# EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS

***Dissertation submitted for partial fulfillment of the***

***rules and regulations***

## DOCTOR OF MEDICINE

## BRANCH - XVIII (PSYCHIATRY)

**THE TAMILNADU DR.MGR MEDICAL UNIVERSITY**

**CHENNAI**

**TAMIL NADU**

**MAY 2018**

# CERTIFICATE

This is to certify that the dissertation titled, **"EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS"** is the bonafide work of **Dr. DEEPA.S.**, submitted in partial fulfillment of the requirements for **M.D. Branch-XVIII [Psychiatry]** examination of The Tamilnadu **Dr. M.G.R. Medical University,** to be held in **May 2018.**

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# CERTIFICATE OF GUIDE

This is to certify that the dissertation titled, **"EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS"** is the bonafide work of **Dr. DEEPA. S.,** done under my guidance submitted in partial fulfillment of the requirements for **M.D. Branch-XVIII [Psychiatry]** examination of the The Tamilnadu Dr. M.G.R. Medical University, to be held in May, 2018.

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# DECLARATION

I **Dr. S. DEEPA,** solemnly declare that the dissertation titled, **"EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS"** is a bonafide work done by me at the Institute of Mental Health, Chennai, during the period from March 2017 – August 2017 under the guidance and supervision of **Dr. SHANTHI NAMBI, M.D., FIPS.,** Professor of Psychiatry, Madras Medical College.

The dissertation is submitted to the **The Tamilnadu Dr. M.G.R. Medical University** towards partial fulfillment of requirement for **M.D. Branch XVIII [Psychiatry]** examination.

Place :

Date : **Dr. S. DEEPA**

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## CERTIFICATE OF APPROVAL

To
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Dear Dr.S.Deepa ,

The Institutional Ethics Committee has considered your request and approved your study titled **"EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS " - NO.22012017 (IV).**

The following members of Ethics Committee were present in the meeting hold on **31.01.2017** conducted at Madras Medical College, Chennai 3

| | |
|---|---|
| 1.Dr.C.Rajendran, MD., | :Chairperson |
| 2.Dr.M.K.Muralidharan,MS.,M.Ch.,Dean, MMC,Ch-3 | :Deputy Chairperson |
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| 8.Tmt.J.Rajalakshmi, JAO,MMC, Ch 3 | : Lay Person |
| 9.Tmt.Arnold Saulina, MA.,MSW., | :Social Scientist |

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

Member Secretary – Ethics Committee

MEMBER SECRETARY
INSTITUTIONAL ETHICS COMMITTEE
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INTRODUCTION Cannabis is one of the most widely used illicit substances in the world. "With approximately 200 to 300 million regular users, it occupies fourth place in worldwide popularity among psychoactive drugs, after caffeine, nicotine and alcohol. The prevalence of lifetime use of cannabis by young adults has increased in many developed countries over the past several decades. The ready availability of the drug, the increasing social disapproval of cigarette smoking, stern drinking laws and perceptions that cannabis is safe or less harmful than cigarettes or alcohol may explain these changes".1 "Today there is no part of the world that is free from the curse of drug trafficking & drug addiction. India too is caught in this vicious circle of drug abuse, and the numbers of drug addicts are increasing day by day. As per the world health report 2002, tobacco & alcohol use were among the ten leading risk factors for the global burden of disease measured in DALYs. Besides alcohol & tobacco, cannabis, heroin & Indian produced pharmaceutical drugs are the most frequently abused drugs in India. Cannabis products often called charas, bhang or Ganja are abused throughout the country because it has attained some amount of religious sanctity because of its association

# CONTENTS

# ABBREVATIONS

| | | |
|---|---|---|
| DALY | - | Disability Adjusted Life Years |
| THC | - | Tetra Hydro Cannabinoid |
| CB1 | - | Cannabinoid receptor 1 |
| GABA | - | Gamma Amino Butyric Acid |
| DSM | - | Diagnostic and Statistical Manual |
| CWS | - | Cannabis withdrawal Syndrome |
| CD | - | Conduct Disorder |
| ADHD | - | Attention Deficit Hyperactive Disorder |
| STD | - | Sexually Transmitted Diseases |
| CUD | - | Cannabis Use Disorder |
| VTA | - | Ventral Tegmental Area |
| NESARC | - | National Epidemiologic Survey on Alcohol and Related Conditions |
| NEMESIS | - | Netherlands Mental Health Survey and Incidence Study |
| EDSP | - | Early Developmental Stages of Psychopathology Study |
| SPD | - | Schizotypal Personality Disorder |

# INTRODUCTION

Cannabis is one of the most widely used illicit substances in the world. "With approximately 200 to 300 million regular users, it occupies fourth place in worldwide popularity among psychoactive drugs, after caffeine, nicotine and alcohol. The prevalence of lifetime use of cannabis by young adults has increased in many developed countries over the past several decades. The ready availability of the drug, the increasing social disapproval of cigarette smoking, stern drinking laws and perceptions that cannabis is safe or less harmful than cigarettes or alcohol may explain these changes".[1]

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Many surveys were conducted since 1970's at various levels & among different populations in India to find the prevalence of psychoactive substance abuse. "The national household survey of drug use in the country is the first

systematic effort to document the nationwide prevalence of drug use. Alcohol (21.4%) was the primary substance used (apart from tobacco) followed by cannabis (3.0%) & opioids (0.7%)"[3]. In the recent years, admission related to cannabis has been largely increased in our institution.

"The increasing use of cannabis has raised a series of complex issues about both the health effects of cannabis & the appropriate social response to increasing cannabis use. Amongst issues relating to the consequences of cannabis use, there have been concerns about the extent to which the use of cannabis is associated with increased risks of a range of psychosocial problem. Specifically, it has been well documented that those who use cannabis are an at risk population for a range of adverse psycho social outcomes that include: crime; mental health problem, other forms of illicit drug use; social drop out & unemployment "[4]

"It is now established that patients who use illicit drugs & suffer from comorbid psychiatric illnesses have worse outcomes than drug users without a dual diagnosis. In addition, patients with a psychoactive substance use diagnosis usually experience a progression from abuse to dependence. The progression is very rapid for cocaine and opiate dependence but it also occurs in cannabis & alcohol use."[5]

"In this context, genetic & environmental influences cannot fully explain cannabis use severity & progression towards other illicit drugs. Indeed one other important issue is the ease of access to cannabis already at a young

age, which may favor a reduced perception of the risk connected with drug abuse as well as compromised judgment of its consequences".[5]

Alfonso Troisi et al also in their article pointed out that "Cannabis abuse or dependence is often associated with significant premorbid psychopathology ranging from personality & affective disorders to psychotic disorders. In addition, acute adverse reactions, chronic anxiety states, depressive symptoms & changes in life style have been linked to chronic cannabis use by a number of observers. Even though, several studies have investigated the relationship between psychopathology & cannabis use, there are few data on the psychiatric comorbidity of different patterns of cannabis use. There is a continuum of cannabis use from occasional or experimental use of the drug to compulsive use patterns. As the level of involvement with the drug progresses, the risk of associated psychiatric disorder is likely to increase".[6]

Besides psychiatric comorbidity it has huge effect on education. "Cannabis use is typically initiated during adolescence, an important time of transition between childhood and adulthood. High school education is an important determinant of how well this transition is negotiated, its outcomes affect an individual's educational & career opportunities and ultimately an individual's life chances throughout adulthood. Given the widespread use of cannabis by adolescents and the fact that its intoxicating effects include cognitive & psychomotor impairment, there have been increasing concerns about its potentially adverse effects on educational performance." [7]

Hence, use of cannabis is associated with psychiatric comorbidity significantly. A lot of research papers had been published about various psychopathologies associated with cannabis. Researches somewhat tried setting the old controversies but raising new ones. This topic is relevant in the context that comorbid psychopathologies are very common among cannabis users in treatment setting in India as well as abroad. In India, data about distribution of psychiatric comorbidity among cannabis user are very limited. Always an update is needed in this area to take a stock of the prevailing situation. Hence in our study, we tried to evaluate various socio demographic profiles & comorbid psychiatric disorders in a sample of cannabis dependent treatment seeking patients attended our institute of Mental Health, Kilpauk.

# REVIEW OF LITERATURE

## CANNABIS:

Cannabis sativa is the plant from which cannabis preparations are obtained. Cannabis has been used by mankind since 4500 years. Cannabis sativa was a native of central & western Asia. Since ancient times it has been cultivated in Asia & Europe. In post – Columbian times, it spread to the world.

The medicinal value of cannabis has been discovered in India and it has been used in Ayurveda medicine as early as 900 BC.

## BOTANICAL DESCRIPTION:

## CLASSIFICATION

It belongs to the "Kingdom, Plantae; Subkingdom, Tracheobionta; Superdivision, Spermatophyta; Division, Magnoliophyta; Class, Magnoliopsida; Subclass, Hamamelididae; Order, Urticales; Family, Cannabaceae; Genus, Cannabis; Species, sativa. Its binomial name is Cannabis sativa."[8]

"It is important to distinguish between the two familiar subspecies of the cannabis plant. Cannabis sativa known as Marijuana, has psychoactive properties. The other plant is cannabis sativa L (The "L" was included in the name in honor of the botanist Carl Linnaeus). This subspecies is known as hemp; it is a non-psychoactive form of cannabis & is used in manufacturing products such as oil, cloth & fuel. A second psychoactive species of the plant,

cannabis indica, was identified by the French naturalist Jean – Baptiste Lamarck, and a third uncommon one, cannabis ruderalis, was named in 1924 by Russian botanist D.E.Janishchevisky."[9]

**GROWTH HABIT**

Cultivation of cannabis plant in India is controlled. It is permitted only in the districts of Garhwal, Nainital and Almara in Uttarakhand state, small extent in Travancore & Kashmir. It takes 12 hours to 8 days for the seeds germinate. Seedling phase is the period of greatest vulnerability requiring medium to highest intensity of light, humidity in moderate levels and adequate soil moisture. It starts to reveal the sex by itself and the root system expands along with it downwards. During pre-flowering phase, development of the plant increase significantly with more nodes & branches. It varies about 6 – 22 weeks for flowering phase & needs diminished light.[8]

As mentioned, the cannabis plant occurs in 2 forms viz female and male forms. The highest concentrations of psychoactive compounds found in the female plant. Sinsemilla method is the one by which female plants only are grown to maximize their productions of psychoactive compound .

**CHEMICAL CONSTITUENTS OF CANNABIS:**

The chemical constituents represent most of the classes of chemicals Eg. Nitrogenous compounds, sugars, steroids, terpenes, flavonoids, hydrocarbons,

amino acids etc. In these, the most important & specific class is C21 terpenophenolic cannabinoids.

| Total number of natural compounds identified | Year | Reference |
|---|---|---|
| 423 | 1980 | Turner et al[10] |
| 483 | 1995 | Ross & ElSohly et al[11] |
| 489 | 2005 | ElSohly & Slade et al[12] |

"Out of these 489 compounds, 70 were cannabinoids. Those 70 cannabinoids were classified further to 11 categories. They are Cannabigerol type-7, Cannabidiols-7, Cannabichromene-5, Δ8-trans-Tetrahydrocannabinol, Δ9-trans-Tetrahydrocannabinol, Cannabicyclol-3, etc. other than cannabinoids, other compounds (419) were also classified to various chemical classes such as nitrogenous compounds, amino acids, proteins, enzymes, glycoproteins, sugars, hydrocarbons, simple alcohols, simple aldehydes, simple ketones, simple acids, fatty acids, simple esters, lactones, steroids etc. The details of all the chemical constituents of cannabis sativa are beyond the scope".[8]

**PREPARATIONS OF CANNABIS:**

The common preparations of cannabis are marijuana, hash oil and hashish. Marijuana has been prepared from the flowering tops and the leaves of the cannabis plant which are dried. The potency of marijuana depends upon

various factors like its growing conditions, genetic characteristics, plant part used and the THC to other cannabinoids ratio. The highest concentrations of THC have been found in the flowering tops than in the stems, seeds and leaves.

Likewise, the THC concentration varies depending upon the preparation as follows:

| | |
|---|---|
| Marijuana | 0.5-5% THC |
| Sinsemilla variety | 7-14% THC |
| Hashish | 2-8% THC |
| Hash oil | 15-20% THC |

**USAGE OF CANNABIS:**

Traditionally cannabis has been smoked as joints, hand-rolled cigarettes which use tobacco for burning. Second most popular way is by using a water pipe or bong. It gives the maximum effect by delivering larger dose of tetrahydrocannabinol.

Also, cannabis can be used using vaporizer, hashish also smoked mixing with tobacco as joint or using a pipe. As the hash oil is highly potent its few drops applied to a joint or cigarette or it may be heated so that its vapors inhaled. Bhang is a form of tea brewed from cannabis leaves and stem.

The typical joint made of 0.5 and 1.0g of marijuana contains about 5-150mg of tetrahydrocannabinol 20 to 70% of it reaches lung which is found

in the smoke. 5-24% of the only reaches blood stream. 2-3mg of tetrahydrocannabinol in an occasional user produces a brief feeling of high. Hence a joint can provide for 2-3 individuals enough the heavy cannabis user might use 75 joints in a day, some may up to 420mg a day of THC.[13]

**PSYCHOTROPTIC EFFECTS OF CANNABIS:**

The pharmakon, the classical Greek terms describes that a substance can be a remedy as well as a poison. This holds good for cannabis. The effects of cannabis on human brain were extensively studied since last century.

**THE ENDOCANNABINOID SYSTEM:**

"The major and important psychoactive ingredient present in cannabis was THC-Δ9-tetrahydrocannabinol. The chemical structure of THC was first given by Raphael Mechoulam in1960s. The psychological effects of THC occur by its stimulating action on CB1- cannabinoid 1 receptors. CB1 was first identified by 1988 . These receptors are G‑protein-coupled receptor present in the brain. It was expressed high in the hippocampus, basal ganglia, cerebellum and neocortex. That are consistent with the predominant psychological and motor effects produced when administer THC. CB1 receptors present in peripheral nerves, dorsal root ganglion, dorsal horn of spinal cord and peri-aqueductal grey responsible for its analgesic property. CB2, the second cannabinoid receptor, thought previously as they were present on immune cells, is also found in CNS neurons, may be at low level than CB1 receptors.

The discovery of cannabinoid receptors led to the search for the endogenous agonists. The first endocannabinoid discovered is arachidonoylethanolamide, also termed as anandamide,( Sanskrit word ananda, signify ‘bliss’). The next endocannabinoids was 2‑arachidonoylglycerol in 1995, and followed by others. Contrast to conventional neurotransmitters, they are not stored as vesicles, they are synthesized only ‘on demand’ from the membrane phospholipids. They act via retrograde signal transmission at synapses. Endocannabinoids are synthesized mostly in dendrites and act presynaptically. It mainly inhibit release of amino-acid neurotransmitters which are fast acting. Ultrastructural analyses also helped us to locate key enzymes for the synthesis of endocannabinoid on dendritic spines. It also detected the location of CB1 receptors on neighbouring neurons of both GABA as well as glutamatergic neurons. In the hippocampus, neocortex and the striatum, CB1-receptor expressed higher concentration on GABA-releasing neurons than on glutamatergic neuron terminals. Endocannabinoids are also synthesized by the principal output neurons, like Purkinje cells of the cerebellum, the pyramidal neurons of the hippocampus and cortex, spiny neurons of the striatum, and also by dopaminergic neurons of the midbrain. Thus by releasing endocannabinoids these neurons regulate their activities.

Through this way, endocannabinoids add an another layer of neuronal plasticity at glutamate synapses.”[14]

**MEDICINAL USE OF CANNABIS:**

Cannabis is used to treat the following aliments for thousands of years by Indian native practitioners.

That includes refreshing the mind & intellect, for treating headaches & migraines, generalized & localized pain, Cleaning phlegm, Curing insomnia, Gastrointestinal disorders, easing childbirth, aiding & quickening digestion, Cough, relieving dysentery, sharpening the appetite, for improving anemia & weight loss. And the list is very long.[8]

In the Ananda kanda, there is a chapter significantly dedicated to cannabis solely. The perils of misuse were documented first in that text interestingly.

Pharmacological studies of cannabis are also done by using various animal models as well as on human.

The list of pharmacological effects is given below.

Cannabis has various pharmacological effects discovered by many previous studies. It includes allergenic effect, analgesic effect, anticancer activity, antidepressant-like actions, antidiuretic, antiemetic, anti-inflammatory activity, anti-tumor activity, appetite enhancing effect, bronchoconstrictor activity. It also produces cell death with shrinkage of neurons, central nervous system depressant activity, gynecomastic effect, hemagglutinin activity, histamine release stimulation, hyperglycemic activity, immunomodulatory

effect, inflammatory effect, mitogenic effect, pancreatic effect, pancreatic toxicity, psoriatic effect, reproductive effect, sexual headache, spermicidal effect, suicidal effect and tumor-promoting effect.[8]

**ACUTE EFFECTS OF CANNABIS:**

People who use cannabis experience a feeling of high which are characterized by relaxation, mild euphoria, perceptual alterations like distortion of time, intensification of usual experiences like eating, watching movies, listening music and sex engagement. When cannabis used in a setting of social gathering, it is accompanied by increased sociability, talkativeness and infectious laughter.

Some cognitive changes are impairment in short term memory, difficulty in attention and also difficulty in sustaining goal oriented mental activity. Also there might be impartment of motor coordination and skilled motor activity.

**CANNABIS DEPENDENCE:**

Nearly 90% of people who use cannabis and those who were older than 15 years reported that they had no problems with their use of cannabis. But, harms due to cannabis use are established well; particularly regular users of cannabis are at high risk to those harms.

In a survey conducted in 2004 in Canada, showed approx. 9% of people who use cannabis may go to the level of addiction compared with alcohol,

cocaine and heroin, it was 11%, 15%, and 24% respectively. Though they do not qualify for addiction by criteria, they still have problems related with cannabis use like problems in health, social or legal issues.[15]

The risk of dependence increases with increased frequency of use, daily use, earlier the age of initial use and longer duration.

High risk of dependence associated with certain factors like deviant behavior in children and adolescence, poor academic achievement, maladjustment and personal distance, poor relationship with parents, family history of drug use and earlier use.[13]

**CANNABIS WITHDRAWAL:**

Cannabis withdrawal syndrome a phenomenon that is common and clinically significant among adult cannabis users who stop using cannabis without seeking treatment.

DSM 5 proposed certain criteria to diagnose CWS. Those are 3 or more out of 7 symptoms occur within several days after cessation of heavy and prolonged use of cannabis.[16]

a) Irritability, aggression or anger

b) Anxiety or nervousness

c) Insomnia

d) Weight loss or decreased appetite

e) Restlessness

f) Depressed mood

g) At least one of following physical symptoms – stomach ache, tremors / shakiness, fever, headache, sweating, chills.[17]

Commonly these symptoms occur within 24 hours of quitting the use of cannabis, peaks in the first week and lasts for 1-2 weeks approximately.[18]

Various studies commonly reports that the most common withdrawal symptoms were behavioral and affective in nature, although a group of adolescents experienced physical symptoms also.[18]

**RISK FACTORS FOR CANNABIS USE:**

Various authors classified risk factors for cannabis use in many ways. Kandel et al[19] classified that the following were the risk factors identified for the use of cannabis.

- Biomedical which includes genetic
- Psychological
- Psychiatric
- Social
- Financial
- Environmental

In general the risk factors highly associated with the use of cannabis were explained under the following headings:

**Socio-environmental factors:**

The following are the high risk factors associated with use of cannabis - Male gender, low socioeconomic status, adverse life events, younger age, and living in urban place.

**Substance related factors:**

It includes use of tobacco, use of alcohol, AUD, attitudes towards the use of drug, opportunities to use drugs, use of nicotine or cannabis by peers.

**Intrapersonal factors:**

Personality attributes: low self-esteem, novelty seeking, and loneliness.

Psychopathology: mood/ mental/ anxiety disorders.

Childhood factors: insecurity, social incompetence, behavioral problems.

**Interpersonal factors:**

Current family situation: low parental attachment, low family caring, smoking in father, leaving home within age 18.

Childhood family situation: poor parental relationship with the child, conflicts within family, sexual abuse, history of alcohol use and problems between parents, not brought up by any of the parent.[20]

**SOCIO DEMOGRAPHIC VARIABLES:**

Carolyn coffey et al did a study and they found the peak use of cannabis at 20 years. Males reported use of cannabis more frequently than females consistently. They also found smoking cigarettes; high risks drinking of alcohol, cannabis use in peers, antisocial behavior were associated with adolescent use during mid-school period (14.9-15.9 years).[21]

12% of adults and 27% of adolescents who use cannabis were identified as dependent by them. Adolescents who use cannabis regularly are at higher risk of use of other illicit substances, tobacco and alcohol.

Carolyn coffey et al concluded that the following harms were unequivocally proved among heavy users of cannabis in adolescence.

That include

1. High risk for dependence
2. Other substance abuse
3. School dropout and academic failure
4. Persisting problems in mental health.[21]

Dennis et al in their article noted that 3 wave's patterns among new users of cannabis which were overlapping and more in younger age cohorts of use. First wave, during 1960's and early 1970's where the new user cohort comprised of persons who aged 18 years and older. Second ware in mid to late

1970’s, comprises of persons between ages 15 and 17, and also who started at less than 15yrs of age begin to increase.[22]

In the third wave, 1990’s more people around 40% begin to use cannabis at less than 15yrs and it grows rapidly. By 1998, early use of substance becomes the most common.

| S.NO | Substance | % under 18years | % Under 15years |
|---|---|---|---|
| 1 | Tobacco | 79% | 45% |
| 2 | Alcohol | 67% | 29% |
| 3 | Cannabis | 63% | 24% |
| 4 | Inhalants | 64% | 28% |
| 5 | Hallucinogens | 51% | 11% |

Use of cannabis regularly and dependence were associated with broad variety of mental disorders which includes CD, ADHD, depression, anxiety. Particularly use of cannabis in vulnerable persons precipitate schizophrenia and in people with schizophrenia worsen prognosis.[22]

And also health related problems associated Dennis et at with the use of cannabis are interference in normal development of adolescents aggravation of bronchial asthma, greater risk of bronchial and lung cancer, road traffic accidents and high risk of STD.

**PSYCHOSOCIAL FACTORS ASSOCIATED WITH CANNABIS ABUSE:**

"The term psychosocial factors refer to the psychological and social factors that influence mental health. Social influences such as peer pressure, parental support, cultural and religious background, socioeconomic status and interpersonal relationships all help to shape personality and influence psychological make-up".[23]

Though all psychiatric disorders has influenced by a range of psychosocial factors, substance use disorder share a lot. As mentioned earlier cannabis has a broad range of psychological and physical disorders, so there is a great need to explore the various factors which lead to and contribute to the development and continuance of CUD.

Various factors across multiple domains contribute to the development of CUDs. Particularly, variables in the following domains contribute to use of cannabis and dependence. They are peer, family, personality attributes, neighborhood, work and other substance use.[24]

Brook et al in 2011 did a study on psychosocial factors related to CUDs. The semi structured variables used in that study was adopted by us in our study. Regards to personality attributes, several studies identified certain traits in personality were associated with a "syndrome of under control" which includes impulsive behavior, disinhibition and aggressive behavior. They also found that depressive and anxiety disorders were associated with high risk of

CUDs. In regarding family factors, levels of mental attachment, partner relationship plays an important role. Similarly association with drug using peers is significantly associated with use of cannabis and dependence. Work related measures like frequent asterism and poor occupational achievement were related to use of cannabis. Neighborhood characteristics such as violence and drug availability were importantly associated with CUDs.[24]

Brook et al conclude that male adults were 4 times more likely to diagnose as CUDs than females. And also they stated that "CUDs were predicted by the cumulative number of psychosocial and demographic risks. They postulate in accord with FIT (Family Interactional Theory ), increase in the total number of psychosocial risks with which an individual must cope is associated with a corresponding increase in substance use in adolescents and young adults".[24]

**PSYCHIATRIC MORBIDITY ASSOCIATED WITH CANNABIS:**

According to DSM 5, the prevalence of CUD is around 3.4% in 12-17 years of age & 1.5% in adults aged 18 years & older. And also rates of CUD are higher among males (2.2%) than females (0.8%).

The onset of CUD is during adolescence or during young adulthood. The progression of CUD is more rapid in adolescents especially those with conduct problems. And also, cannabis use prior to age 15years is a strong predictor of the CUD, other substance use disorder & mental illness in young adulthood.

DSM 5 elaborates various risk factors for CUD viz temperamental, environmental, genetic & physiological. The use of cannabis has related to a decrease in prosocial and goal- directed activities which was labeled as amotivational syndrome. It manifests as poor performance in school & problems in employment. Chronic use of cannabis contribute to the onset or exacerbation of many mental illness, particularly raised concern about it as an important causal factor in the onset of schizophrenia and other psychosis.[16]

Use of cannabis is associated with poor satisfaction in life, more mental health hospitalization & treatment. It has higher incidence of depressive disorder, anxiety, attempting suicide & conduct problems. Persons with lifetime or past year CUD have more than 50% & 53% of alcohol & tobacco use disorder respectively. Among persons who seek treatment for CUD has 74% problematic use of other substance. Also, among them, MDD accounts for 11%, anxiety disorder 24% & bipolar I disorder 13%. Among personality disorders, 30% has antisocial, 19% obsessive compulsive & 18% paranoid personality.[16]

**CANNABIS AND PSYCHOSIS:**

Both cross sectional studies and longitudinal studies gives evidence for the strong association of use of cannabis and persistent psychosis. The studies include “The Swedish military conscript cohort, NEMESIS – the Netherlands Mental Health survey and incidence study, the German prospective early developmental stages of psychopathology study (EDSP), the Dunedin cohort

and the Christ church Health and Development study birth cohort (CHDS)"[25]. All these studies have their own pros and cons.

The association strength between cannabis exposure and the onset of psychosis in the general population is modest. The relative risk of schizophrenia after exposure to cannabis was found to be 1.4 in a systematic review of about 35 longitudinal studies. This relative risk is achieved after adjusting about sixty confounding factors like socioeconomic variables, personality traits, other substance use and other problems in mental health. There is indirect but strong evidence that was seen in cannabis induced psychosis is converted to schizophrenia.[25]

In laboratory as well as epidemiological studies they found that a range of psychosis effects induced by cannabinoids. The causal role of cannabis in the onset of psychotic disorder is magnified by various factors like exposure to cannabis at earlier age, greater quantities, long time course, these with genetic vulnerability or with history of abuse in childhood.

