for suicide in patients with schizophrenia. Br J Psychiatry; 171: 355 - 359.

Rudolf H and Jay W (2002). Quality of life in substance abuse and dependency. International Review of psychiatry; 14, (3)385-391.

Rudra C (2006). Age of onset and comorbid substance use in schizophrenia. Br J Psychiatry; 188: 237-242.

Ruhm J (1996). Alcohol policies and highway vehicle fatalities. Journal of Health Economics; 15:435-454.

Ryan F and White M (1996). Health status at entry to methadone maintenance treatment using the SF-36 Health Survey Questionnaire. Addiction; 91, 39– 45.

Ryan W (2003). Managing negative symptoms of schizophrenia. Am J Psychiatry; 160: 807.

Sadek H(2006). Inflammatory Response in Schizophrenia. Current Psychiatry; 13(3) 498-507.

Safren A, Heimberg G, Brown J and Holle C (1997). Quality of life in social phobia. *Depress Anxiety. Journal of Affective Disorders*; 50: S29 - S34.

Sainfort F, Becker M and Diamond R (1996). Judgments of quality of life of individuals with severe mental disorders: Patient self-report versus provider perspectives. *Am J Psychiatry*; 153(4):497-501.

Saji H, Iida Y, Nakatsuka I et al. (1993). A potential imaging agent for SPECT investigations of benzodiazepine receptors. *J Nucl Med*; 34(6):932-7.

Salem S (1998). Annual Statistical Report. Alexandria: Poison Center, Alexandria Main University Hospital.

Sarah R, Cassio L and Richard M (2006). Alcohol abuse and alcoholism. *JAMA*; 295: 2100.

Schaar I and Ojehagen A (2003). Predictors of improvement in quality of life of severely mentally ill substance abusers during 18 months of co-operation between psychiatric and social services. *Soc Psychiatry Psychiatr Epidemiol*; 38(2):83-7.

Schmidt K, Staupendahl A and Vollmoeller W (2004). Quality of life of schizophrenic psychiatric outpatients as a criterion for treatment planning in psychiatric institutions. *International Journal of Social Psychiatry*; 50, 262-272.

Schneiderd K, James L, and Sidney H (2001). Update in addiction medicine. *Annals of Internal Medicine*: 387-395.

Schooler N (2004). Maintenance medication for schizophrenia, strategies for dose reduction. *Focus*; 2: 175 - 186.

Schrimsher W, Parker D, Burke S, Ker D, and Burke S (2007). Relation between cognitive testing performance and pattern of substance use in males at treatment entry. *Clin Neuropsychol*; 21(3):498-510.

Schuckit A (1996). Are the costs of alcoholism treatment justified? Drug Abuse Alcohol News; 25:1.

Schuckit A (2000). Drug and alcohol abuse. A clinical Guide to Diagnosis and Treatment, 5th edition, USA, New York.

Schuckit A and Hesselbrock V (1994). Alcohol dependence and anxiety disorders: what is the relationship? Am J Psychiatry; 151:1723-1734.

Schuckit M and Victor H (2004). Alcohol dependence and anxiety disorders, what is the relationship. Focus; 2:440-453.

Schulte F (2006). Risk of clozapine associated agranulocytosis and mandatory white blood cell monitoring; Ann Pharmacother; 40(4): 683 - 688.

Seena F and Martin G (2006). The Population Impact of Severe Mental Illness on Violent Crime. Am J Psychiatry; 163:1397-1403.

Seidl M and Zannon M (2004). Quality of life and health: conceptual and methodological issues. Cad Saude Publica; 20(2):580-8.

Seidman J, Giuliano L, Smith W et al., (2006). Neuropsychological functioning in adolescents and young adults at genetic risk for schizophrenia and affective psychoses. Schizophr Bull; 32(3): 507 - 524.

Sharma T, Lancaster E, Lee D et al., (1998). Brain changes in schizophrenia. Volumetric MRI study of families multiply affected with schizophrenia. Br J Psychiatry; 173: 132 - 138.

Sharonj H, Sheil G, Avril T, David J and Martin F (2000). Extent and contributing factors of drug expenditure of injectors in Glasgow. Br J Psychiatry; 176: 166-172.

Shaun E and Christina N (2007). Psychiatric symptoms and quality of life in schizophrenia. Schizophrenia Bulletin; 33(5):1225-1237.

Shawanda W, Alan J, and Nanetta P (2004). Predicting inpatient length of stay with the expanded version of the Brief Psychiatric Rating Scale. *Psychiatr Serv*; 55:77-79.

Shedler J and Block J (1990). Adolescent drug use and psychological health: A longitudinal inquiry. *American Psychologist*; 45(5):612-630.

Shephard R, Greenough A and Johnson K (2002). Hyperphagia, weight gain and neonatal drug withdrawal. *Acta Paediatrica*; 91, 951–953.

Shepherd M, Watt D and Falloon I (1989). The natural history of schizophrenia, a five-year follow-up in a representative sample of schizophrenics. *Br J Gen Pract*; 45(396): 343–347.

Sherbourne D, Hays D, Fleishman A et al., (2000). Impact of psychiatric conditions on health-related quality of life in persons with HIV infection. *Am J Psychiatry*; 157(2):248-54.

Shirley G, Stephen R, Robert P et al (2004). Supplementing clinical based skills training with Manual-Based Community support sessions. Effects on social adjustment of patients with schizophrenia. *Focus*; 2: 68 - 77.

Siegrist J and Junge A (1990). Measuring the social dimension of subjective health in chronic illness. *Psychother Psychosom*; 54:90-98.

Sim K, Siris R, Heckers G, and Chong S (2004). Subjective quality of life in first episode schizophrenia spectrum disorders with comorbid depression. *Psychiat Res*; 129:141–147.

Sindelar J (1998). Social costs of alcohol. *Journal of Drug Issues*; 28:763-780.

Slaymaker J and Owen L (2006). Employed men and women substance abusers, job troubles and treatment outcomes. *J Subst Abuse Treat*; 31(4):347-54.

Smith K and Larson M (2003). Quality of life assessments by adult substance abusers receiving publicly funded treatment in Massachusetts. *Am J of Drug and Alcohol Abuse* ; 313-318.

Smith W, Avis E and Assmann F (1999). Distinguishing between quality of life and health status in quality of life research. *Quality of Life Research*; 8:447–459.

Smyth B, Joe B, Alison L et al., (2005). Inpatient treatment of opiate dependence, medium term follow up outcomes. *Br J Psychiatry*; 187: 360 – 365.

Soares C, Innis B (1999). Neurochemical brain imaging investigations of schizophrenia. *Biol Psychiatry*; 46:600–615.

Solomonp L, Cavanaugh M, and Gelles J (2005). Family violence among adults with severe mental illness. *J Am Acad Psychiatry Law*; 36:74–86.

Sophie P and Shôn L (2006). Identification of young people at risk of psychosis. *Advances in Psychiatric Treatment*; 2: 249-255.

Soueif I (1994). Extent and patterns of drug use among students and working class men in Egypt. Cairo: National Centre for Social and Criminological Research.

Soyka M (2000). Substance misuse, psychiatric disorder and violent and disturbed behaviour. *Br J Psychiatry*; 176: 345 - 350.

Stephen H, Louis S and Newman A (2003). Prevalence of hepatitis C among psychiatric patients in the public sector. *Am J Psychiatry*; 160:172-174.

Stephen P (2006). Euphorigenic and abusive properties of modafinil. *Am J Psychiatry*; 163:549.

Steven J (2002). Physical health monitoring of patients with schizophrenia. *Am J Psychiatry*; 159:615-61.

Steven J, Farzin I, Colleen M, Christian G (2006). Prognostic variables at intake and long-term level of function in schizophrenia. *Am J Psychiatry*; 163:433-441.

Steven M, Steven L and Ritchard S (1995). Practice guideline for the treatment of patients with substance use disorders, alcohol, cocaine, opioids. *Am J Psychiatry*; 152:11

Strassman R (1995). Hallucinogenic drugs in psychiatric research and treatment. Perspectives and prospects. *J Nerv Ment Dis*; 183(3):127-38.

Suddhasatta A and Heping Z (2003). Assessing sex differences on treatment effectiveness from the drug abuse treatment outcome study; *Am J of Drug and Alcohol Abuse*; 277-282.

Sukhwinder S, Gabrielle S, Paul M et al., (2005). Evidence for Sensory Prediction Deficits in Schizophrenia. *Am J Psychiatry*; 162: 2384 - 2386.

Sullivan G, Burnam A, Paul K, and Jan H (2000). Quality of life of homeless persons with mental illness. *Psychiatr Serv*; 51:1135-1141.

Sun W and Rebec V (2006). Repeated cocaine self-administration alters processing of cocaine-related information in rat prefrontal cortex. *J. Neurosci*; 26(30): 8004 - 8008.

Susser E, Miller M, Valencia E, Colson P et al., (1996). Injection drug use and risk of HIV transmission among homeless men with mental illness. *Am J Psychiatry*; 153:794-798.

Swenson J and Clinch J (2000). Assessment of quality of life in patients with cardiac disease, the role of psychosomatic medicine. *J Psychosom Res*, 48:405-415.

Swift W, Wayne H and Maree T (2001). Cannabis use and dependence among Australian adults, results from the National Survey of Mental Health and Wellbeing. National Drug and Alcohol Research, Australia. *Addiction*; 96, 737–748.

Taber H, Lewis A, and Hurley A (2001). Schizophrenia, what is under the microscope. *J Neuropsychiatry Clin Neurosci* ; 133-154.

Taioli E and Wynder E (1991). Effect of the age at which smoking begins on frequency of smoking in adulthood. *New Engl J Med*; 325:968- 9.

Tarrier N (2006). Negative symptoms in schizophrenia. *Schizophr Bull*; 32(2): 231 - 233.

Tatsuo A, Motoki I, Yosuke U and Shoichiro T (2006). Alcohol consumption and suicide among middle-aged men in Japan. *Br J Psychiatry*; 188: 231 - 236.

Testa A, Simonson C (1996). Assessment of quality of life outcomes. *N Engl. J Med*: 334:835-840.

Thieda P, Beard S, Richter A and Kane J (2003). An economic review of compliance with medication therapy in the treatment of schizophrenia. *Psychiatr Serv*; 54(4): 508 - 516.

Thomas H (1993). Psychiatric symptoms in cannabis users. *Br J Psychiatry*; 163:141.

Thomas J, Jon M, Kimberly A, Eyich L (2003). Health-related Quality of Life for Adults Participating in Outpatient Substance Abuse Treatment; *Am J Addi*; 583-588.

Thornicroft G (1990). Cannabis and psychosis. *Br J Psychiatry*; 157:25.

Thornicroft G, Tansella M, Becker T (2004). The personal impact of schizophrenia in Europe. Schizophrenia has substantial impact on personal life of patients and caregivers. *Schizophr Bull*; 69:125-132.

Thune J and Pakkenberg B (2000). Stereological studies of the schizophrenic brain. *Brain Res Rev*; 31:200–204.

Tine W, Preben B, Carsten B et al., (1999). Exposure to prenatal and childhood infections and the risk of Schizophrenia and Influenza Prevalence, *Arch Gen Psychiatry*; 56: 993 - 998.

Tolmac J and Hodes M (2004). Ethnic variation among adolescent psychiatric in-patients with psychotic disorders. *Br. J. Psychiatry*; 184(5): 428 - 431.

Tomas J, Giedrius L, Saulius V et al., (2006). Effects of ketamine on precipitated opiate withdrawal. *Medicina*; 42(8) 625

Torpy J, Cassio L and Richard M (2004). Opioid Abuse. *JAMA*; 292: 1394.

Treichel A (2004). Scientists search for roots of apathy in schizophrenia. *Psychiatr News*; 39(2): 26 - 26.

Turkington D and Kenna P (2003). Is cognitive behavioral therapy a worthwhile treatment for psychosis? *Br J Psychiatry*; 182(6): 477 - 479.

Turkington D, Kingdon D, and Weiden J (2006). Cognitive behavior therapy for schizophrenia. *Am J Psychiatry*; 163(3): 365 - 373.

Turner H (2004). Long term outcome of treating schizophrenia. *BMJ*; 1058 - 1059.

Turner S and Stewart W (2006). Review of the evidence for the long-term efficacy of atypical antipsychotic agents in the treatment of patients with schizophrenia and related psychoses. *J Psychopharmacol*; 20(6): 20 - 37.

Tuulio H, Partonen T, Suvisaari J et al., (2004). Age at onset and cognitive functioning in schizophrenia. *Br J Psychiatry*; 185(3): 215 - 219.

Tyrone D, Jaakko K, Jouko L et al., (1998). The genetic epidemiology of schizophrenia in a Finnish twin cohort. Arch Gen Psychiatry; 55:67-74.

Urshel C, McLellan A (1996). The Clinical Training Version of the Fifth Edition of the Addiction Severity Index.

Van den Brink W and Haasen C(2006). Evidenced-based treatment of opioid-dependent patients. Can J Psychiatry; 51(10):635-46.

Vasant P, Keitha R and William M (2000). Survey of Hepatitis B and C in addiction treatment unit. Am J Drug and Alcohol Abuse; 26 (4) 616-629.

Vasta B (2001). Ecstasy Experts Want Realistic. JAMA; 86:777.

Vastag B (2001) HIV and heroin interactions. JAMA; 286:295.

Vastag B (2001). Mixed message on prescription drug abuse. JAMA; 285: 2183 - 2184.

Vastag B and Nora V (2003). From rejection to direction. JAMA; 290: 2647 - 2652.

Veenhuis E (2000). Recent developments in alcoholism, alcohol and violence epidemiology, neurobiology, psychology, family issues. JAMA; 283: 1887.

Velakoulis D, WoodS J, Wong H et al., (2006). Hippocampal and Amygdala volumes according to psychosis stage and diagnosis. A magnetic resonance imaging study of chronic schizophrenia, first episode psychosis, and ultra high risk individuals. Arch Gen Psychiatry; 63(2): 139 - 149.

Velarde E and Avila C (2002). Evaluation of the quality of life. Salud Publica Mex; 44(4):349-61.

Velligan I, Kern S, and Gold M (2006). Cognitive rehabilitation for schizophrenia and the putative role of motivation and expectancies. Schizophr Bull; 32(3): 474 - 485.

Volavka J, Czobor P, Sheitman B et al., (2004). Clozapine, olanzapine, risperidone, and haloperidol in the treatment of patients with chronic schizophrenia and schizoaffective disorder. *Focus*; 2: 59 - 67.

Volk J, Cantor B, Steinbauer R and Cass R (1997). Alcohol use disorders, consumption patterns, and health-related quality of life of primary care patients. *Alcohol Clin Exp Res*; 21(5):899-905.

Volk W, Austin C and Pierri N (2000). Decreased glutamic acid decarboxylase 67 messenger RNA expression in a subset of prefrontal cortical gamma-aminobutyric acid neurons in subjects with schizophrenia. *Arch Gen Psychiatry*; 57:237–245.

Vollenweider X (1998). Advances and pathophysiological models of hallucinogenic drug actions in humans, a preamble to schizophrenia research. *harmacopsychiatry*; 31: 92–103.

Walker A (2005). A European perspective on quality of life in old age. *Eur J Ageing*; 2(1):2–12.

Wallace C, Paul E, and Philip B (2004). Criminal offending in schizophrenia over a 25-year period marked by deinstitutionalization and increasing prevalence of comorbid substance use disorders. *Am J Psychiatry*; 161:716-727.

Ware E (1995). The status of health assessment 1994. *Annu Rev Public health*; 16:327-354.

Ware E and Sherbourne D (1992). The MOS 36-item short-form health survey, conceptual framework and item selection. *Med Care*; 30:473–483.

Warner R (1999). The emics and etics of quality of life assessment. *Social Psychiatry and Psychiatric Epidemiology*; 34, 117 -121.

Warner R. and Huxley P (1998). Outcome for people with schizophrenia before and after Medicaid capitation at a community mental health center in Colorado. *Psychiatric Services*; 49, 802 -807.

Watkins K, Paddock S, Zhang L (2006). Improving care for depression in patients with comorbid substance misuse. *Am J Psychiatry*; 163:125-132.

Weiser M, Reichenberg A, Grotto I et al., (2004). Higher rates of cigarette smoking in male adolescents before the onset of schizophrenia. *Am J Psychiatry*; 161(7): 1219 - 1223.

Weisner C and Schmidt L (1993). Alcohol and drug problems among diverse health and social service populations. *Am J Public Health*; 83:824-829.

Wertz S, Cleaveland L and Stephens S (1995). Problems in the application of the Addiction Severity Index (ASI) in rural substance abuse services. *J Subst Abuse*; 7(2):175-88.

Westermeyer J and Terry D (1999). Course of substance abuse in patients with and without schizophrenia. *Am J Addict*; 8:55.

Wiersma D and Busschbach J (2001). Are needs and satisfaction of care associated with quality of life? An epidemiological survey among the severely mentally ill in the Netherlands. *Eur Arch Psychiatry Clin Neurosci*; 251(5):239-46.

Wilkin D, Hallam L and Doggett A (1992). Measures of need and outcome for primary health care. Oxford University, Oxford Medical Publications; 230-60.

Wilkinson G, Bernadette H Diane W et al., (2000). Declaration of interest self-report quality of life measure for people with schizophrenia. *Br. J. Psychiatry*; 177: 42-46.

William W, Majella B, Henrik E, Esben A et al., (2006). Association of schizophrenia and autoimmune diseases. Am J Psychiatry; 163: 521 - 528.

Williams R (2003). Cognitive behavioral therapy delivered by nurses improved insight and overall symptomatology in schizophrenia. Evid Based Med; 8(1): 23 - 23.

Wilson M, Bridget F, James D, Meyer D et al., (2004). Prevalence of marijuana use disorders in the United States: 1991-1992 and 2001-2002. JAMA; 291: 2114 - 2121.

Wilson M, Yonette F, Kevin P and James D (2005). Developments in the epidemiology of drug use and drug use disorders. Am J Psychiatry; 162:1494-1502.

Wisniewski B, Selnes A, Nath A, McArthur C (2005). Depressive symptoms, quality of life, and neuropsychological performance in HIV/AIDS: the impact of gender and injection drug use. J Neurovirol.; 11(2):138-43.

Woodruff H, Healy J (2000). Glutamate receptor expression in schizophrenic brain. Brain Res Rev; 31:288– 294.

Woolley J and McGuire P (2005). Neuroimaging in schizophrenia: what does it tell the clinician. Advan Psychiatr Treat; 11(3): 195 - 202.

Zakhari S (1997). Alcohol and the cardiovascular system: Molecular mechanisms for beneficial and harmful action. Alcohol Health and Research World; 21(1):21-29.

Zheng L and David A (2005). Family education for people with schizophrenia in Beijing, China. Br J Psychiatry; 187: 339-345.

Zwart W and van Laar M (2001). Cannabis regimes. Br J Psychiatry; 178: 574-575.

