A DESCRIPTIVE STUDY ON PREVALENCE AND FACTORS ASSOCIATED WITH PSYCHIATRIC MORBIDITY AMONG SPOUSES OF MEN WITH ALCOHOL DEPENDENCE

Dissertation submitted to

The Tamil Nadu Dr. M.G.R. Medical University
In part fulfilment of the requirement for

M.D. branch XVIII - Psychiatry final examination

April 2014
CERTIFICATE

This is to certify that the dissertation titled “A descriptive study on prevalence and factors associated with psychiatric morbidity among spouses of men with alcohol dependence” is the bona fide work of Dr. Jagad Amish Harish towards the MD Psychiatry Degree Examination of the Tamil Nadu Dr M.G.R Medical University to be conducted in April 2014. This work has not been submitted to any university in part or full.

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CERTIFICATE

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DECLARATION

I hereby declare that this dissertation titled “A descriptive study on prevalence and factors associated with psychiatric morbidity among spouses of men with alcohol dependence” is a bona fide work done by me under the guidance of Dr. Anna Tharyan, Professor and Head of Psychiatry, Christian Medical College, Vellore. This work has not been submitted to any university in part or full.

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Most of all, I thank God Almighty for his grace and blessings, and for giving us the strength to go through with this project.
November 27, 2012

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Sub: FLUID Research grant project NEW PROPOSAL:
Descriptive study on prevalence and factors associated with psychiatric
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Dr. Jagad Amish Harish, Post-Graduate Registrar, Dept of Psychiatry,
Dr. Anna Tharyan, Dr. Arum, Ms. S. Subakamal, Psychiatry,

Ref: IRB Min. No. 8055 dated 01.10.2012

Dear Dr. Jagad Amish Harish,

I enclose the following documents:-

1. Institutional Review Board approval
2. Agreement

Could you please sign the agreement and send it to Dr. Nihal Thomas, Addl. Vice Principal (Research), so that the grant money can be released.

With best wishes,

Dr. Nihal Thomas
Secretary (Ethics Committee)
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9. A CD containing documents 1-8

The following Institutional Review Board (Research & Ethics Committee) members were present at the meeting held on October 1, 2012 in the CREST/SACN Conference Room, Christian Medical College, Bagayam, Vellore 632002.

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INTRODUCTION

Alcohol use is not just a psychiatric or medical problem but also a social one. The fact that its socially validated in many cultures makes it even more difficult to treat and tends to be under reported. WHO statistics state that there are 2 billion alcohol users worldwide. Alcohol use contributes to 2.2 percent of deaths and 4.0 percent of disability-adjusted life years lost. In India, alcohol-related diseases rank among the top ten diseases and contribute to high number of years lived with disability. Thus, alcohol use poses a global public health concern.

Alcohol use not only disrupts the life of the person who consumes alcohol, but also the life of their families, especially their spouses and also society at large. The interaction of alcohol and its impact on the marital relationship and consequently on the spouses' mental health has always been a challenge to understand and treat. The neurobiology of alcohol dependence has been studied more closely than the impact of alcohol dependence on the family.
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INTRODUCTION

Alcohol use is not just a psychiatric or medical problem but also a social one. The fact that it’s socially validated in many cultures makes it even more difficult to treat and tends to be under reported. WHO statistics state that there are 2 billion alcohol users worldwide. Alcohol use contributes to 3.2 percent of deaths and 4.0 percent of disability-adjusted life years lost. In India, alcohol-related diseases rank among the top ten diseases and contribute to high number of years lived with disability. Thus, alcohol use poses a global public health concern.

Alcohol use not only disrupts the life of the person who consumes alcohol, but also the life of their families, especially their spouses and also society at large. The interaction of alcohol and its impact on the marital relationship and consequently on the spouses’ mental health has always been a challenge to understand and treat. The neurobiology of alcohol dependence has been studied more closely than the impact of alcohol dependence on the family.

International and national studies on family of alcohol users have largely focused on interpersonal conflicts between spouses including domestic violence. The mental health of spouses of alcohol users, a major area of concern, has been ignored.
2.0. Literature Review

2.1. Substance use/Alcohol use

This section describes the definitions of alcohol use and patterns of alcohol abuse, its epidemiological aspects, its implications on self and family especially spouses evolution of the concept of spouses of alcoholic and the Indian scenario.

2.1.1. Definition

Alcohol dependence was first defined as a syndrome by Edward and Gross. (1) Since then the description has been widely used and also adopted in ICD10 diagnostic criteria. It describes following essential characteristics of alcohol dependence—narrowing of repertoire of drinking behavior, salience in drink seeking behavior, repeated withdrawal symptoms, increased tolerance to alcohol, repeated relief or avoidance of withdrawal symptoms by drinking further, a compulsion to drink and reinstatement of the syndrome after a period of abstinence.

ICD 10 describes 6 criteria of dependence. Three or more of these for a period of more than 1 month amount to a diagnosis of alcohol dependence. These include a strong desire to consume alcohol, impaired capacity to control the substance taking behavior, tolerance, and preoccupation with substance seeking behavior, and continued use despite knowing
the consequences. ICD10 further provides character codes which are broadly-“currently abstinent”, “currently abstinent but in a protected environment”, “currently on a supervised maintenance or replacement regimen”, “currently abstinent but on treatment with aversive or blocking drugs” and “continuous use”. ICD 10 also talks about ‘harmful use’ as an altogether different category, which simply refers to substance use in such a dysfunctional manner as to resulting in specified and identifiable physical and psychological harm to the individual. DSM IV-TR defines substance dependence (alcohol inclusive in it) as manifested by 3 or more of the following characteristics at any time in the same 12 month period-tolerance, withdrawal, substance is taken for longer periods and in larger amounts than intended, persistent desire and unsuccessful efforts to cut down or control the substance use, excessive time spent in activities related to substance use or recovery from its effects, impaired socio-occupational functioning and using the substance despite knowing its adverse effects. DSM V reports 11 criteria, all of which can be fitted into 4 broad groups viz. impaired control, social impairment, risky use and pharmacological criteria.

Much has been talked about various patterns of drinking and their clinical and psychosocial correlates. Jellinek created the first scientific typology of alcoholics. This divided alcoholics in to 2 broad categories-‘steady’ and ‘intermittent. This was further subdivided into four subcategories viz. primary alcoholics, steady endogenous, symptomatic drinkers, and intermittent endogenous symptomatic drinkers and Stammtisch.(2) Cloninger offered the classification of sub typing alcohol abuse into type 1
and type 2. Type 1 was also termed as the “milieu limited” and type 2 is “male limited”. Type 1 was characterized by late onset and more associated with guilt feelings and other psychological correlates. Type 2 was described as early onset type with more disruptive behavior under intoxicated state. However this classification was studied further by many researchers and the validity of it questioned. In one study no gender differences were noted in the two types (3). Some researchers have classified alcoholics into type A and type B. Type A being the late onset type, with few childhood risk factors, less severe dependence and less psychopathology. Type B is the early onset, more severe dependence and worse prognosis.(4). It is worth mentioning here the cultural position of alcohol use and consequent sub typing of various patterns of alcohol use. Overall four distinct types can be identified across various cultures –fiesta drunkenness, banalized drinking, constrained ritual drinking and abstinent societies.(5).