The association between the use of cannabis and psychotic illness can be explained as

1. Psychosis or schizotypy traits due to direct pharmacological actions of cannabis.
2. Use of cannabis due to psychosis or schizotypy as a coping means.
3. Another factor associated with both i.e. psychosis and cannabis.[26]

D’souza et al in 2005 established that case of cannabis increase the positive symptoms of psychosis.[27] Ameri in 1999 itself found that cannabinoids increase dopaminergic neurons activity in VTA (Ventral Tegmental Area) in Mesolimbic dopamine pathway.[28]

NESARC study postulate that both psychosis and schizotypal personality disorder prevalence increases as the use of cannabis increases in a dose – dependent relation. Those who use cannabis when compared with non-user had a prevalence of symptoms of SPD in a significantly increased level in all domains viz positive, negative, cognitive, perceptual, disorganized and interpersonal.[29]

In summary, exposure to cannabinoids can produce a range of transient features, cognitive deficits and abnormalities in psychopathology that bear a resemblance to some features of schizophrenia. Also in individuals with psychotic disorder, it exacerbates psychotic symptoms, has negative effect on the illness course and trigger relapse. At last, in adolescence exposure to cannabinoids has a high risk of psychosis in late life. However, it also should be kept in mind that majority of persons who use cannabis do not experience psychosis of any kind.[25]

Cyril D’ souza et al in 2009 stated that cannabinoids could induce transient positive, negative, cognitive symptoms of schizophrenia and exacerbate those symptoms in already schizophrenic patients. Schizophrenics and people who are prone for psychosis are more likely to experience those

symptoms after exposure to cannabis than healthy individuals. The cannabinoids increase dopaminergic activity, reduce GABA and glutamatergic transmission that contribute to the production of these symptoms of schizophrenia but exact mechanism is still unclear. They finally conclude in their article that exposure to cannabis can be a component or a cause contributing that interacts with genetic, environmental and other unknown factors to culminate in schizophrenia.[30]

Myles et al in a systematic review conducted in 2012 examined nearly 80 papers and compared to tobacco smoking, cannabis smoking and the onset of psychosis. They found that use of cannabis was associated with early mean age of onset (almost 3 years earlier) of psychosis, both schizophrenia spectrum disorders and affective subtypes also whereas use of tobacco at that age had no effect on onset of psychosis. Hence this meta-analysis also added evidence for the causal association of use of cannabis and early onset of wide range of psychotic disorders.[31]

**CANNABIS AND AFFECTIVE DISORDERS:**

Gibbs et al in 2014 conducted a systematic review on cannabis use and manic symptoms. They found only 6 articles regarding their inclusion criteria. They stated that psychosis and mania share the same etiological mechanisms. Example, dopaminergic system sensitization raises the risk of schizophrenia as well as mania. They conclude that use of cannabis was almost 3 fold increase in association in the odds of symptoms of mania indicate a moderate association. They also suggested that this area of research is like neglected clinical issue.[32]

Lev Ran et al in 2013 did a meta-analysis and systematic review of 57 longitudinal studies upon the association of cannabis use and depression. They found that use of cannabis has been associated with moderate risk increase in developing depression.[33]

Hercilio et al conducted a study on treatment seeking cannabis dependent persons about their psychiatric comorbidity in 2014. They found that major depression accounts for 22% of psychiatric disorders among cannabis dependent individuals. Next come, anxiety disorders 20% schizophrenia 9%.[34]

Degenhardt et al conducted a systematic review to explore the association between the use of cannabis and depression. He stated that Delta 9 the affect brain serotonin and other neurotransmitters to produce symptoms of depression. And also heavy users can precipitate indirectly depression symptoms by causing impairment in psychosocial adjustment like school drop-out, reduced capacity to earn. Furthermore thy stated that individuals who were depressed begin to use cannabis to curb their depressive symptoms. Thirdly they explained about some factors common to both use of cannabis and depression which are personality, biological, social, environmental or combination of some of these.[35]

One prospective study by Bovasso in Baltimore site reported that use of cannabis at baseline on follow up 4.5 times more chance to report symptoms of depression and 4.6 fold increases to report suicide ideation compared with nonusers.[36]

Horwood et al presented an integrative analysis on data from 4 cohort studies from Australia in 2012 about the association of use of cannabis frequency and the symptoms of depression severity. They conclude that use of cannabis more frequently has been associated with moderate increase in depressive symptoms. Also found that the associations is stronger among adolescents and thereafter decreases. [37]

**CANNABIS AND COGNITION:**

Acute intake of cannabis produces impairment in cognitive functioning especially executive functions like attention and working memory and hippocampus dependent memory and learning. The underlying mechanism was described as endocannabinoids were the key component in the mechanism of neuroplasticity. Chronic use of cannabis show cognitive impairment. But the persistence of this impairment after abstinence is still controversy. But various studies proved that the use of cannabis before 16 years associated with persistent deficits in performing tasks that need focused attention and also associated with low IQ scores on verbal component.[14]

Cohen et al in 2008 suggested that cannabinoids exposure result in change in functions of CB1 found brain regions, change in cerebral perfusion and change in neuro modulatory systems relevant to cognition like GABA, Dopamine and Glutamate.[38]

A meta-analysis done by Rabin et al in 2011 conclude that use of cannabis has been associated with modest but possibly clinically insignificant

effects on neurocognition especially in schizophrenia. They conclude that future research further needed in this area.[39]

Pope et al in their study conclude that use of cannabis at early age before 17 years differed significantly from late onset users and controls on variety of measures most importantly verbal IQ.[40]

Many studies showed that memory functions baseline impairment in continue at 7 days of abstinence but apparently recovered fully after abstinence of 28 days. Adolescents who use cannabis were shown to have impairment in memory, psychomotor speed, attention and ability to plan even after 23 days and more of abstinence. And also they found alterations in blood flow to temporal lobe and cerebellum even after 28 days of abstinence from cannabis. [41]

**CANNABIS AND EDUCATION:**

The concern is growing about cannabis use among adolescents and its impact on education. Use of cannabis has been associated in adolescents with lower grade average, decreased satisfaction in school, more negative attitudes upon school and overall poor school performance. Hence the evidence suggested that cannabis use early place adolescents at high risk of decreased educational attainment, particularly leaving school early.[42]

A research report by Lynskey et al in 2002 reported that use of cannabis by persons aged less than 15 years and regular users were associated with high rates of early school dropouts, even after confounding variables such as familial background, mental illness and use of other substances excluded. The

most acceptable reason behind this finding is early use of cannabis definitely associated with acceptance of anti-conventional style of life, of which school dropout is an indicator.[42]

Meier et al in 2012 did a prospective study by following 1037 birth cohorts for 20 years. They concluded that average of approximately 6 points decline in IQ who uses cannabis persistently. Likewise the study concludes that certain domains of neuropsychological functions specifically involved. It includes working memory, perceptual reasoning index, processing speed index and verbal comprehension index. But the difference is not that much significant statistically. This study added evidence that impairment interfere with day to day functioning of the persistent user of cannabis and also onset of cannabis use during adolescent showed persistent impairment even after 1year or more abstinence from cannabis. It suggests that cannabis may have some neurotoxic effects on developing brain during adolescence.[43]

With all these reviews on the back of mind, we tried to find socio demographic profile, various psychosocial factors and distribution of psychiatric comorbidity among persons who abuse cannabis. Since our reviews found that persons who start to use cannabis during adolescence have some unique psycho social factors and also the psychiatric comorbidity too. Hence in our post hoc analysis, we tried to compare socio demographics & psycho social factors between adolescent onset & adult onset cannabis abusers.

# AIMS & OBJECTIVES

## AIM

To evaluate psychosocial factors and psychiatric comorbidity among persons abusing cannabis.

## OBJECTIVES

1. To evaluate sociodemographic profile among persons abusing cannabis.
2. To evaluate problematic domains among persons abusing cannabis.
3. To evaluate withdrawal symptoms among persons who abstain from cannabis.
4. To estimate the distribution of psychiatric comorbidity among persons abusing cannabis.
5. To estimate sociodemographic variables and psychosocial attributes between adolescent and adult onset of cannabis use.

# HYPOTHESIS

## NULL HYPOTHESIS

There is no significant sociodemographic profile among persons abusing cannabis.

There is no significant psychiatric comorbidity among persons abusing cannabis.

# METHODOLOGY

## SETTING:

This study was conducted at the Institute of Mental Health, Madras Medical College, a tertiary care center of Tamilnadu. The necessary approval for conduct of the study was obtained from Institutional Ethics Committee, Madras Medical College, Chennai.

## STUDY POPULATION:

Subjects who use cannabis attending our outpatient department and also got admitted in Institute of Mental Health were included in this study.

## SAMPLE SIZE:

A total of 100 subjects who use cannabis were included in this study.

## SAMPLE SIZE CALCULATION:

The sample size calculated according to the formula

$Z^2*p*(1-p)/ d^2$

According to previous studies the prevalence of psychiatric comorbidity among persons abusing cannabis was 60%[44] to 80%[45]. So we took average of 70% prevalence. Precision was assigned as 10%.

$1.96*1.96*70*30/10^2 = 80.67$

**PERIOD OF STUDY:**

This study was conducted for a period of 4 months from March 2017 to June 2017.

**SAMPLING METHOD:**

Convenience sampling

**STUDY DESIGN:**

Descriptive study.

**INCLUSION CRITERIA:**

1. Adult patients attending Institute of Mental Health with history of current cannabis use.
2. Those who fulfill criteria for cannabis dependence as per ICD10.

**EXCLUSION CRITERIA:**

1. Previous history of psychiatric illness before abusing cannabis.
2. Acute intoxication of any illicit substance.
3. Head injury / neurological illness / hearing impairment.

## OPERATIONAL DESIGN:

After obtaining the written consent from the participants as required by the international ethics committee the following questionnaire were given to all subjects

1. Semi structured proforma
2. Marijuana problem scale
3. The Cannabis withdrawal scale
4. MINI PLUS structured clinical interview.

## DESCRIPTION OF THE INSTRUMENTS:

### 1. SEMI STRUCTURED PROFORMA

This was used to collect the subject's sociodemographic profile viz age, gender, educational attainment, occupation, marital status, place of residence, socioeconomic status, religion.

The second part was used to assess psychosocial factors under the following headings

1. Personal attributes
2. Marital relationship
3. Peer relationship
4. Neighborhood
5. Work
6. Other substance use

Under personal attributes, violence towards others & impulsivity were considered.

Relationship with partner & peer were considered

Drug availability in neighborhood, work achievement was enquired.

Comorbid substance use & family history of substance use disorder & mental illness were collected.

## 2. MARIJUANA PROBLEM SCALE

Stephens et al developed this “Marijuana problem scale”. It was a self-report that helps to identify the areas in life affected by cannabis use. It consists of 19 items under the following sub headings

1. Self esteem
2. Social relationship
3. Work & finances
4. Motivation & productivity
5. Physical health
6. Memory impairment
7. Legal problems

Those items were rated as serious problem (2), minor problem (1) or no problem (0). The items endorsed as minor or serious problem has been counted

to get a total number of marijuana related problem. This measure was proved to be internal consistency among persons abusing cannabis cronbach's alpha =0.89.[46]

**3. CANNABIS WITHDRAWAL SCALE**

CWS has 19 items. It should be from 0 to 10, as per how he / she felt over the past 24 hours. 0- not at all, 10- extremely. Total score is achieved by summing up all the values. Max score – 190. This 19 items scale has high internal reliability score. The Cronbach's alpha of 0.91 which supports this scale is a reliable measure to assess withdrawal of cannabis.[47]

**3. MINI PLUS**

First development by Dr. Sheehan & Dr. Lecrubrier of france. It is short & structured interview for diagnosis, developed jointly by clinicians & psychiatrists in the U.S & Europe, for ICD 10 & DSM IV disorders. It was designed to help the multicenter trials and epidemiology studies as short & accuracy in psychiatric diagnosis. It has very short administration time of 15 minutes. It has good test-retest reliability & inter -rater reliability.

## OPERATIONAL DESIGN

Subjects abusing cannabis attending institute of Mental Health

ICD 10 substance dependence criteria

100 subjects with cannabis dependence syndrome taken

- Objective 1

  Semi structured proforma to compare

  sociodemographic profile

- Objective 2

  Marijuana problem scale

- Objective 3

  Cannabis withdrawal scale

- Objective 4

  Mini plus (to evaluate psychiatric comorbidity)

Objective 5

Those who started abusing cannabis > 19years

In adolescent period age group < 19 years

Started abusing cannabis

Comparing both groups for the following

- Duration of cannabis use
- Duration of illness
- Family history of mental illness / substance use
- Psychosocial attributes

# STATISTICAL ANALYSIS

The study design is cross sectional and prevalence study. Most of the variables used in our study are categorical in nature. Hence frequency and prevalence was calculated.

Pearson's chi square test also known as Chi square test for independence and Chi square test of association was used to find if there was any relationship between two categorical variables. Eg: Is there any significant distribution of marital status among the two groups of persons abusing cannabis.

ANOVA was used to compare between the two means. Eg. Mean withdrawal score in different groups.

Bonferroni test was used in our study. This allows to do multiple comparison in an ANOVA situation. This method is valid for both equal and unequal sample sizes.

P value of 0.05 is taken as significant.

# RESULTS AND OBSERVATIONS

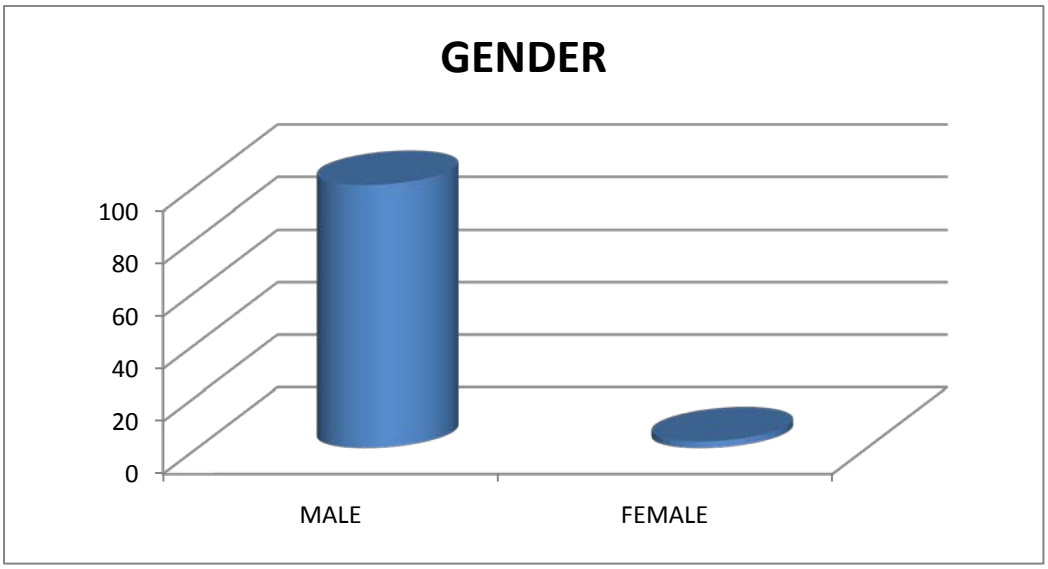
## SOCIODEMOGRAPHIC PROFILE:

The prevalence percentage of various sociodemographic variables among treatment seeking cannabis dependent persons are given below:

**TABLE 1**

**DISTRIBUTION OF GENDER:**

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 100 | 100% |
| Female | 0 | 0% |

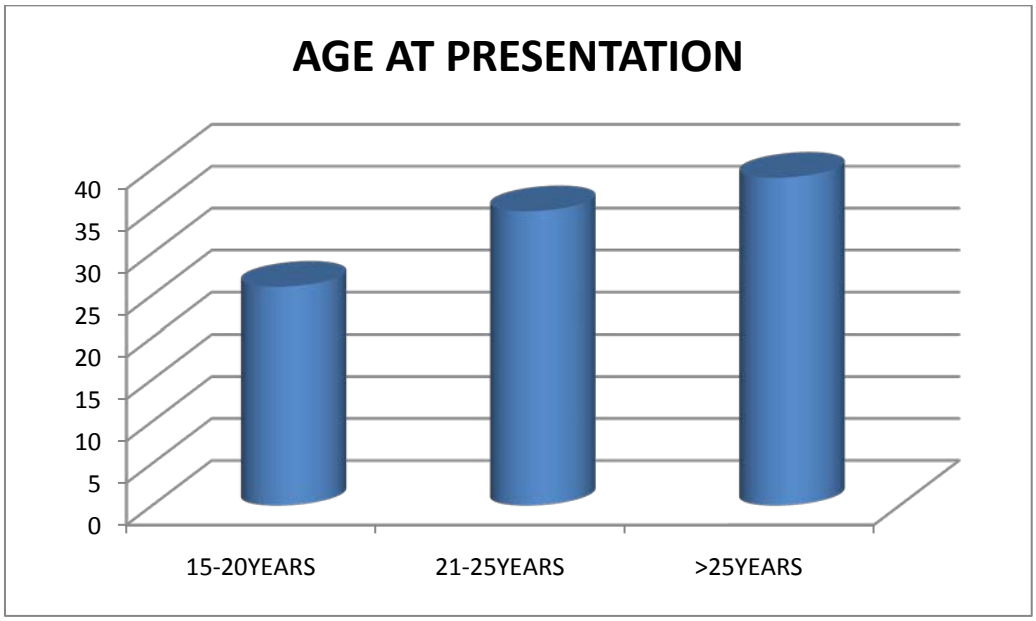



In our study, those who seek cannabis related problems were predominantly male i.e 100% no females registered for cannabis related problems during our study period.

**TABLE 2**

**AGE AT PRESENTATION OF CANNABIS USE DISORDERS**

| Age group | Frequency | Percentage |
|---|---|---|
| <15years | 0 | 0% |
| 15 – 20years | 26 | 26% |
| 21 – 25years | 35 | 35% |
| >25years | 39 | 39% |




39% of individuals present with CUDs were above 25 years of age.

Mean age at the time of presentation: 25.54 years

95% confidence interval - 24.16 – 26.92 years.

Standard deviation: 6.95years

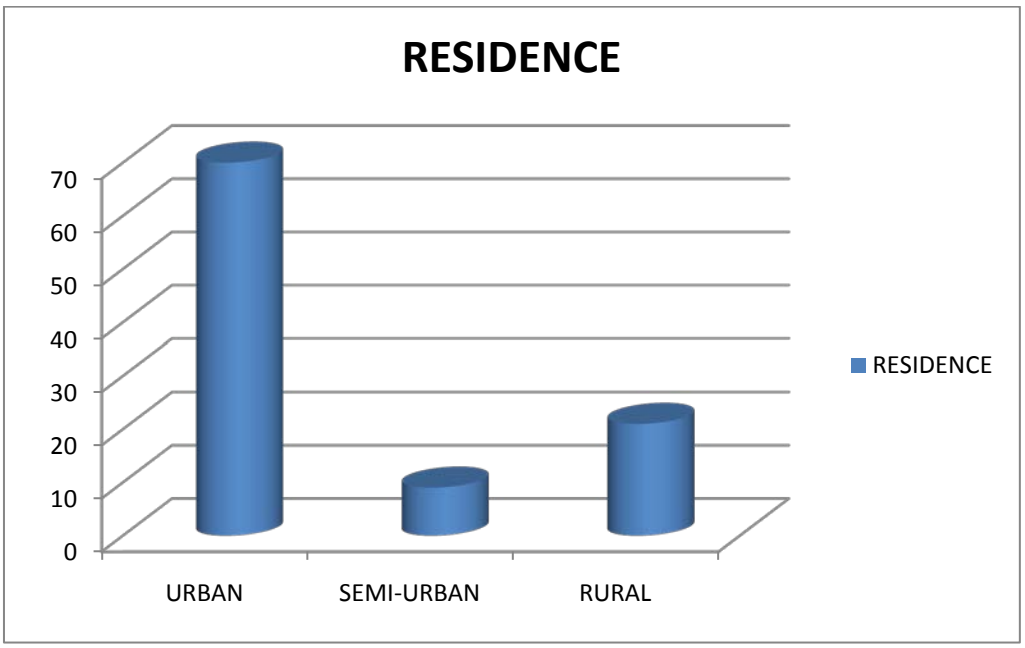
Range: 17 – 49 years

Median: 24years

## TABLE 3

## DISTRIBUTION OF PLACE OF RESIDENCE

| Place | Prevalence | Percentage |
|---|---|---|
| Urban | 70 | 70% |
| Semi-urban | 9 | 9% |
| Rural | 21 | 21% |

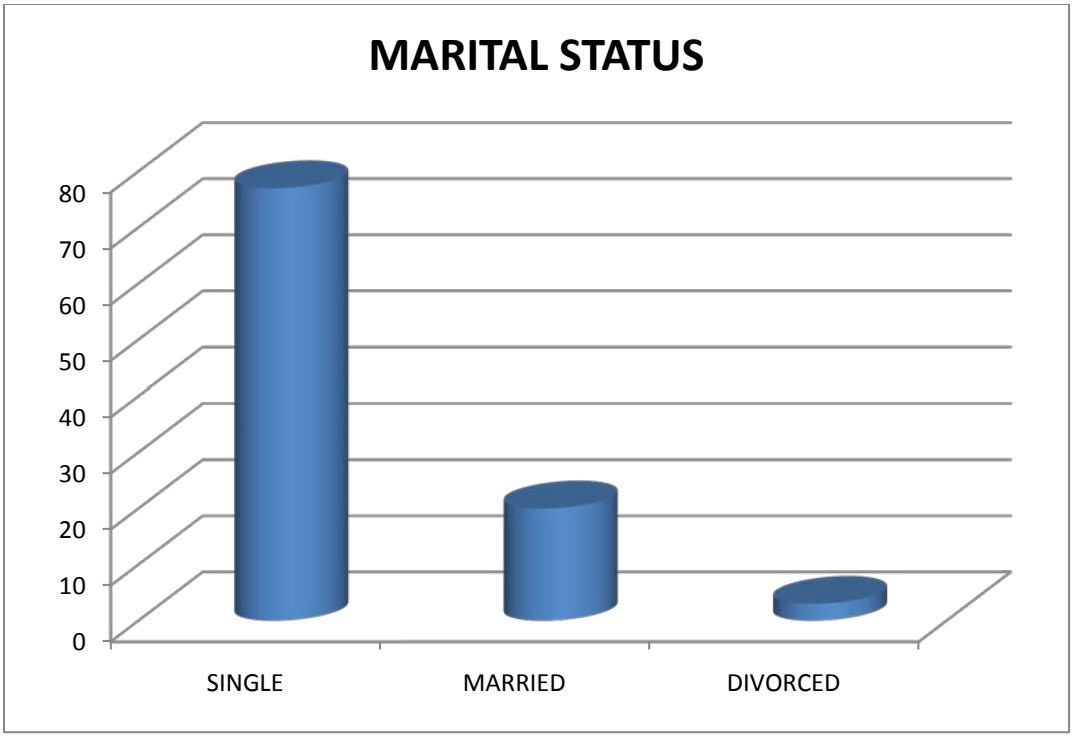



70% belongs to urban area

**TABLE 4:**

**DISTRIBUTION OF MARITAL STATUS**

| Marital Status | Frequency | Percentage |
|---|---|---|
| Single | 77 | 77% |
| Married | 20 | 20% |
| Divorced | 3 | 3% |

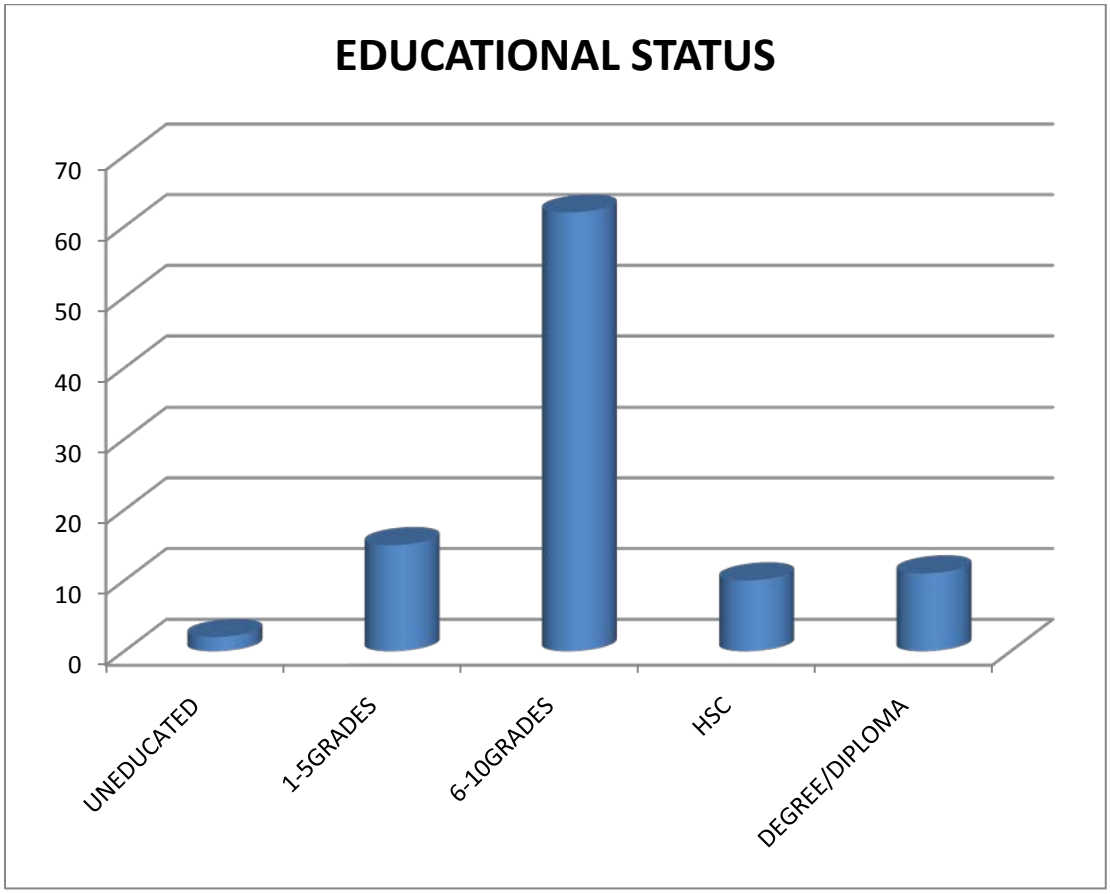



77% individuals with CUDs were unmarried.