الملخص العربي

مقدمة البحث

تعرف جودة نوعية الحياة بأنها قياس التغيرات التي تصاحب الأمراض النفسية أو الإدمان قبل وأثناء العلاج من نواحي متعددة منها الحالة الصحية، الحالة النفسية، الحالة الاجتماعية، الحالة الوظيفية والقانونية ومدى الشعور بالرضي المصاحب لهذه الحالات. كما أن الاعتماد أو سوء استخدام المواد المسببة للإدمان ومرض الفصام العقلي كلها أمراض نفسية مزمنة لها آثار سيئة علي جودة الحياة بالنسبة لكل من المرضى الفصامين والمدمنين والمحيطين بهم. فمن المعروف أن الإدمان هو مرض مزمن يؤثر سلباً على حياة الإنسان الاجتماعية والنفسية والاقتصادية كما يصاحب الإدمان تغيرات في سلوك وتصرفات الفرد والقدرة على الحكم على الأمور وفقد السيطرة على تناول المواد المخدرة والشوق إلى المخدر. وقد وجد في آخر إحصائية أن 37% من سكان الولايات المتحدة يستعمل نوع واحد من المواد المخدرة على الأقل طوال حياتهم و13% استخدموا المواد المسببة للإدمان خلال العام السابق و6% استخدموا المواد المخدرة خلال الشهر السابق للإحصائية و15% من الشباب ممن أعمارهم أكبر من 18 سنة لديهم مشكلات ادمانية خطيرة وتلثين هذه المجموعة تستخدم الكحول. كما أنه حوالي 100.000 من حالات الوفيات في الولايات المتحدة لها علاقة باستعمال الكحول والمواد المسببة للإدمان. في حين 12000 حالة وفاة سنوية لها علاقة بمرض الايدز. وقد كان حجم إنفاق الولايات المتحدة الأمريكية علي مكافحة المخدرات عام 1995 حوالي 276 بليون دولار سنوياً. وقد يستخدم بعض المرضى النفسيين المواد المخدرة كعلاج و في بعض الأحيان قد تكون الأمراض النفسية ناتجة عن استعمال المواد المسببة للإدمان بكميات كبيرة. بينما ذكرت الإحصائيات أن عدد المدخنين حوالي 48 مليون مدخن في العالم والتدخين يؤدي إلي حدوث 430 ألف حالة وفاة سنوية.

أشارت الدراسات إلى أن الاعتماد علي المواد المسببة للإدمان أكثر بين العاطلين عن العمل وكذلك بدء انتشار هذا المرض بين العاملين في المجال الطبي. كما أظهرت النتائج أن الاعتماد علي المواد المخدرة له آثار سلبية علي الإنسان وعلي

أفراد الأسرة وعلى المجتمع وعلى الاقتصاد القومي , فالكحول والمشاكل المصاحبة لتعاطيه واحدة من أكثر أسباب تغييب العمال عن تأدية عملهم وأخذهم الأجازات المرضية وقدرت بحوالي 14 مليون يوم عمل سنوياً.

ليس هذا فحسب بل وجد أن هناك علاقة قوية بين الاعتماد على المواد المسببة للإدمان و الجريمة والعنف الموجه إلي الآخرين أو الممتلكات أو موجه إلي نفس الإنسان في صورة الانتحار حيث وجد أن نسبة الانتحار وسط الشباب الذي يتراوح أعمارهم بين 14-25 سنة الذين يستعملون المواد المخدرة 13.3 من كل 100.000 كما إن 20% من الجرائم لها علاقة بالاعتماد على الهيروين كما في إحصائية عام 2002. فالاعتماد على المواد المسببة للإدمان تؤثر علي الوظائف المعرفية و المهارات الفردية مثل قيادة السيارة فالكحول يعتبر العامل الرئيسي في ارتفاع نسبة الوفيات الناتجة عن حوادث الطريق لتصبح 40%-50% في عام 2000 واستخدام المواد المسببة للإدمان وخاصة التي تستعمل عن طريق الحقن الوريدي تساعد علي انتشار بعض الأمراض الخطيرة مثل الإيدز , التهاب فيروسي سي أو بي وهي أمراض معدية وتحتاج إلي علاج مكلف والي فترات زمنية طويلة ونتائج محدودة. ومن أهم المشاكل التي تصاحب علاج الاعتماد علي المواد المخدرة أن المريض لا يقوم باستكمال البرنامج العلاجي ويرفض التوصيات العلاجية ويؤثر ذلك سلباً علي النتيجة المرجوة من العلاج.

من ناحية أخرى فإن الفصام مرض نفسي يصيب حوالي 1% من كل سكان العالم حسب إحصائية منظمة الصحة العالمية وهذا المرض يؤثر علي المريض وعائلته سلباً كما يؤثر علي جودة الحياة بالنسبة للمريض وعائلته. لذلك أكد الباحثون في مجال الصحة النفسية أهمية قياس المتغيرات التي تطرأ علي الحياة النوعية للمرضى كذلك قياس جودة نوعية الحياة بالنسبة لمرضى الفصام بعد استخدام مضادات الفصام الحديثة , المتابعة المستمرة للمرضى النفسيين واستخدام مضادات الفصام الحديثة طويلة المفعول , التي تؤدي بدورها بتقليل مرات الحجز بالمستشفيات النفسية وهذا يحسن نوعية الحياة لدي المرضى النفسيين.

الهدف من البحث

هناك دراسات كثيرة في الغرب عن التغيرات في حياة المدمنين ومرضي الفصام , وعن درجة الرضا وجودة نوعية الحياة لهؤلاء المرضى ولكن تفتقر منطقتنا العربية لمثل هذه الدراسات وقد أظهرت بعض الدراسات القليلة التي أجريت في هذا النطاق فقر جودة الحياة بالنسبة لمرضي الفصام والإدمان بالرغم من تواتر جهود الحكومات للإنفاق علي هؤلاء المرضى وتحسين نوعية الحياة لديهم و لذا فان الهدف من هذه الدراسة هو المقارنة بين جودة الحياة في مرضي الإدمان وجودة الحياة في مرضي الفصام.

صُممت هذه الدراسة بهدف تغطية الجوانب التالية:

• الجانب النظري

1. مراجعة المعلومات المتوفرة عن جودة الحياة عامة.
2. مراجعة المعلومات المتوفرة عن الإدمان وعلاقته بجودة الحياة.
3. مراجعة المعلومات المتوفرة عن مرض الفصام وعلاقته بجودة الحياة.
4. مراجعة الدراسات السابقة للمقارنة بين جودة الحياة في مرضي الفصام ومرضي الإدمان.

• الجانب العملي

1. دراسة العوامل المؤثرة علي جودة الحياة في مرضي الإدمان ومرض الفصام.
2. دراسة العلاقة بين درجة شدة المرض وجودة الحياة في مرضي الإدمان ومرض الفصام.
3. دراسة العلاقة بين الاكتئاب والقلق المصاحبين لمرض الإدمان و جودة الحياة لهؤلاء المرضى.
4. استنتاج العلاقة بين المتغيرات الإكلينيكية وجودة الحياة في كل عينة من مرضي الإدمان و الفصام لمعرفة أي المجموعتين أفضل في جودة الحياة.

مكان و عينة البحث

مجمع الأمل للصحة النفسية بالمملكة العربية السعودية- الدمام- ويتكون من مستشفى لعلاج الإدمان وآخر لعلاج الأمراض النفسية , ويعتبر من اكبر المستشفيات المتخصصة في علاج الإدمان بالمملكة العربية السعودية , ويتكون مستشفى علاج الإدمان من خمسة أقسام لحجز المرضى داخل المستشفى بسعة 300 سرير , عيادة خارجية , وحدة الرعاية المستمرة لمتابعة المرضى بعد خروجهم من الأقسام الداخلية. يتكون البرنامج العلاجي لمرضي الإدمان من برنامج داخلي يشمل حجز المريض لمدة شهر داخل المستشفى لعلاج من الأعراض الانسحابية وإعادة تأهيله مرة أخرى للمجتمع وبرنامج خارجي يشمل متابعة وحدة الرعاية المستمرة لمدة عام , وتتكون مستشفى الأمراض النفسية من عيادات خارجية وأقسام داخلية لحجز المرضى والتي بدورها تتكون من قسمان للرجال وقسم للحريم, بسعة 150 سرير. ويخدم مجمع الأمل للصحة النفسية المرضى السعوديين عامة ورعايا دول مجلس التعاون الخليجي مثل البحرين , الكويت وغيرها.

تتكون عينة البحث من مرضي يعانون من الاعتماد علي المواد المسببة للإدمان اختيروا من الأقسام التأهيلية بطريقة عشوائية و بعد انتهاء فترة الأعراض الانسحابية. في نفس الوقت اختيرت عينة مرضي الفصام بطريقة عشوائية من أقسام النفسية بالمجمع.

معايير اختيار المرضى

1- بالنسبة لمرضي الإدمان:

1. تشخيص المريض يتوافق مع التصنيف الدولي العاشر للأمراض النفسية والاعتماد علي المواد المسببة للإدمان.
2. المريض لا يعاني من الفصام أو اضطراب المزاج ثنائي القطب.
3. المريض يحمل جنسية عربية.

معايير استبعاد مرضي الإدمان:

1. المريض يعاني من مرض الفصام أو اضطراب المزاج ثنائي القطب.
2. المريض لا يحمل جنسية عربية.

2- معايير اختيار مرضي الفصام :

1. تشخيص المريض يتوافق مع التصنيف الدولي العاشر للأمراض النفسية .
2. المريض لا يعاني من أعراض الاعتماد علي المواد المسببة للإدمان أو أعراض أخرى مثل القلق والاكتئاب.
3. المريض يحمل أي جنسية عربية.

معايير استبعاد المرضي:

1. المريض يعاني من أعراض الاعتماد علي المواد المسببة للإدمان أو أعراض أخرى مثل القلق والاكتئاب.
2. المريض لا يحمل جنسية عربية.

الأدوات المستخدمة في البحث:

1. التقييم الطبي النفسي.
2. التقييم الطبي للإدمان.
3. التشخيص العالمي للأمراض النفسية ICD-10.
4. مقياس لتحديد شدة المرض في مرضي الإدمان ASI.
5. مقياس لتحديد شدة المرض في مرضي الفصام BPRS.
6. مقياس لتبئين وجود أعراض قلق واكتئاب في مرضي الإدمان HDRS , HARS
7. مقياس نوعية جودة الحياة لكل من الفريقين W-QOL.

8. التحليل الإحصائي.

الخطوات المتبعة مع كل مريض من مرضي الإدمان:

1. اخذ موافقة شفوية من المريض لاشتراكه في البحث
2. اخذ التاريخ المرضي النفسي والادمانى للمريض بالتفاصيل
3. الفحص الإكلينيكي للمريض
4. الفحص المعملّي للكشف عن وجود المواد المسببة للإدمان .
5. قياس شدة الإدمان عند المرضي.
6. معامل هاملتون لقياس الاكتئاب.
7. معامل هاملتون لقياس القلق.
8. قياس التغيرات الناتجة عن الإدمان وجودة الحياة باستخدام مقياس وسكانسن لقياس جودة الحياة.

الخطوات المتبعة مع كل مريض من مرضي الفصام :

1. اخذ موافقة شفوية من المريض لاشتراكه في البحث.
2. اخذ التاريخ المرضي النفسي للمريض بالتفاصيل.
3. الفحص الإكلينيكي للمريض.
4. الفحص المعملّي للمرضي.
5. قياس شدة الأعراض الذهانية عند مرضي الفصام باستخدام اختبار المسح الذهاني.
6. قياس التغيرات الناتجة عن الإصابة بمرض الفصام و جودة الحياة بالنسبة لمرضي الفصام باستخدام مقياس وسكانسن لقياس جودة الحياة.

الخطوات المتبعة:

سبقت الدراسة الأساسية اخذ عينة استطلاعية من المرضي المحجوزين بالمجمع بأقسام الإدمان والنفسية ذلك لتحديد نوعية المرضي من ناحية العمر والجنس , والاشتمال علي المرضي المحجوزين و مرضى العيادات الخارجية , ولعمل تقييم مبدئي للأدوات المستخدمة
و قد أظهرت نتائج العينة الاستطلاعية الآتي:

1. قلة عدد مرضي الإدمان من النساء المنومين لذلك تم استبعادهم من البحث حتى تكون العينة متجانسة
2. لوحظ وجود فروق في السن بين مرضي الفصام ومرضي الإدمان الذين بدورهم يأتون للعلاج في المراحل المبكرة من المرض
3. هناك عدد كبير من مرضي الفصام يتابعون العيادات الخارجية و لكن بطريقة غير منتظمة ولذا تم استبعاد مرضي العيادات الخارجية وذلك لان تطبيق أدوات البحث يتطلب ما بين 2-3 جلسات مع كل مريض.
4. كانت نسبة الأشغال لمرضي الإدمان عالية بمعدل 3-5 مرضي منومين يوميا أما بالنسبة لمرضي النفسية كانت اقل في المعدل من 1-2 مريض يوميا وبناء علي ذلك تم تحديد عدد 200 مريض للإدمان و 100 مريض من مرضي الفصام في العينة الأساسية وقد تم البحث في الفترة ما بين فبراير 2006 إلي ابريل 2007.

نتيجة البحث و المناقشة:

لقد أظهرت نتيجة هذا البحث أن جودة الحياة لمرضي الفصام و المرضي الذين يعانون من مشكلة الإدمان في كل الدراسات اقل بكثير عن المستوي الطبيعي. بالمقارنة بين جودة نوعية الحياة في مرضي الإدمان و الفصام وجد أنها أفضل بين مرضي الإدمان عن مرضي الفصام عامة في هذه الدراسة وذلك لان سياسة الدولة داعمة لعلاج الإدمان بوضع البرامج اللازمة وتوفير السياسات العلاجية الحديثة للعلاج من الإدمان وهذا يحسن جودة الحياة بالنسبة لمرضي الإدمان عن مرضي الفصام, كذلك طريقة اختيار مرضي الفصام من الأقسام الداخلية , عدم وجود مريضات بالنسبة لكل من عينة الإدمان و الفصام , وحيث أن جودة حياة المدمنين من الذكور أفضل من المدمنات الإناث وفيما يخص جودة الحياة لمرضي الفصام فبالعكس صحيح وذلك بسبب عادات المجتمع الذي يوفر للمرأة الحماية بجميع جوانبها .

ومن نتائج البحث أن متوسط أعمار مرضي الإدمان أقل من متوسط أعمار مرضي الفصام كان متوسط مرات دخول المستشفى بالنسبة لمرضي الإدمان 2.89 ± 3.54 بينما متوسط مرات دخول المستشفى بالنسبة لمرضي الفصام 3.24 ± 1.17 وكانت النتائج مقاربة لمعظم الدراسات التي تمت في أماكن مختلفة بالعالم , متوسط أعمار مرضي الفصام اكبر من متوسط أعمار مرضي الإدمان وذلك حيث أن مرض الفصام يحتاج لفترة زمنية طويلة حتى تظهر جميع

الإعراض الذهانية ,فالكثير من الناس لا يعلمون ويخشون التعامل مع المرضى النفسيين وينظرون إلي المرض النفسي نظرة دونية وهذه النظرة لها تأثير سلبي علي المريض في علاجه وبالتالي علي جودة الحياة لمرضى الفصام. كان غالبية المرضى سعوديين في العينتين (94% من مرضى الإدمان و 92% من مرضى الفصام).

بالنسبة للحالة الاجتماعية , كانت الغالبية العظمي من مرضى الإدمان عزاب لم يسبق لهم الزواج , نسبة المتزوجون كانت 26% , المطلقون 12% والأرامل 5% وهذا يرجع إلي التأثير السلبي للإدمان علي الحياة الاجتماعية و الزوجية و بالتالي علي جودة الحياة , بالمقارنة بمجموعة الفصاميين كانت نسبة العزاب التي لم يسبق لهم الزواج 76% , المطلقين 16% والمتزوجين 8% وهذه النتائج كانت مماثلة للدراسات الأخرى و يرجع هذا إلي تأثير مرض الفصام علي الحياة الاجتماعية والعلاقات الاجتماعية وينعكس هذا سلبيا علي جودة الحياة لمرضى الفصام , فقد لوحظ أن جودة الحياة لدى المرضى الذين قد تزوجوا قبل المرض ولهم علاقات أسرية قوية كانت أفضل من الآخرين.

أما بالنسبة لوجود عمل و الانتظام فيه فان , 74.5% من المرضى المدمنين مازالوا محافظين علي عملهم وخاصة في عمل حكومي أو عسكري , ففي معظم الدول العربية الوظائف الحكومية تمتص أعداد كبيرة من الموظفين الغير منتظمين في العمل ولذلك ينتشر سوء استخدام المواد المسببة للإدمان وسط هؤلاء و76% من مرضى الفصام مازالوا يعملون, الغالبية منهم في وظائف حكومية ويعتبر هذا مخالف لمعظم الدراسات الغربية حيث يمثل عدم وجود عمل بالنسبة لمرضى الفصام أكثر من 79% وهذا يؤثر سلبيا على المرضى , وجود عمل لدي مرض الفصام يؤثر ايجابيا علي جودة الحياة .

وكما هو متوقع وجد أن الأغلبية من مرضى الفصام حاصلون علي الشهادة الإعدادية أو علي الشهادة الابتدائية , وذلك لتأثير مرض الفصام علي القدرات المعرفية للمرضى بالمقارنة بمرضى الإدمان فقد وجد أن الكثير منهم وصل إلى درجة متقدمة من التعليم , ويرجع اختلاف النتائج عن بعض الدراسات الأخرى صغر

سن المرضي عند بداية التعاطي والذي بدوره يؤثر سلبيا علي استكمال المراحل التعليمية وبالتالي علي جودة الحياة .

بالمقارنة بين المجموعتين بالنسبة للإصابة بالأمراض العضوية المزمنة وجد إن 40% من مرضي الفصام يعانون من أمراض عضوية مزمنة بالمقارنة مع مرضي الإدمان 22% , لكن بالنسبة للأمراض المعدية مثل الالتهاب الكبدي الفيروسي والأمراض الجنسية المعدية فإنها أكثر انتشارا وسط المرضي الإدمان 21.5% عن مرضي الفصام وخاصة وسط مرضي الإدمان الذين يستخدمون المواد المخدرة عن طريق الحقن .

أما بالنسبة للحالة الجنائية فقد وجد أن 37.5% من مرضي الإدمان قد تعرضوا لمساءلات قانونية أكثر بكثير مقابل 4% من مرضي الفصام وذلك حيث إن استعمال المواد المسببة للإدمان غالبا يكون مصاحبا ببعض الجرائم من سرقات , حوادث طريق , الاغتصاب الجنسي والحرائق. لكن وجد أن 8% من لمرضي الفصام لديهم مشاكل قانونية وأن نسبة الجرائم وسط هؤلاء المرضي اعلي من معدلاتها الطبيعية وخاصة إذا كان المريض الفصامي يستعمل بعض المواد المسببة للإدمان , 12% من مرضي الفصام لهم تاريخ عائلي للإصابة بأحد الأمراض النفسية بينما 14% من مرضي الإدمان لهم تاريخ عائلي سابق بالاعتماد علي احدي المواد المخدرة.