Alcohol abuse is still socially accepted in many cultures. Many societies across the globe endorse “social drinking”. This exceptional tolerance is however not seen with other substances like opioid substances cannabis and LSD. The same was evident in the WHO collaborative cross cultural applicability (CAR) study.(6).

The Indian attitude towards alcohol and patterns of drinking are more ambiguous and complex than in the western world. Diverse culture and varied beliefs about alcohol may be influential in this regard. Alcohol use has evolved through the ‘Pre Vedic’, ‘Vedic’, ‘Mughal’, ‘British’, and post independence era in India.(7)
2.1.2. Epidemiology

Estimates of the prevalence of Alcohol use and dependence vary across time and culture. Under reporting is suspected to be the rule. About 48% of the adult population i.e. about 2 billion adults are current users of alcohol according to one study(8). Alcohol abuse as estimated by disability adjusted life years poses a considerable burden. One Canadian study reports that as in year 2000, 4% of burden, as measured in terms of disability adjusted life years was attributed globally to alcohol abuse and also is held responsible for 3.8% deaths.(9). An American study (2002) done in college students concluded that at least two of five college students were abusing alcohol. Alcohol use was higher in male than female students and was also higher in whites.(10). According to the National Household Survey of Drug Abuse drinking was lowest in Hispanic and black. The prevalence of alcohol abuse was 68.2% in one Chinese study.(11). A Finnish study among university students concluded that male students had more prevalence of heavy and binge drinking than female student (12). Studies have shown an equal and universal prevalence of alcohol abuse across all ages. Another American study that was done in age group 50-64 (middle aged) and 65 and above (elderly) also showed significant (51%) alcohol abuse.(13). The South African Community Epidemiology Network on Drug use (SACENDU) project findings reported widespread alcohol use in this part of the world as well. One such study reports rates ranging from 51-77%.(14).

It’s thus clear from the above numbers that the problem of alcohol is rather universal across all ages, races, countries and regions and in both sexes. Any strategy to curb on this,
should thus encompass a wide vision taking in to consideration the global impact of alcohol abuse. It is however evident that research in the epidemiology is restricted to certain regions and restricted by either lack of a system in place or lack of resources. One way of looking at this dearth of research is the society’s attitude towards drinking and that includes doctors as well who consider drinking occasionally as not a problem by itself.

2.1.3. Implications of alcohol use

The profound effect that alcohol has on the physical and psychological health of a person and his close kin is worth a mention. Also important and worth mentioning are the financial and social repercussions of alcohol abuse. Here in this section we discuss all these points.

i. Effects of alcohol on self –

Alcohol profoundly affects all systems of human body viz. central nervous system, cardiovascular system, respiratory system, reproductive system and the gastrointestinal system. A standard drink consists 10 gms of ethanol. Approximately 10% of alcohol is absorbed through the stomach and rest through the small intestine. Peak plasma concentration is reached in about 30-90 mins. Alcohol is distributed to all body tissues and is uniformly dissolved in body water as a result tissues containing high water content have high alcohol concentration. The intoxicating effect of alcohol is more prominent when the blood alcohol concentration is rising rather than when its falling. This effect is
popularly known as the “Mellanby Effect”. A major proportion of the consumed alcohol (80-90%) is metabolized in the liver. The rest is excreted through the kidneys and the lungs. The chief pathway for metabolism in the liver is oxidative. The metabolism of alcohol is taken care of by two major enzymes-alcohol dehydrogenase (that catalyzes the reaction that converts alcohol to acetaldehyde) and aldehyde dehydrogenase (that catalyzes the reaction that converts the toxic compound acetaldehyde to acetic acid).

The overall effect of alcohol on the human brain still is clouded by controversies. A common topic of debate that still remains is what is due to direct damage to the brain by alcohol and what is related to indirect effects of alcohol like thiamine deficiency.(15) Studies so far have been able to conclude that alcohol leads to white matter damage and shrinkage of brain overall. This appears to be a direct toxic effect of alcohol and is more prominent in specific areas of brain like the cerebral cortex and the hypothalamus. More severe and widespread changes are noted with thiamine deficiency, which may include lesions in the mamillary bodies and hippocampus as well.(16). Much has been studied over the years about the neurophysiology of alcohol including its action on the brain receptors. It is now a well-known fact that alcohol facilitates GABA function and GABA-A receptor facilitating agents suppress alcohol withdrawal effects. By its actions alcohol increases the GABA release, increases the neurosteroid levels and enhances GABA-A function. The peculiar characteristics of the GABA-A receptors are their extra synaptic location, their low chloride conductance and their high affinity to GABA and neurosteroids
and relative insensitivity to benzodiazepines. It's now known that certain variation in the GABA-A subunit receptor may increase the subjects vulnerability to alcoholism.(17).

Brain diseases that are commonly associated with alcohol are Wernicke-Korsakoff syndrome, alcohol induced dementia, optic atrophy, cerebellar damage, corpus-callosum degeneration (Marchiafava-Bignami disease and central pontine myelinolysis. Thiamine acts as a cofactor for at least three enzymes in carbohydrate metabolism pathway.(18).
Wernicke’s Korsakoff psychosis remains the most studied alcohol related syndrome affecting the brain. Wernicke’s encephalopathy is an acute presentation characterized by confusion, ataxia and ophthalmoplegia. Korsakoff extended the findings of the syndrome and included confabulation and amnesic elements into it.(19). Korsakoff’s syndrome is a chronic neurological condition that usually occurs as a consequence of Wernicke’s encephalopathy. Pathology findings in brain associated with Wernicke’s include degenerative changes in the medial thalamus while in Korsakoff’s the more specific finding is atrophy of the mamillary bodies(20).