## TABLE 5

## DISTRIBUTION OF EDUCATION STATUS AMONG THE GROUP

| Education | Prevalence | Percentage |
|---|---|---|
| Uneducated | 2 | 2 |
| 1 – 5 | 15 | 15 |
| 6 – 10 | 62 | 62 |
| Higher secondary / ITI | 10 | 10 |
| Degree / Diploma | 11 | 11 |

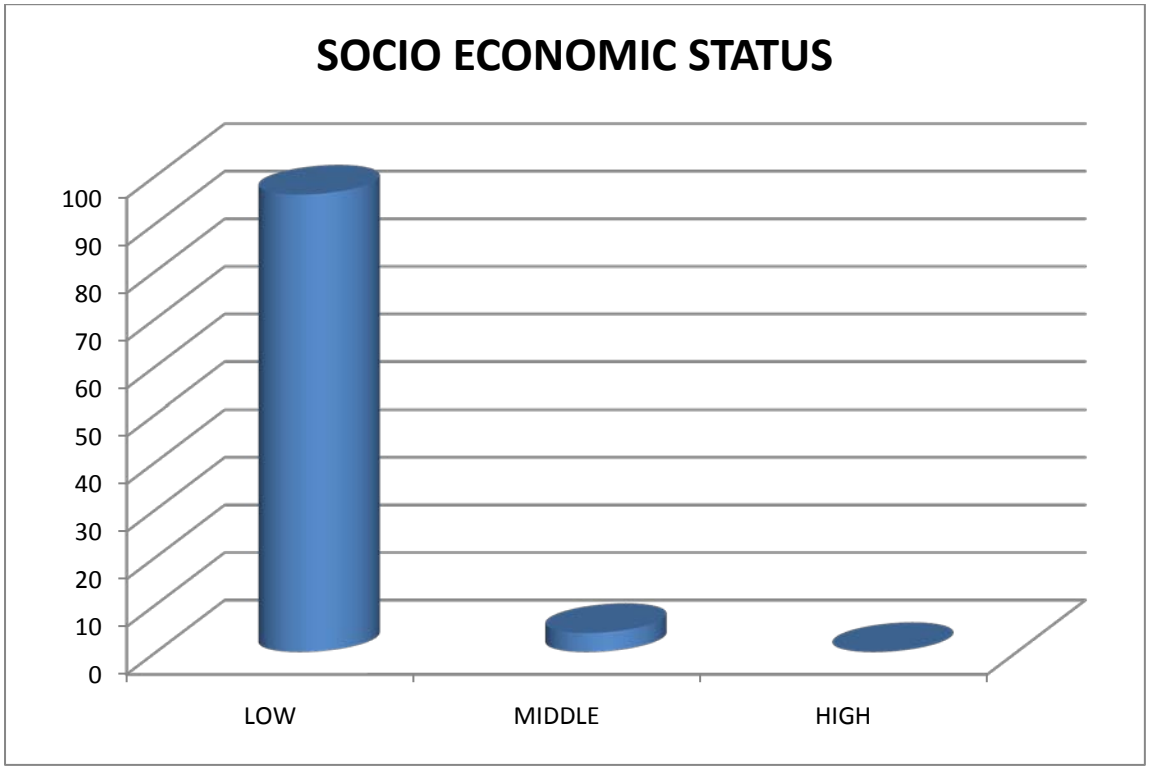



79% of people were below 10th standard

**TABLE 6**

**DISTRIBUTION OF SOCIOECONOMIC STATUS**

| SE Status | Frequency | Percentage |
|---|---|---|
| Lower | 96 | 96% |
| Middle | 4 | 4% |
| Higher | 0 | 0% |

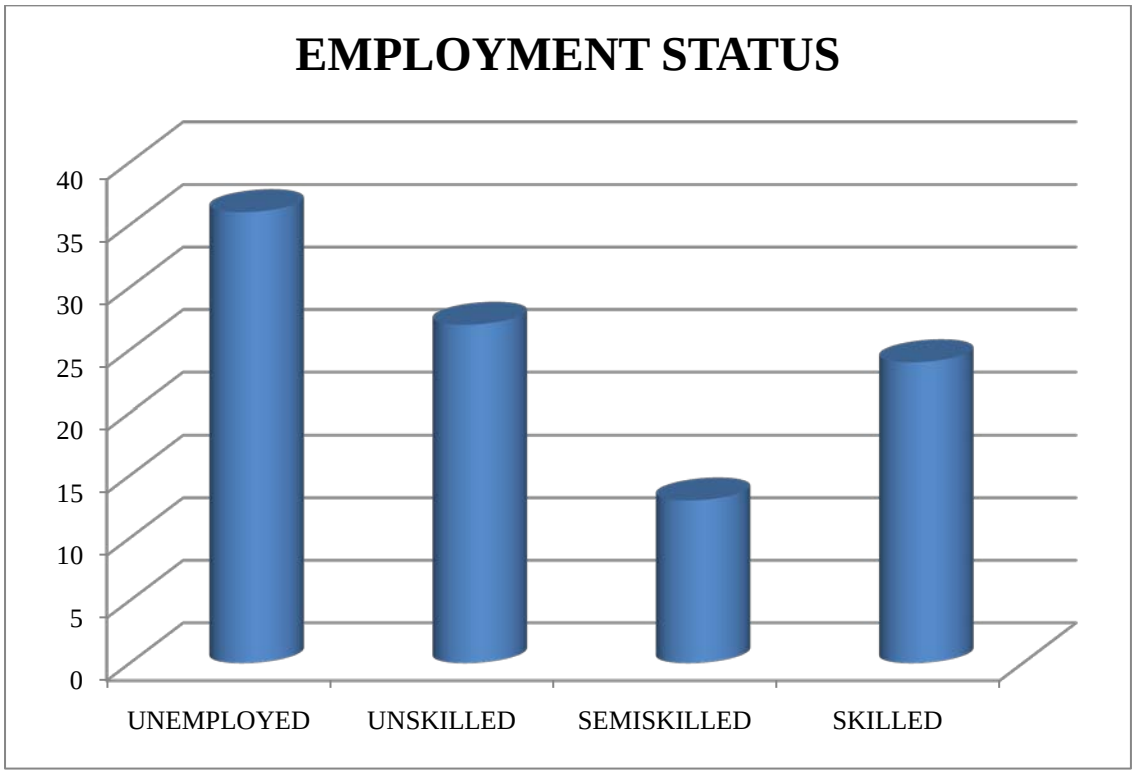



96% belongs to low socioeconomic status.

**TABLE 7**

**OCCUPATIONAL STATUS AMONG THE GROUP**

| | Frequency | Percentage |
|---|---|---|
| Unemployed | 36 | 36% |
| Unskilled | 27 | 27% |
| Semiskilled | 13 | 13% |
| Skilled | 24 | 24% |

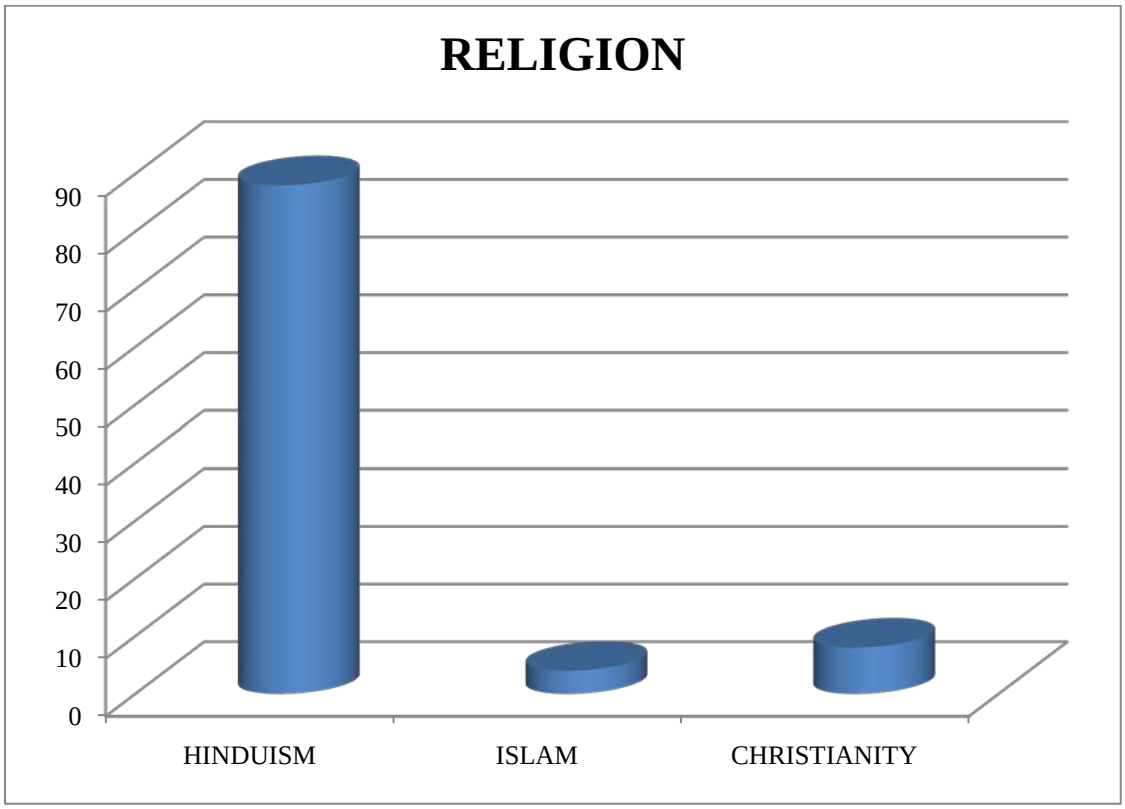



36% were unemployed among persons who presented with CUDs.

**TABLE 8**

**DISTRIBUTION OF RELIGION**

| Religion | Frequency | Percentage |
|---|---|---|
| Hinduism | 88 | 88% |
| Islam | 4 | 4% |
| Christianity | 8 | 8% |

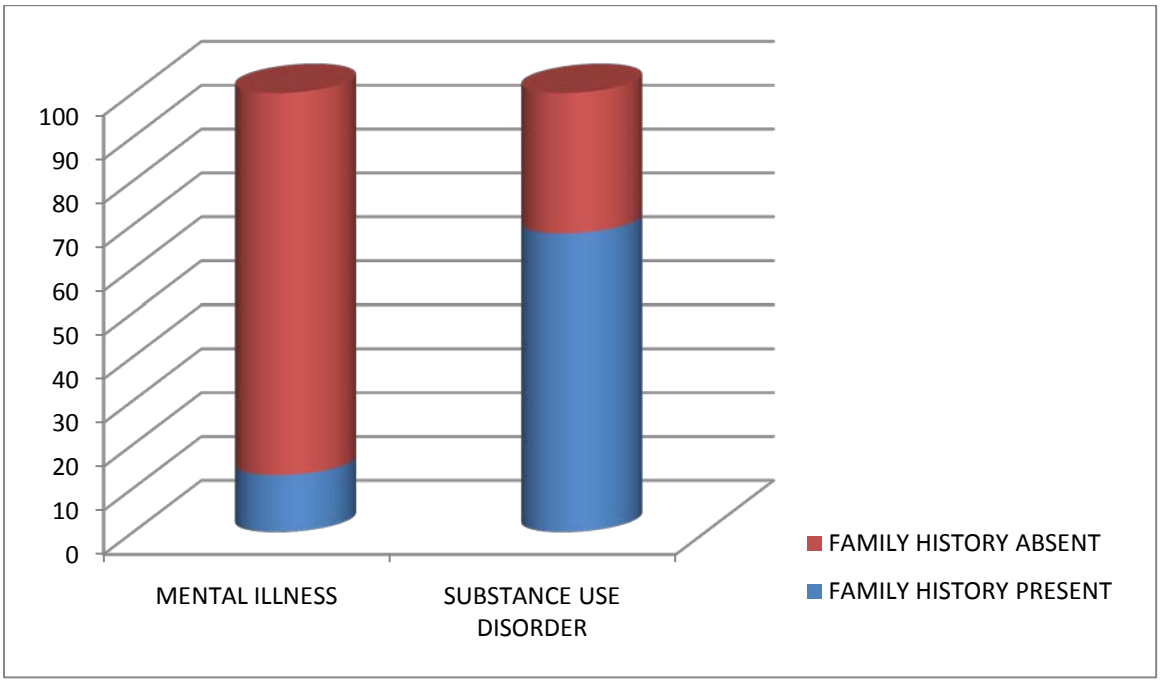



88% belongs to Hinduism.

## TABLE 9

## FAMILY HISTORY

| Family history | Prevalence | Percentage |
|---|---|---|
| Family H/o of mental illness | 13 | 13% |
| Family H/o of substance use disorder | 68 | 68% |

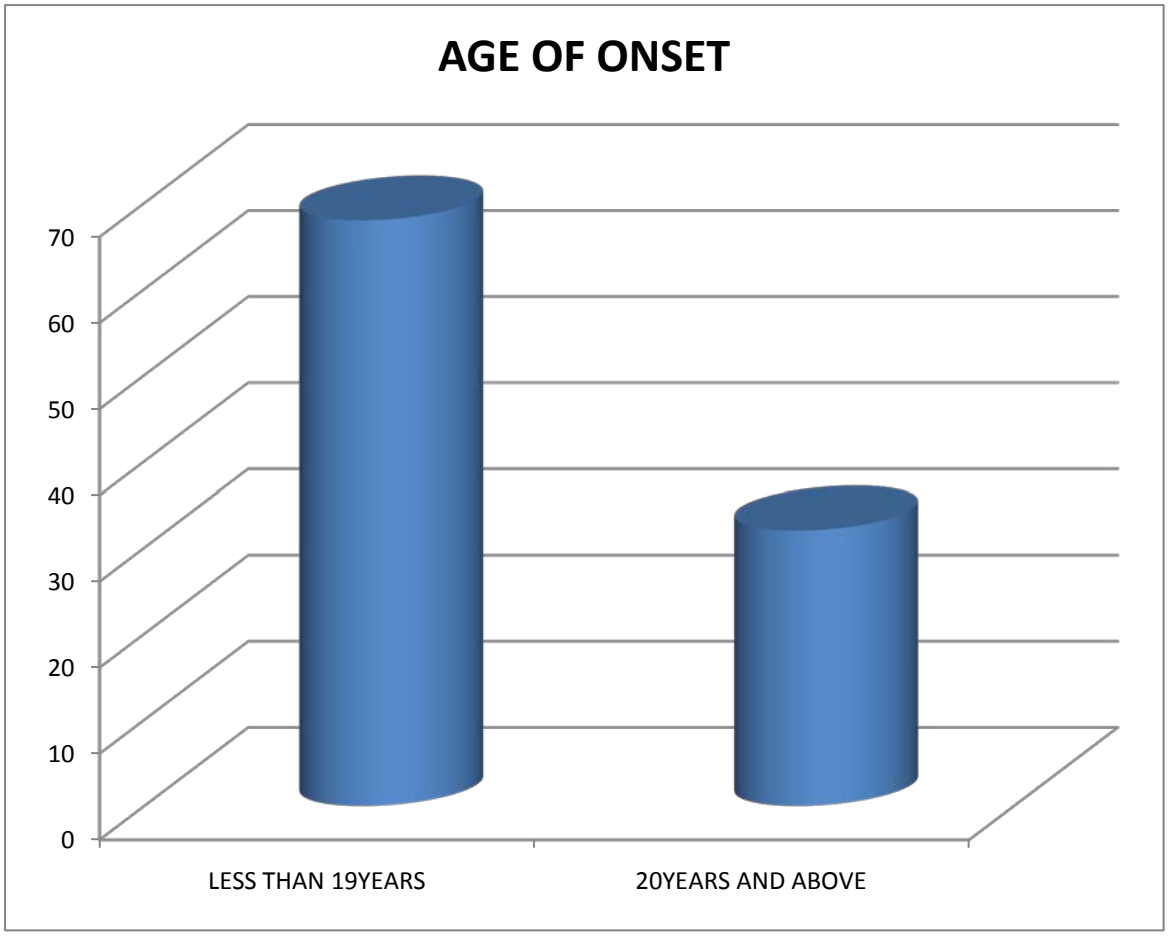



87% people has family H/o SUD whereas only 13% has mental illness in family.

**TABLE 10**

**AGE AT ONSET OF CANNABIS ABUSE**

| | Frequency | Percentage |
|---|---|---|
| ≤ 19 years | 68 | 68% |
| 20 years and above | 32 | 32% |




68% begin to abuse cannabis in their adolescent period

Mean age of onset→ 18.36 years

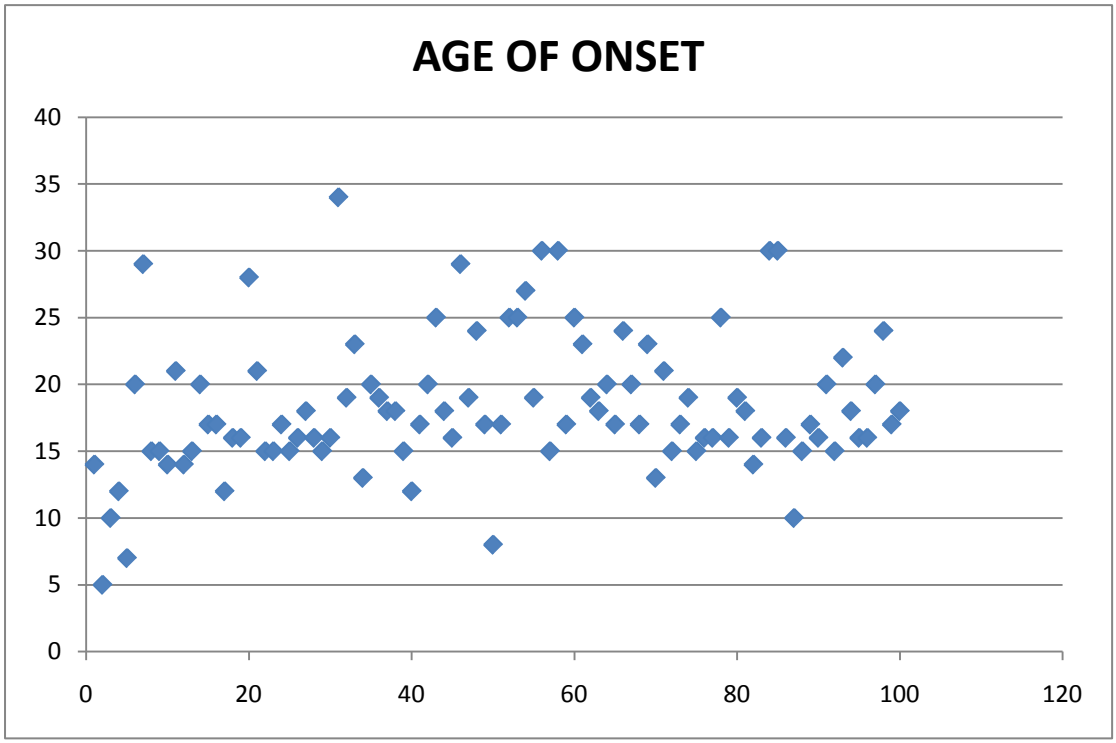
95% Confidence Interval – 24.16 – 26.92 years

Range → 5 – 34 years

Standard deviation→ 5.20 years

Median – 17years

**SCATTER DIAGRAM SHOWING THE AGE OF ONSET OF CANNABIS ABUSE**



## TABLE 11

## DURATION OF CANNABIS ABUSE AT THE TIME OF PRESENTATION

| Duration in years | Frequency | Percentage |
|---|---|---|
| < 5 years | 54 | 54% |
| 5 – 10 years | 26 | 26% |
| >10 years | 20 | 20% |

80% of people present with cannabis related problems within 10 years dictation of use

Mean duration of dependence – 7.15 years

95% Confidence Interval - 6.03 – 8.27 years

Range – 1 -26 years

Standard Deviation – 5.66 years

## PIE DIAGRAM SHOWING THE DURATION OF CANNABIS

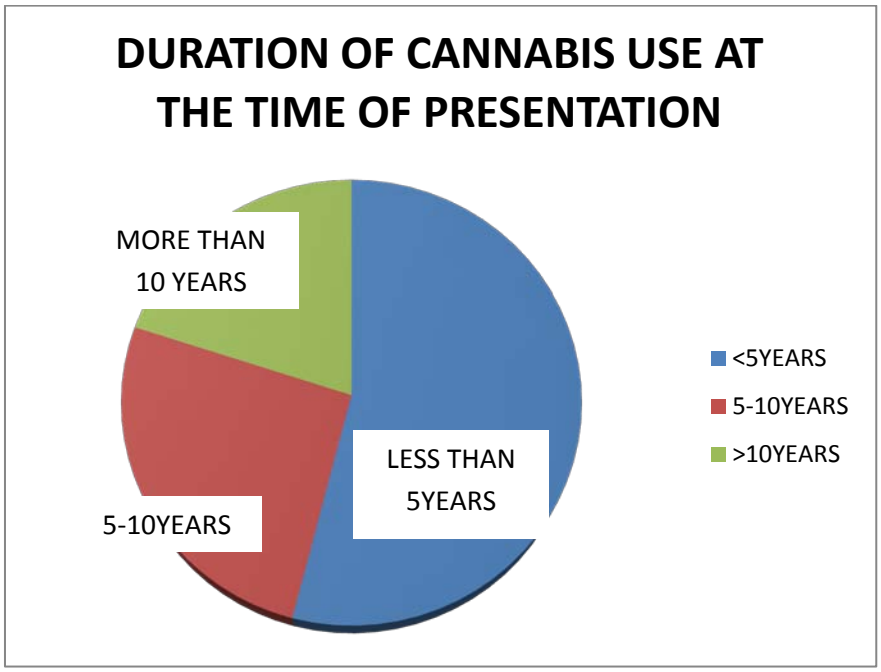


**TABLE 12**

**PREVALENCE OF PSYCHOSOCIAL ATTRIBUTES AMONG THE SAMPLE OF CANNABIS DEPENDENT PERSONS**

| Variable | Frequency | Percentage |
|---|---|---|
| Violence prone | 27 | 27% |
| Impulsive | 53 | 53% |
| Deviant behavior | 32 | 32% |
| Drug using peers | 45 | 45% |
| Drug availability | 33 | 33 |
| Skipping at work | 43 | 43% |
| Poor achievement | 56 | 56% |
| Comorbid substance use | | |
| Nicotine | 48 | 48% |
| Alcohol | 66 | 66% |
| Others | 27 | 27% |

More than 50% people were impulsive, had poor achievement in work / school and abusing alcohol.

**CHART 5: BAR CHART REPRESENTING THE PREVALENCE OF PSYCHOSOCIAL ATTRIBUTES OF THE SAMPLE**

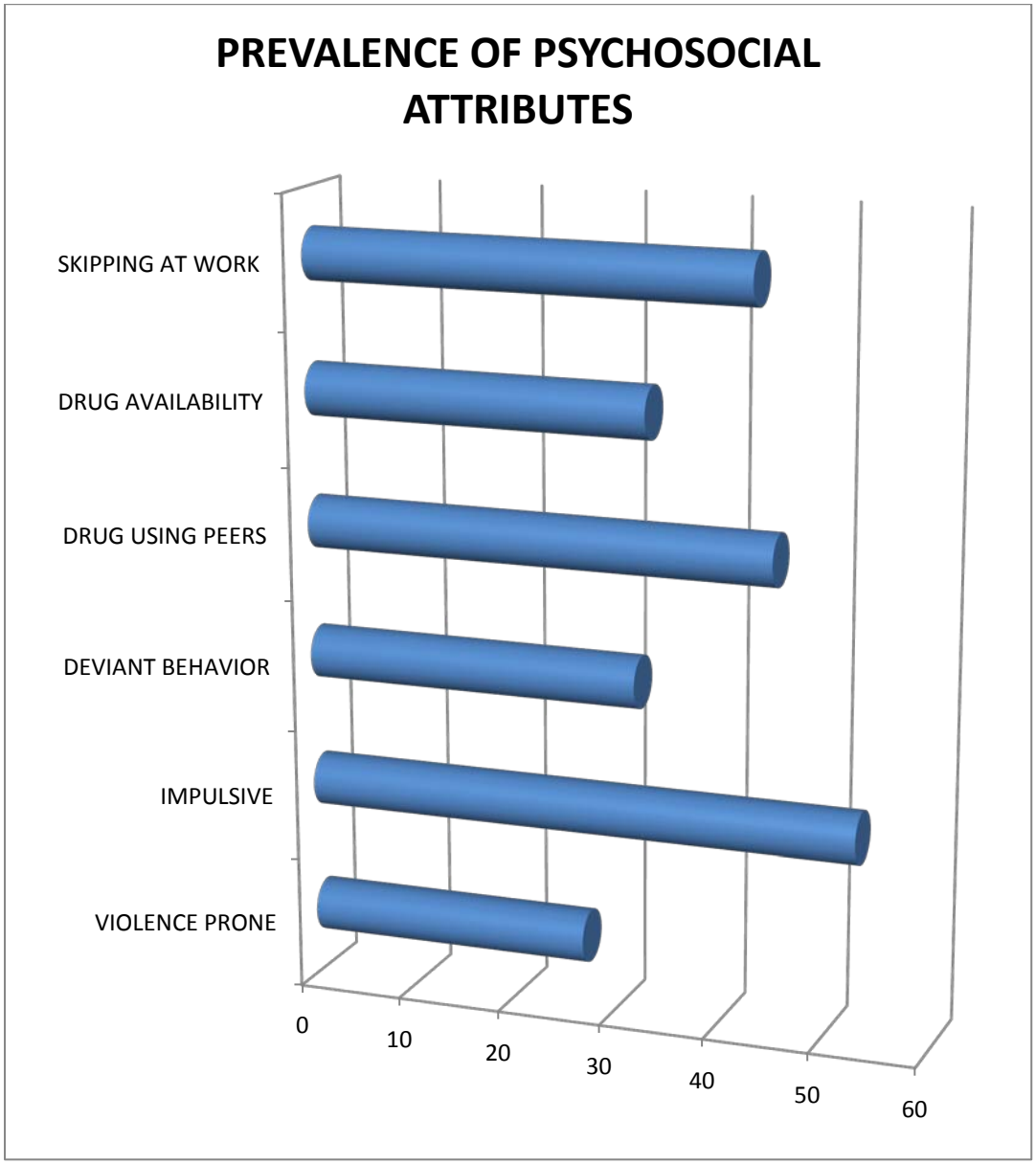
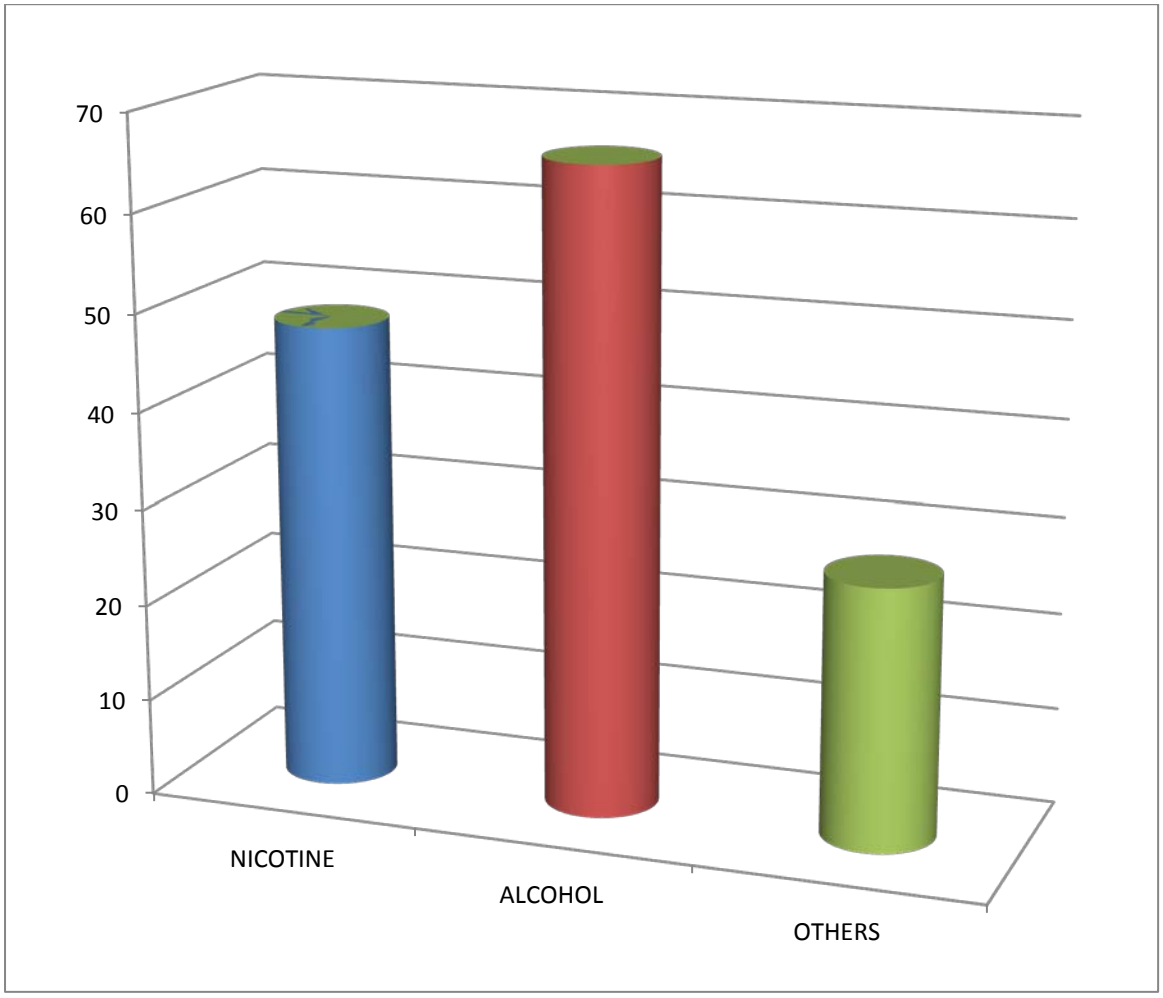


**CHART 6: BAR CHART REPRESENTING**

**COMORBID SUBSTANCE USE:**




In our sample 66% consume alcohol, 48% use nicotine and 27% used other substances like fevibond, Nitrazepam tablets and tobacco impurities like HANS.