وجد أيضا في هذا البحث إن 35% من مرضي الإدمان يعتمدون علي مادة الأمفيتامين , 23% يعتمدون علي مواد ادمانية متعددة , 21% يعتمدون علي مشتقات الأفيون و كانت اقل المواد الادمانية استعمالا المهدئات والمواد الطيارة 1% , الاعتماد علي الامفيتامين والمواد الشبيهة بالأمفيتامين أصبحت منتشرة بكثرة في كل أنحاء العالم حوالي 40 مليون شخص يستعملون الأمفيتامين , يوجد اختلاف بين مناطق المملكة العربية السعودية من ناحية نوع المواد المخدرة المستعملة ويرجع هذا إلي الناحية الاقتصادية والمستوي الثقافي والتعليمي من منطقة إلي أخرى .

وقد تبين من هذه الدراسة أن كل البنود الخاصة بمقياس جودة الحياة تأثرت سلبيا باستعمال المواد المسببة للإدمان , كان أكثرهم تأثرا علي جودة الحياة استخدام المواد الطيارة ثم مشتقات الأفيون واستخدام مواد متعددة وذلك لأن استخدام المواد الطيارة يبدأ في سن مبكر حوالي 10-16 سنة و يسبب موت كثير من مرضى الإدمان , حيث أن جرعات كبير منة قد تؤدي إلى التشنجات والإغماء والاستعمال المزمن يؤدي إلي تلف عضوي بالمخ .

وجد في البحث أن عدد لا بأس به من مرضى الإدمان يعانون من أعراض قلق واكتئاب ما بين المتوسط والبسيط. كما أظهر مقياس شدة الإدمان ارتفاع شديد في البنود الآتية: سوء استخدام المواد المسببة للإدمان , البطالة , الاعتماد علي الكحول, الاعتماد علي المواد المسببة للإدمان والمشاكل الأسرية. بينما كان أقل البنود ارتفاعا الأمراض العضوية , الأمراض النفسية, وكلما ارتفعت درجة معدل شدة الإدمان صاحب ذلك انخفاض في معدل جودة الحياة.

أما في حالات مرضي الفصام فقد اظهر اختبار المسح الذهاني ارتفاع شديد في الأعراض الفصامية مثل الأفكار الغريبة , الهلوس بأنواعها ومن هذا فان جودة الحياة تتأثر بطبيعة مرض الفصام , ومدى شدته وتقبل الأسرة للمريض ومساندته. وجد أن هنالك عوامل لها علاقة بجودة الحياة لدى مرضي الفصام مثل عمر الإصابة بمرض الفصام , طول فتر العلاج , طول فترة مكوثه بالمستشفى , عدد الأدوية المضادة للذهان المستخدمة , حيث أن استخدام دواء واحد يحسن جودة الحياة , استخدام مضادات الذهان عن طريق الحقن طويلة المفعول , الأعراض الجانبية للأدوية النفسية وأخيرا ظهور الأعراض الذهانية النشطة تؤثر سلبيا علي جودة الحياة.

و بمقارنة مرضى الإدمان والفصام تبين أن مرضي الإدمان لديهم علاقة ايجابية بين الأمراض العضوية المزمنة وجودة الحياة , كذلك أكثر الأشياء تأثيرا في نوعية جودة الحياة بالنسبة لمرضي الإدمان عدد مرات دخول المستشفى , تاريخ الإصابة بالأمراض المزمنة , التاريخ القضائي للمرضي , وجود أعراض اكتئابية بمقياس الهاملتون للاكتئاب , وجود مظاهر قلق بمقياس الهاملتون للقلق ودرجة شدة الإدمان ويقاس بمقياس شدة الإدمان. وقد وجد أن دخول المريض في برنامج لعلاج

الإدمان أو المحاولة لتقليل الجرعات المستخدمة من المادة الإدمانية يصاحبه تحسن في جودة الحياة. بينما أكثر الأشياء تأثيراً في جودة الحياة المتوازنة بالنسبة لمرضى الفصام كانت عمر المريض , وجود عمل للمريض , المستوى الدراسي , التاريخ الجنائي للمريض ومظاهر شدة الأعراض النفسية والتي تقاس بمقياس المسح الذهاني للأمراض النفسية.

في نهاية الدراسة وجد إن جودة الحياة تتأثر سلباً في كل من مرضى الإدمان والفصام , كانت جودة الحياة لمرضى الفصام أقل من جودة الحياة لمرضى الإدمان وذلك بسبب البرامج العلاجية الداخلية والخارجية لمرضى الإدمان المدعومة من قبل الجهات الرسمية والغير رسمية.

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Comparative Study in Quality of Life: *Substance Abuse* versus
Schizophrenic Patients

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HYPOTHESIS

Chronic mental disorders account for a substantial proportion of disease disability and burden. The burden associated with mental disorders is projected to increase over the coming years. The quality and quantity of mental health resources need to improve to meet the current and future needs. Quality of life (QOL) has been firmly established as an important outcome in patient care and clinical research. Improving QOL is a major goal in the treatment of individuals with chronic mental illnesses. The chronic mentally ill patients, although consume large proportion of mental health budget, are associated with poor Quality of life especially in substance abuse and schizophrenic patients. Most researches investigated these two groups separately and found that the quality of life of these patients were poor.

The study's hypothesis is that the QOL in both substance use disorder patients and schizophrenic patients was poor but the QOL in substance use disorder patients are better than the QOL of schizophrenic patients.

Chapter (I)

Quality of Life

Recently, quality of life is a term frequently heard these days on the surface. Many people have worked to clarify about the idea of quality of life, and how to use it in the work and in their lives (*Bindman et al., 2000*). Considerable progress has been made, but much work still needs to be done. Several authors have noted that quality of life as a construct is really still in its infancy (*Brown et al., 1993*). The well being or quality of life of a population is an important concern in economics and political science. There are many components of well being. A large part is standard of living, the amount of money and access to goods and services that a person has. These numbers are fairly easily measured (*Shalev et al., 2002*). Others like freedom, happiness, art, environmental health, and innovation are far harder to measure. This has created an inevitable imbalance as programs and policies are created to fit the easily available economic numbers while ignoring the other measures that are very difficult to plan for or assess (*Gladis et al., 1999*).

A good life arises from a variety of life conditions that work together in complex ways. Quality of life is often quite different for different people. It seems obvious enough that people throughout the centuries, and in various parts of the world, have defined quality in their lives in rather distinct ways. Even within their time and culture, groups and individuals often think of quality in ways that are specific to their own life

situations and their own characteristics (**Lehman, 1996**). The way of thinking about health and health care is changing. The two factors driving this change are the recognition of the importance of the social consequences of disease and the acknowledgement that medical interventions aim to increase the length and quality of survival. For these reasons, the quality, effectiveness, and efficiency of health care are often evaluated by their impact on a patient's quality of life (**Gladis et al., 1999**).

On the other hand, health promotion is the process of helping people to take control over and improve their own health. Changing people's expectations of health is the core of health promotion. Some people's experiences cause them to have low expectations of their health; they then tolerate significant levels of disease and disability. It is possible for patients to achieve the level of autonomy necessary to engage in health promotion activities only if they are aware of the possibilities (**Kishner and Guyatt, 1985**). Raising expectations of health is therefore an essential part of the critical consciousness of improving community health. In the drive to improve health, health promotion might increase the expectations of people with poor health and seemingly reduce their quality of life. Reflecting on aspects of reality is part of the process of empowerment and provides the force that allows people to take action to change that reality (**Headey et al., 1984**).

Quality of life thus has been defined as a broad ranging concept affected in a complex way by such things as physical health, psychological state, level of independence, social relationships and relationship to the environment. This definition

lays emphasis on the subjective nature of quality of life, and also on the need to explore all those factors considered to have a significant impact on quality of life (**Evans, 1991**). Definitions range from those with a holistic emphasis on the social, emotional, and physical wellbeing of patients after treatment to those that describe the impact of a person's health on his ability to lead a fulfilling life (**Greer, 1984**). Quality of life has become a buzzword in medicine, psychology, and society. The term is used to describe events that range from satisfaction with one's work or leisure activities to the physical and economic burden imposed by specific illnesses (**Patrick and Erikson, 1993**). There is no consensus on the definition of quality of life as it is affected by health (health related quality of life) but the quality of life has an important role today in health care, decisions on what research or treatments and continuity of care affected by different situations (**Wiersma and Busschbach, 2001**).

How the concept of quality of life originated?

Quality of life is now a more valued assessment, not only in psychiatry but also in many other areas, particularly those branches of medicine dealing with patients who suffer over relatively long periods of time. Patients are increasingly viewed as people and not just cases. This is indicative of a more consumer oriented approach to medical care, in which the patient's own views are considered important rather than patients being solely the objects of expert opinion from professionals who themselves judge the effectiveness and relevance of what they do (**Daradkeh and AL Habeeb, 2005**). For more emphasis, the health related quality of life (HRQOL) typically assesses

patients' limitations in physical, emotional, social, or vocational functioning, using either general constructs or those developed to capture dysfunction associated with specific diseases (**Katschnig, 1997**). Physicians have often used health related quality of life (HRQOL) to measure the effects of chronic illness in their patients to better understand how an illness interferes with a person's day to day life.

The changing demographic profile of the world's population towards old age and evidence of people living for longer with less time spent in ill health highlight the importance of addressing quality of life (QOL) assessment issues for older people. The assessment of health related QOL (HR-QOL) has received considerable attention in the last 2-3 decades, with a wide variety of assessment instruments available. Health related quality of life measures the effects of numerous disorders, short and long term disabilities, and diseases in different populations (**Olfson et al., 1998**). Tracking health related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health (**Angermeyer and Katschnig 1997**). In 1948, the World Health Organization defined health as not merely the absence of disease but rather a state of complete physical, mental, and social well being. So, quality of life is of interest particularly in the areas of health, rehabilitation, disabilities studies, health planning, health economics, and medical decision making and other different situations such as social services, education (**Koch, 2000; La Puma and Lawlor, 1990**).

Quality of life was unrelated to satisfaction with services but was strongly associated with unmet needs in the area of mental and physical health, and of rehabilitation. Quality of life decreased as needs increased. Needs were also strongly related to diagnosis and cognitive functioning. Furthermore, more intensive care settings were provided as needs increased. Demographic, diagnostic and treatment variables did not explain much extra variance in quality of life (*Wilkin et al., 1992; Lehman, 1996*). At the same time, quality of life is an important but poorly defined outcome in health and health care research. It refers to the patient's ability to enjoy normal life activities. Some medical treatments can seriously impair quality of life without providing appreciable benefit, while others greatly enhance quality of life (*McKevitt et al., 2003*).

The quality of life (QOL) concept has led to extensive scientific research and has been increasingly used by health care professionals treating a wide range of diseases (*Seidl and Zannon, 2004*). The study of quality of life is an examination of influences upon the goodness and meaning in life, as well as people's happiness and well-being. Moreover, the ultimate goal of quality of life study and its subsequent applications is to enable people to live both meaningful and enjoyed lives (*Renwick, 1991*). Quality of life assessment puts patients first, and recognizes the importance of their opinions. This assessment is a response to patients' desires not to be treated merely as cases but rather as human beings who have many other concerns. Frequently, their disease or condition may not be the main factor

affecting their lives; physicians at times have a tendency to reframe all problems as be the impact of chronic disease on patients' quality of life which can be minimized by helping them adjust their expectations and adapt to their changed clinical status. This approach has already been adopted in many healthcare strategies, including some psychological interventions, self management programs, and patients' education groups. Adaptation effects occurred in all life domains including health **(Huxley, 2005)**. For example, one aim of assistive technology is to allow people to continue in their normal roles and meet their expectations of life despite their physical impairment and disability and help the people to bridge the gap between what they want to do and what their physical health allows them to do **(Roberts et al., 1993)**. The necessity of having at hand cross culturally applicable instruments for the assessment of health related quality of life (HRQL) in clinical trials has been voiced. Several important theoretical bases leading to cultural bias in HRQL measurement include differences in definitions of HRQL across national and cultural contexts, levels of observation relied upon to indicate HRQL states, and the significance or weight placed upon the various HRQL states or dimensions measured **(Bullinger et al., 1993)**.

Domains of quality of life

Well-being, this term describes how well people feel about their environment, and collectively these feelings can be thought of as quality of life. To assess quality of life, indicators are used to represent the most important aspects of a person's life (called

domains), which include, for example, housing, education, employment and household finances. Indicators are used to measure complex phenomena. The individual indicators (and their domains) were categorized into three broad groups called the social environment, economic environment and physical environment. The indicator data were compiled, transformed and analyzed to generate three quality of life maps for each environment, and then combined in a fourth map to show the overall quality of life (**Lehman, 1996**). Later on, five themes emerged, (physical) health, psychological well being, social contacts, activities, and home and neighborhood. Factors that influenced quality of life were having good medical care, finances and a car. Respondents compared themselves mostly to others whose situation was worse than their own, which resulted in a satisfactory perceived quality of life. However, the priorities of the domains of quality of life were observed to change from place to another (**Walker, 2005**). Domains of quality of life refer to areas of behavior that are measured. The subjective domains of quality of life are: physical functioning (the capacity to perform physical tasks); occupational functioning (quality of life should focus on the ability to perform multiple essential roles and not just on return to work); perceptions about health status (health perceptions are personal beliefs and evaluations of general health status. They are the result of integration of information and feelings about health and health limitations from the self, the medical system, the family and the society); psychological functioning and social functioning (**Swenson and Clinch, 2000**). Concept of domains measurement of HRQOL is based on the assessment of the individual's perception of the impact of a series

of medical and non-medical issues concerned with physical, mental (or emotional), and social functioning. The concepts of global perception of function and wellbeing can also be addressed. Dimensions or items (questions) are components of a domain of health (**Gutstein, 2001**). For example the domain of physical functioning might include dimensions of self care, activity and mobility; social functioning might include peer and family relationships. The domains or dimensions of health that have been identified must reflect the perceptions and priorities of the individuals within the given population. Once the dimensions have been identified (for a population) through, for example, focus groups or open interviews, questions probing the functioning or perceptions of the individual, specifically relating to these issues are quality of life which become a widely used concept for encompassing non disease aspects of diseases of all kinds (**Connolly et al., 1999**).

The concept of quality of life in mental health

The quality of life of the mentally ill has been a matter of concern for centuries. The great reforms of the past century were prompted by this, and more recently there has been a move from institutional to community care. With mental health care returning into the community and with the growth of the self-help and advocacy movements, the quality of life concept has become central to mental health activities alongside symptoms and diagnosis (**Schumacher and Berzon, 1995**). Today it is used as an outcome measure in clinical trials and in health services research, for the planning of clinical care of individual patients,

for health needs assessment of populations in descriptive studies, and in health economic studies (**Stewart and Ware, 1995**). Additionally, quality of life is used in association with several methodological problems to evaluate health care environment which is characterized by ever increasing conflicts and debates on costs and outcome (**Heinz Katschnig et al., 2002**). It is also used to evaluate community psychiatric services, continuity of care improvement associated with individual patient outcome improvement, with improvement of health related quality of life (**Bindman et al., 2000**). The good quality is always relative. Program developers, policy-makers, health care managers, and providers of care (physician and non-physician) continually express a need to define and measure quality so that better programs can be developed, better quality of care delivered, and programs and quality evaluated (**Shalev et al., 2002**).

The quality of life in persons with severe and persistent mental illness is often poor. Most treatment programs have the goal of increasing quality of life. Unfortunately, existing methods to assess quality of life are cumbersome and oriented towards research rather than clinical settings. Recently, studies of quality of life focus on preliminary steps in the development, testing and application of a new patient focused index for measuring quality of life in persons with severe mental illness (**Streiner and Norman, 1989**). Studies of quality of life (QOL) in mental illness have investigated objective life circumstances, the individual's subjective appraisal of their life, health status and a variety of health-economic approaches. A primary aim of treatment, particularly in chronic disease, is to enhance the quality of life by

reducing the impact of the disease. Yet patients with severe mental disease do not necessarily report having a poor quality of life. Therefore the relation between symptoms and quality of life is neither simple nor direct (**Holloway and Carson, 2002**). Among chronic mental illnesses that have been associated with poor QOL were substance use disorders and schizophrenia. Quality of life (QOL) has been recognized as an important outcome of schizophrenia and substance use disorders treatment, yet the determinants of QOL for individuals with any of these disorders are not well known (**Bizzarri et al., 2005**). Research has consistently found psychotic symptoms to be negatively related to QOL (**Koch, 2000**). The majority of schizophrenic patients were moderately happy with their general QOL. They were least satisfied in the domains of job and financial situation, mental health and sexuality. Psychopathology and especially the quality of individual care had a significant influence on the evaluation of QOL (**Borge et al., 1999**). Data regarding the quality of life of patients with schizophrenia and substance use disorders from the developing countries in the Eastern Mediterranean Region are sparse, and carrying out such assessment may help identify problems that are not visible and not dealt with by the conventional type of management, primarily consisting of pharmacotherapy (**Daradkeh and Al Habeeb, 2005; Iqbal, 2001**).

Measurement of quality of life

There is no universally accepted definition of the quality of life. However, the most often used to describe are such aspects of

health status as physical symptoms, daily activity level, psychological well being, and social functioning. The major challenge is to develop measures of the various dimensions of quality of life that meeting rigorous standards of validity and reliability and also reflect an appreciation of the practical constraints typically operating in clinical research settings (**Aaronson, 1988**). The development of these scales aims to measure the quality of life beyond physical status. Thus, quality of life assessment includes areas such as mental health, social support, and life satisfaction. It is recognized that the expectations, vitality, pain, disability, and personal experiences influence the perception of a person's general health. A composite measurement aimed to quantify health according to physical, mental, and social well being simultaneously would likely find people at different points on the three different continua, but in the midranges of the composite. The multidimensionality problems and the level of subjectivity involved in the assessment of the quality of life require valid and reliable instruments (**Jurado and Figueroa, 2002**).

In the first phase of quality of life research in the 1970s and early 1980s, already available psychological well-being scales were used or new ones were specifically developed for this purpose. Examples are the "Affect Balance Scale" (ABS) by Bradburn (1969), the "Quality of Well-Being Scale" (QWBS) by Kaplan et al (1976) and the "Psychological General Well-Being Index" (PGWB) by Dupuy (1984). This particular development has connections to the "happiness research" tradition within psychology, where well-being is discussed not only in terms of

absence of negative factors (such as depressed mood), but as a positive concept.