Alcohol related dementia is considered to have a younger age of onset as compared to other forms of dementia and is more common in males and those who are socially isolated. (21). Controversies still surround on what quantities of alcohol consumption leads to dementia. Alcohol related dementia affect both cortical and subcortical structures. Most common deficits are in visuospatial and executive functions. Some other syndromes of rare occurrences seen in alcoholics are central pontine myelinolysis and Marchiafava Bignami syndrome. Central pontine myelinolysis is seen when hyponatremia is rapidly corrected leading to shrinking of neurons and consequently dysphagia, dysarthria, quadriparesis and loss of consciousness or prolonged confusion. Its however also reported in the absence of hyponatremia as well(22). Marchiafava
Bignami disease is a rare condition characterized by demyelination of the corpus callosum seen in chronic alcoholism.(23). The other major adverse effect that alcohol has is on the gastrointestinal system especially the hepatobiliary system. It’s a well known fact that alcohol dependence can lead to liver damage ranging from fatty liver to acute or chronic hepatitis to liver cirrhosis and consequently portal hypertension and hepatocellular cancer. One American study reported that alcoholic liver diseases is the second most common indication for orthoptic liver transplant.(24). Controversies also still cloud the popular belief that alcohol is protective for the heart. Research shows that the relationship between cardiovascular morbidity and alcohol follows a “J” curve which implies that lesser and less frequent quantities of alcohol has some protective role but binges and dependence clearly increases the risk of cardiovascular disease. (25).

Psychological effects of alcohol are as a result of both direct and indirect actions. It can lead to an array of behavioral disturbances ranging from personality changes to anxiety disorders to the more severe forms of illnesses like mood disorders and psychosis. Personality and alcohol have a bi-directional relationship. Research has time and again pointed towards an increased association of borderline, impulsive and antisocial personalities to be more prone to alcohol and other substance abuse. One study concluded that the prevalence of antisocial personality disorder in alcohol abusers was 3.6% while
that of antisocial behavior in alcoholics was 12.3%. (26). An American study found positive correlates between alcohol dependence and paranoid, schizotypal, antisocial, borderline, narcissistic and histrionic personality while an inverse relationship with anankastic personality. (27). For a patient with anxiety disorder alcohol consumption can bring about a short lived anti-anxiety effect leading to an improved performance and thereby a ‘feel good’ sense or a sense of well-being. This in turn drives the person into consuming more and more alcohol and may push him/her into dependence pattern of drinking. Current knowledge favors the hypothesis that both anxiety disorder and alcohol use can initiate and maintain each other and that anxiety disorder can contribute to the maintenance and relapse of pathological type of drinking. (28).

The concept of “self medication” with alcohol to relieve distress is studied more with anxiety disorder than with mood disorder however recently one study found significant (up to 24%) of patients with mood disorder self medicating with alcohol. It was more common in bipolar 1 disorder (41%). (29). The relationship between mood disorder and alcoholism is of a complex nature. Not much evidence supports a relationship between unipolar depression and alcohol dependence however; there is a small but significant relationship between bipolar depression and alcohol use. (30)
The financial burden that alcohol has on the health care system and overall economy are startling. One study done in Thailand reviewed the economic burden that alcohol poses in terms of GDP (gross domestic product) in 12 countries across the world and found that the economic burden was found to be 0.45%-5.44% of the GDP.(31)

What we contribute to our society can come not just by our mere presence but also by our behavior by large. Alcohol is regarded as a social nuisance by all societies across the world. Crime and alcohol seem to have a close relationship and researchers support the same. One British study examined criminal and delinquent behavior in binge drinkers and found the prevalence to be as high as 60%.(32). Rape and sexually aggressive behavior is seen more when men are under intoxicated state than not, however, it’s also worth to take a note that alcohol in such cases interacts with personality traits and makes aggression more likely.(33).

ii. Effects of alcohol on immediate family members –

Alcohol though consumed by the person its effects are borne not just by the person himself but also by his immediate family members. Physical violence, verbal aggression, financial burden, delinquent behaviors are just some of the many problems that alcoholism brings upon the family of the abuser. Occasional use is perceived as facilitating conversation but habitual use can destroy the family.
Apart from the consequences of alcohol abuse on the immediate family members studies have also focused on the possibility of a genetic predisposition for alcoholism and have found a positive correlation (34). The pivotal role that the family plays in the lives of alcoholics gave rise to the worldwide organization “Al Anon” and Al Teen. This organization helps families to help their alcoholic dear ones to seek treatment as well as supports the family members themselves through the basic principles of warmth, understanding, support and concern (35).

2.2. Spouses of alcoholics

2.2.1. Concept

The role played by spouses of alcoholics has evolved a great deal over the years. Earlier it was regarded that the alcoholics are villains and their spouses are victims. There was no other dimension to it. But today the role of a wife in initiating, perpetuating, maintaining alcoholism and nevertheless treating an alcoholic is undoubted and rather a multidimensional one. Studies till date have focused more so on the wives disturbed personality factors or her distorted coping skills or the magnitude of domestic violence. The emotional experience that a wife goes through and her own mental health status in terms of both the ‘experience’ per se and the presence of a diagnosable mental health condition has largely been overlooked.
2.2.2. Evolution of concept

Women are regarded as emotionally more open than men to the distress of their loved ones and hence more vulnerable to trauma and suffering (36). Early studies held the hypothesis that the wives of alcoholics have the need to suffer, dominate and punish their mates in a bid to keep their own anxieties at bay. This view partly has been held even today but more so as an aspect of poor coping skills. Three major perspectives of women’s emotional experience have been evident.

1- The “disturbed personality model”- which says that wives of alcohol are themselves neurotic. Women psychologically maladjusted sado-masochistic, dependant and hostile traits, end up marrying alcoholics to fulfill their own neurotic needs.(37)

2- The “stress model”- mentions the maladjusted behavior of a spouse as a way to restore peace, and stability amidst chaos(38)

3- The “psychosocial model”- takes a rather integrated approach with personality and situational factors both playing a role on the emotional experience of the spouse.(39)

Etiologically, the factors that have been most studied to be related to psychological distress in the spouse are the personality factors, the coping skills and the presence or absence of a history of psychological disorder in the self or family of the spouse.
Whalen categorized the spouses of alcoholics into four types(40)

1) Wavering Winifred who to be loved sought a weak inept husband who needed her desperately.
2) Punitive Polly- needed an emasculated husband to control
3) Controlling Catherine- chooses a inept husband to dominate
4) Suffering Susan-As the name says likes to suffer and hence chooses a sadist life partner.

One Croation study compared the personality dimensions of spouses of alcoholic and non alcoholic subjects and concluded that wives of alcoholics are less extraverted than wives of non alcoholics(41). A Spanish study found excess of dependency, passivity, insecurity and passive-aggressive behavior in the wives of alcoholics. This study also found that about 25% of these spouses knew that their husbands drink before marrying them, about 75% were victims of some sort of violence, about 40% had personal psychopathologic background and 15% were ‘repeater wives’ or those whose parents were alcoholic(42).