## TABLE 13

## DISTRIBUTION OF PSYCHIATRIC COMORBIDITY

## AMONG 100 CANNABIS DEPENDENT PEOPLE

| DIAGNOSIS AS PER MINI PLUS | PERCENTAGE |
|---|---|
| Psychotic disorders | 61% |
| Manic episode | 11% |
| Depression | 1% |
| ASPD | 6% |
| Non-alcohol psychoactive substance use disorder | 21% |

## CHART 7: PIE DIAGRAM SHOWING THE DISTRIBUTION OF PSYCHIATRIC COMORBIDITY AMONG THE SAMPLE

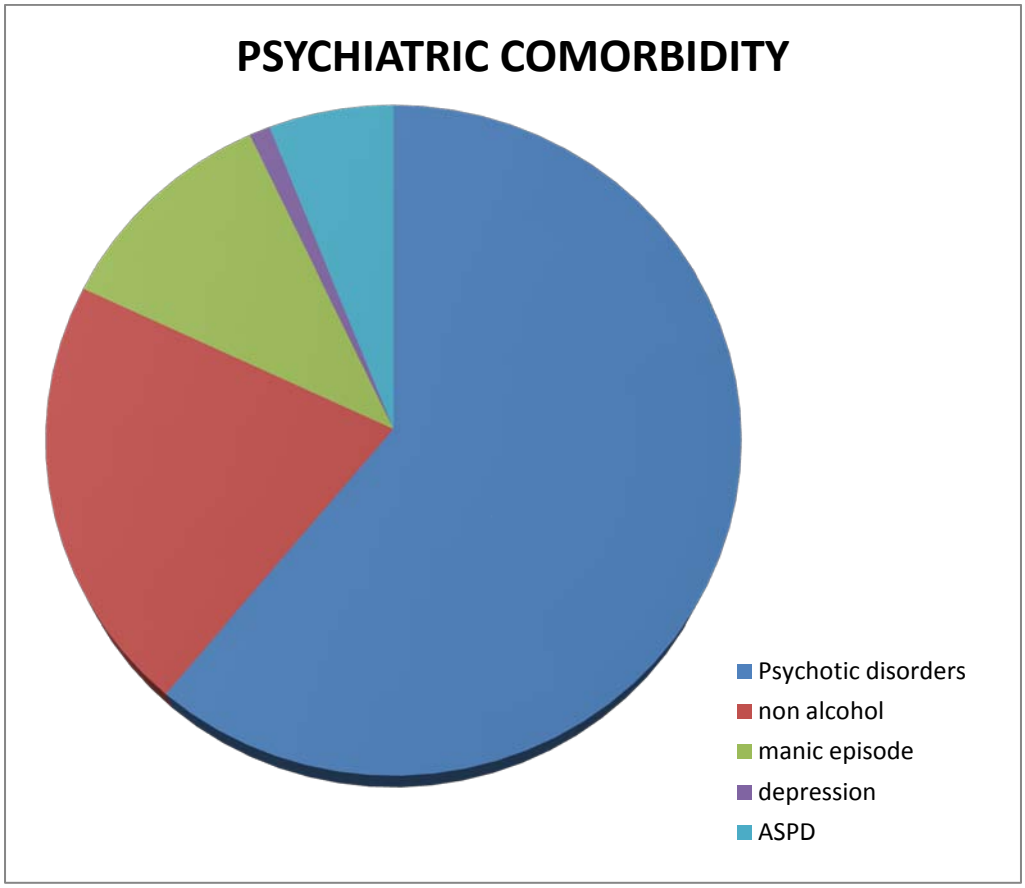


**TABLE:14**

**PREVALENCE OF COMORBID ALCOHOL ABUSE AMONG PSYCHIATRIC COMORBIDITY**

| PSYCHIATRIC COMORBIDITY | NO ALCOHOL ABUSE N (%) | WITH ALCOHOL ABUSE N (%) |
|---|---|---|
| Psychotic disorders | 22 (36.1%) | 39 (63.9%) |
| ASPD | 1(16.7%) | 5 (83.3%) |
| Non Alcohol Psychoactive Substance use disorder | 8 (38.1%) | 13 (61.9%) |
| Manic episode | 3 (27.3%) | 8 (72.7%) |
| Depression | 0 | 1 (100%) |

Among all the psychiatric comorbidity, more than 50% have comorbid alcohol abuse.

**TABLE:15**

**VARIABLES RELATED TO THE PSYCHOSIS IN THE SAMPLE:**

61% had psychotic disorders in our study.

| | |
|---|---|
| Mean age at presentation | 25.54years |
| Mean age of onset of cannabis abuse | 18.36years |
| Mean duration of cannabis abuse | 7.15years |
| Mean duration of illness | 24.98 months |
| Percentage had family history of mental illness: (N=10) | 16.4% |
| Percentage had family history of substance use disorder: (N=42) | 68.8% |
| Percentage of alcohol abuse: (N=39) | 63.9% |
| Percentage of alcohol dependence: (N=24) | 39.3% |

From these variables, we understand when a person starts to use cannabis by average age of 18.36years for the mean duration of 7.15years present with psychosis by the age of 25.54years. In that only 16.4% have family history of mental illness whereas 68.8% have family history of substance use. Similarly 63.9% have comorbid alcohol use.

**TABLE: 16**

**PREVALENCE OF ALCOHOL DEPENDENCE**

| PSYCHIATRIC COMORBIDITY | ALCOHOL DEPENDENCE | PERCENTAGE |
|---|---|---|
| PSYCHOSIS | 24 | 39.34% |
| ASPD | 3 | 50% |
| MANIA | 4 | 36.3% |
| DEPRESSION | 1 | 100% |
| NON ALCOHOL PSYCHOACTIVE SUBSTANCE USE | 5 | 23.8% |

**POST HOC ANALYSIS**

Comparison of sociodemographic variables, psychosocial attributes between adolescent and adult onset cannabis abusers.

**Table 14**

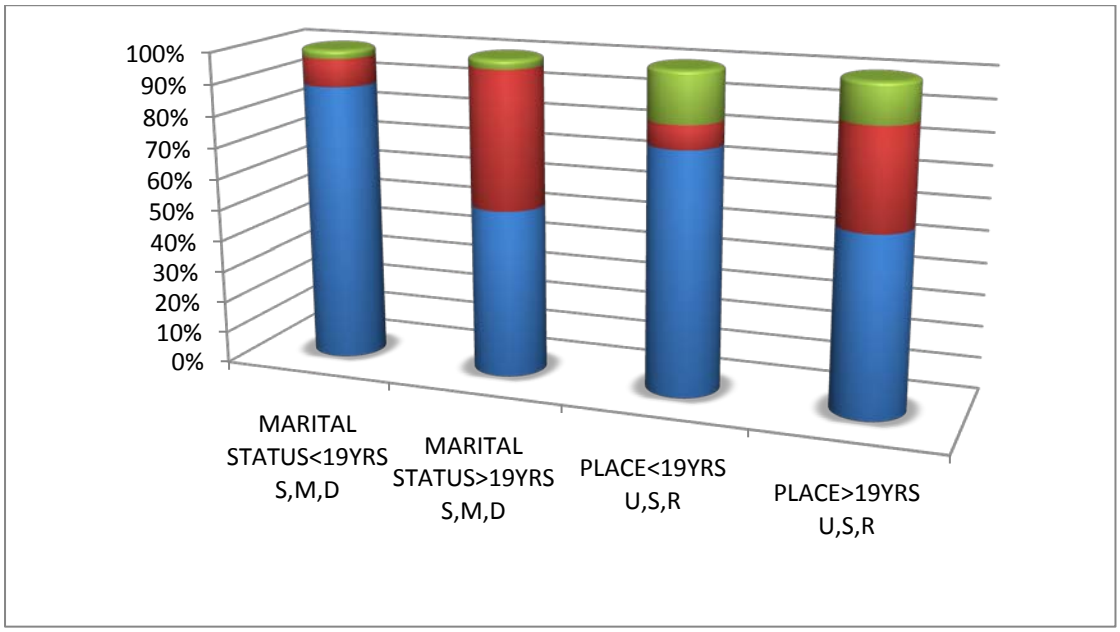
**Comparison of sociodemographic variables between adolescent and adulthood onset of cannabis abuse**

| VARIABLES | | ≤19 years N=68 | >19 years N=32 | γ | P |
|---|---|---|---|---|---|
| Marital status | Divorced | 2(2.9%) | 1(3.1%) | 16.758 | <0.001 |
| | Married | 6(8.8%) | 14(43.8%) | | |
| | Single | 60(88.2%) | 17(53.1%) | | |
| Occupation | Unemployed | 27(39.7%) | 9(28.1%) | 3.773 | 0.287 |
| | Semiskilled | 6(8.8%) | 7(21.9%) | | |
| | Skilled | 17(25.0%) | 7(21.9%) | | |
| | Unskilled | 18(26.5%) | 9(28.1%) | | |
| Place | Rural | 11(16.2%) | 10(31.2%) | 4.266 | 0.118 |
| | Semiurban | 5(7.4%) | 4(12.5%) | | |
| | Urban | 52(76.5%) | 18(56.2%) | | |
| SE Status | Lower | 65(95.6%) | 31(96.9%) | 0.094 | 0.759 |
| | Middle | 3(4.4%) | 1(3.1%) | | |
| Religion | Christian | 5(7.4%) | 3(9.4%) | 3.754 | 0.153 |
| | Hindu | 62(91.2%) | 26(81.2%) | | |
| | Islam | 1(1.5%) | 3(9.4%) | | |

Statistically significant difference in marital status i.e. most of the adolescent onset cannabis users were unmarried. Whilst occupation, place, SE status, religion there was no significant difference between these 2 groups.

## CHART 8

## BAR CHART SHOWING COMPARISON OF DEMOGRAPHIC FACTORS AMONG ADOLESCENT & ADULT ONSET CANNABIS ABUSE




## CHART 9

## BAR CHART SHOWING COMPARISON OF DEMOGRAPHIC VARIABLES BETWEEN ADOLESCENT & ADULT ONSET CANNABIS ABUSE

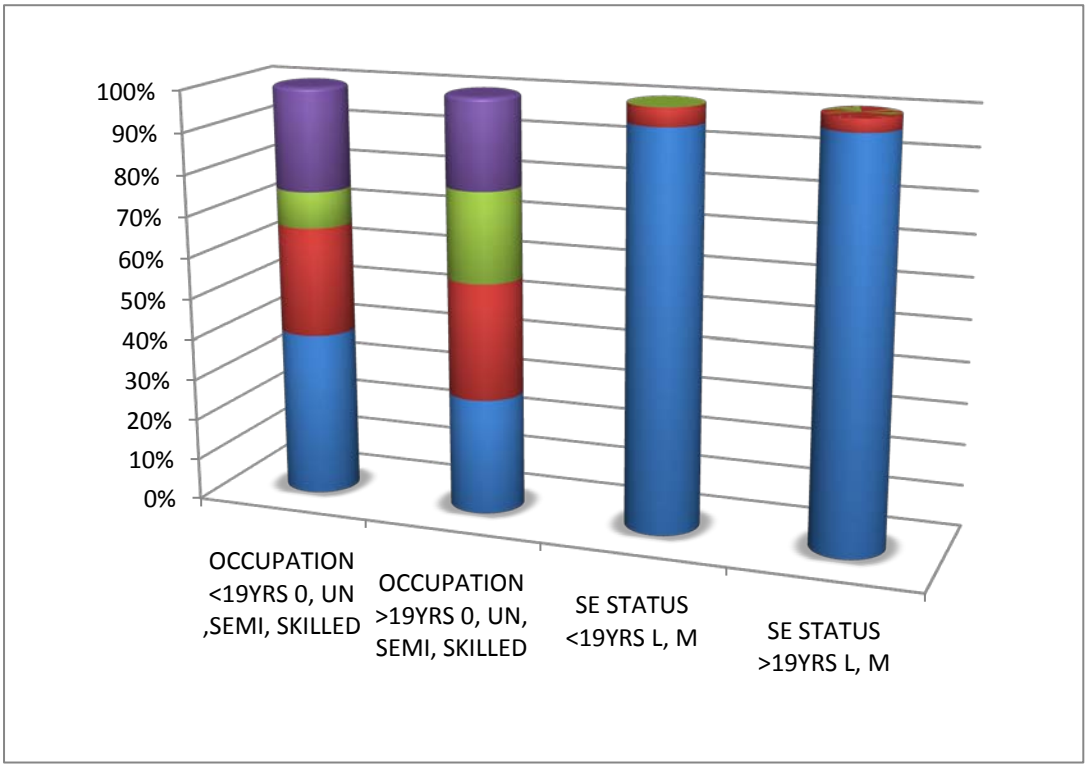


**TABLE 15**

**COMPARISON OF PSYCHOSOCIAL ATTRIBUTES BETWEEN ADOLESCENT ADULT ONSET CANNABIS ABUSER.**

| S.NO | | ≤ 19 years N 68 | >19 years N 32 | $\gamma$ | P |
|---|---|---|---|---|---|
| 1 | Violent prone | 21(30.9%) | 6(18.8%) | 1.625 | 0.202 |
| 2 | Impulsive | 43(63.2)% | 10(31.2%) | 8.97 | 0.003 |
| 3 | Deviant peer | 24(35.3%) | 8(25.0%) | 1.641 | 0.440 |
| 4 | Drug using peer | 38(55.9%) | 7(21.8%) | 10.168 | <0.001 |
| 5 | Drug availability | 27(39.7%) | 6(18.7%) | 4.238 | 0.038 |
| 6 | Skipping at work | 34(50%) | 9(28.1%) | 4.248 | 0.039 |
| 7 | Work achievement | 38(55.8%) | 18(56.2%) | 4.183 | 0.123 |
| 8 | Nicotine use | 34(50%) | 14(43.75%) | 0.341 | 0.560 |
| 9 | Alcohol use | 45(66.1%) | 21(65.6) | 0.003 | 0.957 |
| 10 | Family H/o MI | 8(1.7%) | 5(15.6%) | 0.327 | 0.568 |
| 11 | Family H/o SUD | 47(69.1%) | 21(65.6%) | 0.122 | 0.727 |

## CHART 10

## COMPARISON OF PSYCHOSOCIAL ATTRIBUTES BETWEEN ADOLESCENT & ADULT ONSET CANNABIS ABUSE

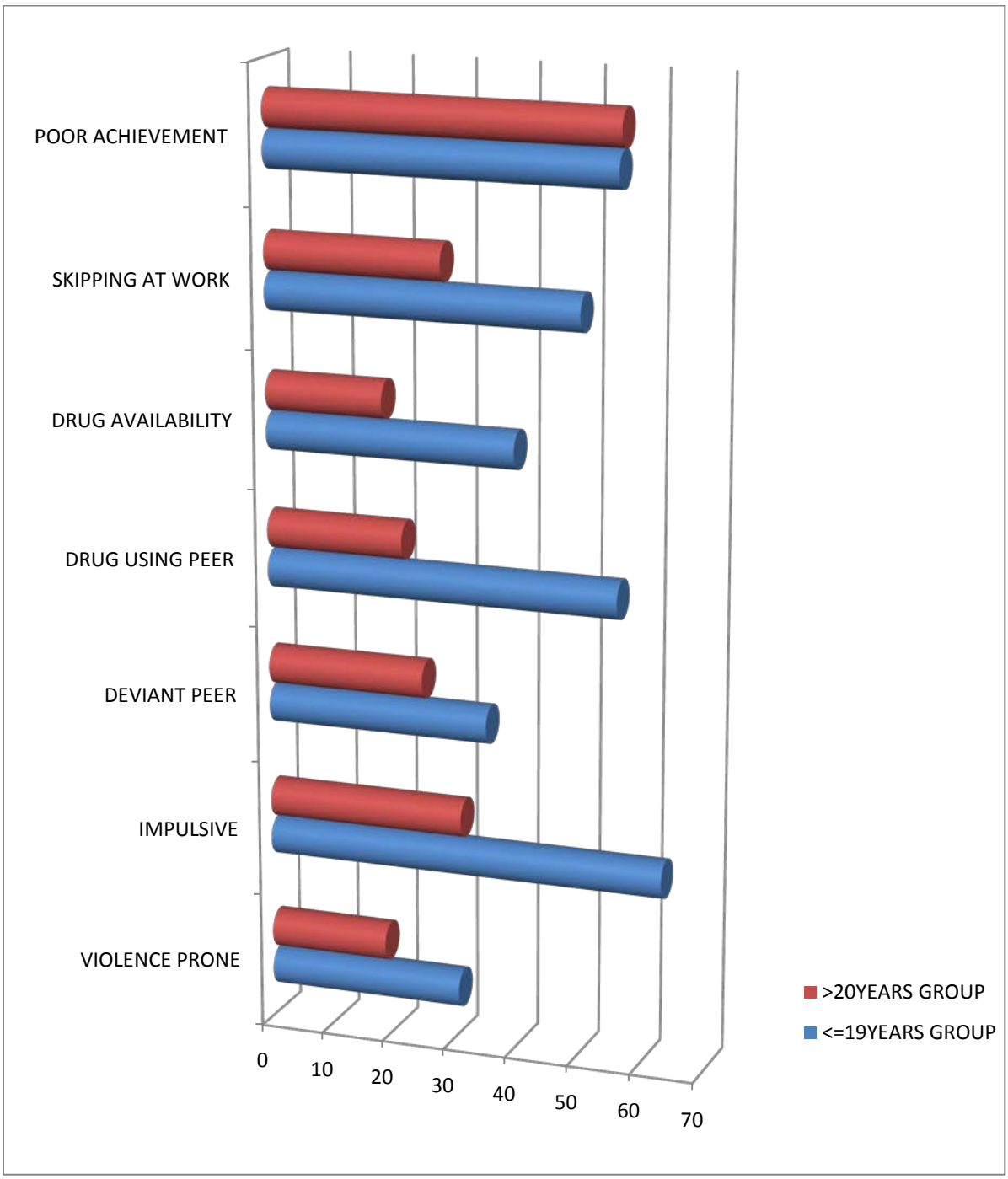


**TABLE 16:**

**COMPARISON OF MPS BETWEEN ADOLESCENT AND ADULT ONSET CANNABIS ABUSE**

| | | ≤ 19 years | >19 years | Chi square | P value |
|---|---|---|---|---|---|
| Social | 1 | 45(66.2) | 1(3.1) | 4.240 | 0.237 |
| | 2 | 20(29.4) | 24(75.0) | | |
| | 3 | 3(4.4) | 7(21.9) | | |
| Academic / Occupation | 1 | 64(94.1) | 31(96.9%) | 0.348 | 0.555 |
| | 2 | 4(5.9) | 1(3.1) | | |
| Physical | 0 | 1(1.5%) | | 1.195 | 0.550 |
| | 1 | 62(91.2%) | 31(96.9) | | |
| | 2 | 5(7.4%) | 1(3.1) | | |
| Financial | 1 | 66(97.1) | 31(96.9) | 0.003 | 0.960 |
| | 2 | 2(2.9) | 1(3.1) | | |
| Psychological | 1 | 47(69.1%) | 24(75%) | 3.827 | 0.281 |
| | 2 | 18(26.4%) | 7(21.8%) | | |
| | 3 | 3(4.5%) | o | | |

Both groups showed no difference in experiencing problems due to use of cannabis.

## CHART 11:

## BAR CHART SHOWING THE SEVERITY OF CANNABIS PROBLEMS AMONG THE SAMPLE

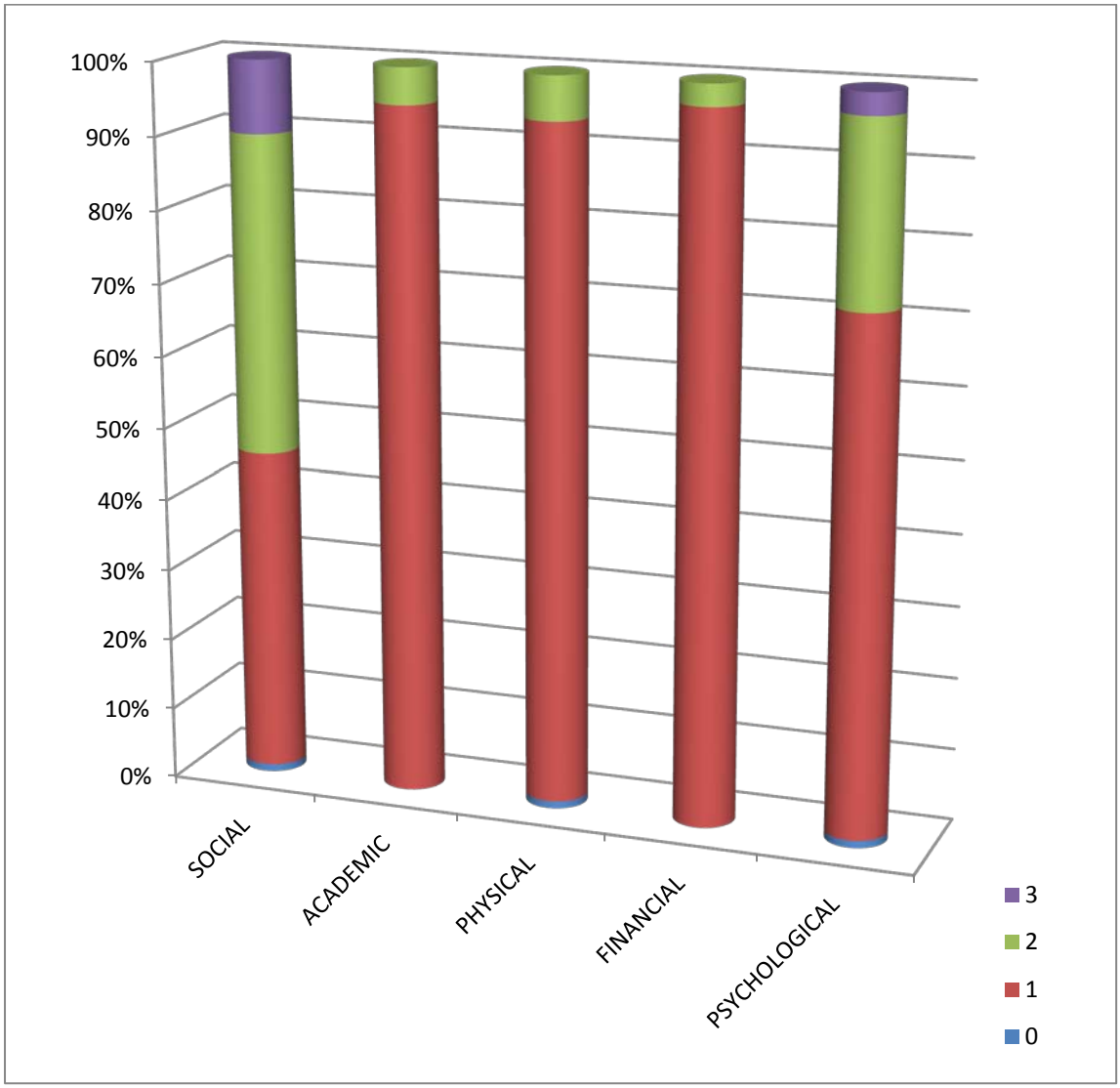


**TABLE 17:**

**COMPARISON OF AGE ONSET GROUP WITH**

**DURATION OF CANNABIS USE**

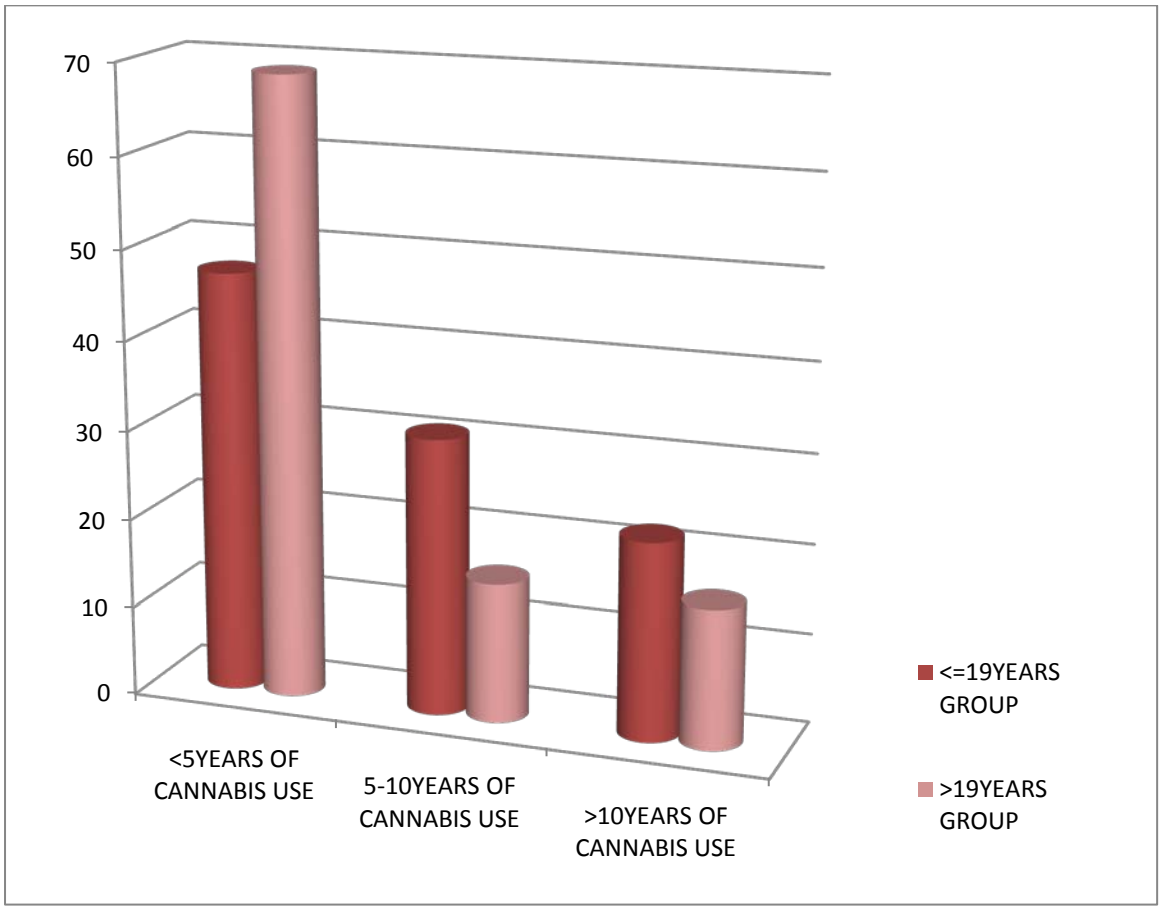
| AGE AT ONSET OF CANNABIS ABUSE | | **DURATION OF CANNABIS USE** | | | **Total** |
|---|---|---|---|---|---|
| | | **<5 YEARS** | **5-10 YEARS** | **> 10 YEARS** | |
| <=19 years | Count | 32 | 21 | 15 | 68 |
| | % within group | 47.1% | 30.9% | 22.1% | 100.0% |
| ABOVE 19 YEARS | Count | 22 | 5 | 5 | 32 |
| | % within group | 68.8% | 15.6% | 15.6% | 100.0% |
| Total | Count | 54 | 26 | 20 | 100 |
| | % within group | 54.0% | 26.0% | 20.0% | 100.0% |

| | |
|---|---|
| Chi square value | 4.295 |
| P value | 0.117 |

There is NO significant association between duration of cannabis abuse and age of onset of cannabis.

## CHART 12

## BAR CHART SHOWING COMPARISON OF DURATION OF CANNABIS ABUSE BETWEEN ADOLESCENT & ADULT ONSET CANNABIS ABUSE




People who use cannabis after the age of 19years present more with problems within 5years of use.