From the 1980s onwards, in addition to the assessment of well-being and satisfaction, instruments for assessing functioning in daily life were developed. This development is subsumed under the term "health status research". Well-known examples of "health status research" instruments are the Sickness Impact Profile (SIP) by Bergner et al (1981); the Nottingham Health Profile (NHP) by Hunt and McEwen (1980) and the Rand SF-36 Health Status Profile by Ware and Sherbourne (1992). Although these instruments do not use the term "quality of life", studies employing them are today generally regarded as belonging to health related quality of life research. Later in contrast to these "generic instruments", disease specific quality of life instruments were developed (*Katschnig, 1997*).

Instruments used in measuring quality of life must be valid (if it is really measuring what is supposed to measure); reliable (if it gives the same measurement after repeated administration in stable patients); sensitive (if it is able to reflect clinically meaningful differences in quality of life across the broad spectrum of the clinical conditions) and responsive (if it detects changes when the patients' conditions change) (*Swenson and Clinch, 2000*).

a- Generic versus disease specific measures

There are two basic types of measure of HRQOL; generic and disease population specific. Deciding which to develop will be dependent on the aims, methodological concerns, and practical constraints of the investigation. Measures of the quality of life summaries the judgments people make to describe their experiences of health and illness. This is what distinguishes them from measures of disability that ask about an ability to complete specific task (*Bullinger et al., 1993*). General (or generic) measures attempt to provide a summary of quality of life and they can be standardized and applied widely to those with different types of illness to enable comparisons, but they lack the range, sensitivity and flexibility to deal with the special problems of particular illness. However, the questionnaire items of HRQOL instruments tend to be phrased predominantly in relation to physical function and thus may inadvertently discriminate against older persons, whose physical function is likely not to be as good as that of younger people. The single most commonly used being the 36-Item Short-Form Health Survey (*Hickey et al., 2005*).

Whereas, disease or population specific measures contain domains and dimensions that are designed to be valid only for a specified condition or population. Disease specific measures, therefore, maximize content validity and provide for greater sensitivity and specificity. However they cannot be used to compare HRQOL across conditions or populations (including control groups from the general population) and may be less relevant for measuring the general HRQOL of the target condition/population. In many situations, both generic and disease specific measures are of value and can be used in

combination to facilitate the investigator's ability to compare between populations (generic) and identify specific areas of problems for different patient groups (disease specific) (**Guyatt et al., 1989**). Similarly, public health professionals' use generic measures to assess multiple domains of functioning including mobility, self-care, and physical, emotional, and social functioning. They may be used with a wide range of patient population's. These instruments allow investigators to compare the degree of impairment or suffering associated with different illnesses, as well as relative improvements in functioning in response to treatment (**Wang et al., 1999; Guyatt et al., 1993**). Specific instruments tend to be more responsive to changes and more sensitive in discriminating the range of impairment because of their focus on the most relevant aspects of quality of life for the problems assessed. Nevertheless, using a disease specific quality of life instrument alone can miss important aspects of the impact of a disease in quality of life (**Mayou, 1990**). There is a need for more research, which is based on carefully selected specific measures of quality of life chosen as being of particular importance to patients and to the hypotheses being tested (**Childress et al., 1999**). Some examples of specific instruments to measure quality of life in heart failure patients are: the Chronic Heart Failure Questionnaire; the Minnesota Living with Heart Failure Questionnaire; the Yale Scale; the Quality of Life Questionnaire in Severe Heart Failure and the Kansas City Cardiomyopathy Questionnaire, the Nottingham Health Profile (NHP), the Sickness Impact Profile (SIP), the Medical Outcomes Study Short-Form 36 Item Health Survey (MOS SF-36), the EuroQoL, Dartmouth Primary Care Cooperative Information

Project (COOP) chart system, the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ) and the World Health Organization's WHOQOL. These instruments exemplify several different models for developing or adapting HRQL measures, each model choosing unique approaches to the process of validation for cross-national use (*Mogil and Pasternak, 2001; Anderson et al., 1998*).

b- Subjective versus objective measures

Subjective and objective appraisals are different kinds of data and both have a role in QOL assessment. The subjective dimension is essential in painting a complete picture of the person's life, in explaining patterns of behavior and in providing the subject's interpretation of the personal impact of objective circumstances. It is clear that various factors make it difficult to build predictive models around subjective outcomes: these include the tendency towards psychological adaptation or 'response shift' that can occur over time in the subjective appraisal of a person's current state. Although, scientific understanding of subjective life quality has been slow to develop but is gaining momentum. On the other hand, objective measures of quality of life often bear little relationship to life satisfaction, whereas subjective indicators are often found to correlate highly with a global sense of well-being, as well as being more meaningful and sensitive barometers of quality of life (*Wang et al., 1999*). Within Medicine, patient reported perceptions of life quality are measured as health related quality of life. Within the

social sciences, global perceptions of personal wellbeing are referred to as subjective wellbeing. Increasingly such measures are being used as indicators of outcome effectiveness for diverse programs of human intervention. Scales should focus on both objective and subjective aspects of quality of life (**Jerome, 2004**). One goal of the measurement of quality of life is to have objective evaluations of how much the disease influences patients' life and how patients cope with it. These evaluations may be useful as a baseline and outcome measures and should provide framework to determine the impact of any change on patients' quality of life (**Siegrist and Junge, 1990**). Accordingly, patients' subjective satisfaction should always be included in routine assessment and clinical interventions. They are a useful source of information on patient distress and psychological resources (**Majani et al., 1999**).

Measures that have been used in research in QOL in psychiatric patients have involved either self-reports of a generic nature such as the 36-item Medical Outcome Study Short Form, (**Ware and Sherbourne, 1992**). The General Well Being Scale (**Norman et al., 2000**) and The World Health Organization Quality of Life scale (**The World Health Organization Quality of Life Group, 1998**), more disease-specific scales such as The Wisconsin Quality of Life Scale (Becker et al., 1993) or alternatively more "objective" measures such as rating scales (e.g., the Quality of Life Scale (**Heinrichs et al., 1984**), Lehman Scale (**Lehman, 1984**). Measures relying on subjective reporting, while addressing core concepts of QOL may be more vulnerable to the influence of patients' psychological states, such as

depression (*Sim and Ketal, 2004*) or the level of their insight into their psychiatric problems (*Doyle et al., 1999*). Rating scales, on the other hand, may be subject to difficulties in separating the influence of prevalent symptoms of the illness, such as negative symptoms in the case of psychotic disorders, on ratings of QOL (*Jaffe, 2004; Torpy et al., 2004*).

The Quality of Life Index for Mental Health (The Wisconsin Quality of Life Scale) differs from existing instruments in that it is based on an easy to use self-administered questionnaire that assesses nine separate domains that together encompass quality of life. Each domain can be individually weighted depending on its relative importance to the patient. Different parts of the instrument solicit information from the patient, the primary clinician, and, when available, the family. The instrument and its scoring system address limitations of previous approaches to quality of life measurement (*Becker et al., 1993*). That's why it was chosen for the practical part of this research .it was previously used with reliable results in studies of schizophrenia and chronic mental disorders.

Chapter (II)

Substance Use Disorders and Quality of Life

Substance use disorders are primary chronic relapsing disorders with neurobiological, genetic, psychosocial and environmental factor influencing its development and manifestation. It is characterized by behavioral changes such as impaired control over drug use, compulsive use, continued use despite harm and craving. To be considered addicted, a patient must demonstrate behavior that shows compulsion to use substance (***Sidney et al., 2003***). The dependence syndrome is not absolute, but is a quantitative phenomenon that exists in different degrees. The intensity of the syndrome is measured by the behaviors that are elicited in relation to using the drug and by the other behaviors that are secondary to drug use (***Sessa, 2005***). This syndrome is associated with “compulsive drug-using behavior” (***Kathleen et al., 1998***). Drug abuse and dependence are prevalent behaviors that are pernicious in their effects on individuals, families, and communities. However, while it is true that many addictive drugs have the ability to consistently elicit common neurochemical responses and disruption of homeostatic mechanism, a critical observation is that individuals are differentially vulnerable to addiction. The origins of differential vulnerability are innate (genetic) differences in neurochemistry and behavior, environmental differences, or a combination of both (***David and Andrew, 1998***).

Psychoactive substance can be harmful in a number of ways, both through immediate effects and through damage to

health over time. Drugs and alcohol can produce effects that may lead to violence as part of an acute psychological disturbance or as a result of misuse, withdrawal and dependence. In general, while alcohol is a major risk factor for violent offending, illicit drug use is more likely to be associated with acquisitive offending and trafficking. Even occasional use of marijuana affects cognitive development and short term memory. In addition, the effects of marijuana on perception, reaction and coordination of movements can result in accidents (**Snowden, 2001**).

With a few drugs, the potential dangers are extremely high and they can cause serious problems no matter how or when they are taken. Examples are PCP (Angel Dust), cocaine or heroin (William, 1991) which may have many negative physiological health effects, ranging from minor issues like digestion problems or respiratory infections, to potentially fatal diseases, like AIDS. More than 30% of HIV/AIDS patients nationwide are intravenous drug users (Vastag, 2001) and the prevalence of hepatitis C is 29.7%, or sixteen times higher than that in the general population infection (**Elizabeth, 2004**).

The stigma attached to substance abuse increases the severity of the problem. The hiding of substance abuse, for example, can prevent persons from seeking and continuing treatment and from having a productive attitude toward treatment. Compounding the problem is the gap between the number of available treatment slots and the number of persons seeking treatment for illicit drug use or problem alcohol use

(Kumpfer, 1992; Gastfriend, 2005). Substance abuse characterized by the presence of at least one specific symptom that indicates that substance use interfered with person's life. This would include health problems, mental health, emotional problems, family problems, relationship problems, financial problems, work or school problems, social problems, and legal problems *(Richard et al., 2006)*. This mental illness syndrome manifested by a behavioral pattern in which the use of a given psychoactive drug, or class of drugs, is given a much higher priority than other behaviors that once had higher value *(Preau et al., 2006)*.

Substance abuse is a complex disorder, resulting from genetic, developmental, and sociological vulnerabilities, combined with pharmacologically induced plasticity in brain circuitry that strengthens learned drug-associated behaviors at the expense of adaptive responding for natural rewards. Substance abuse and addiction are major public health issues of both the developed and the developing world *(Rivara et al., 1997)*. Like any other chronic diseases, substance abuse disorders have powerful negative effects on quality of life *(Ryan and White, 1996)*. At the same time, quality of life (QOL) has become an important endpoint in clinical trials and studies of medical interventions for many chronic diseases, but has not been widely studied in the substance abuse field *(Smith and Larson, 2003)*.

Magnitude of substance abuse disorder worldwide

Drug addiction is a wide spread public health problem causing disability in multiple areas of functioning. 37% of populations have used an illicit substance at one time. Drug addiction mainly concerns young people more than 15% of U.S.A population over the age of 18 have serious substance use problems (**Thomas et al., 2006**). The past 30 years of research on the epidemiology of drug use disorders, and related conditions, such as HIV, has provided major insight into these conditions. Drug use peaked in the late 1970s, decreased across the 1980s, increased again in the 1990s, and has remained stable during the past few years. Within this broad pattern, specific epidemics of crack cocaine, amphetamines, club drugs (such as Ecstasy), heroin, and prescription opioids and associated epidemics of HIV and other infectious diseases have been identified and tracked. Besides major accomplishments in surveillance, the epidemiology of drug use and drug use disorders has traditionally focused on identifying risk factors at the individual (genetic factors, high-risk behaviors), family (child abuse), neighborhood (high availability of drugs), and societal (policies and laws) levels as domains of influence, not as components of interrelated processes (**Wilson et al., 2005**).

In recent researches of United Nation Office on Drug and Crime, it was found that substance abuse disorders are common chronic psychiatric diseases that are today prevented and treated (**DuPont, 2000**). Around 205 million people in the world use illicit drugs, including 25 million who suffer from illicit drug dependence representing 5 percent of the global population age 15-64, have used illicit drugs at least once in the last 12 months.

Cannabis remains by far the most widely used illicit drug. The number of cannabis users in the world surpassed the 160 million mark in 2005 and is now estimated at some 162 million people, or 4 percent of the world's population in the 15-64 ages group (*Tatsuo et al., 2006*). Moreover, there is going increase of methamphetamine use mainly in a number of Asian countries and in some African countries, while, in Europe and in the Americas remained largely stable. Meanwhile, the number of opiate users in the world remains stable, around 16 million People depending on opiate derivatives and 11 million people abuse heroin. This mainly reflects increasing levels of opiate abuse in some parts of Asia (countries surrounding or close to Afghanistan) and Eastern Europe. In Africa, the estimated number of heroin users now approaches the one million reflecting spillover effects from increased heroin trafficking through that region (*Goldman et al., 2006*).

Whereas, the lifetime prevalence of diagnosis of substance abuse or dependence among the united state population over the age of 18 was 16.7% (*Gastfriend, 2005*). The lifetime prevalence of alcohol abuse or dependence was 13.8% and for non-alcohol substance, it was 6.2% (Compton et al, 2004). About 80 million Americans have tried drugs, but only about 13 million are involved in any kind of illicit use today (*Wenlin and Rebec, 2006*). Five million Americans are regular users of cocaine, 6000 use the drug for the first time each day and more than 30 million have tried cocaine at least once. Approximately 250 000 women in the USA meet the criteria for intravenous drug abuse. Nearly 90% of these women are of childbearing age (*Shephard et al.,*

2002). The most common substance abuse in USA is alcohol and nicotine (cigarettes) but marijuana and cocaine are also commonly used. Increases in the prevalence of marijuana use disorders were most notable among young black men and women and young Hispanic men, than among young white men and women (**Wilson et al., 2004**).

Abuse and dependence on substance is more common in male than in female with the difference more marked for non-alcoholic substance than for alcoholic (**Kapusta et al., 2006**). Despite that, the health related quality of life scores were poorer in women than men (**Linzer et al., 1996**). In the UK, approximately 16% of the women had taken one or more illicit substances (**Johnson et al., 2003**). Substance abuse is also higher among the unemployed and among some minority groups than among working people and majority group (**Marwick, 1999**). The majority of U.S. adults with substance abuse or dependence are gainfully employed. However, little is known about outcomes among stably employed people in treatment for substance dependence and this affected overall quality of life during the year following discharge from treatment (**Slaymaker and Owen, 2006**).

Recently substance abuse is not limited to adults. It affects also high school senior; 4 million people aged 12 years and older misused pain relievers, sedatives, tranquilizers, and stimulants in 1999 (**Bruner and Fishman, 1998; Vastag, 2001**). About 16% of students in grades 8, 10, and 12 reported abusing illicit drugs (Bridget, 2006) and about 30 percent of them had tried a non

alcohol substance at least once and about 16 percent of them had tried non alcoholic at least once (**Mangus, 1998**). While in the UK, the lifetime prevalence rates of adolescent drug use have been rising since 1992 among adolescents aged 12-17 years referred to mental health services. The prevalence of drug use was 16.3% among boys and 9.3% among girls (**Swadi, 2000**). Furthermore, researchers have found that children and teens (both male and female) who are physically and sexually abused (Charnaud and Griffiths, 2000) are at greater risk than other young people of using marijuana and other drugs and of beginning drug use at an early age (**Harrison et al., 1997**). A history of sexual abuse is associated with substantial impairment in health related quality of life (**Dickinson et al., 1999**).

On the other hand, worldwide estimates indicate that annual deaths from cigarette smoking will rise from the current figure of 3 million to 10 million by 2025, with approximately 70% of these deaths occurring in developing countries (**Makary and Kawachi, 1998**). Tobacco is considered the leading cause of death in the United States, killing 430000 US smokers and 53000 nonsmokers annually (Bitton et al., 2001) and it also responsible for poor diet, physical inactivity and alcohol consumption (**Mokdad et al., 2004**).

In Western European, it was estimated that at least 27% of drug users had died within 20 years after starting regular drug use. For half, death had been due to causes unrelated to human immunodeficiency virus. A favorable trend towards abstinence was increasing with times since initiation of regular use was observed. However, among those alive, the estimated prevalence of abstinence for at least 4 months from the above drugs was only 27% at 20 years since initiation (**Termorshuizen et al., 2005**). Nevertheless, crude mortality rates varied from 1 per 100 person year in the Dublin and London cohorts to 3.8 per 100 person year in Barcelona. The highest drug related mortality rate was 10 per 1000 person every year in Barcelona. The rates were 7 per 1000 person every year in Denmark, London, Rome, and Vienna, and <3.5 per 1000 person every year for the others cohorts. The mortality rate for AIDS was <2 per 1000 person every year in all the cohorts except Lisbon, Rome, and Barcelona, for which it was 6 per 1000 person every year (**Anna et al., 2006**). These high rates of mortality were attribute to increased the alcohol

consumption, traffic crashes, injure and related fatalities among young persons under age 21 years (*Holder et al., 1997*).

Problems of substance abuse in Arab countries

The 1980s witnessed a sharp rise in morbidity due to drug misuse. Since then, Egyptian community leaders at all levels have demonstrated intense concern over this problem. Estimates of the magnitude of substance addiction and the changing pattern of drug availability showed that the most commonly used drugs in the 1980s were cannabis, opium, solid and liquid hypnotosedatives, heroin and finally cocaine, in descending order of frequency. But, recently, epidemiological research and clinical studies of known addicts show that those who use more than one drug are double in number compared with those who use one drug exclusively. The drug abuse is mainly a male problem between 20 and 30 years of age. Also the widespread availability of bang and its cheap price made helped in the persistence of cannabinoids as the most widely abused illicit drug in Egypt till now (*Ismail et al., 2006*). The age of abusers of bang is reported to be decreasing from 10–12% in the age group 15–25 years, i.e. less than 1% of the population (65 million in 1998). The total number of heroin addicts is frequently estimated at 20,000 to 30,000 although the source of these data is unclear (*Okasha, 1996*). This was associated with increases in drug related health problems mainly overdose toxicity (Salem, 1998) and an alarming drop in age at initiation of drug use, with a consequent rise in adolescent addicts (*Amer et al., 1986*).

During the 1990s, synthetic psychoactive drug use increased exponentially to become the third most commonly available drug following cannabis and alcoholic beverages. Towards the second half of the 1990s, cannabis became prevalent in the form of bang (**Okasha, 2004**). There were different reasons for the different user categories. For secondary school students the main reason for drug use was as entertainment on happy social occasions, and the substance mostly used was hashish (**Soueif, 1994**). Sedatives and hypnotics were the next most frequently used substances, these substances were used in situations of physical exhaustion and fatigue, and to cope with psychosocial problems or difficult working conditions, as well as at times of studying and examinations (**Al Azayem and Ez Eldin, 1996**). Egyptian surveys have found a gradual increase in the consumption of alcohol, leading to the prediction that this will be the most common form of substance misuse in the coming years. It is interesting to note that despite the relative availability of alcohol in Egypt compared with the Gulf states, the incidence of alcohol misuse is much higher in the latter countries, where the sale of alcohol is strictly prohibited on religious grounds (**Okasha, 1996; Al Akabawi, 2001**).