From being etiologically linked to alcoholism the wives role spans across into an important role in the therapy of the alcoholic to the victim of the alcoholics maladaptive behavior. Research has time and again shown that roping in the wife for deaddiction of the husband has always given better outcomes than otherwise in terms of relative periods of abstinence and number of relapses. The Antabuse (Disulfiram) contracts made for married alcoholics have been found to be effective in maintaining the Antabuse ingestion.(43).Behavioral
Marital Therapy couples group for male alcoholics used strategies like better coping, direct communication and Antabuse contract and found better results reflecting the importance of a spouses role in the treatment of the alcoholic partner(44). It’s unfortunate though that someone who is so quintessential in therapy for the patient herself is victimized on several occasions in numerous ways. Domestic violence amongst couples with an alcoholic partner is not new. Violence occurs under an inebriated state and even otherwise. The reasons for this could be numerous. It could be to procure money for alcohol, as a product of antisocial personality and impulse dyscontrol, as a part of psychosis (infidelity delusions) secondary to alcohol use and as a part of psychosocial consequences like financial losses and familial interpersonal strained relationship. One Swiss study found the association of alcohol use and domestic violence as strong as 40%(45).

2.2.3. Psychological distress among spouses

The psychological distress that the spouse undergoes as a result of direct or indirect consequence of partners drinking is immense. It can range from anxiety, insomnia, panic, depression and dysthymia, somatic symptoms, to more severe illnesses like reactive psychosis and suicide and homicide. An American study showed that Alcohol abuse in the husband can precipitate depression in the wife(46). One study examined the effect of coping skill training in women whose spouses had a drinking problem and found it effective in helping them deal with anxiety and depression(47). It’s also evident that large number of women are actually afraid of their alcoholic partners and consequently have more depressive symptoms(48). Emotional distress amongst spouse is also related to sex
pathology in alcoholics with a delusion of jealousy who are frequently found to engage into sado-masochistic activities as a means to cover their own sexual inabilities which on many levels is related to their alcohol use(49).

2.2.4. Predictors of psychological distress

There could be many factors other than alcohol use that may contribute to the psychological burden on the spouse. A Canadian study identified 9 such factors which included male partner lifetime at risk drinker, socio economic status, job situation, perceived health status, presence of children less than 15 years, presence of a confidant, years of marriage and availability of social support(50). Some other factors that are found to be associated with increased psychological distress in spouses of alcoholics are – domestic violence or intimate partner violence(51), personality traits in the spouse like the ‘stressed wife theory’(41)

2.3. Indian scenario

India is popularly regarded as a “dry” nation, however making such an opinion may ignore a rapid change that has been noted over the last few decades with regards to the growing economy, globalization, western acculturation seen especially in the urban youth and a growing normalization of alcohol use under the name of ‘social drinking’.
2.3.1. Epidemiology

More than 200 papers have been published in the Indian Journal of psychiatry on the epidemiology of alcohol use. A meta analysis done in 1998 revealed substance use prevalence to be nearly 6.9/1000(52) and the same was nearing 14% in southern rural India(53). The National Household Survey of Drug Use (2000) marked the prevalence of alcohol use to be 21.4%. A study has also been done in women population consuming alcohol and their sociodemographic profile(54). Nearly 20% of all head injuries were attributed to alcohol use in one study(55). Personality assessment of alcoholics in India revealed high levels of anxiety, neuroticism, extroversion and psychopathic deviation(56). High levels of co morbidd cluster B personality and depression was found in one study(57).

2.3.2. Spouses of alcoholics in India

India with its diverse cultural heritage still holds strong ‘values’ about what’s right behavior and what’s not, in a social scenario. Women still are regarded to be homemakers and men bread winners in the vast rural, semi-urban and even parts of urban India. In such circumstances what goes behind closed doors goes largely unnoticed and unreported. Intimate partner abuse is one such major issue. Most Indian women irrespective of what caste and religion they belong to, still grow up learning from their mothers or significant elders to never retaliate to violence inflicted by the husband.
Psychological distress

Co dependency is largely seen in Indian subcontinent and is said to increase with severity of alcoholism in the husband (58). The study also concluded that wives with poor perceived support and poor coping had more co dependence. The common ways in which wives cope is through fearful withdrawal, indulgence and avoidance (59). It’s generally culturally believed for Indian wives to have certain feminine attributes like submissiveness and dependence. This was re claimed in one study where the traditional Indian stereotype feminine attributes were more common in spouses of alcoholics viz. silent, submissive, timid, trustful and adaptable, simple, conservative, conventional and poised. The scores were on the other hand low on aggression, self-sufficiency and tenseness (60). It is these factors that further add up to the psychological distress of Indian wives. This can manifest as depression, anxiety, fatigue, somatic complaints, insomnia and even suicide (61).

Predictors

Some predictors of psychological distress in women are financial loss, poor support system and domestic violence are well established (62). Some other factors that may play a role are the socio economic class, presence or absence of employment, presence or absence of a mental illness in the family or a past history of mental illness in the spouse, infidelity delusions in the husband and socio occupational and interpersonal dysfunction in the husband.
2.4. Rationale for the study and conceptual formulation

Much has been said internationally about the marital dyad and how alcohol abuse can lead to psychological distress in women. There have been studies that have systematically examined the personality and coping styles in spouses of alcoholics internationally as well as in India. However there seems a serious dearth of Indian studies that examine the prevalence of psychiatric morbidity in spouses of these alcoholics. Considering the role that a spouse plays in the treatment and rehabilitation of a alcoholic, its disheartening to see that we rarely ask questions to address her own needs. In India considering the cultural norm in place unless a clinician actively probes into these areas the spouses never would voluntarily come forwards and ask for much needed help. By just enquiring about these issues a clinician can detect and treat a potentially incapacitating condition and even prevent suicides. We attempt to bring to light this fact and take one step forwards in filling the gap.
3.0. AIMS AND OBJECTIVES OF THE STUDY

3.1. AIMS:

1) To estimate the prevalence of psychiatric morbidity among spouses of men with alcohol dependence attending Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India

2) To identify the factors related to psychiatric morbidity among spouses of men with alcohol dependence attending Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India

3.2. OBJECTIVES:

1). To assess the burden of psychiatric morbidity among spouses of men with alcohol dependence

2). To identify the factors associated with psychiatric morbidity among spouses of men with alcohol dependence.
4.0. METHODOLOGY

This chapter deals with the methodology of the research study adopted to meet the objectives. It includes sections on study design, study setting and rationale for its selection, sample size estimation, sample selection procedure, data collection, storage, and analysis, variables in the study, study tools, and ethical consideration.

4.1. Study design

The study was a cross-sectional survey following quantitative research methodology.