## TABLE 18

## COMPARISON OF DURATION OF CANNABIS ABUSE AND CANNABIS WITHDRAWAL SYMPTOMS

| DURATION OF CANNABIS ABUSE | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| <5 YEARS | 54 | 9.4074 | 5.97643 | .81329 | 7.7762 | 11.0387 |
| 5-10 YEARS | 26 | 16.9231 | 9.45272 | 1.85383 | 13.1050 | 20.7411 |
| ABOVE 10 YEARS | 20 | 22.7000 | 6.46529 | 1.44568 | 19.6742 | 25.7258 |
| Total | 100 | 14.0200 | 8.87395 | .88740 | 12.2592 | 15.7808 |

## COMPARISON OF WITHDRAWAL BY ANOVA:

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| **Between Groups** | **2874.877** | **2** | **1437.438** | **28.334** | **.000** |
| **Within Groups** | **4921.083** | **97** | **50.733** | | |
| **Total** | **7795.960** | **99** | | | |

* The mean difference is significant at the 0.05 level.

This shows that as the duration of cannabis abuse increases the mean scores of withdrawal symptoms also increases.

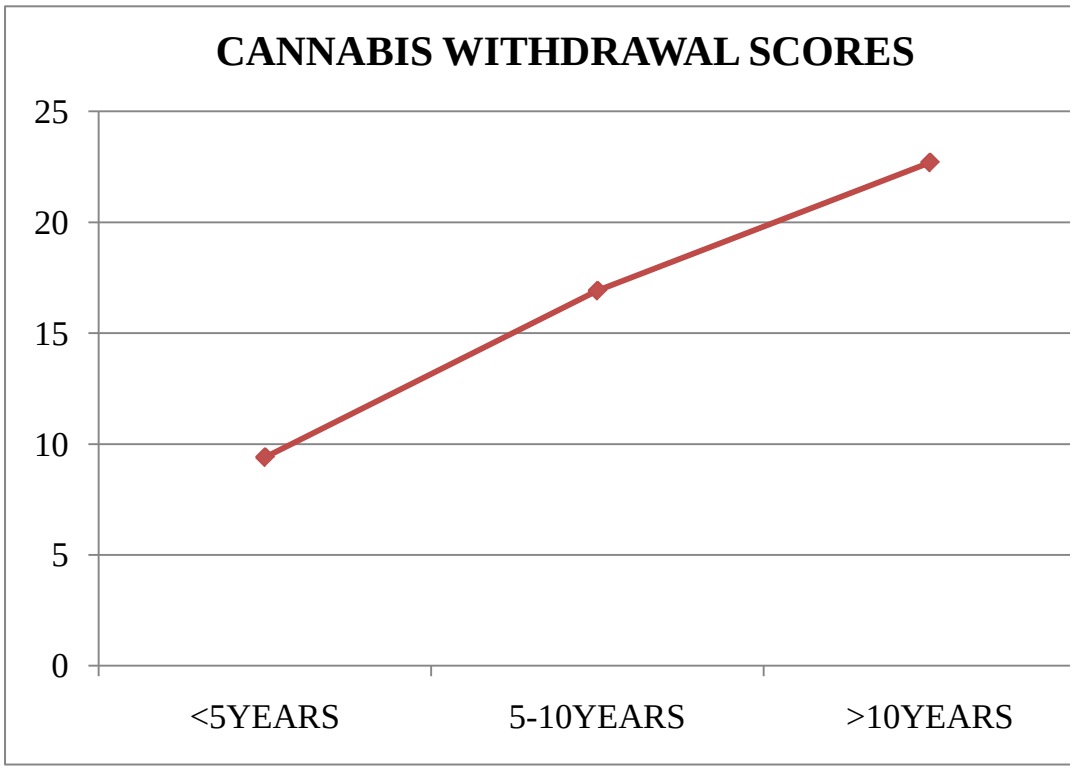


**TABLE 19:**

**COMPARISON OF DURATION OF ILLNESS WITH THE DURATION OF CANNABIS USE**

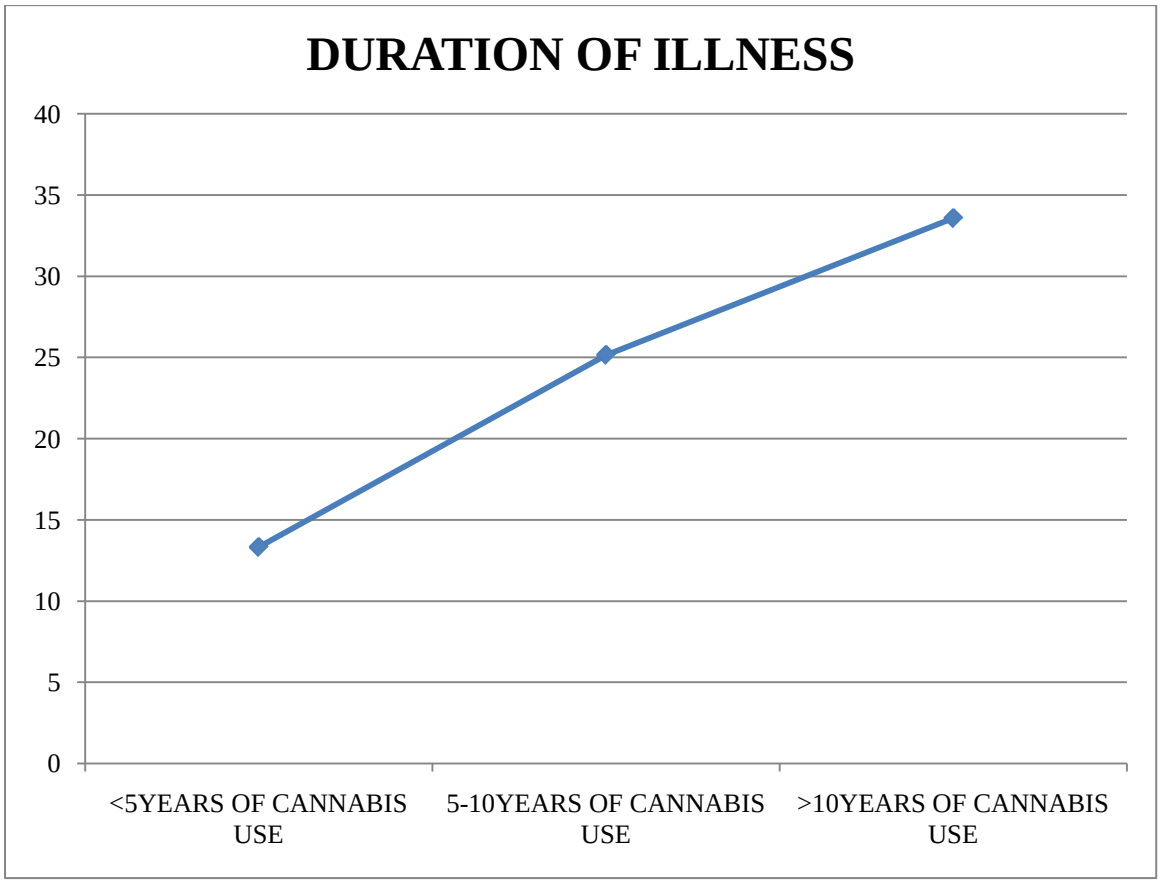
| DURATION OF CANNABIS ABUSE | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| <5 YEARS | 54 | 13.3241 | 10.96184 | 1.49172 | 10.3321 | 16.3161 |
| 5-10 YEARS | 26 | 25.1538 | 17.24805 | 3.38262 | 18.1872 | 32.1205 |
| ABOVE 10 YEARS | 20 | 33.5750 | 39.03011 | 8.72740 | 15.3083 | 51.8417 |
| Total | 100 | 20.4500 | 22.36345 | 2.23634 | 16.0126 | 24.8874 |

**ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 6762.649 | 2 | 3381.325 | 7.672 | .001 |
| Within Groups | 42749.601 | 97 | 440.718 | | |
| Total | 49512.250 | 99 | | | |

## CHART 13

## LINE CHART COMPARING THE DURATION OF CANNABIS ABUSE WITH THE DURATION OF ILLNESS PERIOD

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The above table & chart shows that the duration of illness is directly proportional to the duration of cannabis abuse. As the duration of cannabis abuse increased, the duration illness also increased proportionately.

# DISCUSSION

Our study concluded that specific socio demographics were associated with cannabis use disorder. CUDs are more common in males. This is consistent with the various other studies. Though various studies state the prevalence of cannabis use in females was very much significant. In our study we found zero prevalence that may be due to subjective bias in our sampling technique. Secondly few studies highlighted that males were more likely to become cannabis dependent in early years after initial use.[49]

In our study we found those who presented with cannabis related problems are predominantly males, 77% unmarried, 70% belong to urban area, 96% belong to LSES, 64% employed. The mean age of onset of cannabis use was 18.36 years with a median of 17 years. This was approximately consistent with a similar study done in 2013 by Hercilio et al, which conclude those who were seeking treatment for CUD were 81% male, 66% single, 62.5% employed. The mean age of onset of use of cannabis was 16.53 years with standard deviation 4.66 years.[44]

Regarding religion, 88% belong to Hinduism. This is most probably due to small sample size and also certain religion has restriction towards illicit substance use.

Regarding education, 79% of people were below $10^{th}$ standard. That too, most people were discontinued studies due to use of cannabis. In previous literature which evaluates the effects of cannabis on education, the most

important issue concerned is the risk of early drop outs from school due to heavy, regular use of cannabis. Hall et al specifically shown that use of cannabis produce impairment in reaction time, impairment in short term memory, loosening association and they become the reasons that cause impairment in attainment of proper education.[50]

87% has family history of substance use disorder whereas history of mental illness present only in 13%. The strongest predictor for adolescent substance use is do their parents use substances or not. This is in accordance with social learning theory. Numerous studies found that substance use among parents greatly influences the onset of substance use by their children. Andrews et al in US did a study from which parent the children get the behavior. He suggested that the children get smoking behavior from their mother and drinking behavior from the father.[51]

68% used cannabis in adolescent period i.e less than 19 years. This is consistent with previous studies by Fergusson et al, he concluded that 70% of cannabis users belong to the age group less than 21 years[52]. Similarly Poulton et al showed that 62% of cannabis users were less than 20 years[53].

In our study we found that 27% of cannabis users were violence prone, 53% were impulsive, 32% has deviant behavior, 45% have drug using peers, and 33% admitted drug availability in neighborhood. This is consistent with the previous studies which conclude that cannabis use is more prevalent among young people who belong to disadvantaged family or social background,

people with adjustment problems, depression in early years, poor scholastic achievement, unemployment and those who were exposed to difficult childhood circumstances[54]. In our study also we found 79% quit studies below $10^{th}$ grade. 36% were unemployed, 96% belong to lower socioeconomic status, and 87% has family history of substance use disorder. By wrong role modeling they were prone to use of cannabis at early age. When we compared these psychosocial factors among adolescent onset cannabis user and adult onset cannabis users, (table 15) we found there was significantly high level of impulsivity, drug using peer relationship, drug availability in neighborhood, skipping at school or work were more among adolescent onset group. In a previous study also it showed that the violent / impulsive was moderately strongly associated with the use of cannabis at the age of 14-15 years. Thereafter decreases as age advances and less by the age 20-21 years.[54]

**Comorbid substance use among cannabis users:**

Our study showed that 48% use nicotine, 66% use alcohol and 27% use other psychoactive substance like fevibond, HANS, nitrazepam tablets, cough syrup etc. 84% of the sample use one or other psychoactive substance along with cannabis. 16% were only cannabis users. It has been found in various studies that use of cannabis increase the risk of developing other substance dependence. In 1970's researchers debated about "the gateway hypothesis" that people who use illicit substances like heroin, cocaine would have been used initially one of the gateway drugs like tobacco, alcohol or cannabis.

(Vanyukov et al, 2012)[55]. Now researchers began to reveal reverse gateway hypothesis. In that they say use of cannabis is reverse gateway for the onset of other drugs like nicotine or alcohol (Agrawal et al 2008)[56]. Various studies and meta-analysis found that there was a moderate evidence of statistically significant association between the use of cannabis and the occurrence of other substance abuse or dependence which includes alcohol, tobacco and other illicit substances.[57]

Similarly one follow up study done in united states revealed that those who used cannabis at initial phase later in 3 years found to around 3 times higher rate of alcohol abuse compared to individuals who did not used cannabis. Similarly the risk of abusing tobacco was also two times high among them.

**Psychiatric comorbidity among persons abusing cannabis:**

Our study found that 61% qualified for psychosis, 21% for non-alcohol psychoactive substance use disorders [cannabis use disorder], 11% as Mania, 6% with antisocial personality disorder and 1% with depression. This was similar to the study done by Sarkar et al who found that 53% had psychotic illness and 34% had substance dependence[45]. Similar study done in Brazil in 2010 found that 22.5% had depression, 11% had generalized anxiety disorder, 8.8% panic disorder, 8.8% had schizophrenia, and rest around 31% had only cannabis dependence[44].

This study by Hercilio et al concluded that 61.2% had psychiatric comorbidity among cannabis dependent persons. Another study by Holscher et al showed 42% had comorbid psychiatric disorders. They also concluded that the most prevalent is depression and generalized anxiety disorders. But our findings were inconsistent with those results by concluding around 79% has comorbid psychiatric condition in that psychosis was predominant illness found[58].

This may be due to sampling error that we took sample in a tertiary care center where people with predominantly major mental illnesses report. This can be adjusted if we did our study at multicenter level / community level. Among psychotic patients, the average duration of psychotic illness was found to be 24.98months. Cannabis induced transient psychotic illness would last only up to few months. (DSM V) This showed that use of cannabis has a contributing effect on the development of psychotic symptoms. Similarly, the Dutch study showed that people who are genetically vulnerable are at greater risk to develop psychosis than people without family history but abusing cannabis. The RD (risk difference) of cannabis use is 2.2% whereas those who have family history of psychosis are 54.7%.[59] But in our study those who developed psychosis has family history of some mental illness only in about 16.4%. While nearly 83% had no history supportive of mental illness in their family.

Four hypothesis were formulated by various studies for the associations of cannabis and psychosis.

1. Confounding hypothesis – By this, use of cannabis often mixed with the other substance use and various other factors that can cause psychosis.

2. Interaction hypothesis – By this, cannabis as a component causing psychosis in vulnerable individuals.

3. Reverse causality hypothesis – By this theory, they hypothesis that to cope with psychotic symptoms especially negative symptoms, people use cannabis.

4. Ethological hypothesis – In this hypothesis, cannabis as a direct cause for psychotic symptoms.[60]

Our study definitely ruled out reverse causality hypothesis since no one suffered from psychotic symptoms before the use of cannabis. But we could not conclude or exclude other hypothesis as follow up study will be needed to confirm causal association between the two.

The average age of onset of psychotic symptoms was found to be about 25.54years and the average durations of cannabis use among them was found as 7.15years. The mean age of onset of cannabis in psychotic group was found to be 18.36 years. One Swedish study found a relation of dose – response between the frequency of use of cannabis at the age of 18 and the risk of schizophrenia diagnosis over 15 year's period[61]. In our study, we found use of cannabis over 7.15 years produced psychotic symptoms.

Though, DSM 5 did not mention about cannabis induced mood disorder, in our study we found around 11% of persons abusing cannabis suffer from

Mania. In a study done by Gilbert et al found that use of cannabis was associated with a nearly 3 fold increase in symptoms by the odds ratio compared with clinical outcome[32].

Another study done in Italy suggested that the less realistic in thinking and more involvement in religion and spiritual experience are at higher risk of developing cannabis dependence. They also found that the following psychiatric disorders occur as Axis I comorbidity – Adjustment disorder, Dysthymia, Major depression, GAD. They showed certain personality disorders specifically associated with the use of cannabis i.e. borderline, histrionic, dependent and unspecified[5].

People without comorbid psychiatric illness report that they use cannabis or other drugs for external reasons such as problems at work, social pressure, peer pressure etc.

We found only 1% in our study sample reported as depression. Various studies also provide mixed evidence upon the associative nature of the use of cannabis and depression. Brook et al in a cohort study found that use of cannabis early i.e. before 20 years was associated with mild increase in the risk of MDD by 27 years of age. But after the control of confounding factors like demographics, history of depression in the family, childhood depression, and the odds ratio was 1.7, that is people who use cannabis has 1.7 times higher risk in developing MDD compared with those who did not use cannabis. But by the age of 27 years the risk of developing depression become very less[62].

Similar result was also given by Fergusson et al, in which the association between the use of cannabis and the depressive disorder with the age, by the age of 20-21 years, significantly there was no association between the two. Since the average age at presentation of our sample was around 25 years, the risk of depression may be low comparing the results of the abovementioned studies.[63]

About withdrawal symptoms, the common symptoms we encountered were craving for cannabis, easy irritability, anger outbursts. On Likert scale, the average value for cannabis withdrawal symptoms was found to be 14.02 out of maximum score of 190. And also it has been found the mean of withdrawal score increases significantly as the duration of cannabis use increases (Table 17). This is consistent with the finding of a study published in the Journal of clinical psychiatry by Deborah et al[64].

Another study done by Bonnet et al also suggested that 75% of people who abuse cannabis seeking outpatient treatment usually develop mild to moderate cannabis withdrawal symptoms. Heavy and prolonged use favors the increased risk of CWS[65].

Hofler et al in 1999 did a study on risk factors for cannabis use among 1228 subjects. The risk factors that were well documented are drug use in peer group, drug availability in immediate neighborhood, low competence and self-esteem. In addition, they found substance use disorder in family and experience with legal drugs before the use of cannabis play an important role among 14-17 years old subjects who use cannabis.[66]

# CONCLUSION

- Psychiatric comorbidity is a common occurrence in persons with cannabis dependence especially those seek treatment.
- Psychotic disorders are the most common presentation presented in a tertiary care center.
- Cannabis withdrawal symptoms increase as the duration of cannabis abuse increase.
- Comorbid other substance use and family history of substance use are the commonest association with the persons who abuse cannabis.
- Adolescents who begin to use cannabis has poor psychosocial factors like high levels of impulsivity, drug using peer relationship drug availability in neighborhood, skipping at school or work than those begin to use cannabis in early adulthood.

## STRENGTH OF THE STUDY

- The sample taken according to the sample size calculation.
- The tools used were validated and has good internal consistency.
- This study conducted in a tertiary care center replicated the findings of previous studies.

# LIMITATIONS

1. The cross sectional study design used in our study can be helpful to study the association between variables but it could not assess causal relationship.

2. As this study has been done in a tertiary care setting, burden in a community level could not be generalized.

3. The amount and pattern of cannabis use were not considered in our study.

4. Often associated with the comorbid alcohol use, that may have a confounding effect.

# FUTURE DIRECTIONS

1. Community level study will be needed to assess the exact prevalence of cannabis use disorders and the distribution of psychiatric comorbidity.

2. Comparison between cannabis dependent persons with or without comorbid mental illness, will throw added insight upon the biopsychosocial causes for psychiatric comorbidity.

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# ஆராய்ச்சி தகவல் தாள்

ஆராய்ச்சி தலைப்பு : கஞ்சா பழக்கமுள்ளவரிடம் காணப்படும் சமூக உளவியல்

காரணிகளும், உளவியல் நோக்களும்- ஒரு மதிப்பீடு

ஆய்வாளர் : சி. தீபா

பங்குகொள்பவர் பெயர் :

இடம் : அரசு மனநல காப்பகம்
சென்னை- 600010

தாங்கள் இந்த ஆராய்ச்சியில் பங்குபெறுவதற்கேற்ப தகவல்கள் கொடுக்கப்பட்டுள்ளது. தங்கள் சந்தேகங்களை கேட்டு அறிந்து கொள்ளலாம்.

ஆராய்ச்சியின் நோக்கம் : கஞ்சா பழக்கமுள்ளவரிடம் காணப்படும் சமூக உளவியல்

காரணிகளும், உளவியல் நோக்களும்- பற்றிய ஒரு மதிப்பீடு சயவது நோக்கம்.

ஆராய்ச்சி முறை :
உங்கள் நோயாளியுடன் உங்கள் விருப்பத்துடன் இருவரிடமும் கேள்விகள் கேட்கப்படும்.

இந்த ஆய்வின் முடிவுகளை ஆராய்ச்சியின் போது அல்லது ஆராய்ச்சியின் முடிவின் போது தங்களுக்கு அறிவிக்கப்படும் என்பதையும் தெரிவித்துக்கொள்கிறோம்.

இந்த ஆராய்ச்சியில் பங்க்கேற்பது தங்களுடைய விருப்பத்தின் பேரில் தான் இருக்கிறது. மேலும் நீங்கள் எநநேரமும் இந்த ஆராய்ச்சியில் இருந்து பின் வாங்கலாம் என்பதையும் தெரிவித்துக்கொள்கிறோம்.

தங்களுக்கு மன அழுத்தம் மற்றும் மனபதற்றம் இருப்பதை கண்டுபிடித்தால் அதற்கான சிகிச்சைக்கான ஆலோசனை வழங்கப்படும்.

மூடிவுகளை அல்லது கருத்துகளை வெளியிடும் போது அல்லது ஆராய்ச்சியின் போது தங்களது பெயரையோ அல்லது அடையாளங்களையோ வெளியிட மாட்டோம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

ஆராய்ச்சியாளர் கையெப்பம்: பங்கேற்பாளர் கையெப்பம்:

இடம்:
தேதி:

# ஆராய்ச்சி ஒப்புதல் கடிதம்

ஆராய்ச்சி தலைப்பு: கஞ்சா பழக்கமுள்ளவரிடம் காணப்படும் சமூக உளவியல்

காரணிகளும், உளவியல் நோய்களும்- ஒரு மதிப்பீடு

பங்கு கொள்பவர் பெயர்:

ஆய்வாளர்: சி. தீபா

மருத்துவ நிலையம்: அரசு மனநல காப்பகம்
சென்னை- 600010

..... எனும் நான் எனக்கு கொடுக்கப்பட்ட தகவல் தாளினை படித்து புரிந்துகொண்டேன். என்னுடைய சுய நினைவுடனும் மற்றும் முழு சுதந்திரத்துடனும் இந்த ஆராய்ச்சியில் என்னை சேர்த்துக்கொள்ள சம்மதிக்கிறேன்.

எனக்கு இந்த ஆராய்ச்சியின் ஒப்புதல் படிவம் விளக்கப்பட்டது.

எனக்கு இந்த ஆராய்ச்சியின் நோக்கமும், விவரங்களும் விளக்கப்பட்டது.

எனக்கு என்னுடைய உரிமைகளை பற்றி விளக்கப்பட்டது.

நான் இதுவரை எடுத்துக்கொண்ட அனைத்து மருத்துவ முறைகளைப் பற்றி தெரிவித்திருக்கிறேன்.

இந்த ஆராய்ச்சியில் இருந்து எந்நேரமும் பின் வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்துகொண்டேன்.

என்னை பற்றிய எந்த தகவல்களும், அடையாளமும் வெளியிடப்பட மாட்டாது என்பதை புரிந்துகொண்டேன்.

என்னை பற்றிய எந்த தகவல்களும், அடையாளமும் வெளியிடப்பட மாட்டாது என்பதை நான் புரிந்துகொண்டேன்.

என்னுடைய முழு சுதந்திரத்தோடும் இந்த ஆராய்ச்சியில் என்னை சேர்த்துக்கொள்ள சம்மதிக்கிறேன்.

பங்கேற்பாளர் பெயர் மற்றும் கையெழுத்து..... தேதி :.....

பாதுகாவலர் பெயர் மற்றும் கையெழுத்து..... தேதி :.....

**INFORMATION TO PARTICIPANTS**

Title : **" EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS "**

Principal Investigator : Dr. S.DEEPA,

II Year, MD Psychiatry Post Graduate,

Madras Medical College, Chennai.

Co-Investigator (if any) :

Name of Participant :

Site : IMH, MMC, Chennai.

You are invited to take part in this research. The information in this document is meant to help you decide whether or not to take part. Please feel free to ask if you have any queries or concerns.

What is the purpose of research?

Cannabis abuse is a common disorder characterized by significant impairment of functioning in day to day life. Depression and psychosis occur in a substantial proportion of cannabis abuse patients, thereby increasing the burden. We want to find out how commonly clinical depression and psychosis occurs in patients with cannabis abuse.

We have obtained permission from the Institutional Ethics Committee.

The study design

You will be interviewed while you are attending our hospital.

Study procedures

The study involves evaluation for the presence of depression and / or psychosis for which we will be interviewing you with various questionnaires. You will be required to spare roughly half an hour for a one-time interview during your visit to the hospital.

Possible benefits to you

If you are found to have depression and / or psychosis you will be referred to the Psychiatry OP, IMH for further management of these conditions (s).

Possible benefits to other people

The results of the research may provide benefits to the society in terms of advancement of medical knowledge and / or therapeutic benefit to future patients.

Confidentially of the information obtained from you

You have the right to confidentially regarding the privacy of your medical information (personal details, results of physical examinations, investigations, and your medical history). By signing this document, you will be allowing the research team investigations, other study personnel and the Institutional Ethics Committee, to view your data, if required.

The information from this study, if published in scientific journals or presented at scientific meetings, will not reveal your identity.

How will your decision to not participate in the study affect you?

Your decision not to participate in this research study will not affect your medical care or your relationship with the investigator or the institution. You will be taken care of and you will not lose any benefits to which you are entitled.

Can you decide to stop participating in the study once you start?

The participation in this research is purely voluntary and you have the right to withdraw from this study at any time during the course of the study without giving any reasons. However, it is advisable that you talk to the research team prior to stopping the treatment / discontinuing of procedures etc.

Signature of Investigator

Date :

Signature of Participant

Date :

**INFORMED CONSENT FORM**

Title : : " EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS "

Name of the Participant :

Name of Principal/Co-Investigator : Dr. S.DEEPA,

Name of Institution : IMH, MMC, Chennai.

Name and address of the sponsor / agency(ies), if any: _____

I _____(name of participant), have read the information in this form (or it has been read to me). I was free to ask any questions and they have been answered. I am exercising my free power of choice, hereby give my consent to be included as a participant in "EVALUATION OF PSYCHOSOCIAL FACTORS AND PSYCHIATRIC COMORBIDITY AMONG PERSONS ABUSING CANNABIS "

1) I have read and understood this consent form and the information provided to me.

2) I have had the consent document explained to me.

3) I have been explained about the nature of the study.

4) I have been explained about my rights and responsibilities by the investigator.

5) I have informed the investigator of all the treatments I am taking or have taken in the past, including any native (alternative) treatments.

6) I am aware of the fact that I can opt out of the study at any time without having to give any reason and this will not affect my future treatment in the hospital.

7) I hereby give permission to the investigators to release the information obtained from me as a result of participation in this study to the regulatory authorities, Government agencies, and ethics committee. Iunderstand that they may inspect my original records.

8) I understand that my identity will be kept confidential if my data are publicly presented.

9) I have had my questions answered to my satisfaction.

10) I consent voluntarily to participate as a participant in the research study.

I am aware, that I can opt out of the study, I should contact the investigators. By signing this consent from, I attest that the information given in this document has been clearly explained to me and understood by me. I will be given a copy of this consent document.

For adult participants

Name and signature / thumb impression of the participant (or legal representative if participant is incompetent):

(Name)_____(Signature)_____Date:_____

Name and signature of impartial witness (required for illiterate patients):

(Name)_____(Signature)_____Date:_____

Address and contact number of the impartial witness:_____

Name and signature of the investigator or his representative obtaining consent:

(Name)_____ (Signature) _____Date:_____

**SOCIO DEMOGRAPHIC PROFILE**

Name:

Age:

Sex:

Education:

Occupation:

Income:

Marital status:

Place: rural/ urban/semi urban

Socio economic status:

Religion:

PSYCHO SOCIAL FACTORS:

Personal attributes: 1. Ego integration 2. Violence towards others 3.Psychological symptoms 4. Impulsivity

Marital relationship: 1. Satisfaction with partner 2.marital harmony 3.arguements with partner

Peer relationship: 1. Deviance 2. Illegal drug use 3. Association with drug using peers

Neighborhood: 1. Drug offering 2. Violence toward subject 3.Drug availability

Work: 1. Skipped work 2. Work achievement

Substance use: 1. Nicotine 2. Alcohol 3. others

### *Explain and Ask Client To Complete* Marijuana Problem Scale*; Evaluate Consequences of Marijuana Use*

The *Marijuana Problem Scale* (MPS) (form AS5), developed by Stephens and colleagues (1994*a*), is a self-report assessment that helps the client identify areas in his or her life affected by marijuana use. It contains 19 items that represent potential negative effects of marijuana on social relationships, self-esteem, motivation and productivity, work and finances, physical health, memory impairment, and legal problems. The items were chosen based on existing self-report drug abuse severity measures and on data from people who sought treatment for marijuana use.