Whereas, the literature on drug abuse in Saudi Arabia is still sparse. However, the published data put heroin at the top of the list of drugs abused in Jeddah. Abuse of other substances such as alcohol, barbiturates, solvents and anticholinergic drugs has also been reported. Addiction to volatile substances has been reported in 5.3% of school girls and 9.8% of schoolboys. Poly

drug abuse has also been reported and almost all combined heroin with another drug and/or alcohol. In recent years, the medical community of Saudi Arabia has begun to recognize the existence of substance abusers. Specialized rehabilitation facilities have been established in Riyadh, Jeddah and Dammam that aim to provide the latest advances in the management of drug addiction. Al-Amal hospitals have been in operation as specific hospitals for addiction since September 1991 (Abedel Mawgoud, 1995) and have adopted integrated preventive, curative and post-curative follow-up programs. However, acute or chronic drug abuse has been linked to many problems. Road traffic accidents in Saudi Arabia, fires and injuries are more prevalent among drug abusers. Chronic drug abuse is also associated with psychological disturbances, behavioral alterations. These changes often lead to weight loss, contributing in turn to the development of malignant and infectious diseases. Detoxification therapy has proved to be a major financial burden. The detoxification process is complicated and produces only modest results, as there is a high relapse rate (*Abalkhail, 2001*).

Substances commonly abused in Saudi Arabia and other Gulf region, include injectable drugs such as heroin and cocaine and non injectable drugs such as cannabis and amphetamine. The estimated annual prevalence of heroin and amphetamine abuse in Saudi Arabia in 2000 was 0.01% and 0.002% in age more than 15 years, respectively. The number of drug abusers annually admitted to detoxification centers in Riyadh, Jeddah, Dammam, and Qassim from 1996 through 2001 ranged from 4740 to 6650

new patients with an average annual increment of 5.1% (unpublished data) (*Madani et al., 2004*). Additionally, health and social problems from alcohol use in Saudi Arabia have a large number of expatriates, some of whom live in special quarters. Alcoholic beverages are available to them, but the unwritten rule is that the drinking takes place behind closed doors. While there are limited legal means to get alcohol and consume it privately, there is also smuggling, which is thought to be more active through the eastern side of the country. Alcohol can be brought in from neighboring Gulf States, especially Bahrain, which is easily assessable via a causeway. Another smuggling route is from Jordan where spirits are available, and where some of it is manufactured, like beer and a spirit known as alaq. Those with a smaller budget resort to buying homemade alcohol, or make it themselves using grapes and dates (*Hassan, 2002*).

Burden of substance abuse on quality of life

Complications arising from the abuse of psychoactive substances often draw public attention to their deleterious effects, which culminate in drug control policy formulation. Contribution of poverty, political instability, social unrest and refugee problems lead to the rapid spread of psychoactive substance abuse all over the world particularly among the youth. Poor funding, insufficient skilled health personnel, poor laboratory facilities, inadequate treatment facilities, and lack of political will are some of the impediments to controlling substance abuse in Arab countries (*Odejide, 2006*). Thus recovery from substance use is notoriously difficult, even with exceptional treatment resources. Although relapse rates are difficult to accurately obtain, the National Institute on Alcohol Abuse and Alcoholism showed that 90% of alcohol dependent users experience at least one relapse within the 4 years after treatment. Relapse rates for heroin and nicotine users are believed to be similar (*Kranzler, 2006*). These Relapses are most likely to occur within the first 12 months of having discontinued substance use. Triggers for relapses can include any number of life stresses (problems on the job or in the marriage, loss of a relationship, death of a loved one, financial stresses), in addition to seemingly mundane exposure to a place or an acquaintance associated with previous substance use (*Schneider et al., 2001*).

a- Substance abuse and economic costs

Substance abuse is arguably the number one public health problem in the United States, affecting 18% of the population at some time in their lives and costing \$144 billion per year (*Veenhuis, 2000*). The economic cost to society from alcohol and drug abuse was estimated \$246 billion in 1992. Alcohol abuse and alcoholism cost an estimated \$148 billion, while drug abuse and dependence cost an estimated \$98 billion. When adjusted for inflation and population growth, the alcohol estimates for 1992 are very similar to cost estimates produced over the past 20 years (Farrel et al., 2002) and the drug estimates demonstrate a steady and strong pattern of increase. The current estimates are significantly greater than the most recent detailed estimates developed for 1985 for alcohol and for drugs (*Rice et al., 1990*). The 42 percent higher for alcohol and 50 percent greater for drugs over and above increases due to population growth and inflation. Between 1985 and 1992, inflation accounted for about 37.5 percent and population growth for 7.1 percent increases (*Michael et al., 2003*).

In 1992, total estimated spending for health care services was \$18.8 billion for alcohol problems and the medical consequences of alcohol consumption and \$9.9 billion for drug problems. Specialized services for the treatment of alcohol and drug problems cost \$5.6 billion and \$4.4 billion, respectively. This included specialized detoxification and rehabilitation services as well as prevention, training, and research expenditures (*Tatsuo et al., 2006*). Costs of treatment for health

problems attributed to alcohol and drug abuse (e.g., cirrhosis, HIV infection, and trauma) were \$13.2 billion and \$5.5 billion, respectively (*Lyons et al., 1995*). At the same time, there were lost productivity around \$82 billion attributed to alcohol and drug abuse in 1992 (\$67.7 billion and \$14.2 billion, respectively). This accrued in the form of work not performed including household tasks and was measured in terms of lost earnings and household productivity. These costs were primarily borne by the drug or alcohol abusers and by those with whom they lived (Jason, 2006) as well as private insurance (*Ringold et al., 2006*).

Additionally, the total costs attributed to alcohol related motor vehicle crashes were estimated to be \$24.7 billion. This included \$11.1 billion from premature mortality and \$13.6 billion from automobile and other property destruction (Annie et al., 2004) and also, the costs of crime attributed to illicit drug abuse were estimated at \$59.1 billion (*Charles et al., 2006*). These costs include reduced earnings due to incarceration, crime careers, and criminal victimization (*Brois et al., 2004*). Imprisonment is common among the drug users and roughly half to three quarters of injecting drug users have been in prison at some time (*Henry, 2005*).

In the UK, during the year 2002, 4.7 percent of the population reported driving under the influence of an illicit drug and 14.2 percent reported driving under the influence of alcohol at least once during the past year (*Galea et al., 2004*). While the confederation of British industry found that drink and drug related problems to be one of seven most common cause of

sickness absence. Fifteen percent of large companies have reported drug use as problem at work. For alcohol, it has been estimated that 14.8 million working days are lost every year costing about 1 billion English £ in 1992 (*Harwood et al., 1998*).

Thus a number of factors must be considered when treating addicts, including drug abusers may need job training and referral, assistance in finding housing and reintegrating into society. Drug abusers who commit crimes require alternative treatment in order to break the cycle of drug abuse and crime and to improve their quality of life (*Charles et al., 2005*).

b- Substance abuse and psychiatric comorbidity

Comorbidity is the diagnosis of two or more psychiatric disorder in a single patient i.e. comorbidity of substance misuse and psychiatric disorder, particularly severe mental illness. In recent large community survey, it was found that 76 percent of men and 65 percent of women with a diagnosis of substance abuse or dependence had an additional psychiatric diagnosis. The most common psychiatric diagnoses associated with substance abuse is antisocial personality disorder, anxiety disorder, major depressive disorder, phobias, psychosexual dysfunctions and dysthymic disorder (*Ross et al., 1988; Abou-Saleh, 2004*). The prevalence of personality disorder was 18.6% in young adults. There are independent associations between cluster B personality disorders and substance use disorders (*Moran et al., 2006*).

Certain behavioral syndromes in childhood e.g. conduct disorder and certain psychiatric disorder in adulthood especially antisocial personality disorder also increase the likelihood of drug abuse and dependence, including opioid dependence or alcohol dependence. These syndromes have both biological and environmental roots (Lyons et al., 1995) and are associated with diminished mental health functioning and co-occurrence with mood and anxiety disorders (*Jeffrey et al., 2005*).

Moreover, using of substances exacerbate symptoms of schizophrenia e.g., cannabis, cocaine, and opiates (*Westermeyer et al., 1999*). Whereas between 40% and 70% of people with bipolar disorder have a history of substance use disorder mainly amphetamine and cocaine. A current or past comorbid substance use disorder may lead to worse outcomes for bipolar disorder or schizophrenia, including more symptoms, more suicide attempts, longer episodes, and lower quality of life (*Ostacher et al., 2006*).

c- Substance abuse and occupational functioning

Work has long been regarded as a potential contributor and a tool for the treatment of mental illness. It is an important part of a cultural role, filling much of an individual's time, supplying a source of income, providing a source of identity, and contributing to one's physiological and psychological well-being in societies. Unemployment, on the other hand, has demonstrated adverse effects on health caused by poverty, poor housing, and rejection by society (*Kendell, 2000*). Substance abuse is found higher among people who are unemployed and among some minority

groups than among people who are employed and among majority group.

Research demonstrates that increased employment and income can have positive effects on the quality of substance abuse disorders (**Smith and Larson, 2003**). Reversibly, alcohol and drug abuse can interfere with an individual's ability to find an employment and to be a productive, valuable member of the workforce. It also aids in effectively working with job seekers whose alcohol or drug abuse presents barriers to successfully securing and maintaining employment (**Griffiths et al., 1997**). Length of stay in treatment has been found to be a significant predictor of positive post treatment outcomes, such as decreases in unemployment and crime (**Arday et al., 2003**). In addiction treatment evaluation research, employment is viewed as both a desired outcome and an element of treatment. Moreover, employment may be an essential ingredient for retention in treatment, a variable closely related to treatment outcome. There was significant and positive correlation between employment status and retention in treatment. Gainful employment improves self-esteem, which in turn may reduce the use of illicit drugs. Employment may also serve as a means of social integration (**Mortal, 1999**).

Moreover, the type of employment had significant influence on substance abuse, for example substance abuse is more common among medical professionals than among non medical professional or equal (**McGinnis and Foege, 1993**). Also, drug addiction among service soldiers of USA army has

been observed. Of the investigated group of soldiers, 11.8% informed that they have been using drugs and 2.1% showed symptoms of addiction. Marijuana, hashish and amphetamine belong to the group of most commonly used drugs in the army. The main causes of drug taking, listed by the soldiers, include: stress associated with the service and noticeable pleasure. Soldiers taking drugs buy them from their civilian colleagues, from dealers in the area of the unit or the neighborhood (*Jedrzejczak, 2001*).

d- Substance abuse and violence / aggression and suicide

There are many forms of violence related to drugs. This violence may be directed against object, other people, and animals, against the self as with suicide or self harm. All psychoactive substance can impair a whole range of skill need for driving, operating machinery or tool, crossing roads, risky sexual activities (*Mc Ardle, 2006*). Early onset of substance use was associated with greater levels of family deviance and a variety of problems including school adjustment, drug use, and criminal involvement. Early onset of crime was related only to male gender, early onset of substance use, and cruelty to people (*Gordon et al., 2004*). Negative social consequences of alcohol and drug use, like crimes, violence, traffic accidents, domestic violence, lost of workplace productivity and disability make the total burden on the societies even higher. Injecting drug use, often associated with drug dependence and particularly opioid dependence, is a driving force of HIV/AIDS epidemics in many countries of Europe, Asia, the Middle East and Americas, with a

number of injecting drug users worldwide estimated to be around 13.2 million (*Johnston et al., 2003*). All these patient may be associated with increased rates of crime and violence, aggressive behaviors, with disturbance of social behavior (*Miller, 2004*).

In a 2002 study, nearly half of all drunken drivers were alcohol dependent. Alcohol plays a major role in more than half of all automobile fatalities. Even more disturbing, alcohol related automobile accidents are the leading causes of death in young people. Less than two drinks can impair the ability to drive. Alcohol also increases the risk of accidental injuries (*Weisner and Schmidt, 1993*). Nearly 1 million youth aged 16 to 18 years (11 percent of the total) have reported driving in the past year at least once within 2 hours of using an illegal drug (most often marijuana) with car accident (*Rockville, 1998*). Moreover, the prevalence of suicide among regular drug users is far higher than general population. Substance dependence and abuse have been widely recognized as risk factor for suicide, it has been postulated that drug use is partially responsible for rising rate of suicide among individuals between age of 14 and 25. The suicide rate in this group has risen from 5.2 per 100.000 in 1960 to 13.3 per 100.000 by 1980 (*Steven, 2002*).

Higher drug spends were associated with having been imprisoned more often and with those reporting acquisitive crime, drug dealing and prostitution (*Hutchinson et al., 2000*). Also, the total costs for one year for the drug users in UK amounted to over 12 million pounds, the majority attributable to self reported criminal behavioral. Social costs were positively

related to a variety of factors including instability in living circumstances, amount of heroin used and whether or not drugs were taken intravenously (*Healey et al., 1998*). Drug abuse and addiction are common in the incarcerated individual. About 70% of individuals in state prisons and local jails have abused drugs regularly, according to National Institute on Drug Abuse. It estimates that one third of unconvicted men in prison report substance related problems. Left untreated, those affected may be mired in a cycle of incarceration, release, relapse, and re-arrest (*Brooke, 2000*). Health care providers should involve this group in treatment and rehabilitation, both inside prison and following release. This can stop this cycle, thus reducing the use of drugs among these individuals by half, reducing criminal activity by 80%, and reducing new arrests by 64%, according to the National Institute on Drug Abuse (NIDA). It is also a good investment for every dollar spent on treatment. There is a \$4 to \$7 return in reduced costs associated with drug-related crimes (*Kuehn, 2006*).

e- Impact of substance abuse on general health

One of the major problems facing the specialized facilities in treatment of substance abuse disorders are the serious medical consequence. The physical functioning of adult substance abusers is similar to the levels for patients diagnosed with other serious chronic diseases (*Zwart and Laar, 2001*). Alcoholic cirrhosis is the primary cause of cirrhosis in the USA. 10% to 20% of people who drink alcohol heavily develop cirrhosis, a progressive and irreversible scarring of the liver that can eventually be fatal. It is estimated to be responsible for between 44% and 80% of deaths

from cirrhosis in North America (**Buck and Umland, 1997**). People with alcoholism tend to have lifestyles that put them at higher risk for viral hepatitis B and C. Chronic forms of viral hepatitis pose risks for cirrhosis and liver cancer, and alcoholism significantly increases these risks (**Zakhari, 1997**). 80% of injection drug users (IDUs) had hepatitis B core antibody (HBcAB), and 90% had hepatitis C virus antibody (HCVAB). Less than half of each group did not know or were unsure of the mode of transmission (**Luty, 2006**). The hepatitis C virus (HCV) continues to penetrate populations within the United States, especially within the drug abusing population. Therefore, drug users need access to HCV testing and medical care, and drug treatment programs are well situated to provide these services. These patients had definite reductions in health related quality of life (HRQOL) and also reduce the quality of life (**Dhopesh et al., 2000**). However, in some researches postulated that the chronic HCV infection per se did not negatively affect the HRQOL of active injecting drug users. Those who thought they were infected had a lower HRQOL scores than those who believed they were not infected (**Dalgard et al., 2004**).

Drug users and persons with whom they have sexual contact run high risks of contracting gonorrhea, syphilis, hepatitis, tuberculosis, and human immunodeficiency virus (HIV). The relationship between injection drug use and HIV/AIDS transmission is well-known. Treatment costed too much and effective only in a minority of cases (**Garfien et al., 1996**). Illicit drug users have a greatly increased risk of

premature death and mortality due to AIDS (*Wisniewski et al., 2005*).

At the end of 2002, an estimated 42 million people around the world were living with HIV. During the same year, five million new infections were reported, while the epidemic claimed and estimated 3.1 million lives. One third of the people living with HIV are between 15 and 24 years old (*Vastag, 2001*). Between 1990 and 1998, injecting drug users were the largest group among diagnosed AIDS cases in Western Europe (*Aceijas et al., 2004*). Furthermore, in the United States, approximately one third of acquired immunodeficiency syndrome cases and one half of new hepatitis C cases are associated with injection drug use (*Hughes et al., 1999*). Optimization of health related quality of life is particularly important now that HIV is a chronic disease with the prospect of long term survival. Comorbid psychiatric conditions may serve as markers for impaired functioning and well being in persons with HIV. Inclusion of sufficient numbers of appropriately trained mental health professionals to identify and treat such conditions may reduce unnecessary utilization of other health services and improve health-related quality of life in persons with HIV infection (*Sherbourne et al., 2000*). Prevention of psychoactive substance use and associated disorders becomes one of the top public health priorities (*Reid et al., 2003*). Decrease the levels of health related quality of life (HRQL) among individuals HIV infected through drug injection and also HRQL has been found to have a prognostic value on the survival of HIV patients infected through drug injection, then providing more comprehensive care (*Preau et al., 2006*). Isolation and the

desire for connection with others, stigmatization, discrimination, anticipating the future, describing fears about future and its reflection, have negative effect and regrets on HIV/AIDS patients' quality of life QOL (**Geurtsen, 2005**). Intravenous drug use is also expected to play a more important role for HIV transmission in Saudi Arabia in the coming years as the population of intravenous drug users increases. The prevalence of confirmed HIV infection among drug abusers in Jeddah, of whom 80% were intravenous drug users, was found to be only 0.15% (**Madani et al., 2004**). Recently, in study done in Saudi Arabia indicated that the anti-HCV prevalence was 0.4% to 1.7% for adults and 0.1% for children (**Madani, 2007**).

Moreover, amphetamines are the most widely used illicit drugs, second only to cannabis (**Saunders et al., 2000; Kandel et al., 1996**). In 2005, 10% of all drug related hospital emergency department visits in USA, were amphetamine related and 26% of all drug related deaths were due to methamphetamine dependence (**Ebrahim and Gfroerer, 2003**). It can produce cardiovascular collapse, myocardial infarction, stroke, seizures, renal failure, ischemic colitis, and hepatotoxicity (**Sun and Rebec, 2006**). Amphetamines and amphetamine derivatives increase sexual arousal and disinhibition, cause memory impairment because of damage to serotonin releasing neurons and suicidal ideation (**Haney, 2004**). Recently, a lot of data in the gulf region reported that amphetamine psychosis became more common in between amphetamine dependence patients with poor outcome (**Abdel Razek et al., 2006**). At the same time, Kat consumption is also known to cause spermatorrhea and chronic

use may lead to impotence and affecting the sexual function (*Hassan et al., 2007*). Moreover, the use of cocaine, nitrates, and volatile inhalant leading to deterioration of cognitive function and negatively affect the quality of life (*Kaufman et al., 1998*). Other research has focused on the long term effects of alcohol and drug abuse on the immune system as well as the effects of prenatal alcohol and drug exposure on the behavior and development of children (*Dedic, 2003*). While, injection use of illicit opioids has also been associated with neurological lesions such as necrosis of spinal cord, grey matter and degeneration of globus pallidus, transverse myelitis, amblyopia and plexitis (*Mintzer et al., 2002; Nehkant et al., 2005*).