4.2. Study setting

The research study was carried out in Department of Psychiatry, Christian Medical College, India. Christian Medical College is a tertiary health care centre in private sector located in Vellore District of Tamil Nadu State. The hospital catchment primarily includes those from Tamil Nadu. However, patients do come from nearby States like Andhra Pradesh and Kerala and, from North Eastern States like West Bengal and Bihar. Department of Psychiatry is one among all the well established departments with inpatient strength of around 120 beds. There are three units catering to adult population and one unit catering to child and adolescent population. The adult units include Unit I, Unit II and Unit III. Unit I has outpatient clinics on Mondays, Wednesdays and Fridays. Outpatient review
clinics are primarily on Mondays and Wednesdays. Unit II has outpatient clinics on Tuesdays, Thursdays and Saturdays. Outpatient review clinics are primarily on Tuesdays and Thursdays. Unit III has outpatient clinics on Mondays and Wednesdays. Registration timing for outpatient review clinics is from 8 am to 4 pm. Patients attending outpatient review clinics include both those who are recently registered and those who are following up for many years. The new registration is on an average of 40 patients per day. In outpatient review clinics, patients, who have registered earlier, are reviewed alone, with their relatives or as proxy. Approximately 300 - 400 patients review on regular review days. The common psychiatric diagnoses of patients reviewing include schizophrenia, bipolar disorder, substance use disorder and anxiety disorders. Thus, it is expected that sufficient persons with alcohol dependence with their spouses could be traced out in the outpatient review clinic. Hence the outpatient review clinic in the Department of Psychiatry, Christian Medical College, Vellore could provide an ideal setting to explore the psychiatric morbidity in the spouses of men with alcohol dependence.

4.3. Sample size estimation

Pilot study on ten pair of participants from the sample frame shows, the prevalence of common mental disorders among spouses is 50 percent. With this data, sample size for the study is estimated as follows

\[ S = (1.96)^2 PQ/D^2, \]

where \( S \) is sample size without considering sample frame, \( P \) is expected prevalence of condition under study, \( Q \) is \((1-P)\), \( D \) is half width of confidence interval.
Here, \( S = (1.96)^2 \times 0.50 \times 0.50 / (0.1)^2 = 100 \). Making room for practical field issues, the estimated sample size was 125.

Thus, the estimated sample size was 100 (expected prevalence = 50 percent; half width of 95 percent confidence interval = 10 percent). Considering issues like non-response, incomplete data, etc an extra 25 percent of the estimated sample size was calculated and the final sample size was 125.

4.4. Sample selection procedure

The consent for recruiting participants was obtained from concerned unit chiefs. The treating therapists were sensitised regarding the study. Each day the investigator identified eligible participants from among the list in Department of Medical Records. The investigator then will attach a request to the treating therapist to refer the participant with their spouse to meet the investigator and the co-investigator after consultation. The investigator will then finalise the eligibility of the couple (patient and their spouse) for the study. If the selected couple came under the exclusion category (discussed later), then the next eligible couple was selected. Likewise all the participants were recruited and 100 samples were selected consecutively. Recruitment of participants occurred during the period October 2012 to September 2013.
4.5. Data collection

The co-investigator discussed the nature of the study and obtained informed consent separately from the person with alcohol dependence and his spouse. The consent was obtained in Tamil from the patient and his spouse separately and was countersigned by the investigator. The severity of alcohol use in the patient was then objectively assessed by the SADD (Severity Of Alcohol Dependence Data questionnaire) (Appendix 4), by the co-investigator. The investigator then interviewed the patient. Details collected were as mentioned in the Clinical research form (Appendix 1) that included demographic and personal details of the spouse and the patient. The psychiatric morbidity in the spouse was assessed by using the CISR (Clinical Interview Schedule Revised) Tamil version (Appendix 2). Domestic violence was further assessed by the HITS (Hurt, Insult, Threaten Scream)(Appendix 3) Severity of alcohol dependence was assessed using SADD(Severity Of Alcohol Dependence Data questionnaire) (Appendix 4) Interview by the co-investigator took around 20 minutes and the principal investigator took around 40 minutes for each pair of participants. Utmost care was taken to safeguard the privacy and autonomy of the respondents.

4.6. Data storage

Along with data collection, the data were entered in SPSS spread sheet masking their personal identity (Appendix 8). In rare situations when there were missing or incomplete data, clarifications were sought from concerned respondents on the next visit and necessary corrections made in the data entered.
4.7. Data analysis

The data were analysed using SPSS version 16.0. The primary objective of analysis was to identify the prevalence of psychiatric morbidity among spouses of men with alcohol dependence. In order to identify the factors associated with caregiver burden, the independent variables were grouped into various categories, the details of which are given below.

4.8. Introducing variables used in the study

a. Dependent variable

Psychiatric morbidity among spouses, as assessed by the Tamil version of CISR, the details of which are discussed in the coming section.

b. Independent variables – Spouse related

Demographic variables

Age, Sex, Religion, Place of residence, Literacy.

Socioeconomic variables

Socioeconomic status as assessed with the Kuppuswamy scale, Average monthly income of the family – current and lifetime and current and lifetime employment
Marital variables

Total years of marriage, Type of marriage (arranged or love marriage), Number of children their ages and sex of each child.

Personal details

Presence or absence of any medical illness and details of the same

Current or lifetime use of any substance and the details of the same

Mental health details

Have they ever met a psychiatrist, or have you been diagnosed with a psychiatric illness and taking any psychiatric medications and the details of it.

Any family history of psychiatric morbidity and its details.

Presence or absence of suicidal thoughts and attempts.

Details of suicidal attempt if there is a positive history of the same. Presence of absence of any recent stressful event the family and what is the main source of distress currently. Perceived support of the family including husband, children, parents and siblings-present or absent.
c. Independent variables – Patient related

Alcohol use variables

When did the alcohol use start-from before marriage or after?

If before marriage, was the spouse aware of this?

Years of alcohol use,

Severity of alcohol use as assessed by The Severity Of Alcohol Dependence Data Questionnaire, Tamil Validated version (SADD),

Previous history of failed deaddiction, expression of suspicion of infidelity and presence or absence of any co morbid axis 1 psychiatric diagnosis in the patient.

Current or lifetime use of any other substance other than alcohol and the details of the same.

Domestic violence as assessed by the HITS scale (Hurt Insult, Threaten, and Scream).