Some questions on the MPS are similar to those in the SCID-IV. However, the MPS is a self-report instrument and the counselor should not base diagnostic decisions on the MPS alone. Clinical judgment is needed to make a diagnosis of cannabis abuse.

The counselor gives the form to the client and instructs the client to take a few moments to respond to each item by indicating whether he or she experienced a particular problem related to marijuana use in the past month. After reading each question, the client circles the corresponding number on the questionnaire:

Not a problem (0) A minor problem (1) A serious problem (2).

After answering all the questions, the client gives the form back to the counselor who counts the number of items identified as either minor or serious problems. Higher scores generally indicate more serious problems with marijuana. However, it is important to review the specific problem items with clients because the nature of the problems reported may be more important than the total score. For instance, although nearly all people who use marijuana and seek treatment report feeling bad about their use, a smaller number will indicate serious problems with friends, family, work, or finances. Exhibit VII-1 in section VII presents the frequency of problems reported by MTP participants.

The counselor keeps the form and uses the information to complete the client's PFR, which is discussed in the next session.

### *Administer* Reasons for Quitting Questionnaire*; Evaluate Reasons for Seeking Treatment*

The *Reasons for Quitting Questionnaire* (form AS6) is based on earlier work with tobacco cessation and has been modified based on initial results with people who use marijuana and seek treatment (McBride et al. 1994). The 26 items assess reasons for quitting marijuana in the following broad categories: health concerns, desire for self-control, and social and legal influences. The counselor gives the client the form and asks him or her to take a few moments to indicate the degree to which each reason applies to him or her using a 5-point scale:

Not at all (0) A little bit (1) Moderately (2) Quite a bit (3) Very much (4).

# Marijuana Problem Scale

Following are different types of problems you may have experienced as a result of smoking marijuana. Please circle the number that indicates whether each item has been a problem for you in the past month.

| Has marijuana use caused you... | No Problem | Minor Problem | Serious Problem |
|---|---|---|---|
| 1. Problems between you and your partner | 0 | 1 | 2 |
| 2. Problems in your family | 0 | 1 | 2 |
| 3. To neglect your family | 0 | 1 | 2 |
| 4. Problems between you and your friends | 0 | 1 | 2 |
| 5. To miss days at work or miss classes | 0 | 1 | 2 |
| 6. To lose a job | 0 | 1 | 2 |
| 7. To have lower productivity | 0 | 1 | 2 |
| 8. Medical problems | 0 | 1 | 2 |
| 9. Withdrawal symptoms | 0 | 1 | 2 |
| 10. Blackouts or flashbacks | 0 | 1 | 2 |
| 11. Memory loss | 0 | 1 | 2 |
| 12. Difficulty sleeping | 0 | 1 | 2 |
| 13. Financial difficulties | 0 | 1 | 2 |
| 14. Legal problems | 0 | 1 | 2 |
| 15. To have lower energy level | 0 | 1 | 2 |
| 16. To feel bad about your use | 0 | 1 | 2 |
| 17. Lowered self-esteem | 0 | 1 | 2 |
| 18. To procrastinate | 0 | 1 | 2 |
| 19. To lack self-confidence | 0 | 1 | 2 |

# Marijuana Problem Scale (continued)

## Marijuana Problem Scale Scoring Instructions

*To obtain the* Marijuana Problem Scale *(MPS) Score, add the number of items reported as either a minor problem or serious problem. This score is used in the* Personal Feedback Report *(form AS8) and compared with the scores in table C at the end of the instructions for creating the PFR.*

*Items circled as 1 or 2 by the client should be checked on part II of the* Personal Feedback Report *(form AS8).*

**For Office Use**

**MPS Score: _____**

FROM: Steinberg KL, Roffman RA, Carroll KM, et al. Brief Counseling for Marijuana Dependence: A Manual for Treating Adults. Rockville, MD: CSAT, SAMHSA, 2005. DHHS Pub. No. (SMA) 05-4022 http://www.integration.samhsa.gov/clinical-practice/sbirt/Brief_Counseling_for_Marijuana_Dependence.pdf

## The Cannabis Withdrawal Scale

**Instructions:** This version of the CWS asks about symptoms experienced over the last 24 hours, and can be administered by an interviewer OR by self report.

The following statements describe how you have felt over the last 24 hours. Please **circle the number** that most closely represents your personal experiences for each statement. For each statement, please rate its negative impact on normal daily activities on the same scale (0 = Not at all to 10 = Extremely), writing the number in the right hand column.

| | | Not at all | | | | Moderately | | | | | | Extremely | Negative Impact on daily activity (0 – 10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | The only thing I could think about was smoking some cannabis | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 2 | I had a headache | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 3 | I had no appetite | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 4 | I felt nauseous (like vomiting) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 5 | I felt nervous | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 6 | I had some angry outbursts | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 7 | I had mood swings | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 8 | I felt depressed | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 9 | I was easily irritated | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 10 | I had been imagining being stoned | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 11 | I felt restless | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 12 | I woke up early | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 13 | I had a stomach ache | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 14 | I had nightmares and/or strange dreams | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 15 | Life seemed like an uphill struggle | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 16 | I woke up sweating at night | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 17 | I had trouble getting to sleep at night | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 18 | I felt physically tense | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 19 | I had hot flashes | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |

Score by summing each items value to a maximum withdrawal score of 190 (you can derive two scores from the scale: one for withdrawal intensity and one for the negative impact of withdrawal – each separate score has a theoretical maximum of 190).

**Allsop, D., Norberg, M., Copeland, J., Fu, S. & Budney, A.J. (2011).** The Cannabis Withdrawal Scale Development: Patterns and Predictors of Cannabis Withdrawal and Distress. *Drug and Alcohol Dependence* 119 (1-2), 123-129

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# M.I.N.I.

## MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW

**English Version 5.0.0**

**DSM-IV**

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**DISCLAIMER**

Our aim is to assist in the assessment and tracking of patients with greater efficiency and accuracy. Before action is taken on any data collected and processed by this program, it should be reviewed and interpreted by a licensed clinician.

This program is not designed or intended to be used in the place of a full medical and psychiatric evaluation by a qualified licensed physician – psychiatrist. It is intended only as a tool to facilitate accurate data collection and processing of symptoms elicited by trained personnel.

**M.I.N.I. 5.0.0 (July 1, 2006)**

| | | | |
|---|---|---|---|
| ***Patient Name:*** | | ***Patient Number:*** | |
| ***Date of Birth:*** | | ***Time Interview Began:*** | |
| ***Interviewer's Name:*** | | ***Time Interview Ended:*** | |
| ***Date of Interview:*** | | ***Total Time:*** | |

| | MODULES | TIME FRAME | MEETS CRITERIA | DSM-IV | ICD-10 | |
|---|---|---|---|---|---|---|
| A | MAJOR DEPRESSIVE EPISODE | Current (2 weeks) | ☐ | 296.20-296.26 Single | F32.x | ❐ |
| | | Recurrent | ☐ | 296.30-296.36 Recurrent | F33.x | ❐ |
| | MDE WITH MELANCHOLIC FEATURES | Current (2 weeks) | ☐ | 296.20-296.26 Single | F32.x | ❐ |
| | Optional | | | 296.30-296.36 Recurrent | F33.x | ❐ |
| B | DYSTHYMIA | Current (Past 2 years) | ☐ | 300.4 | F34.1 | ❐ |
| C | SUICIDALITY | Current (Past Month)<br>Risk: ☐ Low ☐ Medium ☐ High | ☐ | | | ❐ |
| D | MANIC EPISODE | Current | ☐ | 296.00-296.06 | F30.x-F31.9 | ❐ |
| | | Past | ☐ | | | |
| | HYPOMANIC EPISODE | Current | ☐ | 296.80-296.89 | F31.8-F31.9/F34.0 | ❐ |
| | | Past | ☐ | | | |
| E | PANIC DISORDER | Current (Past Month) | ☐ | 300.01/300.21 | F40.01-F41.0 | ❐ |
| | | Lifetime | ☐ | | | |
| F | AGORAPHOBIA | Current | ☐ | 300.22 | F40.00 | ❐ |
| G | SOCIAL PHOBIA (Social Anxiety Disorder) | Current (Past Month) | ☐ | 300.23 | F40.1 | ❐ |
| H | OBSESSIVE-COMPULSIVE DISORDER | Current (Past Month) | ☐ | 300.3 | F42.8 | ❐ |
| I | POSTTRAUMATIC STRESS DISORDER | Current (Past Month) | ☐ | 309.81 | F43.1 | ❐ |
| J | ALCOHOL DEPENDENCE | Past 12 Months | ☐ | 303.9 | F10.2x | ❐ |
| | ALCOHOL ABUSE | Past 12 Months | ☐ | 305.00 | F10.1 | ❐ |
| K | SUBSTANCE DEPENDENCE (Non-alcohol) | Past 12 Months | ☐ | 304.00-.90/305.20-.90 | F11.1-F19.1 | ❐ |
| | SUBSTANCE ABUSE (Non-alcohol) | Past 12 Months | ☐ | 304.00-.90/305.20-.90 | F11.1-F19.1 | ❐ |
| L | PSYCHOTIC DISORDERS | Lifetime | ☐ | 295.10-295.90/297.1/ | F20.xx-F29 | ❐ |
| | | Current | ☐ | 297.3/293.81/293.82/ 293.89/298.8/298.9 | | |
| | MOOD DISORDER WITH PSYCHOTIC FEATURES | Lifetime | ☐ | 296.24/296.34/296.44 | F32.3/F33.3/ ❐ | |
| | | Current | ☐ | 296.24/296.34/296.44 | F30.2/F31.2/F31.5 F31.8/F31.9/F39 ❐ | |
| M | ANOREXIA NERVOSA | Current (Past 3 Months) | ☐ | 307.1 | F50.0 | ❐ |
| N | BULIMIA NERVOSA | Current (Past 3 Months) | ☐ | 307.51 | F50.2 | ❐ |
| | ANOREXIA NERVOSA, BINGE EATING/PURGING TYPE | Current | ☐ | 307.1 | F50.0 | ❐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| O | GENERALIZED ANXIETY DISORDER | Current (Past 6 Months) | ☐ | 300.02 | F41.1 | ❐ |
| P | ANTISOCIAL PERSONALITY DISORDER<br>Optional | Lifetime | ☐ | 301.7 | F60.2 | ❐ |

Which problem troubles you the most? Indicate your response by checking the appropriate check box(es).

# GENERAL INSTRUCTIONS

The M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization for lay interviewers for ICD-10). The results of these studies show that the M.I.N.I. has acceptably high validation and reliability scores, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 minutes, median 15 minutes) than the above referenced instruments. It can be used by clinicians, after a brief training session. Lay interviewers require more extensive training.

**INTERVIEW:**

In order to keep the interview as brief as possible, inform the patient that you will conduct a clinical interview that is more structured than usual, with very precise questions about psychological problems which require a yes or no answer.

**GENERAL FORMAT:**

The M.I.N.I. is divided into **modules** identified by letters, each corresponding to a diagnostic category.

•At the beginning of each diagnostic module (except for psychotic disorders module), screening question(s) corresponding to the main criteria of the disorder are presented in a **gray box**.

•At the end of each module, diagnostic box(es) permit the clinician to indicate whether diagnostic criteria are met.

**CONVENTIONS:**

*Sentences written in* « normal font » should be read exactly as written to the patient in order to standardize the assessment of diagnostic criteria.

*Sentences written in* « CAPITALS » should not be read to the patient. They are instructions for the interviewer to assist in the scoring of the diagnostic algorithms.

*Sentences written in* « **bold** » indicate the time frame being investigated. The interviewer should read them as often as necessary. Only symptoms occurring during the time frame indicated should be considered in scoring the responses.

*Answers with an arrow above them* (➡) indicate that one of the criteria necessary for the diagnosis(es) is not met. In this case, the interviewer should go to the end of the module, circle « **NO** » in all the diagnostic boxes and move to the next module.

When terms are separated by a *slash (/)* the interviewer should read only those symptoms known to be present in the patient (for example, question H6).

*Phrases in (parentheses*) are clinical examples of the symptom. These may be read to the patient to clarify the question.

**RATING INSTRUCTIONS:**

All questions must be rated. The rating is done at the right of each question by circling either Yes or No. Clinical judgment by the rater should be used in coding the responses. The rater should ask for examples when necessary, to ensure accurate coding. The patient should be encouraged to ask for clarification on any question that is not absolutely clear.

The clinician should be sure that <u>each dimension</u> of the question is taken into account by the patient (for example, time frame, frequency, severity, and/or alternatives).

<u>Symptoms better accounted for by an organic cause or by the use of alcohol or drugs should not be coded positive in the M.I.N.I.</u> The M.I.N.I. Plus has questions that investigate these issues.

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For any questions, suggestions, need for a training session, or information about updates of the M.I.N.I., please contact :

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# A. MAJOR DEPRESSIVE EPISODE

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE **NO** IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

| | | | |
|---|---|---|---|
| A1 | Have you been consistently depressed or down, most of the day, nearly every day, for the past two weeks? | NO | YES |
| A2 | In the past two weeks, have you been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time? | NO | YES |
| | ➡ IS **A1** OR **A2** CODED **YES?** | NO | YES |

A3 **Over the past two weeks, when you felt depressed or uninterested:**

| | | | |
|---|---|---|---|
| a | Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ±5% of body weight or ±8 lbs. or ±3.5 kgs., for a 160 lb./70 kg. person in a month)? IF **YES** TO EITHER, CODE **YES.** | NO | YES * |
| b | Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)? | NO | YES |
| c | Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day? | NO | YES * |
| d | Did you feel tired or without energy almost every day? | NO | YES |
| e | Did you feel worthless or guilty almost every day? | NO | YES |
| f | Did you have difficulty concentrating or making decisions almost every day? | NO | YES |
| g | Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead? | NO | YES |

ARE **5** OR MORE ANSWERS (**A1-A3**) CODED **YES**?

**NO** **YES ***

***MAJOR DEPRESSIVE EPISODE, CURRENT***

IF PATIENT HAS CURRENT MAJOR DEPRESSIVE EPISODE CONTINUE TO A4, OTHERWISE MOVE TO MODULE B:

| | | | | |
|---|---|---|---|---|
| A4 | a | During your lifetime, did you have other episodes of two weeks or more when you felt depressed or uninterested in most things, and had most of the problems we just talked about? | NO | YES |
| | b | In between 2 episodes of depression, did you ever have an interval of at least 2 months, without any depression and any loss of interest? | | |

**NO** **YES**

***MAJOR DEPRESSIVE EPISODE, RECURRENT***

* If patient has Major Depressive Episode, Current, use this information in coding the corresponding questions on page 5 (A6d, A6e).

# MAJOR DEPRESSIVE EPISODE WITH MELANCHOLIC FEATURES (optional)

**(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

IF THE PATIENT CODES POSITIVE FOR A CURRENT MAJOR DEPRESSIVE EPISODE (**A3** = **YES**), EXPLORE THE FOLLOWING:

| | | | | |
|---|---|---|---|---|
| A5 | a | During the most severe period of the current depressive episode, did you lose almost completely your ability to enjoy nearly everything? | NO | YES |
| | b | During the most severe period of the current depressive episode, did you lose your ability to respond to things that previously gave you pleasure, or cheered you up?<br>**IF NO:** When something good happens does it fail to make you feel better, even temporarily? | NO | YES |
| | | IS EITHER **A5a** OR **A5b** CODED **YES**? | ➡<br>NO | YES |

| | | | | |
|---|---|---|---|---|
| A6 | | **Over the past two week period, when you felt depressed and uninterested:** | | |
| | a | Did you feel depressed in a way that is different from the kind of feeling you experience when someone close to you dies? | NO | YES |
| | b | Did you feel regularly worse in the morning, almost every day? | NO | YES |
| | c | Did you wake up at least 2 hours before the usual time of awakening and have difficulty getting back to sleep, almost every day? | NO | YES |
| | d | IS **A3c** CODED **YES** (PSYCHOMOTOR RETARDATION OR AGITATION)? | NO | YES |
| | e | IS **A3a** CODED **YES** FOR ANOREXIA OR WEIGHT LOSS? | NO | YES |
| | f | Did you feel excessive guilt or guilt out of proportion to the reality of the situation? | NO | YES |

ARE **3** OR MORE **A6** ANSWERS CODED **YES**?

| **NO** | **YES** |
|---|---|
| ***Major Depressive Episode*** **with** ***Melancholic Features Current*** | |

# B. DYSTHYMIA

**(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

IF PATIENT'S SYMPTOMS CURRENTLY MEET CRITERIA FOR MAJOR DEPRESSIVE EPISODE, DO NOT EXPLORE THIS MODULE.

| | | | |
|---|---|---|---|
| B1 | Have you felt sad, low or depressed most of the time for the last two years? | ➡ NO | YES |
| B2 | Was this period interrupted by your feeling OK for two months or more? | NO | ➡ YES |
| B3 | **During this period of feeling depressed most of the time:** | | |
| a | Did your appetite change significantly? | NO | YES |
| b | Did you have trouble sleeping or sleep excessively? | NO | YES |
| c | Did you feel tired or without energy? | NO | YES |
| d | Did you lose your self-confidence? | NO | YES |
| e | Did you have trouble concentrating or making decisions? | NO | YES |
| f | Did you feel hopeless? | NO | YES |
| | ARE **2** OR MORE **B3** ANSWERS CODED **YES**? | ➡ NO | YES |

B4 Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way?

**NO** **YES**

***DYSTHYMIA***
**CURRENT**

# C. SUICIDALITY

**In the past month did you:**

| | | | | Points |
|---|---|---|---|---|
| C1 | Suffer any accident? | NO | YES | 0 |
| | IF NO TO C1, SKIP TO C2; IF YES, ASK C1a,: | | | |
| C1a | Plan or intend to hurt yourself in that accident either passively or actively? | NO | YES | 0 |
| | IF NO TO C1a, SKIP TO C2: IF YES, ASK C1b,: | | | |
| C1b | Did you intend to die as a result of this accident? | NO | YES | 0 |
| C2 | Think that you would be better off dead or wish you were dead? | NO | YES | 1 |
| C3 | Want to harm yourself or to hurt or to injure yourself? | NO | YES | 2 |
| C4 | Think about suicide? | NO | YES | 6 |

IF YES, ASK ABOUT THE INTENSITY AND FREQUENCY OF THE SUICIDAL IDEATION:

| Frequency | | Intensity | |
|---|---|---|---|
| Occasionally | ❒ | Mild | ❒ |
| Often | ❒ | Moderate | ❒ |
| Very often | ❒ | Severe | ❒ |

→ Can you control these impulses and state that you will not act on them while in this program? Only score 8 points if response is NO. NO YES 8

| | | | | |
|---|---|---|---|---|
| C5 | Have a suicide plan? | NO | YES | 8 |
| C6 | Take any active steps to prepare to injure yourself or to prepare for a suicide attempt in which you expected or intended to die? | NO | YES | 9 |
| C7 | Deliberately injure yourself without intending to kill yourself? | NO | YES | 4 |
| C8 | Attempt suicide? | NO | YES | 10 |

Hoped to be rescued / survive ❒
Expected / intended to die ❒

**In your lifetime:**

| | | | | |
|---|---|---|---|---|
| C9 | Did you ever make a suicide attempt? | NO | YES | 4 |

IS AT LEAST **1** OF THE ABOVE (EXCEPT C1) CODED **YES**?

**NO** **YES**

IF YES, ADD THE TOTAL NUMBER OF POINTS FOR THE ANSWERS (C1-C9) CHECKED 'YES' AND SPECIFY THE LEVEL OF SUICIDE RISK AS INDICATED IN THE DIAGNOSTIC BOX:

MAKE ANY ADDITIONAL COMMENTS ABOUT YOUR ASSESSMENT OF THIS PATIENT'S CURRENT AND NEAR FUTURE SUICIDE RISK IN THE SPACE BELOW:

***SUICIDE RISK CURRENT***

| | | |
|---|---|---|
| 1-8 points | Low | ❒ |
| 9-16 points | Moderate | ❒ |
| ≥ 17 points | High | ❒ |

# D. (HYPO) MANIC EPISODE

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

| | | | | |
|---|---|---|---|---|
| D1 | a | Have you **ever** had a period of time when you were feeling 'up' or 'high' or 'hyper' or so full of energy or full of yourself that you got into trouble, or that other people thought you were not your usual self? (Do not consider times when you were intoxicated on drugs or alcohol.)<br><br>IF PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN BY 'UP' OR 'HIGH' OR 'HYPER', CLARIFY AS FOLLOWS: By 'up' or 'high' or 'hyper' I mean: having elated mood; increased energy; needing less sleep; having rapid thoughts; being full of ideas; having an increase in productivity, motivation, creativity, or impulsive behavior.<br><br>IF NO, CODE NO TO **D1b**: IF **YES** ASK: | NO | YES |
| | b | Are you currently feeling 'up' or 'high' or 'hyper' or full of energy? | NO | YES |
| D2 | a | Have you **ever** been persistently irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to other people, even in situations that you felt were justified?<br><br>IF NO, CODE NO TO **D2b**: IF **YES** ASK: | NO | YES |
| | b | Are you currently feeling persistently irritable? | NO<br>➡ | YES |
| | | IS **D1a** OR **D2a** CODED **YES**? | NO | YES |

D3 IF **D1b** OR **D2b** = **YES**: EXPLORE THE **CURRENT** AND THE MOST SYMPTOMATIC **PAST** EPISODE, OTHERWISE
IF **D1b** AND **D2b** = **NO**: EXPLORE ONLY THE MOST SYMPTOMATIC **PAST** EPISODE

**During the times when you felt high, full of energy, or irritable did you:**

| | | Current Episode | | Past Episode | |
|---|---|---|---|---|---|
| a | Feel that you could do things others couldn't do, or that you were an especially important person?<br>IF **YES**, ASK FOR EXAMPLES.<br>THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. ❒ No ❒ Yes | NO | YES | NO | YES |
| b | Need less sleep (for example, feel rested after only a few hours sleep)? | NO | YES | NO | YES |
| c | Talk too much without stopping, or so fast that people had difficulty understanding? | NO | YES | NO | YES |
| d | Have racing thoughts? | NO | YES | NO | YES |
| e | Become easily distracted so that any little interruption could distract you? | NO | YES | NO | YES |
| f | Become so active or physically restless that others were worried about you? | NO | YES | NO | YES |
| g | Want so much to engage in pleasurable activities that you ignored the risks or consequences (for example, spending sprees, reckless driving, or sexual indiscretions)? | NO | YES | NO | YES |

| | Current Episode | | Past Episode | |
|---|---|---|---|---|
| **D3 (SUMMARY):** ARE **3** OR MORE **D3** ANSWERS CODED **YES** (OR **4** OR MORE IF **D1a** IS **NO** (IN RATING PAST EPISODE) AND **D1b** IS **NO (**IN RATING CURRENT EPISODE)? RULE: ELATION/EXPANSIVENESS REQUIRES ONLY THREE D3 SYMPTOMS WHILE IRRITABLE MOOD ALONE REQUIRES **4** OF THE **D3** SYMPTOMS. VERIFY IF THE SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD. | NO | YES | NO | YES |
| D4 Did these symptoms last at least a week **and** cause significant problems at home, at work, socially, or at school, **or** were you hospitalized for these problems? | NO ↓ | YES ↓ | NO ↓ | YES ↓ |
| THE EPISODE EXPLORED WAS A: | ❒ ***HYPOMANIC EPISODE*** | ❒ ***MANIC EPISODE*** | ❒ ***HYPOMANIC EPISODE*** | ❒ ***MANIC EPISODE*** |

IS **D4** CODED **NO**?

SPECIFY IF THE EPISODE IS CURRENT OR PAST.

**NO** **YES**

***HYPOMANIC EPISODE***

CURRENT ❒
PAST ❒

IS **D4** CODED **YES**?

SPECIFY IF THE EPISODE IS CURRENT OR PAST.

**NO** **YES**

***MANIC EPISODE***

CURRENT ❒
PAST ❒

# E. PANIC DISORDER

**(➡ MEANS : CIRCLE NO IN E5, E6 AND E7 AND SKIP TO F1)**

| | | | | |
|---|---|---|---|---|
| E1 | a | Have you, on more than one occasion, had spells or attacks when you **suddenly** felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way? | ➡ NO | YES |
| | b | Did the spells surge to a peak within 10 minutes of starting? | ➡ NO | YES |
| E2 | | At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner? | ➡ NO | YES |
| E3 | | Have you ever had one such attack followed by a month or more of persistent concern about having another attack, or worries about the consequences of the attack or did you make a significant change in your behavior because of the attacks (e.g., shopping only with a companion, not wanting to leave your house, visiting the emergency room repeatedly, or seeing your doctor more frequently because of the symptoms? | NO | YES |
| E4 | | **During the worst spell that you can remember:** | | |
| | a | Did you have skipping, racing or pounding of your heart? | NO | YES |
| | b | Did you have sweating or clammy hands? | NO | YES |
| | c | Were you trembling or shaking? | NO | YES |
| | d | Did you have shortness of breath or difficulty breathing? | NO | YES |
| | e | Did you have a choking sensation or a lump in your throat? | NO | YES |
| | f | Did you have chest pain, pressure or discomfort? | NO | YES |
| | g | Did you have nausea, stomach problems or sudden diarrhea? | NO | YES |
| | h | Did you feel dizzy, unsteady, lightheaded or faint? | NO | YES |
| | i | Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body? | NO | YES |
| | j | Did you fear that you were losing control or going crazy? | NO | YES |
| | k | Did you fear that you were dying? | NO | YES |
| | l | Did you have tingling or numbness in parts of your body? | NO | YES |
| | m | Did you have hot flushes or chills? | NO | YES |
| E5 | | ARE BOTH **E3,** AND **4** OR MORE **E4** ANSWERS, CODED **YES**? | NO | YES ***PANIC DISORDER LIFETIME*** |
| | | IF YES TO E5, SKIP TO E7. | | |
| E6 | | IF **E5** = **NO,** ARE ANY E4 ANSWERS CODED **YES**? | NO | YES ***LIMITED SYMPTOM ATTACKS LIFETIME*** |
| | | THEN SKIP TO **F1.** | | |
| E7 | | In the past month, did you have such attacks repeatedly (2 or more) followed by persistent concern about having another attack? | NO | YES ***PANIC DISORDER CURRENT*** |

# F. AGORAPHOBIA

F1 Do you feel anxious or uneasy in places or situations where you might have a panic attack or the panic-like symptoms we just spoke about, or where help might not be available or escape might be difficult: like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, traveling in a bus, train or car? NO YES

IF **F1** = **NO**, CIRCLE **NO** IN **F2**.

F2 Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them? NO YES

***AGORAPHOBIA CURRENT***

IS **F2** (CURRENT AGORAPHOBIA) CODED **NO**

and

IS **E7** (CURRENT PANIC DISORDER) CODED **YES**?

**NO** **YES**

***PANIC DISORDER without Agoraphobia CURRENT***

IS **F2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **E7** (CURRENT PANIC DISORDER) CODED **YES**?

**NO** **YES**

***PANIC DISORDER with Agoraphobia CURRENT***

IS **F2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **E5** (PANIC DISORDER LIFETIME) CODED **NO**?