The influence of substance abuse on quality of life

Drug and alcohol abuse is associated generally with forms of unhealthy and unproductive behavior, including delinquency and high-risk sexual activity, all these leading to deterioration of quality of life (*Rockville, 1997*). Personality dimensions, substance abuse and objective life circumstances accounted directly or indirectly for substantial parts of quality of life (*Eklund et al., 2003*). Higher levels of both mental and physical health related quality of life were found in patients with no depressive symptoms, abstinent from drugs and experiencing few drug related problems (*Kann et al., 1993*). Mental health related quality of life was also independently higher in patients receiving high social support. Physical health related quality of life was independently higher for patients who stopped injection, whether

on drug maintenance treatment or not, for patients on anti-retroviral treatment and for patients who remained in early stages of addiction (*Preau et al., 2006*).

Substance abuse disorders, in general, are associated with poor quality of life especially with heroin addicts because of exposure to HIV infection, rates of unemployment, criminal records and low educational level were high (*Puigdollers et al., 2004*). While patients on drug maintenance treatment who stopped injecting drugs had better mental health related quality of life than injectors but lower levels of mental health-related quality-of-life than abstinent patients (*Mintzer and Stitzer 2002*).

In case of alcohol abuse, which is the major cause of preventable deaths associated with violence and motor vehicle crashes, excessive alcohol intake strains personal relationships and may affect one's ability to hold a job. In addition, excessive alcohol intake may result in serious health problems, including damage to the liver and brain (*Ringold et al., 2006*). The quality of life scores in the alcoholic patients are lower in the areas of role functioning and mental health. In contrast to recent studies of mental health problems in primary care, alcohol use disorders and consumption patterns seem to have a modest impact on patients' Health Related Quality of Life (HRQOL). These effects, though, vary by dimension of functioning, the presence of alcohol dependence rather than abuse, and pattern of alcohol consumption (*Volk et al., 1997*). The severity of alcohol dependence as well as the co-occurrence with depression and anxiety seemed to influence the perception of health related

quality of life negatively (**Daeppen et al., 1998; Kraemer, 2002**). The alcohol dependent patients make substantially more costly use of resources than abusers and experience with a much poorer quality of life including financial, family, legal, and social problems (**Scherrer et al., 2005**). Furthermore, youth with recent alcohol use tend to experience a poorer level of health related quality of life, especially with mental health related problems (**Chen and Storr, 2006**). Binge drinkers and frequent, high quantity drinkers showed markedly lower scores in the areas of role functioning and mental health. The changes in alcohol consumption are associated with changes in quality of life and alcohol-related consequences (**Kraemer et al., 2002**).

On the other hand, impairment in social or occupational functioning due to cannabis use has been frequently reported e.g., marked loss of interest in activities previously engaged in, loss of friends, absence from work, loss of job or legal difficulties (other than due to a single arrest for possession, purchase or sale of an illegal substance). The early use of marijuana was associated with lowered income and reduced health later in life. While, people who abstain from smoking marijuana appear to have a better quality of life and higher levels of educational achievement than marijuana users (**Nestler, 1998**). Adolescents aged 12 to 17 years who smoke marijuana were more than twice as likely to cut class, steal, attack persons, and destroy property than those who did not smoke marijuana. Marijuana affects many skills required for safe driving: alertness, the ability to concentrate, coordination, and reaction time. These effects can last up to 24 hours after smoking marijuana. Marijuana use can make it

difficult to judge distances and react to signals and sounds on the road (**Kandel, 1995**). Cannabis use was linked to externalizing problems (delinquent and aggressive behavior) but not to internalizing problems (withdrawn behavior, somatic complaints and depression). An increasing frequency of use resulted in stronger links. Marijuana hinders the user's short term memory, and induced handling of complex and make tasks especially simple tasks difficult (Miller, 2004) with exacerbation of psychotic symptoms and increase risk of psychotic relapse among psychotic patients and earlier onset schizophrenia (**Barnes et al., 2006**).

Methods to improve quality of life in substance abuse patients

Drug dependence is a preventable and treatable disease, and effective prevention and treatment interventions are available. The best results are achieved when a comprehensive multidisciplinary approach which includes diversified pharmacological and psychosocial interventions are available to respond to different needs. Even taking into account the requirements for the delivery of evidence-based treatment, its costs are much lower than the indirect costs caused by untreated drug dependence (prisons, unemployment, law enforcement, health consequences) (**Curran et al., 2004; Seeman et al., 2005**).

A major priority in US medicine is to treat the drug abusers effectively and consequently improve the quality of their lives (**Bruce et al., 2000**). Abstinence was significantly associated with

completion of the 6 week inpatient treatment programs including the residential care, 12-step support, individual counseling and attendance at outpatient after care for following up and rehabilitation programs (*Smyth et al., 2005; Golub, 2005*). Improvement in QOL primarily was predicted by improvements in psychiatric symptoms, physical health, legal and family problems. Number of months without alcohol and drugs and psychological problems were positively associated with improvement in QOL (*Schaar and Ojehagen, 2003*). Relapse prevention treatments have a well-established efficacy and effectiveness for persons with substance use disorders. Key ingredients include reducing exposure to substances, fostering motivation for abstinence, self-monitoring, recognizing and coping with cravings and negative affect, identifying thought processes with relapse potential, and deploying, if necessary, a crisis plan. Relapse prevention approaches may be best suited for persons in the action of maintenance stages of treatment or recovery. Further research is needed to examine relapse prevention therapies as a key component to continuing care for persons with co-occurring substance use and psychiatric disorders. Despite that, still substance abuse is a big problems with harmful impact on quality of life (*Mark, 2005*).

The direct application of prevention and treatment research knowledge is particularly important in solving substance abuse problems. Developing adaptations of research proven programs for diverse racial and ethnic populations, field testing them with high quality process and outcome evaluations, and providing them where they are most needed are critical. Interventions

appropriate to the population to be served, including interventions to address gaps in substance abuse treatment capacity, must be identified and implemented by Federal, Tribal, regional, State, and community-based providers in a variety of settings (**Cook and Moore, 1993**). Scientific research has identified many opportunities to prevent alcohol related problems. For example, studies indicate that school based programs focused on altering perceived peer group norms about alcohol use and developing skills in resisting peer pressures to drink reduce alcohol use among participating students. Communitywide programs involving school curricula, peer leadership, parental involvement and education, and community task forces also have reduced alcohol use among adolescents (**Holder et al., 1997; Cook et al., 1982**).

In college settings, brief motivational counseling has proved effective in reducing alcohol and other related problems among high risk groups (**Marlatt, 1995**). Many opportunities to prevent drug related problems have been identified. Core strategies for preventing drug abuse among youth include raising awareness, educating and training parents and others, strengthening families, providing alternative activities, building skills and confidence, using spiritual education, mobilizing and empowering communities, and environmental approaches (**Odejide, 2006**). Research suggests that improving parent-child attachment and supervision and monitoring also protects youth from substance abuse. Alternative activities for youth is to teach social skills and provide an alternative to substance abuse. According to one study, programs that help young persons

develop psycho- social and peer resistance skills are more successful than other programs in preventing drug abuse (**Taioli, 1991**).

Furthermore, the prevention and treatment of substance abuse require that all abused substances be addressed from tobacco and alcohol to marijuana and other illicit drugs. Tobacco prevention and treatment are equally important parts of a comprehensive substance abuse prevention program (**Hingson, 1996**). Studies also show that changing norms is extremely effective in reducing substance abuse and related problems (**Ruhm, 1996**). Higher prices or taxes for alcoholic beverages are associated with lower alcohol consumption and lower levels of a wide variety of adverse outcomes including the probability of frequent beer consumption by young persons (**Coate and Grossman, 1988**).

However, particular attention must be given to young persons under age 18 years who have an addicted parent, since these youth are at increased risk for substance abuse. Because alcoholism and drug abuse continue to affect lesbians, gay men, and transgendered persons at two to three times the rate of the general population, programs that address the special risks and needs of these population groups also are needed. Government, employers, the faith community, and other organizations in the private and nonprofit sectors must increase their level of cooperation and coordination to ensure that multiple effectiveness of treatment services for substance abusers needs are met (**Marlatt, 1995**).

Chapter (III)

Schizophrenia and Quality of Life

As formally described by Emil Kraepelin in 1898, schizophrenia is a devastating illness affecting every aspect of life for the patient and the patient's family. Approximately one percent of the population develops schizophrenia during their lifetime; more than 2 million Americans suffer from the illness in a given year (*Nicola et al., 2006*). It is a multifactorial disorder. Numerous theories have been proposed regarding the cause of schizophrenia ranging from developmental or neurodegenerative processes or neurotransmitter abnormalities to infectious or autoimmune process (*Sadek, 2006*). Schizophrenia is one of the major chronic mental health problems that decrease the quality of life (*Lamert, 2006*). Although schizophrenia was subject to several researchers for long decades yet, still the social and occupational consequence of schizophrenia are not yet resolved (*Okasha et al., 1990*). That's why a recent trend in researches is to focus on the health related quality of life issues revolving around schizophrenia. At the same time, several studies have shown that the chronically mental ill are at higher risk for reduced health related quality of life (HRQL). A combination of mental health problems with traumatic events might increase this risk (*Bellis et al., 2006*).

The cost of schizophrenia

The incidence and prevalence of schizophrenia vary by geographic area and across time. It has been estimated that approximately 24 million people suffer from schizophrenia worldwide, with annual incidence rates of 1-4 per 10 000 adults aged 15-54 years and an average lifetime prevalence of between 0.5-1% (**Robert, 2004; Muldoon et al., 1998**). Schizophrenia affects all individuals equally, regardless of sex, race, or nationality. The severity of the symptoms and long-lasting, chronic pattern of schizophrenia often cause a high degree of disability. Medications and other treatments for schizophrenia, when used regularly and as prescribed, can help reduce and control the distressing symptoms of the illness (**McGrath, 2006**). Schizophrenia continues to be a high cost illness because of the range of health needs that people have. Despite the shifting balance of care away from hospital-based care, the health care costs of treating and supporting people with schizophrenia remain high (**Chassin and Galvin, 1998**). The direct costs of schizophrenia are large, ranging from 0.5% to as high as 3.5% of national healthcare expenditures (**Gill and Feinstein, 1994**). In 1990, the socioeconomic impact of schizophrenia in the United States alone was \$32.5 billion. These patients accounted for 25% of all hospital admissions and occupied 40% of all long-term care beds (**Taber et al., 2001**). While in England, the annual cost of schizophrenia was 2.6 billion pounds (**Knapp, 1997**) and in 2005 the total societal cost of schizophrenia was £6.7 billion. The direct cost of treatment and care was about £2 billion; the burden of indirect costs to the society was huge, amounting to nearly

£4.7 billion. Cost of informal care and private expenditures borne by families was £615 million. The cost of lost productivity due to unemployment, absence from work and premature mortality of patients was £3.4 billion. The cost of lost productivity of careers was £32 million. Estimated cost to the criminal justice system was about £1 million. It is estimated that about £570 million will be paid out in benefit payments and the cost of administration associated with this is about £14 million (*Burton, 2006*). Furthermore, up to 24% of adults in USA have experienced a mental disorder during the preceding year. In 1997, the estimated cost of mental illness exceeded \$150 billion for treatment, social services, disability payments, lost productivity, and premature mortality (*Jeffrey, 2006*).

In general, mental health disorders account for a significant and growing proportion of the global burden of disease and yet remain a low priority for public financing in health systems globally (*Dixon et al., 2006*). The total costs for schizophrenia were higher than those for other psychiatric disorders, and they were also age dependent. In both fiscal years, the costs of schizophrenia were higher for the youngest and oldest cohorts than for the patients in the 30-65-year range (*Cuffel et al., 1996*). So, schizophrenia still represents the second most costly among diseases, accounting for 9.4% of total health expenditure, just after cardiovascular diseases 10.7% (*Rollin, 2003*).

Burden of schizophrenia as an illness on quality of life

The last decade has seen a number of changes to the treatment and management of patients with schizophrenia. New more effective medications have been introduced, more programs and services have been offered, and there is a better understanding of the needs and requirements to treat patients with schizophrenia. These changes can have a significant impact on family and work relations, social interactions, and quality of life for patients with schizophrenia (**Chakos et al., 2004**). The prognosis for persons with schizophrenia is variable. The disease can be relatively mild with the patient suffering one or several episodes with little or no lasting impairment. However, for the majority of patients, schizophrenia is associated with repeated episodes and worsening symptoms and outcomes, with about 9% of patients suffering a lasting impairment, and 43% enduring increasingly severe symptoms with no periods of complete remission (**Schulte, 2006**). Symptoms of the illness are highly variable from person to person but typically include "positive" symptoms (delusions, hallucinations, and thought disorganization), "negative" symptoms (blunted affect, social dysfunction, lack of motivation), cognitive impairments, and mood disturbance. Recurrence of active psychosis, progression of symptoms, and deterioration in all areas of life function are the rule (**Michael et al., 2004**). The positive, negative, and disorganized symptoms of schizophrenia are related to quality of life, associated with lower general life satisfaction and lower satisfaction with daily living, finances, health, and social life (**Huppert et al., 2001**). Also sexual dysfunction has high prevalence in schizophrenic patients due to the nature of the illness, patient's non-marriage and lack of addressing the sexual

issues. But in the fact; married schizophrenics mostly suffering of any sexual problem more than normal subjects due to the illness or the using of drugs which can affect their normal sexual function; but still the mechanisms are poorly understood (**Abdel Azim et al., 2006**).

Surprisingly, The World Health Organization's studies of relapse showed better outcomes of schizophrenia, in developing countries than in industrialized ones, with over 60% of patients in poor countries asymptomatic after five years compared with only 18% in rich countries. This finding was generally attributed to better social acceptance and support in these communities, but it may have been related to less use of mainstream antipsychotic agents, and continued use of medication correlating with poorer outcome (**Whitaker, 2004**).

Impact of clinical symptoms on quality of life

Positive symptoms

The schizophrenic disorders are a major social tragedy because of the large number of persons affected and because of the severity of their impairment. It is estimated that people who suffer from schizophrenia fill 50% of the hospital beds in psychiatric units and 25% of all hospital beds resulting from positive symptoms i.e. positive symptoms predicted future hospitalizations (**Abdelmawla and Mitchel, 2006**). Positive symptoms of schizophrenia are associated with neurodegenerative changes and leading to brain cell death and deterioration of cognitive function. The long duration of

untreated psychosis in early schizophrenia affect negatively on quality of life in late life especially in life satisfaction domain, economic outcomes and social network (*Al-Jamal et al., 1998*). The positive symptoms are also related to increase of violence and aggressive behaviors (*McGlashan, 2006*). For long years ago, the reduction of positive symptoms and their associated behavioral problems have been considered the most important treatment outcome parameter in patients with schizophrenia (*Adent et al., 2000*). The positive symptoms in people with schizophrenia are associated with poor functioning and lower quality of life. There are associations between positive symptoms, community functioning and cognitive deficits because they may be more directly related to functioning outcomes and predictive of future care (*Pelonero et al., 1998*).

Negative symptoms

Research suggests that the negative symptoms of schizophrenia, including problems with motivation, social withdrawal, diminished affective responsiveness, speech, and movement, contribute more to poor functional outcomes and quality of life for individuals with schizophrenia than do positive symptoms (*Haggag, 1998*). Moreover, caregivers of patients with negative symptoms report high levels of burden (*Turner and Stewart, 2006*). Negative symptoms tend to persist longer than positive symptoms and are more difficult to treat (*Whitaker, 2004*). Research suggests that improvements in negative symptoms are associated with a variety of improved functional outcomes including independent living skills, social functioning,

and role functioning (*Nasrallah, 2006*). Thus, targeting negative symptoms in the treatment of schizophrenia may have significant functional benefits. Treatment of negative symptoms has been identified as a vital unmet clinical need for many persons with schizophrenia (*Nicholas, 2006*). These negative symptoms are harder to recognize as part of the disorder and can be mistaken for laziness, depression or prodroma of schizophrenia and around 15-40% of these patients will make the transition to full psychosis within 12 months (*William, 2003*). Poor quality of life is related to residual psychopathology, long delays in treatment of negative symptoms, and poor premorbid adjustment (*Barnes, 2005*). The severity of negative symptom was positively and significantly correlated with later occupational impairment, financial dependence on others, impaired relationships with friends, impaired ability to enjoy recreational activities, and global assessment of functioning (*Maxine et al., 2005*). The magnitudes of correlation between the levels of psychotic symptoms or disorganized symptoms and quality of life measures were comparatively lower (*Facorro et al., 2001*). Negative symptoms of schizophrenia are a prominent feature of the illness, and frequently remain refractory to treatment. Both the psychomotor poverty and disorganization syndromes were associated with social and occupational impairment, in particular, the psychomotor poverty syndrome was associated with impairment of personal relationships, and the disorganization syndrome with poor self-care, in persistence at work and quality of life (*Beng et al., 2004*). Generally, improvement in positive, negative, and extrapyramidal symptoms was associated with

mood improvement and this affect indirectly on quality of life (*Eack and Newhill, 2007*).

Cognitive impairment

Cognitive deficits are recognized as a critical determinant of functional outcomes in schizophrenia (Haddock et al, 2005). Schizophrenia is characterized by cognitive deficits in attention, memory, executive function, motor control, language and general intellectual ability (*Barnes, 2005*). Impairments in cognitive functioning or cognitive deficits are common in schizophrenia, and the degree of impairment may be associated with the individual's age at onset of the disorder (*Henriksson et al., 2004*). Moreover, the severity of cognitive dysfunction proves to be a better predictor of the prognosis for successful outpatient treatment in the community than the severity of positive symptoms (*Mohl, 2005*). Neuropsychological studies clearly show that patients with schizophrenia suffer from impaired cognitive performance. This was supported by Magnetic Resonance Imaging (MRI) techniques, which provided evidence for brain morphological changes in schizophrenia (*Joachim et al., 2001*). Improving cognitive function is currently an important focus of the management of schizophrenia since deficits in this area contribute to poor clinical and psychosocial outcomes and poor quality of life (*Kane, 2003*). Cognitive rehabilitation techniques offering remedial treatment of cognitive dysfunction in schizophrenia have also been developed and have been found to be a beneficial adjunct to treatment in stable patients with moderate deficits (*Adams, 2001*). This intellectual deterioration

was started from childhood through adolescence with increased risk for later hospitalization for schizophrenia and this was associated with deterioration of the quality of life (**Reichenberg et al., 2005**). Added to these, patients with impaired insight and cognitive function provided QOL ratings that were less reliable than those provided by patients with better insight and cognitive function (**Rebecca et al., 2006**).