Cognitive-emotional, Economic, Occupational and Legal Consequence of patients alcohol use and its details
4.9. Introducing the special tools used in the study

Four tools were used in the study to capture four variables.; Clinical Interview Schedule Revised (CISR) Tamil validated version for assessing the psychiatric morbidity in the spouses of men with alcohol dependence, Severity Of Alcohol Dependence Data Questionnaire (SADD) Tamil validated version to assess the severity of alcohol dependence in the patient, Hurt, Insult, Threaten and Scream Scale (HITS) to assess the severity of domestic violence and The Kuppusamy’s Socio-Economic Status Scale to assess the socioeconomic stratification. The description of each tool is given below.

a. Clinical Interview Schedule Revised (CISR) (Appendix 2)

The Revised Clinical Interview Schedule (CIS-R) is a standardized semi-structured interview to assess the mental state of subjects with CMDs. The schedule minimizes observer bias as it does not require the interviewer's clinical judgment. Most aspects of the interviewing style are prescribed, including the exact wording of the questions and specific rules for coding each symptom. The schedule has 14 sub-sections: somatic symptoms, fatigue, concentration, sleep problems, irritability, worry about physical health, depression, depressive ideas, worry, anxiety, phobia, panic, obsessions and compulsions. Scores for sub-sections range from 0 to 5. The ratings obtained at interview provide a score for each section, which together can be summed to yield an overall score. A cut-off score of 12 has been validated to determine caseness. The CIS-R has been shown to have high inter-rater reliability. It has been employed in many investigations of
CMD. It takes 10 to 20 minutes to administer. Algorithms have been developed to lead to International Classification of Diseases-10 Primary Care (ICD-10) diagnoses. This instrument has been translated into Hindi, "Konkani" and Tamil and used in ethnic Indian populations. The Tamil version of the interview will be used for this study.

b. Hurt Insult Threaten Scream (HITS) (Appendix 3)

It was developed by Sherin, Sinacore, Li, Zitter, & Shakil, 1998. It’s a four-item questionnaire that asks respondents how often their partner physically Hurt, Insulted, Threatened with harm, and Screamed at them. These four items make the acronym HITS. The four items are scored on a five point likert scale. Chen, Rovi, Vega, Jacobs, and Johnson (2005) tested the HITS and found Cronbach’s alpha 0.76. The English HITS has sensitivity 86% and specificity 99%. In studies The HITS scale showed good internal consistency and concurrent validity with the CTS verbal and physical aggression items. It has good construct validity. HITS was translated into Tamil and back translated into English to check for accuracy. The Tamil version would be used in this study.

c. Severity Of Alcohol Dependence Data Questionnaire (SADD) (See Appendix 4)

It was developed by Raistrick, D., Dunbar, G and Davidson, R.(1988). The SADD is used to measure the severity of alcohol dependence. It focuses less on the withdrawal symptoms and more on the behavioral and subjective aspects of alcohol dependence. It is relatively
independent of socio-cultural influences. It is a 15-item self-report questionnaire. The SADD takes less than 5 minutes to administer. Each item is scored as follows: never = 0; sometimes = 1; often = 3; nearly always = 4. A total score is obtained by adding the score from each of the items. A score of 1–9 indicates low dependence; 10–19 medium dependence and a score of 20 or more high dependence. It has been validated in Tamil by Chandrasekaran.R and John Abraham which will be used in this study.

d. Kuppusamy’s Socio-Economic Status Scale (Appendix 5)

Socio-economic standard of people is conventionally expressed in terms of various social classes in which people are distributed which are referred to as social stratification. The socio-economic status scale developed by Kuppuswamy attempts to measure the socio-economic class of family in urban community. It is based on three variables - education, occupation, and income. A weightage is assigned to each variable according to seven point predefined scale. The total of three weightages gives the socio-economic status score which is graded to indicate the five classes - upper, upper middle, middle, upper lower and lower. Each layer or social class has a comparable standard of living, status and life style.
4.10. Operationalising variables

a. Primary caregiver

- One who is married to the patient has been involved in care and responsibility of the patient.

b. Diagnosis of alcohol dependence

- Diagnostic criteria

  The diagnosis of alcohol dependence is based on the diagnostic criteria laid down by ICD10 as mentioned below-

  Three or more of the following occurring in the last 1 month

  1. A strong desire or compulsion to take alcohol
  2. Impaired capacity to control alcohol intake
  3. A physiological withdrawal when alcohol is abruptly ceased
  4. Tolerance to the effects of alcohol
  5. Preoccupation with alcohol use
  6. Persistent use despite of clear evidence of harmful consequences

c. Inclusion and exclusion criteria

The participant with alcohol dependence SHOULD satisfy ALL the following Inclusion criteria:

1. ICD-10 diagnosis of Alcohol dependence syndrome – continuous use
2. Participant should be from Tamil Nadu-

   (This was agreed upon as the tools used in this study were in the Tamil language)

3. Participant should be married and attending the hospital with spouse.

   (As the primary objective of the study is to assess the psychiatric morbidity in the spouse)

The participant with alcohol dependence SHOULD NOT be satisfying ANY of the following Exclusion criteria:

1. Person with co-morbid independent axis 1 psychiatric diagnosis

   (A co morbid axis 1 diagnosis can lead to selection bias as in such cases the distress in the spouse may be related to the mental illness in the partner and not just the alcohol use)

2. Person with Mental retardation, Dementia, Post-head injury sequel

   (There are other disease specific process which may lead to bias in the outcome rather than just alcohol related phenomenon in the partner)

3. Person attending OPD without spouse

   (As the primary outcome is the psychiatric morbidity in the spouse)
4.11. Ethical considerations

The study had obtained approval from the Institutional Review Board of Christian Medical College, Vellore, Tamil Nadu prior to data collection (Appendix 6). The chiefs of the units were first approached for consent. The participants were approached for obtaining their willingness to participate in the study. Separate informed written consent was obtained from each person with schizophrenia and caregiver (Appendix 7). During data collection prime consideration was given for privacy and autonomy of the participant. Confidentiality of the entire data obtained from each participant has been strictly maintained and will continue to do so as mentioned in the consent form. Those spouses, who were identified as having significant psychiatric morbidity, were offered follow up and treatment opportunities.
5.0. RESULTS

This chapter primarily describes the outcomes of data analysis in concordance with the objectives of the study. After cleaning up the data entered, they were analyzed using SPSS version 16.0. In a stepwise manner, the data were analyzed for identifying - the baseline characteristics of the sample population and various independent variables. The results are organized under three major headings- Sample characteristics, Prevalence of psychiatric morbidity in spouses of men with alcohol dependence, and Correlates of psychiatric morbidity among spouses.

5.1. SAMPLE CHARACTERISTICS

A detailed depiction of the study sample is provided in this section. The characteristics of sample population will be discussed under the following titles – baseline details of the spouse which would include their age, literacy, family type (joint or nuclear), socio-economic class, any family history of mental illness and presence of any chronic medical illness.

The details of psychiatric history of the spouse that are included are – if she has ever been diagnosed with a psychiatric condition, whether she had any suicidal thoughts or made any suicide attempts in the past, whether she had any recent stressful life event other than
husband’s alcohol use, the main source of distress at the moment, whether she had any lifetime substance abuse and her perceived family support.