**NO** **YES**

***AGORAPHOBIA, CURRENT without history of Panic Disorder***

# G. SOCIAL PHOBIA (Social Anxiety Disorder)

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)

| | | | |
|---|---|---|---|
| G1 | In the past month, were you fearful or embarrassed being watched, being the focus of attention, or fearful of being humiliated? This includes things like speaking in public, eating in public or with others, writing while someone watches, or being in social situations. | ➡ NO | YES |
| G2 | Is this social fear excessive or unreasonable? | ➡ NO | YES |
| G3 | Do you fear these social situations so much that you avoid them or suffer through them? | ➡ NO | YES |
| G4 | Do these social fears disrupt your normal work or social functioning or cause you significant distress? | | |

SUBTYPES

Do you fear and avoid 4 or more social situations?

If YES Generalized social phobia (social anxiety disorder)

If NO Non-generalized social phobia (social anxiety disorder)

NOTE TO INTERVIEWER: PLEASE ASSESS WHETHER THE SUBJECT'S FEARS ARE RESTRICTED TO NON-GENERALIZED ("ONLY 1 OR SEVERAL") SOCIAL SITUATIONS OR EXTEND TO GENERALIZED ("MOST") SOCIAL SITUATIONS. "MOST" SOCIAL SITUATIONS IS USUALLY OPERATIONALIZED TO MEAN 4 OR MORE SOCIAL SITUATIONS, ALTHOUGH THE DSM-IV DOES NOT EXPLICITLY STATE THIS.

EXAMPLES OF SUCH SOCIAL SITUATIONSTYPICALLY INCLUDE INITIATING OR MAINTAINING A CONVERSATION, PARTICIPATING IN SMALL GROUPS, DATING, SPEAKING TO AUTHORITY FIGURES, ATTENDING PARTIES, PUBLIC SPEAKING, EATING IN FRONT OF OTHERS, URINATING IN A PUBLIC WASHROOM, ETC.

**NO** **YES**

***SOCIAL PHOBIA***
***(Social Anxiety Disorder)***
***CURRENT***

GENERALIZED ❒

NON-GENERALIZED ❒

# H. OBSESSIVE-COMPULSIVE DISORDER

(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE **NO** AND MOVE TO THE NEXT MODULE)

| | | |
|---|---|---|
| H1 | In the past month, have you been bothered by recurrent thoughts, impulses, or images that were unwanted, distasteful, inappropriate, intrusive, or distressing? (For example, the idea that you were dirty, contaminated or had germs, **or** fear of contaminating others, **or** fear of harming someone even though you didn't want to, **or** fearing you would act on some impulse, **or** fear or superstitions that you would be responsible for things going wrong, **or** obsessions with sexual thoughts, images or impulses, **or** hoarding, collecting, **or** religious obsessions.)<br><br>(DO NOT INCLUDE SIMPLY EXCESSIVE WORRIES ABOUT REAL LIFE PROBLEMS. DO NOT INCLUDE OBSESSIONS DIRECTLY RELATED TO EATING DISORDERS, SEXUAL DEVIATIONS, PATHOLOGICAL GAMBLING, OR ALCOHOL OR DRUG ABUSE BECAUSE THE PATIENT MAY DERIVE PLEASURE FROM THE ACTIVITY AND MAY WANT TO RESIST IT ONLY BECAUSE OF ITS NEGATIVE CONSEQUENCES.) | NO YES<br>↓<br>SKIP TO **H4** |
| H2 | Did they keep coming back into your mind even when you tried to ignore or get rid of them? | NO YES<br>↓<br>SKIP TO **H4** |
| H3 | Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside? | NO YES<br>**obsessions** |
| H4 | In the past month, did you do something repeatedly without being able to resist doing it, like washing or cleaning excessively, counting or checking things over and over, or repeating, collecting, arranging things, or other superstitious rituals? | NO YES<br>**compulsions** |
| | IS **H3** OR **H4** CODED **YES**? | ➡<br>NO YES |
| H5 | Did you recognize that either these obsessive thoughts or these compulsive behaviors were excessive or unreasonable? | ➡<br>NO YES |
| H6 | Did these obsessive thoughts and/or compulsive behaviors significantly interfere with your normal routine, your work or school, your usual social activities, or relationships, or did they take more than one hour a day? | **NO** **YES**<br>***O.C.D. CURRENT*** |

# I. POSTTRAUMATIC STRESS DISORDER (optional)

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE **NO**, AND MOVE TO THE NEXT MODULE)

| | | | |
|---|---|---|---|
| I1 | Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else?<br><br>EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE, DISCOVERING A BODY, SUDDEN DEATH OF SOMEONE CLOSE TO YOU, WAR, OR NATURAL DISASTER. | ➡ NO | YES |
| I2 | Did you respond with intense fear, helplessness or horror? | ➡ NO | YES |
| I3 | During the past month, have you re-experienced the event in a distressing way (such as, dreams, intense recollections, flashbacks or physical reactions)? | ➡ NO | YES |

| | | | | |
|---|---|---|---|---|
| I4 | **In the past month:** | | | |
| | a | Have you avoided thinking about or talking about the event ? | NO | YES |
| | b | Have you avoided activities, places or people that remind you of the event? | NO | YES |
| | c | Have you had trouble recalling some important part of what happened? | NO | YES |
| | d | Have you become much less interested in hobbies or social activities? | NO | YES |
| | e | Have you felt detached or estranged from others? | NO | YES |
| | f | Have you noticed that your feelings are numbed? | NO | YES |
| | g | Have you felt that your life will be shortened or that you will die sooner than other people? | NO | YES |
| | | ARE **3** OR MORE **I4** ANSWERS CODED **YES**? | ➡ NO | YES |
| I5 | **In the past month:** | | | |
| | a | Have you had difficulty sleeping? | NO | YES |
| | b | Were you especially irritable or did you have outbursts of anger? | NO | YES |
| | c | Have you had difficulty concentrating? | NO | YES |
| | d | Were you nervous or constantly on your guard? | NO | YES |
| | e | Were you easily startled? | NO | YES |
| | | ARE **2** OR MORE **I5** ANSWERS CODED **YES**? | ➡ NO | YES |

| | | |
|---|---|---|
| I6 | During the past month, have these problems significantly interfered with your work or social activities, or caused significant distress? | **NO** **YES**<br><br>***POSTTRAUMATIC STRESS DISORDER CURRENT*** |

# J. ALCOHOL ABUSE AND DEPENDENCE

**(➡ MEANS: GO TO DIAGNOSTIC BOXES, CIRCLE NO IN BOTH AND MOVE TO THE NEXT MODULE)**

| | | ➡ | |
|---|---|---|---|
| J1 | **In the past 12 months**, have you had 3 or more alcoholic drinks within a 3 hour period on 3 or more occasions? | NO | YES |

J2 **In the past 12 months**:

| | | | |
|---|---|---|---|
| a | Did you need to drink more in order to get the same effect that you got when you first started drinking? | NO | YES |
| b | When you cut down on drinking did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms or to avoid being hungover, for example, "the shakes", sweating or agitation? IF **YES** TO EITHER, CODE **YES**. | NO | YES |
| c | During the times when you drank alcohol, did you end up drinking more than you planned when you started? | NO | YES |
| d | Have you tried to reduce or stop drinking alcohol but failed? | NO | YES |
| e | On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol? | NO | YES |
| f | Did you spend less time working, enjoying hobbies, or being with others because of your drinking? | NO | YES |
| g | Have you continued to drink even though you knew that the drinking caused you health or mental problems? | NO | YES |

ARE **3** OR MORE **J2** ANSWERS CODED **YES**?

***** IF YES, SKIP J3 QUESTIONS, CIRCLE N/A IN THE ABUSE BOX AND MOVE TO THE NEXT DISORDER. DEPENDENCE PREEMPTS ABUSE.

**NO** **YES***

***ALCOHOL DEPENDENCE***
**CURRENT**

J3 **In the past 12 months:**

| | | | |
|---|---|---|---|
| a | Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE **YES** ONLY IF THIS CAUSED PROBLEMS.) | NO | YES |
| b | Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.? | NO | YES |
| c | Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct? | NO | YES |
| d | Did you continue to drink even though your drinking caused problems with your family or other people? | NO | YES |

ARE **1** OR MORE **J3** ANSWERS CODED **YES**?

**NO** **N/A** **YES**

***ALCOHOL ABUSE***
**CURRENT**

# K. NON-ALCOHOL PSYCHOACTIVE SUBSTANCE USE DISORDERS

**(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)**

**Now I am going to show you / read to you a list of street drugs or medicines.**

| | | | ➡ NO | YES |
|---|---|---|---|---|
| K1 | a | **In the past 12 months**, did you take any of these drugs more than once, to get high, to feel better, or to change your mood? | | |

CIRCLE EACH DRUG TAKEN:

**Stimulants:** amphetamines, "speed", crystal meth, “crank”, "rush", Dexedrine, Ritalin, diet pills.

**Cocaine:** snorting, IV, freebase, crack, "speedball".

**Narcotics:** heroin, morphine, Dilaudid, opium, Demerol, methadone, codeine, Percodan, Darvon, OxyContin.

**Hallucinogens:** LSD ("acid"), mescaline, peyote, PCP ("angel dust", "peace pill"), psilocybin, STP, "mushrooms", “ecstasy”, MDA, MDMA, or ketamine (“special K”).

**Inhalants:** "glue", ethyl chloride, “rush”, nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

**Marijuana:** hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

**Tranquilizers:** Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown, GHB, Roofinol, “Roofies”.

**Miscellaneous:** steroids, nonprescription sleep or diet pills. Any others?

**SPECIFY MOST USED DRUG(S):** _____

CHECK ONE BOX

ONLY ONE DRUG / DRUG CLASS HAS BEEN USED ☐

ONLY THE MOST USED DRUG CLASS IS INVESTIGATED. ☐

EACH DRUG CLASS USED IS EXAMINED SEPARATELY (PHOTOCOPY K2 AND K3 AS NEEDED) ☐

b SPECIFY WHICH DRUG/DRUG CLASS WILL BE EXPLORED IN THE INTERVIEW BELOW IF THERE IS CONCURRENT OR SEQUENTIAL POLYSUBSTANCE USE:_____

K2 **Considering your use of (NAME THE DRUG / DRUG CLASS SELECTED), in the past 12 months:**

| | | | NO | YES |
|---|---|---|---|---|
| | a | Have you found that you needed to use more (NAME OF DRUG / DRUG CLASS SELECTED) to get the same effect that you did when you first started taking it? | | |
| | b | When you reduced or stopped using (NAME OF DRUG / DRUG CLASS SELECTED), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable, or depressed)? Did you use any drug(s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better? IF **YES** TO EITHER, CODE **YES**. | | |
| | c | Have you often found that when you used (NAME OF DRUG / DRUG CLASS SELECTED), you ended up taking more than you thought you would? | | |
| | d | Have you tried to reduce or stop taking (NAME OF DRUG / DRUG CLASS SELECTED) but failed? | | |
| | e | On the days that you used (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time (>2 HOURS), obtaining, using or in recovering from the drug, or thinking about the drug? | | |

f Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use? NO YES

g Have you continued to use (NAME OF DRUG / DRUG CLASS SELECTED), even though it caused you health or mental problems? NO YES

ARE **3** OR MORE **K2** ANSWERS CODED **YES**?

SPECIFY DRUG(S): _____

***** IF YES, SKIP K3 QUESTIONS, CIRCLE N/A IN THE ABUSE BOX FOR THIS SUBSTANCE AND MOVE TO THE NEXT DISORDER.
DEPENDENCE PREEMPTS ABUSE.

**NO YES ***

***SUBSTANCE DEPENDENCE***
**CURRENT**

**Considering your use of (NAME THE DRUG CLASS SELECTED), in the past 12 months:**

K3 a Have you been intoxicated, high, or hungover from (NAME OF DRUG / DRUG CLASS SELECTED) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem? NO YES

(CODE **YES** ONLY IF THIS CAUSED PROBLEMS.)

b Have you been high or intoxicated from (NAME OF DRUG / DRUG CLASS SELECTED) more than once in any situation where you were physically at risk (for example, driving a car, riding a motorbike, using machinery, boating, etc.)? NO YES

c Did you have legal problems more than once because of your drug use, for example, an arrest or disorderly conduct? NO YES

d Did you continue to use (NAME OF DRUG / DRUG CLASS SELECTED), even though it caused problems with your family or other people? NO YES

ARE **1** OR MORE **K3** ANSWERS CODED **YES**?

SPECIFY DRUG(S): _____

**NO N/A YES**

***SUBSTANCE ABUSE***
**CURRENT**

# L. PSYCHOTIC DISORDERS AND MOOD DISORDER WITH PSYCHOTIC FEATURES

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE **YES** ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE. BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS "BIZARRE".

DELUSIONS ARE "BIZARRE" IF: CLEARLY IMPLAUSIBLE, ABSURD, NOT UNDERSTANDABLE, AND CANNOT DERIVE FROM ORDINARY LIFE EXPERIENCE.

HALLUCINATIONS ARE SCORED "BIZARRE" IF: A VOICE COMMENTS ON THE PERSON'S THOUGHTS OR BEHAVIOR, OR WHEN TWO OR MORE VOICES ARE CONVERSING WITH EACH OTHER.

| | | Now I am going to ask you about unusual experiences that some people have. | | | BIZARRE |
|---|---|---|---|---|---|
| L1 | a | Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you?<br>**NOTE**: ASK FOR EXAMPLES TO RULE OUT ACTUAL STALKING. | NO | YES | YES |
| | b | **IF YES OR YES BIZARRE:** do you currently believe these things? | NO | YES | YES<br>➡**L6** |
| L2 | a | Have you ever believed that someone was reading your mind or could hear your thoughts, or that you could actually read someone's mind or hear what another person was thinking? | NO | YES | YES |
| | b | **IF YES OR YES BIZARRE:** do you currently believe these things? | NO | YES | YES<br>➡**L6** |
| L3 | a | Have you ever believed that someone or some force outside of yourself put thoughts in your mind that were not your own, or made you act in a way that was not your usual self? Have you ever felt that you were possessed?<br>CLINICIAN: ASK FOR EXAMPLES AND DISCOUNT ANY THAT ARE NOT PSYCHOTIC. | NO | YES | YES |
| | b | **IF YES OR YES BIZARRE:** do you currently believe these things? | NO | YES | YES<br>➡**L6** |
| L4 | a | Have you ever believed that you were being sent special messages through the TV, radio, or newspaper, or that a person you did not personally know was particularly interested in you? | NO | YES | YES |
| | b | **IF YES OR YES BIZARRE:** do you currently believe these things? | NO | YES | YES<br>➡**L6** |
| L5 | a | Have your relatives or friends ever considered any of your beliefs strange or unusual?<br>INTERVIEWER**:** ASK FOR EXAMPLES. ONLY CODE **YES** IF THE EXAMPLES ARE **CLEARLY** DELUSIONAL IDEAS NOT EXPLORED IN QUESTIONS L1 TO L4, FOR EXAMPLE, SOMATIC OR RELIGIOUS DELUSIONS OR DELUSIONS OF GRANDIOSITY, JEALOUSY, GUILT, RUIN OR DESTITIUTION, ETC. | NO | YES | YES |
| | b | **IF YES OR YES BIZARRE:** do they currently consider your beliefs strange? | NO | YES | YES |
| L6 | a | Have you ever heard things other people couldn't hear, such as voices?<br>HALLUCINATIONS ARE SCORED "BIZARRE" ONLY IF PATIENT ANSWERS **YES** TO THE FOLLOWING: | NO | YES | |
| | | **IF YES:** Did you hear a voice commenting on your thoughts or behavior or did you hear two or more voices talking to each other? | NO | | YES |
| | b | **IF YES OR YES BIZARRE TO L6a:** have you heard these things in the past month?<br>HALLUCINATIONS ARE SCORED "BIZARRE" ONLY IF PATIENT ANSWERS **YES** TO THE FOLLOWING:<br>Did you hear a voice commenting on your thoughts or behavior or did you hear two or more voices talking to each other? | NO | YES | YES<br>➡**L8b** |

L7 a Have you ever had visions when you were awake or have you ever seen things other people couldn't see? NO YES

CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE**.**

b **IF YES:** have you seen these things in the past month? NO YES

**CLINICIAN'S JUDGMENT**

L8 b IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS? NO YES

L9 b IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR? NO YES

L10 b ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW? NO YES

L11 a ARE 1 OR MORE « a » QUESTIONS FROM L1a TO L7a CODED **YES OR YES BIZARRE** AND IS EITHER:

MAJOR DEPRESSIVE EPISODE, (CURRENT OR RECURRENT)
**OR**
MANIC OR HYPOMANIC EPISODE, (CURRENT OR PAST) CODED **YES**? NO YES
➔**L13**

IF NO TO L11 a, CIRCLE NO IN BOTH 'MOOD DISORDER WITH PSYCHOTIC FEATURES' DIAGNOSTIC BOXES AND MOVE TO L13.

b You told me earlier that you had period(s) when you felt (depressed/high/persistently irritable).

Were the beliefs and experiences you just described (SYMPTOMS CODED **YES** FROM **L1a** TO **L7a**) restricted exclusively to times when you were feeling depressed/high/irritable?

IF THE PATIENT EVER HAD A PERIOD OF AT LEAST 2 WEEKS OF HAVING THESE BELIEFS OR EXPERIENCES (PSYCHOTIC SYMPTOMS) WHEN THEY WERE NOT DEPRESSED/HIGH/IRRITABLE, CODE NO TO THIS DISORDER.

IF THE ANSWER IS NO TO THIS DISORDER, ALSO CIRCLE NO TO L12 AND MOVE TO L13

**NO** **YES**

***MOOD DISORDER WITH*** *PSYCHOTIC FEATURES*

**LIFETIME**

L12 a ARE 1 OR MORE « b » QUESTIONS FROM L1b TO L7b CODED **YES OR YES BIZARRE** AND IS EITHER:

MAJOR DEPRESSIVE EPISODE, (CURRENT)
**OR**
MANIC OR HYPOMANIC EPISODE, (CURRENT) CODED **YES**?

IF THE ANSWER IS YES TO THIS DISORDER (LIFETIME OR CURRENT), CIRCLE NO TO L13 AND L14 AND MOVE TO THE NEXT MODULE.

**NO** **YES**

***MOOD DISORDER WITH*** *PSYCHOTIC FEATURES*

**CURRENT**

L13 ARE 1 OR MORE « b » QUESTIONS FROM L1b TO L6b, CODED **YES BIZARRE**?

**OR**

ARE 2 OR MORE « b » QUESTIONS FROM L1b TO L10b, CODED **YES** (RATHER THAN **YES BIZARRE**)?

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?

**NO** **YES**

***PSYCHOTIC DISORDER***
**CURRENT**

L14 IS **L13** CODED **YES**

**OR**

ARE 1 OR MORE « a » QUESTIONS FROM L1a TO L6a, CODED **YES BIZARRE**?

**OR**

ARE 2 OR MORE « a » QUESTIONS FROM L1a TO L7a, CODED **YES** (RATHER THAN **YES BIZARRE**)

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?

**NO** **YES**

***PSYCHOTIC DISORDER***
**LIFETIME**

# M. ANOREXIA NERVOSA

**(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

| | | | | |
|---|---|---|---|---|
| M1 | a | How tall are you? | ❑❑ft ❑❑in.<br>❑❑❑cm. | |
| | b. | What was your lowest weight in the past 3 months? | ❑❑❑lbs.<br>❑❑❑kgs. | |
| | c | IS PATIENT'S WEIGHT EQUAL TO OR BELOW THE THRESHOLD CORRESPONDING TO HIS / HER HEIGHT? (SEE TABLE BELOW) | ➡ NO | YES |

**In the past 3 months:**

| | | | | |
|---|---|---|---|---|
| M2 | | In spite of this low weight, have you tried not to gain weight? | ➡ NO | YES |
| M3 | | Have you intensely feared gaining weight or becoming fat, even though you were underweight? | ➡ NO | YES |
| M4 | a | Have you considered yourself too big / fat or that part of your body was too big / fat? | NO | YES |
| | b | Has your body weight or shape greatly influenced how you felt about yourself? | NO | YES |
| | c | Have you thought that your current low body weight was normal or excessive? | NO | YES |
| M5 | | ARE 1 OR MORE ITEMS FROM **M4** CODED **YES**? | ➡ NO | YES |
| M6 | | FOR WOMEN ONLY: During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)? | ➡ NO | YES |

FOR WOMEN: ARE **M5 AND M6** CODED **YES**?

FOR MEN: IS **M5** CODED **YES**?

**NO** **YES**

***ANOREXIA NERVOSA***
**CURRENT**

**HEIGHT / WEIGHT TABLE CORRESPONDING TO A BMI THRESHOLD OF 17.5 KG/M$^2$**

| **Height/Weight** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft/in | 4'9 | 4'10 | 4'11 | 5'0 | 5'1 | 5'2 | 5'3 | 5'4 | 5'5 | 5'6 | 5'7 | 5'8 | 5'9 | 5'10 |
| lbs. | 81 | 84 | 87 | 89 | 92 | 96 | 99 | 102 | 105 | 108 | 112 | 115 | 118 | 122 |
| cm | 145 | 147 | 150 | 152 | 155 | 158 | 160 | 163 | 165 | 168 | 170 | 173 | 175 | 178 |
| kgs | 37 | 38 | 39 | 41 | 42 | 43 | 45 | 46 | 48 | 49 | 51 | 52 | 54 | 55 |

| **Height/Weight** | | | | | |
|---|---|---|---|---|---|
| ft/in | 5'11 | 6'0 | 6'1 | 6'2 | 6'3 |
| lbs. | 125 | 129 | 132 | 136 | 140 |
| cm | 180 | 183 | 185 | 188 | 191 |
| kgs | 57 | 59 | 60 | 62 | 64 |

The weight thresholds above are calculated using a body mass index (BMI) equal to or below 17.5 kg/m$^2$ for the patient's height. This is the threshold guideline below which a person is deemed underweight by the DSM-IV and the ICD-10 Diagnostic Criteria for Research for Anorexia Nervosa.

# N. BULIMIA NERVOSA

**(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)**

| | | | |
|---|---|---|---|
| N1 | In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period? | ➡ NO | YES |
| N2 | In the last 3 months, did you have eating binges as often as twice a week? | ➡ NO | YES |
| N3 | During these binges, did you feel that your eating was out of control? | ➡ NO | YES |
| N4 | Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications? | ➡ NO | YES |
| N5 | Does your body weight or shape greatly influence how you feel about yourself? | ➡ NO | YES |
| N6 | DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA? | NO ↓ Skip to N8 | YES |
| N7 | Do these binges occur only when you are under ( ____lbs./kgs.)?<br>INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE. | NO | YES |

N8 IS **N5** CODED **YES** AND IS EITHER **N6** OR **N7** CODED **NO**?

**NO** **YES**

***BULIMIA NERVOSA***
**CURRENT**

IS **N7** CODED **YES**?

**NO** **YES**

***ANOREXIA NERVOSA***
*Binge Eating/Purging Type*
**CURRENT**

# O. GENERALIZED ANXIETY DISORDER

**(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

| | | | | |
|---|---|---|---|---|
| O1 | a | Have you worried excessively or been anxious about several things over the past 6 months? | NO | YES |
| | b | Are these worries present most days? | NO | YES |
| | | IS THE PATIENT'S ANXIETY RESTRICTED EXCLUSIVELY TO, OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT? | NO | YES |
| O2 | | Do you find it difficult to control the worries or do they interfere with your ability to focus on what you are doing? | NO | YES |
| O3 | | FOR THE FOLLOWING, CODE **NO** IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT**.** | | |
| | | **When you were anxious over the past 6 months, did you, most of the time:** | | |
| | a | Feel restless, keyed up or on edge? | NO | YES |
| | b | Feel tense? | NO | YES |
| | c | Feel tired, weak or exhausted easily? | NO | YES |
| | d | Have difficulty concentrating or find your mind going blank? | NO | YES |
| | e | Feel irritable? | NO | YES |
| | f | Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)? | NO | YES |

ARE **3** OR MORE **O3** ANSWERS CODED **YES**?