The findings from longitudinal studies of the dimensional psychopathology of first episode psychosis showed that short-term functional outcome improves after treatment of the first episode, but longer term outcome remains relatively poor for a substantial proportion of patients and is associated with preadolescent onset, poor premorbid adjustment, poor cognitive functioning, cerebral asymmetry, and negative symptoms during prodromal and post onset phases. Poor quality of life is related to residual psychopathology, long delays in treatment, and poor premorbid adjustment (**Malla et al., 2005**).

Negative consequences of poor quality of life in schizophrenic patients

a- Increase risk of suicide

It has long been known that persons with schizophrenia are at high risk for attempted and completed suicide. With estimates of about 5% to 15% for completed suicide and 20% to 40% for attempted suicide, the recent increase in attention to this concern is promising (**Palmer et al., 2005**). The epidemiology of suicidal behavior in patients with schizophrenia has been well documented. Like suicide in other groups, more men than women

complete suicide, although suicide attempt rates do not differ between the sexes (*Lewis et al., 2005*). Women with schizophrenia have higher rates of suicide relative to other women (*Turkington et al., 2006*). In general, the period of greatest risk of suicide is early in the course of illness, therefore, patients with schizophrenia who completed suicide tended to be young and in the first 5 to 10 years of illness (*Crystal et al., 2006*). However, unlike other groups at risk, the risk of suicide in patients with schizophrenia is elevated throughout the lifespan. Suicide attempts tend to be of moderate to severe lethality, and those who attempt suicide are likely to make multiple attempts (*Williams, 2003*). In addition, factors such as unemployment, single status (unmarried), and living alone have been found more often in patients with schizophrenia who attempt and complete suicide (*Kanas, 2006*). Suicide risk was particularly high during the first 5 days after discharge, the period after discharge from a psychiatric hospital represents a critical time in the course of illness for individuals with schizophrenia. The transition from the hospital to another setting has been found to be associated with increased levels of stress and perhaps as a consequence, with exacerbation of psychiatric symptoms, noncompliance with medication, substance abuse, and suicide attempts (*Kimhy et al., 2004*). Moreover, increased risk was also associated with multiple admissions during the previous year, previous suicide attempts, about a third of people with depressive symptoms died within a year of illness (*Hunt et al., 2006*). Higher severity classes were associated with more disability and poor quality of life (*Kruijshaar et al., 2003*). Also social anxiety disorder is associated with a lower health related quality of life and higher

lifetime rates of suicide attempts with schizophrenia in outpatients (*Mendlowicz et al., 2005*).

Quality of life is negatively associated with a history of suicidality of patients with schizophrenia. The patients who had attempted suicide multiple times were less satisfied with regard to a larger number of life domains than the nonattempters and the single attempters (*Hogarty et al., 2004*). Dissatisfaction with QOL was associated with repeated suicide attempts. Interventions aimed at helping people in the period immediately following discharge from inpatient care have been developed and improving their quality of life (*Crawford, 2004*).

b- Increase risk of violence

There is link between mental illness and criminal violence, substance misuse in schizophrenia with male gender, high incidence of homelessness, more pronounced psychotic symptoms, non-adherence with medication, poor prognosis, violence and aggression (*Soyka, 2000*). But actually, most individuals suffering from schizophrenia are not violent; more typically, they are withdrawn and prefer to be left alone (*Walsh et al., 2002*). However, it has been reported that the patients with severe mental illness commit one in 20 violent crimes all over the population (*Fazel and Grann, 2006*).

People with positive psychotic symptoms, such as persecutory ideation, command hallucination, have high the risk of minor and serious violence, because patients with schizophrenia have defects in their ability to predict the sensory consequences of their actions (*Shergill et al., 2005*). The patients with negative psychotic symptoms, such as social withdrawal, depressive symptoms, had lowered risk of serious violence (*Jeffrey et al., 2006*). Moreover, comorbidity with substance abuse significantly raises the rate of violence in people with schizophrenia but also in people who do not have any mental illness (*Coid et al., 2006*). Violence may be also worse if medications were discontinued, or in patient with poor compliance (*McNiel et al., 2000*). When violent behavior does occur, it is most frequently targeted at family members and friends, and more often takes place at home. Violence against family caregivers by their adult relatives with severe mental

illness is a taboo area of public discourse and scientific research because of fears of further stigmatizing this population. Yet, these families experience violence at a rate estimated to be between 10% and 40%, which is considerably higher than the general population (*Solomon et al., 2005*).

Quality of life issues must be addressed more vigorously in the care of chronic mental patients, as they were less satisfied than the general population in most life areas, especially finances, unemployment, safety, and family and social relations. Of particular concern, was the finding that 34% had been recent victims of crime. The results underscore the need for better social programs for these patients (*Lehman et al., 1982*).

c- Increase risk of relapse

The main goal in the treatment of schizophrenia is to reduce symptoms and minimize the risk of relapse or the reappearance of symptom exacerbations. The nature of schizophrenia as an illness leads to some 80% of patients relapsing within two years of a treated first episode and only one in six patients remaining relapse free 10-15 years later (*Turner, 2004*). Relapse in schizophrenia remains common, distressing, and costly, may be associated with an increased risk of hospitalization and cannot be entirely eliminated even by the best combination of biological and psychosocial interventions (*Shepherd et al., 1989*). Relapse prevention is crucial as each relapse may result in the growth of residual symptoms' accelerating social disablement and have a major negative impact on quality of life (*Hogarty et al., 1991*).

Non-compliance or partial compliance remain key barriers in the management of schizophrenia and are often significant contributing factors in relapse. Patients experiencing numerous relapses are at high risk of never regaining previous levels of functioning, therefore, preventing relapse is paramount in order to improve the long-term outcome for people living with the condition (*Walz, 2004*).

Alcohol and drug abuse, social anxiety, and depression are all conditions prevalent among patients with schizophrenia. Each can negatively affect a patient's quality of life and treatment outcome and should be attended to as a regular component of aftercare (*Pfammatter et al., 2006*). Between one third and one half of schizophrenic patients use alcohol and/or other substances; this puts them at increased risk for relapse, treatment nonadherence, hospitalization, violence, and suicide (*Valmaggia, 2005*). The combination of cognitive behavioral drug relapse prevention strategies, social and independent living skills training improved drug and alcohol abstinence, medication adherence, and quality of life (*Bernice et al., 2003*).

d- Increase risk of substance abuse

The high rate of co-occurrence of substance use disorders and other psychiatric disorders are well established. Individuals with schizophrenia have an increased vulnerability to abuse drugs or alcohol. This vulnerability can interfere with the course and treatment of the disorder and may also have a detrimental effect on already compromised cognitive functioning and affected

quality of life negatively (**Brady and Sinha, 2005**). Among those with a mental disorder, the odds ratio of having some addictive disorder was 2.7, with a lifetime prevalence of about 29% including an overlapping 22% with an alcohol and 15% with another drug disorder. For those with either an alcohol or other drug disorder, the odds of having the other addictive disorder were seven times greater than in the rest of the population. Among those with an alcohol disorder, 37% had a comorbid mental disorder. The highest mental-addictive disorder comorbidity rate was found for those with drug (other than alcohol) disorders, among whom more than half (53%) were found to have a mental disorder with an odds ratio of 4.5. Individuals treated in specialty mental health and addictive disorder clinical settings have significantly higher odds of having comorbid disorders (**Regier et al., 1990**).

The prevalence of substance use disorders in patients with schizophrenia is greater than the rate observed in the general population (**Gitlin et al., 2004**). Several theories exist to explain the high rate of comorbidity. The self medication hypothesis suggests that persons may abuse substances to treat underlying psychotic symptoms or adverse effects of medications commonly used to treat schizophrenia. Other hypotheses include the increased availability of substances of abuse, genetic predisposition, and kindling (**Oshima et al., 2003**). The most common form of substance use disorder in people with schizophrenia is nicotine dependence due to smoking. While the prevalence of smoking in the U.S. population is about 25 to 30 percent; about 41% of all individuals who have had a mental

illness smoke compared with 22.5% of those who have never had a mental illness. Persons with mental illness are about twice as likely to smoke as other persons but have substantial quit rates (**Lasser et al., 2000**). Smoking has been found to interfere with the response to antipsychotic drugs (**McCreadie, 2003**). Several studies have also found that schizophrenia patients who smoke need higher doses of antipsychotic medication. Quitting smoking may be especially difficult for people with schizophrenia, because the symptoms of nicotine withdrawal may cause a temporary worsening of schizophrenia symptoms. However, smoking cessation strategies that include nicotine replacement methods may be effective (**Kuehn, 2006**).

Individuals with schizophrenia have a high risk of becoming addicted to drugs other than nicotine mainly marijuana, alcohol and cocaine. Rates of dependence in psychotic population appears to be high, and it has been estimated that patients with mental illness consume 44.3% of all cigarettes in the United States (**Abdel-Aziem, 2007**). And 13 to 42% of schizophrenics are addicted to marijuana (**Weiser et al., 2004**). These individuals often have difficulties adhering to a substance abuse treatment program, and have an increased chance of marijuana relapse. Marijuana use by schizophrenics has also been associated with clinical exacerbations, noncompliance with antipsychotic medications, poor global functioning, increased rehospitalization rates and subsequently associated with poor quality of life. While antipsychotic medications are often effective in controlling symptoms of schizophrenia, they are not always effective in preventing substance abuse (**Henquet et al.,**

2005). Persons with schizophrenia who are addicted to cocaine experience more psychiatric and substance abuse relapses and worse long term outcomes than persons with only one of these conditions (*Smelson et al., 2002*).

Comorbid substance use disorders among patients with schizophrenia are associated with a number of clinical challenges, including an increased rate of medication noncompliance, more frequent and longer hospitalizations, a higher rate of use of crisis-oriented services, and consequently, a higher cost of care. Social problems associated with substance abuse in patients with schizophrenia include legal entanglement, housing instability, unemployment, poor money management and poor quality of life (*Lidz et al., 1995*). Because of the serious consequences associated with substance abuse in this population, the development of effective treatments is of utmost clinical importance. Patients with psychotic disorders may be more reluctant to participate in traditional substance abuse treatment programs and self-help groups, where most members do not have comorbid psychotic disorders. In addition, the cognitive symptoms that are associated with schizophrenia may undermine a patient's motivation and his or her ability to learn new coping strategies in psychosocial treatments. Although specialized psychosocial treatments that focus on behavioral interventions for substance abuse in patients with schizophrenia show promise, they require an intensive intervention by highly trained staff (*Daumit et al., 2006*).

Relation between treatment intervention in schizophrenic and quality of life

Schizophrenia is one of the most expensive disorders across the adult lifespan, and expenditures increase across age cohorts. Effective interventions are needed that improve independent functioning in older age, in conjunction with innovative models of home and community based services that decrease high use of and expenditures for nursing homes (*Bartels et al., 2003*). At the same time, Quality of life (QOL) improvement has been recognized as an important outcome of schizophrenia treatment (*Eack and Newhill, 2007*). The goals of treatment in schizophrenia have evolved from objective improvements in psychotic symptoms to encompass patient related factors such as subjective response and quality of life. More research is needed to address effective interventions to reduce patient and caregiver burdens and to improve outcomes and quality of life (QOL) (*Winkler, 2006*).

The traditional neuroleptics, while alleviating many florid positive symptoms of schizophrenia, did not restore or remediate social or occupational skills. Furthermore, many neuroleptics were beset by untoward side effects (e.g., akathisia), and they were ineffective in reducing the negative symptoms of the disorder (e.g., flat affect, anhedonia), which are often associated with negative outcome (*Matson, 1998*). However, the development of the atypical antipsychotic agents in the early 1990s leads to adoption of new measures for therapeutic outcome, negative symptoms, neurocognition, social functioning,

quality of life and insight (Burton, 2006) and usually allow the patient to function more effectively and appropriately (**Postrado and Lehman, 1995**). In general, improved quality of life was reported in schizophrenic patients treated with novel antipsychotics. They play an integral part in the achievement of remission, such as negative symptoms, cognitive impairment, social functioning and quality of life. Reduction in both negative symptoms and general psychopathology were accompanied with better quality of life. Some improvement in neuropsychological test performance was also found, with a variable pattern of association with change in psychopathology. Improved verbal fluency was associated with reduction in negative symptoms, while improved verbal concept formation was associated with reduction in positive symptoms (**Galletly et al., 1997**). However, non-compliance with medication remains widespread due to illness, treatment and clinician related factors. The use of long-acting antipsychotic agents, with their assured medication delivery, may facilitate compliance and improve long-term treatment outcomes, possibly assisting patients in achieving remission (**Nasrallah, 2006**). Although the second generation (atypical) antipsychotics are more expensive than first generation (typical antipsychotics) up to 10 times the cost (Daumit et al., 2003) but more effective, with fewer adverse effects, and preferable to patients (**Jones et al., 2006**).

Nevertheless, antipsychotic drugs, like virtually all medications, have unwanted effects along with their beneficial effects. During the early phases of drug treatment, patients may be troubled by side effects such as drowsiness, restlessness,

muscle spasms, tremor, dry mouth, or blurring of vision (**Jones et al., 2006**). The long term side effects of antipsychotic drugs may pose a considerably more serious problem as weight gain, diabetes mellitus. One third of new cases of diabetes may be attributed to use of olanzapine, risperidone, and quetiapine in patients taking these medications (**Lambert et al., 2006**). Weight gain is a common complication of antipsychotic treatment. Its consequences include decreased self-esteem, reduced quality of life, reduced adherence with medication and increased morbidity and mortality (**Haddad, 2005**). A definitive relationship exists between compliance and the economic costs of schizophrenia and quality of life. Lower rates of compliance lead to higher costs of treating schizophrenia and low quality of life (**Thieda et al., 2003**).

While medication may help relieve symptoms of schizophrenia, various psychosocial treatments can help with the behavioral, psychological, social and occupational problems associated with the illness (**Turkington and Mckenna, 2003**). There is a wide range of psychological interventions for established schizophrenia. These include family interventions, motivational interventions for substance misuse and for non-adherence to medication (Lewis et al., 2005), social skills training, and cognitive remediation, psycho educational interventions with families and relatives, as well as cognitive behavioral therapy of persistent positive symptoms emerge as effective adjuncts to pharmacotherapy (**Ayek et al., 2003**). Each of the above approaches can help improving different aspects related to quality of life (**Lewis et al., 2005**).

For example, the cognitive behavioral therapy treatment resulted in reductions in feelings of hopelessness, reduction of positive symptoms and in low self-esteem (**Williams, 2003**). These benefits seem to be accompanied by slight improvements in social functioning, improvement of insight, symptomatology and reduce depression (**Turkington et al., 2006**). Recently, cognitive behavioral therapy is now recognized as an effective intervention for schizophrenia in clinical guidelines developed in the United States and in Europe. In spite of the evidence based and absence of side effects, however, the general availability of this treatment approach within community settings is still low (**Olfson et al., 2006**). Rehabilitation or cognitive rehabilitation approaches seek to enhance cognitive processes or to circumvent cognitive impairments in schizophrenia in an effort to improve functional outcome (**Velligan et al., 2006**). Moreover, it has roll in developing the social skills and job training to help people with schizophrenia function in the community and live as independently as possible with social functioning improved (**Glynn et al., 2004**). Also the cognitive behavioral social skills training for middle aged and older outpatients with chronic schizophrenia helped learning coping skills, evaluated anomalous experiences with more objectivity (achieved greater cognitive insight), and improved social functioning and also improving the quality of life for those chronic patients (**Granholm et al., 2005**).

At the same time, employment is a primary goal for a majority of unemployed patients with schizophrenia. Sustained employment has been associated with reduced health care use and costs and increased levels of self-esteem and satisfaction

(Barrowclough et al., 2006). As noted earlier, improvement in positive symptoms appears to be less of a predictor of community functioning (independent living skills, vocational status, and quality of life), social skills, and skill acquisition than improvement in negative symptoms and neurocognitive abilities, because the most impaired aspect of well-being in the schizophrenic group was the social relationship **(Hasanah and Razali, 2002)**. Psychiatric patients reported less satisfaction than the general population on all components of social support **(Caron et al., 1998)**.

Another important approach is group therapy and supporting groups. Group therapy is a widely used treatment modality for early psychosis, which can provide continuing mutual support when used as an adjunct to antipsychotic medications **(Kanas, 2006)**. Mental health quality was negatively related to both rehabilitation needs and poorer continuity of service. Life satisfaction was negatively related to poorer continuity of service and higher perceived treatment coercion **(Crystal et al., 2006)**. From another point of view family therapy can help families deal more effectively and enabling them to better helps their loved one. Family intervention programs has an effect on the patient's relapse rate (decreased 20%), and hospitalization rates **(Pfammatter et al., 2006)**. Very often, patients with schizophrenia are discharged from the hospital into the care of their family, so it is important that family members learn all they can about schizophrenia and understand the difficulties and problems associated with the illness **(Walz et al., 2004)**. It is also helpful for family members to learn ways to minimize the patient's chance of relapse for example, by using

different treatment adherence strategies and to be aware of the various kinds of outpatient and family services available in the period after hospitalization (*Kuipers et al., 2006*). Family psychoeducation, which includes teaching various coping strategies and problem solving skills, may help families deal more effectively with their ill relative and may contribute to an improved outcome for the patient (*Zheng and Arthur, 2005*).

Community Mental Health Care

In the last fifty years, the organization of community based psychiatric services has become increasingly complex and sophisticated in most developed countries. Community Mental Health Services offers help and hope for people who have a serious mental illness such as schizophrenia (*Tolmac and Matthew, 2004*). The Community Mental Health Teams are fully integrated teams of people from a variety of professional backgrounds, aiming to provide one point of access to mental health services to people suffering from a severe mental health problem. Their services are aimed at adults of working age with mental health problems that seriously impair their ability to function. Clients with less serious problems should be looked after in primary care settings and by counseling services. There is some empirical support for the benefits of these teams, particularly in terms of patient satisfaction as they provide flexibility and continuity of care (*Bebbington et al., 2002*). The community treatment program has been successfully transferred to many communities by other teams of clinical researchers. Also, assertive community treatment programs have been

successfully implemented as part of routine clinical care and have been shown to be effective at reducing rehospitalization, therefore the majority of people who suffer from mental illness receive their treatment and care in their own community, not in hospital. Community mental health services work without disrupting their home life through changing of policies of hospitalization from the large old mental hospitals to the development of community mental health care unit all over the community. This will consequently lead to improvement of the functional outcome and quality of life and satisfaction with living situation (*Michael et al., 2004*).