Followed by this are the details of marital dyad in terms of years of marriage, number of children with the age and sex of each child and severity of domestic violence as measured by Hurt, Insult, Threaten and Scream scale (HITS).

This will be followed by the details of the patients alcohol use which mentions- the severity score of alcohol use as assessed objectively by the SADD, when did he start alcohol use (before or after marriage), if before marriage whether the spouse was aware of it, whether any de-addiction treatment was taken in the past by the husband, what are the consequences of alcohol use, whether he has any other substance use, whether he expresses infidelity ideas towards spouse, whether he is diagnosed of any other co morbid axis 1 psychiatric diagnosis.

5.1.1. Demographic characteristics of the spouses.

Of the 100 spouses who participated for the study, their age ranged from 21-54 years with a mean of 32.55 and a standard deviation of 6.838. We subdivided them into four age groups as shown in the table below. What is evident is that maximum women fall in the age group of 21-30 years (45%) and 31-40 years (45%). Of the total 100 spouses, 93% (N=93) were literate. Of the total of 100 spouses, majority (76 percent) lived in a nuclear family setting.
Socio-economic class (SES) was assessed using the Kuppuswamy scale (Appendix-5). It was found that 2% (N=2) spouses belonged to upper socio-economic class; 6% (N=6) to upper-middle class; 11% (N=11) to lower-middle class; 80% (N=80) to upper-lower class and 1% (N=1) to lower socio-economic class. For further analysis, SES was categorized into two categories - one that clubbed upper and middle classes together and another category of lower class. We did not find a major divide between the participants’ place of residence.

Of the total of 100 participants the majority were Hindu by religion i.e. 89% (N=89); Christians were a total of 9% (N=9) and Muslims 2% (N=2).
The details are depicted in the following table –

**Table 1: Demographic details of spouses of people with alcohol dependence**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td></td>
<td>N=100</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
</tr>
<tr>
<td>21-30 years</td>
<td>45 (45)</td>
</tr>
<tr>
<td>31-40 years</td>
<td>45 (45)</td>
</tr>
<tr>
<td>41-50 years</td>
<td>08 (08)</td>
</tr>
<tr>
<td>51-60 years</td>
<td>02 (02)</td>
</tr>
<tr>
<td>TYPE OF FAMILY</td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>24 (24)</td>
</tr>
<tr>
<td>Nuclear</td>
<td>76 (76)</td>
</tr>
<tr>
<td>PLACE OF RESIDENCE</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>56 (56)</td>
</tr>
<tr>
<td>Urban</td>
<td>44 (44)</td>
</tr>
<tr>
<td>SOCIO-ECONOMIC CLASS</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>02 (02)</td>
</tr>
<tr>
<td>Upper middle</td>
<td>06 (06)</td>
</tr>
<tr>
<td>Lower middle</td>
<td>11 (11)</td>
</tr>
<tr>
<td>Upper lower</td>
<td>80 (80)</td>
</tr>
<tr>
<td>Lower</td>
<td>01 (01)</td>
</tr>
<tr>
<td>RELIGION</td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>89 (89)</td>
</tr>
<tr>
<td>Christian</td>
<td>9 (9)</td>
</tr>
<tr>
<td>Muslim</td>
<td>2 (2)</td>
</tr>
<tr>
<td>LITERACY</td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>07 (07)</td>
</tr>
<tr>
<td>Literate</td>
<td>93 (93)</td>
</tr>
</tbody>
</table>
5.1.2. Medical and psychiatric details of the spouses.

We collected details about presence of any chronic medical history or any positive psychiatric history among spouses. We also collected data on positive family history of mental illness in the spouses. We found that only 3% (N=3) had a positive family history. About 8% (N=8) spouses had a history of chronic medical illness. The chronic medical illnesses included two spouses suffering from hypertension, two from bronchial asthma, two from diabetes mellitus type II one from hypothyroidism and one from seizure disorder.

The details are as follows

**Table 2: Details of spouses of psychiatric and medical history**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMILY HISTORY OF MENTAL ILLNESS</td>
<td>N=100</td>
</tr>
<tr>
<td>Present</td>
<td>03(03)</td>
</tr>
<tr>
<td>Absent</td>
<td>97(97)</td>
</tr>
<tr>
<td>CHRONIC MEDICAL ILLNESS IN THE SPOUSE</td>
<td>N=100</td>
</tr>
<tr>
<td>Present</td>
<td>08(08)</td>
</tr>
<tr>
<td>Absent</td>
<td>92 (92)</td>
</tr>
<tr>
<td>DIAGNOSED WITH MENTAL ILLNESS</td>
<td>N=100</td>
</tr>
<tr>
<td>Yes</td>
<td>04 (04)</td>
</tr>
<tr>
<td>No</td>
<td>96 (96)</td>
</tr>
</tbody>
</table>
Ninety six percent (N=96) had never been diagnosed by a psychiatrist with a mental illness. Four had been diagnosed with some psychiatric disorder in the past. One had a diagnosis of Bipolar mood disorder (mania with psychosis) and she is on treatment with Lithium and Risperidone. The other three were diagnosed to have Adjustment disorder with a brief depressive reaction. Two out of these were prescribed SSRI. However none were currently on any psychiatric medications for the last 6 months.

Of the 100 spouses, 35% (N=35) reported suicidal thoughts in the past. Sixteen percent (N=16) of spouses reported attempting suicide in past.

Table 3: Details of suicidal attempts and thoughts

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>Overall (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUICIDAL THOUGHTS</td>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>35 (35)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>65 (65)</td>
<td></td>
</tr>
<tr>
<td>SUICIDAL ATTEMPTS</td>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>16 (16)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>84 (84)</td>
<td></td>
</tr>
</tbody>
</table>
When the participants (spouses) were enquired about their major source of distress, majority of them (N=98) expressed their husband’s alcohol consumption as their major source of distress. One (N=1) expressed job stressors and another (N=1) expressed her child’s illness as the major source of their distress. This is depicted in the pie chart below.

We also enquired about any current and lifetime substance use by the spouse herself. We found 99 percent (N=99) denied any sort of substance use. One percent (N=1) of spouse had a history of substance abuse, which was in the form of pan chewing.
When the spouses were asked about perceived family support 75% (N=75) reported not having adequate family support.