**NO** **YES**

***GENERALIZED ANXIETY DISORDER***
**CURRENT**

# P. ANTISOCIAL PERSONALITY DISORDER (optional)

**(➡ MEANS : GO TO THE DIAGNOSTIC BOX AND CIRCLE NO.)**

P1 **Before you were 15 years old, did you:**

| | | | |
|---|---|---|---|
| a | repeatedly skip school or run away from home overnight? | NO | YES |
| b | repeatedly lie, cheat, "con" others, or steal? | NO | YES |
| c | start fights or bully, threaten, or intimidate others? | NO | YES |
| d | deliberately destroy things or start fires? | NO | YES |
| e | deliberately hurt animals or people? | NO | YES |
| f | force someone to have sex with you? | NO | YES |
| | | ➡ | |
| | ARE **2** OR MORE **P1** ANSWERS CODED **YES**? | NO | YES |

DO NOT CODE **YES** TO THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED**.**

P2 **Since you were 15 years old, have you:**

| | | | |
|---|---|---|---|
| a | repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself? | NO | YES |
| b | done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony)? | NO | YES |
| c | been in physical fights repeatedly (including physical fights with your spouse or children)? | NO | YES |
| d | often lied or "conned" other people to get money or pleasure, or lied just for fun? | NO | YES |
| e | exposed others to danger without caring? | NO | YES |
| f | felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property? | NO | YES |

ARE **3** OR MORE **P2** QUESTIONS CODED **YES**?

| **NO** | **YES** |
|---|---|
| ***ANTISOCIAL PERSONALITY DISORDER*** **LIFETIME** | |

THIS CONCLUDES THE INTERVIEW

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| **Translations** | **M.I.N.I. 4.4 or earlier versions** | **M.I.N.I. 4.6/5.0, M.I.N.I. Plus 4.6/5.0 and M.I.N.I. Screen 5.0:** |
|---|---|---|
| Afrikaans | R. Emsley | W. Maartens |
| Arabic | | O. Osman, E. Al-Radi |
| Bengali | | H. Banerjee, A. Banerjee |
| Braille (English) | | |
| Brazilian Portuguese | P. Amorim | P. Amorim |
| Bulgarian | L.G.. Hranov | |
| Chinese | | L. Carroll, Y-J. Lee, Y-S. Chen, C-C. Chen, C-Y. Liu, C-K. Wu, H-S. Tang, K-D. Juang, Yan-Ping Zheng. |
| Czech | | P. Zvlosky |
| Danish | P. Bech | P. Bech, T. Schütze |
| Dutch/Flemish | E. Griez, K. Shruers, T. Overbeek, K. Demyttenaere | I. Van Vliet, H. Leroy, H. van Megen |
| English | D. Sheehan, J. Janavs, R. Baker, K. Harnett-Sheehan, E. Knapp, M. Sheehan | D. Sheehan, R. Baker, J. Janavs, K. Harnett-Sheehan, M. Sheehan |
| Estonian | | J. Shlik, A. Aluoja, E. Khil |
| Farsi/Persian | | K. Khooshabi, A. Zomorodi |
| Finnish | M. Heikkinen, M. Lijeström, O. Tuominen | M. Heikkinen, M. Lijeström, O. Tuominen |
| French | Y. Lecrubier, E. Weiller, I. Bonora, P. Amorim, J.P. Lepine | Y. Lecrubier, E. Weiller, P. Amorim, T. Hergueta |
| German | I. v. Denffer, M. Ackenheil, R. Dietz-Bauer | G. Stotz, R. Dietz-Bauer, M. Ackenheil |
| Greek | S. Beratis | T. Calligas, S. Beratis |
| Gujarati | | M. Patel, B. Patel, Organon |
| Hebrew | J. Zohar, Y. Sasson | R. Barda, I. Levinson, A. Aviv |
| Hindi | | C. Mittal, K. Batra, S. Gambhir, Organon |
| Hungarian | I. Bitter, J. Balazs | I. Bitter, J. Balazs |
| Icelandic | | J.G. Stefansson |
| Italian | I. Bonora, L. Conti, M. Piccinelli, M. Tansella, G. Cassano, Y. Lecrubier, P. Donda, E. Weiller | L. Conti, A. Rossi, P. Donda |
| Japanese | | T. Otsubo, H. Watanabe, H. Miyaoka, K. Kamijima, J.Shinoda, K.Tanaka, Y. Okajima |
| Kannada | | Organon |
| Korean | | K.S. Oh and Korean Academy of Anxiety Disorders |
| Latvian | V. Janavs, J. Janavs, I. Nagobads | V. Janavs, J. Janavs |
| Lithuanian | | A. Bacevicius |
| Malayalam | | Organon |
| Marathi | | Organon |
| Norwegian | G. Pedersen, S. Blomhoff | K.A. Leiknes , U. Malt, E. Malt, S. Leganger |
| Polish | M. Masiak, E. Jasiak | M. Masiak, E. Jasiak |
| Portuguese | P. Amorim | P. Amorim, T. Guterres |
| Punjabi | | A. Gahunia, S. Gambhir |
| Romanian | | O. Driga |
| Russian | | A. Bystritsky, E. Selivra, M. Bystritsky, L. Shumyak, M. Klisinska. |
| Serbian | I. Timotijevic | I. Timotijevic |
| Setswana | | K. Ketlogetswe |
| Slovenian | | M. Kocmur, M. Kocmur |
| Spanish | L. Ferrando, J. Bobes-Garcia, J. Gilbert-Rahola, Y. Lecrubier | L. Ferrando, L. Franco-Alfonso, M. Soto, J. Bobes-Garcia, O. Soto, L. Franco, G. Heinze, C. Santana, R. Hidalgo |
| Swedish | M. Waern, S. Andersch, M. Humble | C. Allgulander, H. Agren M. Waern, A. Brimse, M. Humble. |
| Tamil | | Organon |
| Telugu | | Organon |

| | | |
|---|---|---|
| Thai | | P. Kittirattanapaiboon, S. Mahatnirunkul, P. Udomrat, P. Silpakit,, M. Khamwongpin, S. Srikosai. |
| Turkish | T. Örnek, A. Keskiner, I. Vahip | T. Örnek, A. Keskiner, A.Engeler |
| Urdu | | S. Gambhir |

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| NAME | AGE | SEX | MARITAL STATUS | EDUCATION | OCCUPATION | PLACE | SE STATUS | RELIGION | AGE OF ONSET | DURATION OF USE(B-K) | VIOLENT | IMPULSIVE | DEVIANT PEER | DRUG USING PEER | DRUG AVAILABILITY | SKIPPING AT WORK | POOR ACHIEVEMENT | NICOTINE | ALCOHOL | ADS | OTHERS | FAM H/O MI | FAM H/O SUD | social | academic/occupation | physical | financial | psychological | WITHDRAWAL | SCL 90 | DURATION OF ILLNESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOKULASANKARAN | 23 | M | S | 9TH | UNSKIL | URBAN | LOWER | HINDU | 14 | 9 | YES | YES | NO | YES | YES | YES | YES | YE | YES | YES | | YES | YES | 2 | 1 | 1 | 1 | 1 | 40 | PSYCHOSIS | 29 |
| NAWAB SULTHAN | 31 | M | M | 9TH | 0 | RURAL | LOWER | ISLAM | 5 | 26 | YES | YES | | | YES | YES | YES | YE | YES | | | | YES | 2 | 2 | 2 | 1 | 2 | 16 | PSYCHOSIS | 40 |
| MUNUSAMY | 22 | M | S | 8TH | 0 | URBAN | LOWER | HINDU | 10 | 12 | | YES | YES | YES | YES | YES | YES | YE | YES | YES | | | YES | 2 | 2 | 2 | 1 | 2 | 36 | MANIA | 6 |
| AJITHKUMAR | 19 | M | S | 6TH | 0 | URBAN | LOWER | CHRISTIAN | 12 | 7 | YES | YES | YES | | YES | YES | YES | | YES | | | | | 2 | 1 | 1 | 1 | 1 | 24 | PSYCHOSIS | 1 |
| ARULKUMAR | 22 | M | S | 9TH | 0 | URBAN | LOWER | HINDU | 7 | 15 | | YES | | YES | YES | YES | YES | YES | | | FEVIBOND | | YES | 2 | 1 | 2 | 1 | 2 | 30 | PSYCHOSIS | 5 |
| DHARMARAJ | 23 | M | S | 10TH | UNSKIL | URBAN | LOWER | HINDU | 20 | 3 | | | | | | | | YE | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 6 |
| SILAMBARASAN | 30 | M | S | 6TH | SEMISK | URBAN | LOWER | HINDU | 29 | 1 | | | | YES | | | YES | | | | | | | 1 | 1 | 1 | 1 | 1 | 0 | PSYCHOSIS | 6 |
| MARUSAMY | 35 | M | S | 2ND | SEMISK | RURAL | LOWER | HINDU | 15 | 20 | | YES | | | YES | YES | YES | | YES | | | YES | YES | 2 | 1 | 1 | 1 | 2 | 24 | MANIA | 0.5 |
| ANANDRAJ | 25 | M | S | 10TH | UNSKIL | RURAL | LOWER | HINDU | 15 | 10 | | | | | | | | | YES | YES | NITRAZEPAM | | YES | 1 | 1 | 1 | 1 | 1 | 18 | DEPRESSIO | 18 |
| PRAKASH | 20 | M | S | 10TH | UNSKIL | URBAN | LOWER | HINDU | 14 | 6 | | | | | | | | YES | | | | | YES | 2 | 1 | 1 | 1 | 2 | 20 | PSYCHOSIS | 7 |
| SARANRAJ | 23 | M | S | DEGREE | 0 | URBAN | LOWER | HINDU | 21 | 2 | | | YES | YES | | YES | YES | | | | | | YES | 1 | 1 | 1 | 1 | 1 | 0 | PSYCHOSIS | 1 |
| PRASHANTH | 21 | M | S | 12TH | SKILLED | URBAN | LOWER | HINDU | 14 | 7 | | YES | YES | YES | | | YES | YES | | | | | YES | 2 | 1 | 1 | 1 | 2 | 18 | L | 6 |
| SARANRAJ | 21 | M | S | 9TH | SEMISK | URBAN | LOWER | HINDU | 15 | 6 | YES | YES | | YES | YES | | YES | YE | YES | | TURPENTINE OIL | | YES | 2 | 1 | 1 | 1 | 2 | 42 | PSYCHOSIS | 3 |
| CHANDRAKANTHAN | 25 | M | S | DEGREE | 0 | RURAL | LOWER | HINDU | 20 | 1 | | | | YES | YES | YES | YES | YE | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 36 |
| RAMESH | 20 | M | S | DEGREE | 0 | URBAN | LOWER | HINDU | 17 | 3 | | | | YES | YES | YES | YES | YE | YES | | | | | 1 | 1 | 1 | 1 | 1 | 8 | ASPD | 36 |
| BALAJI | 20 | M | S | DEGREE | 0 | URBAN | LOWER | HINDU | 17 | 3 | | YES | YES | YES | | YES | YES | | | | NIT, SPASM, SOLVENTS | | | 1 | 1 | 1 | 1 | 1 | 8 | ASPD | 24 |
| THANGADURAI | 19 | M | S | 9TH | SKILLED | URBAN | LOWER | HINDU | 12 | 7 | | | YES | YES | | YES | YES | | | | | | YES | 2 | 1 | 1 | 1 | 2 | 12 | PSYCHOSIS | 10 |
| SIVA | 18 | M | S | 5TH | 0 | URBAN | LOWER | HINDU | 16 | 3 | YES | YES | YES | YES | YES | YES | YES | | YES | YES | FEVIBOND | | YES | 1 | 1 | 1 | 1 | 1 | 12 | ASPD | 12 |
| SURYA | 17 | M | S | 8TH | 0 | URBAN | LOWER | HINDU | 16 | 1 | YES | | YES | YES | YES | YES | YES | | | | | | | 1 | 1 | 1 | 2 | 1 | 14 | L | 12 |
| BARNABAS | 31 | M | M | 10TH | UNSKIL | URBAN | LOWER | CHRISTIAN | 28 | 3 | | YES | YES | | | | YES | YE | YES | | HANS | YES | | 1 | 2 | 2 | 1 | 1 | 12 | PSYCHOSIS | 6 |
| KANDHAN | 28 | M | S | 6TH | SEMISK | URBAN | LOWER | HINDU | 21 | 7 | YES | YES | | | | | | | | | | YES | | 2 | 1 | 1 | 1 | 2 | 14 | PSYCHOSIS | 36 |
| VIGNESH | 18 | M | S | 9th | UNSKIL | URBAN | LOWER | HINDU | 15 | 13 | | | | YES | | | YES | | | | | | YES | 3 | 1 | 1 | 1 | 3 | 24 | MANIA | 1 |
| VALLARASU | 25 | M | S | 10TH | 0 | RURAL | LOWER | HINDU | 15 | 10 | YES | YES | YES | YES | | YES | YES | | YES | | | | YES | 2 | 1 | 1 | 1 | 2 | 26 | PSYCHOSIS | 36 |
| EDWIN | 21 | M | S | 8TH | SEMISK | URBAN | LOWER | CHRISTIAN | 17 | 4 | | YES | | YES | | YES | YES | YE | YES | | NITRAZEPAM | | YES | 1 | 1 | 1 | 1 | 1 | 0 | L | 24 |
| PRASATH | 18 | M | S | 10TH | 0 | URBAN | LOWER | CHRISTIAN | 15 | 3 | YES | YES | YES | | YES | YES | | YE | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 12 | ASPD | 18 |
| ELUMALAI | 19 | M | S | 8TH | SEMISK | URBAN | LOWER | HINDU | 16 | 3 | YES | YES | | | YES | | | | | | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 14 |
| PALANI | 38 | M | M | 6TH | UNSKIL | URBAN | LOWER | HINDU | 18 | 20 | | YES | YES | YES | | | YES | YE | YES | YES | | | | 3 | 1 | 1 | 1 | 3 | 32 | PSYCHOSIS | 60 |
| SELVAKUMAR | 27 | M | S | 8TH | SKILLED | RURAL | LOWER | HINDU | 16 | 11 | | YES | | | | | YES | | YES | YES | | | | 2 | 1 | 1 | 1 | 2 | 24 | MANIA | 3 |
| VINOTHKUMAR | 19 | M | S | 10TH | SKILLED | URBAN | LOWER | HINDU | 15 | 4 | | YES | YES | YES | | | | YE | YES | YES | MAWA | | YES | 1 | 1 | 1 | 1 | 1 | 22 | ASPD | 18 |
| MUTHU | 36 | M | S | 4TH | SKILLED | URBAN | LOWER | HINDU | 16 | 20 | YES | YES | YES | | YES | YES | YES | YE | YES | | | | YES | 2 | 1 | 1 | 1 | 2 | 14 | L | 6 |
| SRINIVASAN | 38 | M | M | 4TH | SKILLED | URBAN | LOWER | HINDU | 34 | 4 | | YES | | | | | | YE | YES | YES | HANS, MAWA | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 6 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VIGNESH | 22 | M | S | 5TH | 0 | URBAN | LOWER | HINDU | 19 | 3 | | YES | | YES | | YES | YES | YES | YES | YES | | | | 1 | 1 | 1 | 1 | 1 | 8 | L | 12 |
| ABDULGANI | 27 | M | M | 3RD | SKILLED | URBAN | LOWER | ISLAM | 23 | 4 | | | | | | | | | YES | | HANS, MAWA | | | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 24 |
| VENKATESAN | 25 | M | S | 3RD | UNSKIL | URBAN | LOWER | HINDU | 13 | 12 | | | | | | | YES | YES | YES | YES | COUGH SYP | | YES | 2 | 1 | 1 | 1 | 2 | 18 | PSYCHOSIS | 1 |
| RAJKAMAL | 28 | M | S | 10TH | 0 | URBAN | LOWER | HINDU | 20 | 8 | | | | | | YES | YES | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 12 | L | 36 |
| GANESAN | 32 | M | DI | 3RD | SKILLED | URBAN | LOWER | HINDU | 19 | 13 | | YES | YES | YES | | | | | YES | YES | | | YES | 2 | 1 | 1 | 1 | 2 | 20 | L | 3 |
| KRISHNAMURTHY | 42 | M | M | 9TH | UNSKIL | URBAN | LOWER | HINDU | 18 | 24 | | | | | | | YES | YES | YES | | | | YES | 2 | 1 | 1 | 1 | 2 | 24 | L | 6 |
| KOTTAISAMY | 33 | M | S | 12TH | SKILLED | URBAN | MIDDL | HINDU | 18 | 15 | YES | YES | YES | | YES | | | YES | YES | | MAWA | | YES | 1 | 1 | 1 | 1 | 1 | 24 | PSYCHOSIS | 40 |
| VINODHKUMAR | 25 | M | S | 10TH | SKILLED | RURAL | LOWER | HINDU | 15 | 10 | | YES | | YES | | | | | YES | YES | | YES | YES | 1 | 1 | 1 | 1 | 1 | 28 | PSYCHOSIS | 36 |
| RAMESH | 27 | M | S | 5TH | SEMISK | URBAN | LOWER | HINDU | 12 | 15 | | | | YES | | | YES | YES | | | | | YES | 2 | 1 | 1 | 1 | 2 | 30 | PSYCHOSIS | 60 |
| KARTHIK | 20 | M | S | 9TH | 0 | RURAL | LOWER | HINDU | 17 | 3 | YES | YES | YES | YES | YES | YES | YES | | YES | YES | | | | 1 | 1 | 1 | 1 | 1 | 10 | PSYCHOSIS | 6 |
| SANKAR | 32 | M | M | 8TH | SKILLED | RURAL | LOWER | HINDU | 20 | 12 | YES | YES | YES | | | | YES | | YES | | HANS | | YES | 2 | 1 | 1 | 1 | 2 | 24 | MANIA | 2 |
| MADANKUMAR | 29 | M | M | 9TH | SKILLED | URBAN | LOWER | HINDU | 25 | 4 | YES | YES | | YES | YES | | YES | YES | YES | | FEVIBOND | | YES | 1 | 1 | 1 | 1 | 1 | 18 | L | 18 |
| VENKATESH | 28 | M | S | 12TH | SKILLED | URBAN | LOWER | HINDU | 18 | 10 | | | | YES | | | | YES | YES | YES | HANS | | YES | 2 | 1 | 1 | 1 | 2 | 24 | PSYCHOSIS | 60 |
| BALAJI | 19 | M | S | DEGREE | 0 | URBAN | LOWER | HINDU | 16 | 3 | | | | YES | | YES | | YES | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 12 | MANIA | 1 |
| NAGESWARAN | 32 | M | S | 2ND | UNSKIL | URBAN | LOWER | HINDU | 29 | 3 | | | | | | | | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 0 | PSYCHOSIS | 32 |
| STEPHENRAJ | 22 | M | S | DIPLOMA | UNSKIL | URBAN | MIDDL | HINDU | 19 | 3 | | YES | | YES | | | | YES | | | | | | 1 | 1 | 1 | 1 | 1 | 0 | MANIA | 1 |
| SARAVANAN | 30 | M | M | 10TH | SEMISK | URBAN | LOWER | HINDU | 24 | 6 | | | | | | | | YES | YES | YES | | | | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 28 |
| KARTHIK | 25 | M | S | ITI | 0 | URBAN | LOWER | CHRISTIAN | 17 | 8 | | YES | | YES | | YES | | YES | YES | YES | FEVIBOND | | YES | 1 | 1 | 1 | 1 | 1 | 12 | L | 14 |
| ARAVINDHAN | 20 | M | S | 10TH | 0 | RURAL | LOWER | HINDU | 8 | 12 | | YES | YES | YES | | YES | | YES | YES | | | | | 1 | 1 | 1 | 2 | 1 | 18 | PSYCHOSIS | 60 |
| SATHISHKUMAR | 21 | M | S | 7TH | UNSKIL | RURAL | LOWER | HINDU | 17 | 4 | | | | YES | | | | | YES | | | | | 1 | 2 | 2 | 1 | 1 | 8 | PSYCHOSIS | 12 |
| NAGARAJ | 30 | M | M | ITI | UNSKIL | URBAN | LOWER | HINDU | 25 | 5 | | | | | | | | | YES | YES | NITRAZEP | YES | | 1 | 1 | 1 | 1 | 1 | 24 | MANIA | 2 |
| SARAVANAN | 28 | M | S | DEGREE | SEMISK | RURAL | LOWER | HINDU | 25 | 3 | | | | | | | | YES | | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 12 | PSYCHOSIS | 48 |
| VETRI | 30 | M | S | 5TH | UNSKIL | SEMI | LOWER | HINDU | 27 | 3 | | YES | | YES | | | | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 12 |
| JEEVA | 25 | M | S | DIPLOMA | SKILLED | URBAN | LOWER | HINDU | 19 | 6 | | | YES | | | | | YES | YES | YES | | | YES | 2 | 1 | 1 | 1 | 2 | 8 | PSYCHOSIS | 32 |
| PRAKASH | 32 | M | S | 5TH | SKILLED | SEMI | LOWER | HINDU | 30 | 2 | YES | YES | YES | | | | | | YES | YES | | | YES | 0 | 1 | 1 | 1 | 0 | 8 | L | 8 |
| SIVANATHAN | 49 | M | M | 7TH | UNSKIL | RURAL | LOWER | HINDU | 15 | 24 | YES | YES | YES | YES | YES | | YES | | | | | | | 3 | 1 | 1 | 1 | 3 | 24 | PSYCHOSIS | 120 |
| RAVIKUMAR | 48 | M | M | 10TH | SKILLED | URBAN | LOWER | HINDU | 30 | 18 | | | | YES | | | | | | | | | | 2 | 1 | 1 | 1 | 2 | 22 | PSYCHOSIS | 24 |
| KISHOREKUMAR | 23 | M | S | 9TH | 0 | URBAN | LOWER | HINDU | 17 | 6 | | YES | YES | | | YES | YES | YES | YES | YES | | YES | YES | 1 | 1 | 1 | 1 | 1 | 12 | ASPD | 48 |
| PRABU | 33 | M | S | 6TH | 0 | RURAL | LOWER | HINDU | 25 | 8 | | YES | YES | | | YES | | | | | | YES | YES | 1 | 1 | 1 | 1 | 1 | 14 | PSYCHOSIS | 72 |
| SANKAR | 27 | M | S | DIPLOMA | 0 | RURAL | LOWER | HINDU | 23 | 4 | | | | YES | YES | YES | | | | | | | YES | 1 | 1 | 1 | 1 | 1 | 22 | PSYCHOSIS | 6 |
| NAGARAJ | 23 | M | S | 7TH | SKILLED | URBAN | LOWER | HINDU | 19 | 4 | | | | | YES | | | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 24 |
| PRASANTH | 21 | M | S | 12TH | SEMISK | URBAN | LOWER | HINDU | 18 | 3 | | YES | YES | | | | | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 4 | PSYCHOSIS | 18 |
| SIVACHANDRAN | 27 | M | S | ITI | 0 | RURAL | LOWER | HINDU | 20 | 7 | YES | YES | | | | YES | YES | | YES | YES | | | | 2 | 1 | 1 | 1 | 2 | 14 | PSYCHOSIS | 36 |
| PRAKASH | 25 | M | S | 9TH | 0 | URBAN | LOWER | HINDU | 17 | 8 | | | | | YES | YES | YES | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 24 |
| GUBENDRAN | 29 | M | M | DEGREE | UNSKIL | RURAL | LOWER | HINDU | 24 | 5 | | | | | | | 0 | | | | | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 18 |
| JEYARAJ | 35 | M | M | 10TH | 0 | URBAN | LOWER | CHRISTIAN | 20 | 15 | | | | | | YES | YES | YES | | | | | YES | 2 | 1 | 1 | 2 | 2 | 24 | PSYCHOSIS | 30 |
| VIJITH | 21 | M | S | ITI | 0 | URBAN | LOWER | HINDU | 17 | 4 | YES | YES | | YES | YES | YES | 0 | YES | YES | YES | NITRAZEPAM | | YES | 1 | 2 | 2 | 1 | 1 | 8 | L | 12 |
| MALAKONDAIYYA | 43 | M | M | 0 | SEMISK | URBAN | MIDDL | HINDU | 23 | 20 | | | | | | | YES | | | | | | | 2 | 1 | 1 | 1 | 2 | 8 | PSYCHOSIS | 120 |
| DEVARAJ | 17 | M | S | 9TH | UNSKIL | URBAN | LOWER | HINDU | 13 | 4 | YES | YES | YES | | YES | YES | 0 | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 8 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VENKATESAN | 26 | M | M | 8TH | SKILLED | SEMI | LOWER | HINDU | 21 | 5 | | | | | | | YES | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | MANIA | 3 |
| PARTHIBAN | 18 | M | S | 10TH | 0 | SEMI | LOWER | HINDU | 15 | 3 | YES | YES | | | YES | YES | YES | YE | YES | | FEVIBOND | | YES | 1 | 1 | 1 | 1 | 1 | 8 | MANIA | 2 |
| MURUGA | 19 | M | S | DEGREE | 0 | URBAN | LOWER | HINDU | 17 | 2 | | YES | | YES | | YES | 0 | | | | HANS | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 12 |
| PARTHASARATHI | 21 | M | S | 10TH | 0 | URBAN | LOWER | HINDU | 19 | 2 | YES | YES | | | | YES | YES | | | | | YES | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 6 |
| VIJAYAKUMAR | 17 | M | S | 9TH | SKILLED | URBAN | LOWER | HINDU | 15 | 2 | | | | YES | YES | | 0 | | | | | | | 1 | 1 | 1 | 1 | 1 | 8 | L | 0.5 |
| SARAVANAN | 24 | M | S | 8TH | 0 | URBAN | LOWER | HINDU | 16 | 8 | | | | | | YES | 0 | | YES | YES | | YES | YES | 1 | 1 | 1 | 1 | 1 | | PSYCHOSIS | 18 |
| MADHAN | 18 | M | S | 6TH | 0 | SEMI | LOWER | HINDU | 16 | 2 | | YES | | YES | | YES | YES | | | | FEVIBOND | | YES | 1 | 1 | 1 | 1 | 1 | 0 | PSYCHOSIS | 3 |
| GOPALAKRISHNAN | 45 | M | DI | 3RD | SEMISK | URBAN | LOWER | HINDU | 25 | 20 | | | | | | | YES | YE | YES | YES | | | | 2 | 1 | 1 | 1 | 2 | 18 | PSYCHOSIS | 84 |
| JHONY | 21 | M | S | ITI | UNSKIL | URBAN | LOWER | CHRISTIAN | 16 | 5 | | | | YES | YES | | YES | | | | NITRAZEPAM | | YES | 2 | 1 | 1 | 1 | 2 | 8 | PSYCHOSIS | 12 |
| MICHAELRAJ | 27 | M | DI | 6TH | SKILLED | URBAN | LOWER | HINDU | 19 | 8 | | | | YES | | | YES | | | | | | | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 6 |
| MARIMUTHU | 25 | M | M | 3RD | UNSKIL | URBAN | LOWER | HINDU | 18 | 7 | | | | YES | YES | | 0 | YE | YES | YES | MAVA, HANS | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 24 |
| RAJKUMAR | 20 | M | S | 8TH | 0 | RURAL | LOWER | HINDU | 14 | 6 | YES | YES | YES | | | YES | 0 | | | | | | | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 12 |
| MANIKANDAN | 20 | M | S | 7TH | UNSKIL | URBAN | LOWER | HINDU | 16 | 4 | YES | YES | | | | | 0 | | YES | YES | | YES | | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 6 |
| SAMEER | 33 | M | M | 0 | 0 | SEMI | LOWER | ISLAM | 30 | 3 | | | | | | YES | YES | | YES | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 36 |
| GUNASEGARAN | 35 | M | S | 6TH | 0 | RURAL | LOWER | HINDU | 30 | 5 | | | | | | YES | YES | YES | | YES | | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 12 |
| MAGESH | 21 | M | S | 7TH | 0 | URBAN | LOWER | HINDU | 16 | 5 | YES | | | YES | | YES | 0 | YES | | | HANS | | YES | 1 | 1 | 1 | 1 | 1 | 8 | L | 24 |
| SUKUMAR | 18 | M | S | 8TH | 0 | SEMI | MIDDL | HINDU | 10 | 8 | | YES | | YES | | YES | 0 | YES | | | | | | 1 | 1 | 1 | 1 | 1 | 12 | L | 18 |
| RAMKUMAR | 19 | M | S | 7TH | UNSKIL | URBAN | LOWER | HINDU | 15 | 4 | YES | | | YES | | | 0 | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 18 | PSYCHOSIS | 6 |
| SURESH | 24 | M | M | 7TH | SKILLED | URBAN | LOWER | HINDU | 17 | 7 | | YES | | | YES | | YES | YE | YES | YES | | | | 1 | 1 | 1 | 1 | 1 | 24 | L | 24 |
| NITHISH | 22 | M | S | 8TH | UNSKIL | URBAN | LOWER | HINDU | 16 | 6 | | YES | | | | | | | | | HANS | | YES | 1 | 1 | 1 | 1 | 1 | 8 | L | 20 |
| RAJESH | 24 | M | S | 9TH | UNSKIL | URBAN | LOWER | HINDU | 20 | 4 | | | | | YES | | | YE | YES | | | YES | YES | 1 | 1 | 1 | 1 | 1 | 14 | PSYCHOSIS | 3 |
| VIJAYAKUMAR | 18 | M | S | ITI | 0 | URBAN | LOWER | HINDU | 15 | 3 | | YES | | | | YES | | | | | | | | 1 | 1 | 1 | 1 | 1 | 0 | MANIA | 2 |
| NOORULLAH | 26 | M | S | 8TH | UNSKIL | URBAN | LOWER | ISLAM | 22 | 4 | YES | | YES | | YES | | YES | YE | YES | | HANS | | YES | 1 | 1 | 1 | 1 | 1 | 14 | PSYCHOSIS | 12 |
| ELUMALAI | 21 | M | S | 6TH | SKILLED | SEMI | LOWER | HINDU | 18 | 3 | | YES | | | YES | | | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 6 |
| DURAI | 20 | M | S | 7TH | UNSKIL | URBAN | LOWER | HINDU | 16 | 4 | | | YES | | | | YES | YE | YES | YES | | YES | | 1 | 1 | 1 | 1 | 1 | 12 | PSYCHOSIS | 5 |
| BABU | 19 | M | S | 4TH | UNSKIL | SEMI | LOWER | HINDU | 16 | 3 | | | | YES | | | | YE | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | L | 12 |
| SUDHAKAR | 24 | M | S | 6TH | UNSKIL | RURAL | LOWER | HINDU | 20 | 4 | | | YES | | YES | | YES | YES | | | MAVA | | | 1 | 1 | 1 | 1 | 1 | 4 | L | 20 |
| JOHN | 28 | M | M | 6TH | SEMISK | RURAL | LOWER | CHRISTIAN | 24 | 4 | | YES | YES | | | | | | YES | | | | YES | 1 | 1 | 1 | 1 | 1 | 8 | PSYCHOSIS | 8 |
| BASKAR | 21 | M | S | 9TH | SKILLED | URBAN | LOWER | HINDU | 17 | 4 | | YES | | | YES | | YES | | YES | YES | | | | 1 | 1 | 1 | 1 | 1 | 0 | L | 12 |
| DINESH | 23 | M | S | 10TH | SKILLED | URBAN | LOWER | HINDU | 18 | 5 | | | YES | | | YES | YES | YES | | | | | YES | 1 | 1 | 0 | 1 | 1 | 8 | L | 36 |

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