مقياس وسكانسن لقياس جودة الحياة

Wisconsin Quality of life Client Questionnaire

نحن نهتم بمشاعرك و وجه نظرك وهذه الأسئلة تدور حول رأيك و تقييمك لنوعية حياتك

رقم الملف :

تاريخ اليوم :

مكان عمل التقييم

I-معلومات أولية عن المريض

1-الاسم

3-تاريخ ميلادك

5-النوع :ذكر أنثى

7-مستوي التعليم

8-الحالة الاجتماعية

أعزب

متزوج

مطلق

منفصل

ارمل

9-ما هي عدد مرات الزواج ؟

10- ما هي مصادر دخلك؟

(يمكن اختيار أكثر من إجابة)

(7) أموال مدخرة	(6) جمعيات خيرية	(8) من عمل	(5) مؤسسات اجتماعية
(3) من الاسرة	(4) معاش تقاعد	(2) من الزوجة	(1) من الأبناء
(0) أخرى تذكر	(1) من الأبناء	(2) من الزوجة	(1) من الأبناء

11- في خلال الأسابيع الأربعة الماضية هل أقمت

(4) مع الأسرة	(2) مع صديق	(1) بمفردك	(4) مع والديك
(0) أخرى تذكر	(3) مع أبنائك	(1) بمفردك	(4) مع والديك

12- هل ترغب في الإقامة

(4) مع الأسرة	(2) مع صديق	(1) بمفردك	(4) مع والديك
(0) أخرى تذكر	(3) مع أبنائك	(1) بمفردك	(4) مع والديك

13- في خلال الأسابيع الأربعة الماضية هل أقمت في

(2) مستشفى	سكن جامعي	شقة	(6) دار رعاية
(0) أخرى	السجن	(5) سكن جامعي	(3) دار رعاية

بلا مأوي ☐ منزل منتصف الطريق ☐ (0) الطريق (4)

14 - ما هو المكان الذي تفضل الإقامة به (أختر واحدة)

☐	شقة	☐	سكن جامعي	☐	مستشفى	(2)
(6)		(5)				
دار رعاية	☐	السجن	☐	أخرى		(0)
(3)		(1)				
بلا مأوي	☐	منزل منتصف الطريق	☐			
(0)		(4)				

II- درجة الرضى

راضى مطلقا	راضى نوعا	راضى بدرجة متوسطة	محايد	غير راضى بدرجة متوسطة	غير راضى نوعا ما	غير راضى مطلقا	
(7)	(6)	(5)	(4)	(3)	(2)	(1)	
							1- هل أنت راضى عن الطريقة التي تقضي بها وقتك ؟
							2- هل أنت راضى عندما نكون بمفردك ؟
							3- هل أنت راضى عن سكنك ؟
							4- هل أنت راضى عن جيرانك في السكن ؟
							5- هل أنت راضى عن طعامك ؟
							6- هل أنت راضى عن ملابسك ؟
							7- هل أنت راضى عن الخدمات الصحية المقدمة لك ؟
							8- هل أنت راضى عن وسيلة انتقالك ؟
							9- هل أنت راضى عن حياتك الجنسية ؟
							10- هل أنت راضى عن أمنك الشخصي ؟

التساؤلات السابقة تشير إلى كيفية الرضا عن الجوانب المختلفة من حياتك
والآن نرغب في معرفة مدى أهمية هذه الجوانب في حياتك

شديدة الأهمية	هامة جدا	مهمة بدرجة متوسطة	مهمة نوعا ما	على الإطلاق	
(5)	(4)	(3)	(2)	(1)	
					1- ما مدي أهمية الطريقة التي تقضي بها وقتك ؟
					2- ما مدي أهمية شعورك بالارتياح عندما تكون بمفردك؟
					3- ما مدي أهمية السكن بالنسبة لك ؟
					4- ما مدي أهمية الجيران بالنسبة لك؟
					5- ما مدي أهمية المأكل بالنسبة لك ؟
					6- ما مدي أهمية الملابس بالنسبة لك ؟
					7- ما مدي أهمية الخدمة الصحية بالنسبة لك ؟
					8- ما مدي أهمية وجود وسيلة الانتقال بالنسبة لك ؟
					9- ما مدي أهمية الحياة الجنسية بالنسبة لك ؟
					10- ما مدي أهمية الإحساس بالأمن بالنسبة لك ؟

III- النشاطات والعمل:

1- في خلال الأسابيع الأربعة الماضية (اختار واحدة فقط)

- كنت لا تعمل / لا تذاكر / لا تقوم بأي أعمال منزلية (1)
- كنت تعمل /تذاكر / تقوم بالأعمال المنزلية بطريقة اقل من المعتاد (2)
- كنت تعمل/ تذاكر / تقوم بالأعمال المنزلية بطريقة معتادة (3)

2- ما هو عدد ساعات عملك في الأسبوع ؟-----

3- ما هو النشاط الأساسي في حياتك ؟ (اختر واحدة)

	نشاط غير بناء (1)		حرفة يدوية /ممارسة هواية (4)		وظيفة (6)
	أخري (0)		قضاء وقت فراغ (5)		علاج/برنامج تأهيلي (2)
			دراسة (5)		عمل تطوعي/بدون أجر (3)

4- هل أنت راضى عن النشاط الذي تمارسه ؟ (اختر واحدة)

غير راضى مطلقا (1)	غير راضى نوعا ما (2)	غير راضى بدرجة متوسطة (3)	محايد (4)	راضى بدرجة متوسطة (5)	راضى نوعا ما (6)	راضى مطلقا (7)
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5- درجة ممارستك لهذه الأنشطة (اختار واحدة)

اقل مما كنت تتمنى (1)	أكثر مما كنت تتمنى (3)	بقدر ما كنت تتمنى (2)
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6- ما هو النشاط الأساسي الذي تتمنى ممارسته ؟

وظيفة (6)	حرفة يدوية /ممارسة هواية قضاء وقت فراغ (4) دراسة (5)	نشاط غير بناء (1)
علاج/برنامج تأهيلي (2) عمل تطوعي/بدون أجر (3)		أخري (0)

1V- الحالة النفسية:

1-الآن نريد أن نعرف مشاعرك تجاه بعض الأشياء المتعلقة بحياتك اختر أفضل ما تصف به مشاعرك في خلال الأسابيع الأربع الماضية.

لا	نعم	
		• الاستمتاع بانجاز مهمة ما ؟
		• أمور حياتك وافقت توقعاتك ؟
		• الفخر -لان احد ما اثنى علي سلوكك ؟
		• الإثارة و الاستمتاع بشيء ما ؟
		• الشعور بأنك على قمة العالم ؟
لا	نعم	
		• الوحدة والبقاء بعيد عن الناس ؟
		• الشعور بالملل ؟
		• القلق الشديد وعدم القدرة على الجلوس لفترات طويلة ؟

• الحزن - لان احد ما انتقدك ؟		
• الاكتئاب أو التعاسة الشديد ؟		

2- في خلال الأسابيع الأربع الماضية هل تري أن حالتك النفسية كانت:

سيئة	لا بأس بها	جيدة	جيدة جدا	ممتازة
(0)	(1)	(2)	(3)	(4)

3- الأعراض / المظهر

- خلال الأسابيع الأربع الماضية هل كنت تعاني من (اختار واحدة)

هادئ بوجه عام و مظهرك جيد	3
فترات من القلق والاكتئاب	2
مشوش بشكل عام خائف ,قلق ومكتئب	1

4- من مظاهر الضغوط النفسية الشعور بالاكتئاب, القلق ,سماع أصوات ..الخ في خلال الأسابيع الأربعة الماضية ما مدي الكرب أو الضيق التي سببتها تلك الأعراض لك ؟ (اختار واحدة)

كثيرة	متوسطة	أحيانا	قليلة	لا يوجد
(1)	(2)	(3)	(4)	(5)

5- في خلال الأسابيع الأربع الماضية	دائما (1)	معظم الوقت (2)	متكرر (3)	أحيانا (4)	لا يوجد (5)
ما مدى تأثير مشاعر الاكتئاب و القلق على أدائك اليومي؟					
هل كان لديك رغبة في قتل نفسك ؟					
هل كان لديك الرغبة في إيذاء الآخرين ؟					

V- الصحة العامة:

1- في خلال الأسابيع الأربع الماضية يمكنك وصف حالتك الصحية على أنها

ممتازة (4)	جيدة جدا (3)	جيدة (2)	لا بأس بها (1)	سيئة (0)
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2- ما هو مدى رضاؤك عن صحتك العامة ؟ (اختار واحدة)

غير راضى مطلقا (1)	غير راضى نوعا ما (2)	غير راضى بدرجة متوسطة (3)	محايد (4)	راضى بدرجة متوسطة (5)	راضى نوعا ما (6)	راضى مطلقا (7)
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3- ما هي أهمية صحتك العامة بالنسبة لك ؟ (اختار واحدة)

غير مهمة على الإطلاق (0)	مهمة نوعا ما (1)	مهمة بدرجة متوسطة (2)	مهمة جدا (3)	شديدة الأهمية (4)
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4- هل تستخدم حاليا أي علاجات نفسيه ؟

نعم (0)	لا (أذهب إلى VI (1)
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5- هل أنت تستعمل العلاجات النفسية كما وصفها الطبيب ؟

دائما (1)	أكثر الأحيان (2)	أحيانا (3)	نادرا (4)	أبدا (5)
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6- بما أنك تستعمل العلاجات النفسية بانتظام, فهل لديك أعراض جانبية ناتجة عن استعمالها ؟

شديدة (1)	متوسطة (2)	قليله (3)	طفيفة (4)	لا يوجد (5)
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7- بما أنك تستعمل العلاجات النفسية, فهل تشعر بجدوى العلاج في السيطرة علي الأعراض النفسية؟

تختفي كلياً (5)	تختفي إلي حد كبير (4)	تختفي بدرجة متوسطة (3)
تختفي بعض منها (2)	لا تختفي أبداً (1)	

8- ما هو شعورك تجاه تناولك الأدوية النفسية ؟

راضى بشدة (6)	راضى نوعا ما (5)	راضى بدرجة متوسطة (4)	محايد (3)	غير راضى بدرجة متوسطة (2)	غير راضى نوعا ما (1)	غير راضى مطلقا (0)
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VI- الكحول و المواد المسببة للإدمان:

1- في خلال الأسابيع الأربع الماضية هل استعملت أي نوع من أنواع الكحول ؟

نعم (0)	لا (9)
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2- في خلال الأربع الأسابيع الماضية ما عدد الأيام التي استعملت فيها الكحول؟

عدد الأيام -----

3- ما هو تاريخ استعمالك للكحول ؟

أقل من عام (4)	من عام إلي ثلاث أعوام (3)	من ثلاث أعوام إلي 10 أعوام (2)	أكثر من 10 أعوام (1)
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4- تناولك للكحول يمثل في اعتقادك (اختر واحدة)

مشكلة كبيرة (4)	مشكلة بسيطة (3)	لا تمثل مشكلة (2)	يساعد أحيانا (1)	يساعد كثيرا (0)
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5- في خلال الأسابيع الأربع الماضية هل استعملت أي نوع من المواد التالية: الحشيش – الهيروين – الأمفيتامين – مذيبيات طيارة - أخرى ؟

نعم (0)	لا (9)
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- إذا كانت الإجابة بنعم

6- ما هي الفترة التي استعملت خلالها تلك المادة ؟

أقل من عام (4)	من عام إلي ثلاث أعوام (3)	من ثلاث أعوام إلي 10 أعوام (2)	أكثر من 10 أعوام (1)
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7- تناولك لهذه المواد يمثل في اعتقادك (اختر واحد)

مشكلة كبيرة (4)	مشكلة بسيطة (3)	لا تمثل مشكلة (2)	يساعد أحيانا (1)	يساعد كثيرا (0)
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VII- العلاقات الاجتماعية و الدعم الأسري

1-	راضي مطلق (7)	راضي نوع (6)	راضي بدرجة (5) متوسطة	محايد (4)	متوسطة بدرجة (3) غير راضي	نوعا ما (2) غير راضي	مطلقا (1) غير راضي
1. هل أنت راضي أم لا عن عدد أصدقائك؟ أم لا يوجد لك أصدقاء؟							
2. هل أنت راضي أم لا في علاقتك مع أصدقائك؟							
3. هل أنت راضي أم لا في علاقتك مع أسرتك؟ أم لا يوجد لك أسرة؟							
4. إن كنت مقيم مع أشخاص آخرين فهل أنت راضي أم لا بعلاقتك بهم؟ أم أنت مقيم بمفردك؟							
5. هل أنت راضي أم لا في علاقتك مع الآخرين؟							

-2

ما هو عدد الأفراد الذين تعتبرهم من أصدقائك	لا يوجد (0)	2-1 (1)	5-3 (2)	أكثر من 5 (3)
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3- مقياس الأهمية

	غير مهمة على الإطلاق (1)	مهمة نوعا ما (2)	مهمة بدرجة متوسطة (3)	هامّة جدا (4)	شديدة الأهمية (5)
1. ما أهمية وجود عدد كافي من الأصدقاء بالنسبة لك؟					
2. ما أهمية ارتباطك بأصدقائك؟					

					3. ما أهمية العلاقات الأسرية بالنسبة لك؟
					4. لو كنت تقيم مع ناس آخرين فهل هم مهمين بالنسبة لك؟
					5. ما هي مدى أهمية العلاقة مع الآخرين؟

4- في خلال الأسابيع الأربعة الماضية (اختر واحدة

- هل كان لديك علاقة جيدة بالآخرين و تلقيت دعم من الأسرة و الأصدقاء (3)
- هل تلقيت دعم متوسط من الأسرة و الأصدقاء (2)
- هل تلقيت دعم قليل أو عند الحاجة الشديدة فقط (1)

VIII- الدخـل

1- هل أنت تحصل على راتب من عمل ثابت أم أنت طالب في مدرسة

لا (0)	نعم (1)
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مطلقاً (1) راضٍ جداً	بدرجة (2) متوسطة	بدرجة (3) متوسطة	بدرجة (4) متوسطة	بدرجة (5) متوسطة	بدرجة (6) متوسطة	بدرجة (7) متوسطة	2-
							ما هو شعورك تجاه ذلك الذي تحصل عليه ؟
							ما هو مدى رضاك عن التحكم في مالك الخاص؟

شديدة الأهمية (4)	هام جداً (3)	مهم بدرجة متوسطة (2)	مهم نوعاً ما (1)	غير مهم على الإطلاق (0)	3-
					ما هو أهمية المال بالنسبة لك؟
					ما هو أهمية التحكم في مالك الخاص؟

أبداً	في بعض الأحيان	كثير	دائماً
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(3)	(2)	(1)	(0)
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4- هل قلة الموارد المادية تمنعك من عمل ما لا ترغب في عمله؟

IX- نشاطات الحياة اليومية:

1- اختر مما يلي النشاطات التي قد تكون مارستها في خلال الأسابيع الأربع الماضية

لا (0)	نعم (1)		لا (0)	نعم (1)	
		الذهاب إلى التسوق			الذهاب إلى مطعم أو كافيتريا
		إعداد وجبة غذائية			الذهاب إلى رحلة بالأتوبيس أو السيارة
		الذهاب إلى المغسلة			تنظيف الحجرة، الشقة، المنزل

ابدا (0)	في بعض الاحيان (1)	كثيرا (2)	دائما (3)	2 - في خلال الاربع اسابيع الماضية
				هل كنت قادر على القيام بكافة النشاطات اليومية الخاصة بك
				هل كنت محتاج إلى مساعدة للقيام بكافة النشاطات اليومية
				هل وجدت صعوبة في أدائها مع وجود المساعدة
				3- في خلال الأسابيع الأربع الماضية هل
				كنت تعاني من أي صعوبات في الاهتمام بنظافتك الشخصية مثل الاستحمام أو غسيل الأسنان

X- الهدف المراد تحقيقه:

ما هي الأهداف المرجوة و المتوقعة من إتمامك برنامج العلاج النفسي الخاص بك – اذكر
3 أهداف

الهدف الأول :-

ما هي أهمية هذا الهدف لك- اختار رقم

غير مهم مطلقا, 1,2,3,4,5,6,7,8,9,10, شديد الأهمية – لا يوجد نتيجة

إلى أي مدى تم تحقيق هذا الهدف لم ينجز 1,2,3,4,5,6,7,8,9,10, تم انجازه تماما – لا يوجد نتيجة.

الهدف الثاني :

ما هي أهمية الهدف لك – اختار رقم

غير مهم مطلقا, 1,2,3,4,5,6,7,8,9,10, شديد الأهمية – لا يوجد نتيجة

إلى أي مدى تم تحقيق هذا الهدف لم ينجز 1,2,3,4,5,6,7,8,9,10, تم انجازه تماما – لا يوجد نتيجة.

الهدف الثالث:

أهمية الهدف لك- اختار رقم
غير مهم مطلقا 1,2,3,4,5,6,7,8,9,10, شديدا الأهمية - لا يوجد نتيجة
بعض النشاطات اليومية التالية اذكر أي منها قد مارسته في خلال الأسابيع الأربع الماضية
إلى أي مدى تم تحقيق هذا الهدف لم ينجز 1,2,3,4,5,6,7,8,9,10, تم انجازه تماما - لا
يوجد نتيجة.

بعض النشاطات اليومية التالية اذكر أي منها قد مارسته في خلال الأربع أسابيع الماضية

لا (0)	نعم (1)		لا (0)	نعم (1)	
		حضور المجالس و الاجتماعات			الذهاب للمشى
		قراءة المجلات و الصحف			الذهاب إلى الإستاد
		الذهاب إلى المسجد			مشاهدة التلفاز
		الاستماع إلى الراديو			ممارسة الرياضة
		الذهاب إلى المكتبة			لعب الورق

1- حدد نوعية الحياة التي تعيشها خلال الأربع أسابيع الماضية (كلما ارتفعت الدرجة تشير إلى نوعية حياة
إيجابية و العكس صحيح) ثم ضع دائرة حول نوعية
الحياة التي تشعر بها ،

10	9	8	7	6	5	4	3	2	1
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2- لو كانت نوعية الحياة اقل مما كنت تأمل فما هي درجة تفاؤلك في تحقيق نوعية الحياة
المرجوة (اختر واحدة)

كثيرا (4)	بدرجة متوسطة (3)	متفائل إلى حد ما (2)	غير متفائل علي الإطلاق (1)
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3- ما مدي شعورك بالقدرة علي السيطرة علي الجوانب المهمة في حياتك؟ (اختر واحدة)

لا يوجد (0)	يوجد درجة متوسطة من التحكم (2)
يوجد تحكم نوعا ما (1)	يوجد تحكم بدرجة كبيرة (3)

4- ما مدي أهمية العوامل التالية في التأثير علي نوعية حياتك ؟

غير مهمة علي الإطلاق (0)	مهمة نوعا ما (1)	مهمة بدرجة متوسطة (2)	مهمة جدا (3)	شديدة الأهمية (4)

العمل - المدرسة أي نشاط وظيفي
آخر

إحساسك بنفسك

الصحة البدنية

الأصدقاء - الأهل- الناس المحيطة
بك

					امتلاك دخل مادي كافي
					القدرة على الاهتمام بنفسك
					صحتك النفسية
					أخرى اذكرها

5-هل يوجد أي شيء آخر تحب أن تذكره؟