Table 4: Details of spouse’s perceived family support

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td>PERCEIVED FAMILY SUPPORT</td>
<td>N=100</td>
</tr>
<tr>
<td>YES</td>
<td>25 (25)</td>
</tr>
<tr>
<td>NO</td>
<td>75 (75)</td>
</tr>
</tbody>
</table>

Table 5: Details of spouse’s substance use

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td>LIFETIME SUBSTANCE USE</td>
<td>N=100</td>
</tr>
<tr>
<td>YES</td>
<td>01 (01)</td>
</tr>
<tr>
<td>NO</td>
<td>99 (99)</td>
</tr>
</tbody>
</table>
5.1.3. Details of the patient’s alcohol use

Nearly three fourth of the husbands reported that they are highly dependent on alcohol as measured by SADD. The number of years of alcohol use ranged from 5 to 40 years with a mean of 16.02 and a Standard Deviation of 7.587. Eighty three percent of husbands started consuming alcohol prior to their marriage. However only 32 percent spouses were aware of this at the time of marriage. Only fourteen percent of those with alcohol dependence underwent deaddiction treatment in the past. Economic, occupational and financial consequences are frequently reported whereas legal consequence was rare. Though sixteen of those husbands had expressed infidelity beliefs against their spouses only one was diagnosed with a co morbid psychiatric diagnosis. Around half of the husbands reported tobacco use (smoking and/or pan chewing) in addition to their alcohol use.

The details of these have been depicted in the tables below-

**Table 6: Severity of alcohol dependence**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td>SEVERITY OF ALCOHOL DEPENDENCE</td>
<td>N=100</td>
</tr>
<tr>
<td>LOW DEPENDENCE</td>
<td>04 (04)</td>
</tr>
<tr>
<td>MEDIUM DEPENDENCE</td>
<td>23 (23)</td>
</tr>
<tr>
<td>HIGH DEPENDENCE</td>
<td>73 (73)</td>
</tr>
</tbody>
</table>
Table 7: Details of husband’s alcohol use

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>Overall (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN DID HUSBAND START ALCOHOL USE?</td>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>BEFORE MARRIAGE</td>
<td>87 (87)</td>
<td></td>
</tr>
<tr>
<td>AFTER MARRIAGE</td>
<td>13 (13)</td>
<td></td>
</tr>
<tr>
<td>IF BEFORE MARRIAGE, WAS WIFE AWARE OF THIS?</td>
<td>N=87</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>32 (36.8)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>55 (63.2)</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Details of other substance abuse by husband

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>Overall (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMOKING</td>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>51 (51)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>49 (49)</td>
<td></td>
</tr>
<tr>
<td>CHEWING TOBACCO</td>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>38 (38)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>62 (62)</td>
<td></td>
</tr>
</tbody>
</table>
Table 9: Details of deaddiction treatment and other outcomes

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAST DEADDITION TREATMENT</td>
<td>N=100</td>
</tr>
<tr>
<td>YES</td>
<td>14 (14)</td>
</tr>
<tr>
<td>NO</td>
<td>86 (86)</td>
</tr>
<tr>
<td>INFIDELITY IDEAS TOWARDS SPOUSE</td>
<td>N=100</td>
</tr>
<tr>
<td>YES</td>
<td>16 (16)</td>
</tr>
<tr>
<td>NO</td>
<td>84 (84)</td>
</tr>
<tr>
<td>ANY OTHER COMORBID AXIS1 DIAGNOSIS</td>
<td>N=100</td>
</tr>
<tr>
<td>YES</td>
<td>1 (1)</td>
</tr>
<tr>
<td>NO</td>
<td>99 (99)</td>
</tr>
</tbody>
</table>
Table 10: Details of consequences of alcohol use

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>COGNITIVE/EMOTIONAL CONSEQUENCE OF ALCOHOL USE</td>
<td>07 (07)</td>
</tr>
<tr>
<td>NONE</td>
<td>65 (65)</td>
</tr>
<tr>
<td>LOSS OF SELF-ESTEEM/DYSPHORIA</td>
<td>27 (27)</td>
</tr>
<tr>
<td>DESPAIR</td>
<td>01 (01)</td>
</tr>
<tr>
<td>&gt;1/2 THE INCOME SPENT ON ALCOHOL</td>
<td>57 (57)</td>
</tr>
<tr>
<td>&lt;1/2 THE INCOME SPENT ON ALCOHOL</td>
<td>43 (43)</td>
</tr>
<tr>
<td>OCCUPATIONAL CONSEQUENCE</td>
<td>75 (75)</td>
</tr>
<tr>
<td>MORE ABSENTEEISM</td>
<td>25 (25)</td>
</tr>
<tr>
<td>LEGAL CONSEQUENCE</td>
<td>04 (04)</td>
</tr>
<tr>
<td>NO</td>
<td>96 (96)</td>
</tr>
</tbody>
</table>
5.1.4. Marital details

We studied the marital dyad in details, considering the fact that many aspects in the marriage can lead to significant distress to one or both the partners.

We enquired the total years of marriage. Years of marriage ranged from 1-37 with mean years of marriage being 13.07 and a standard deviation of 7.131. We also gathered details of the children the couple has. The total number of children ranged from none to five. Five couples had no children, 15 had one child, 61 couples had two children, 16 couples had three children, two couples had four children and one couple had five children. We also enquired details of sex of the child and how many minor (<18) year olds does a couple have. The results of these are as depicted in the tables below.
Table 11: Details of children the couple has

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall (%)</td>
</tr>
<tr>
<td></td>
<td>N=100</td>
</tr>
<tr>
<td>NUMBER OF MINOR(&lt; 18 YEARS) CHILDREN THAT A COUPLE HAS</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>15 (15)</td>
</tr>
<tr>
<td>1 child</td>
<td>19 (19)</td>
</tr>
<tr>
<td>2 children</td>
<td>55 (55)</td>
</tr>
<tr>
<td>3 children</td>
<td>11 (11)</td>
</tr>
<tr>
<td>NUMBER OF MALE CHILD A COUPLE HAS</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>32 (32)</td>
</tr>
<tr>
<td>1 child</td>
<td>47 (47)</td>
</tr>
<tr>
<td>2 children</td>
<td>17 (17)</td>
</tr>
<tr>
<td>3 children</td>
<td>04 (04)</td>
</tr>
<tr>
<td>NUMBER OF FEMALE CHILD A COUPLE HAS</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>29 (29)</td>
</tr>
<tr>
<td>1 child</td>
<td>39 (39)</td>
</tr>
<tr>
<td>2 children</td>
<td>27 (27)</td>
</tr>
<tr>
<td>3 children</td>
<td>04 (04)</td>
</tr>
<tr>
<td>4 children</td>
<td>01 (01)</td>
</tr>
</tbody>
</table>
We collected data from spouse on domestic violence that she has been experiencing. When asked details about domestic violence using the HITS scale it was noted that 12 women said that they were “frequently” physically ‘hurt’; 19 women said that they were “frequently” insulted; 16 women were ‘frequently’ threatened with harm and 19 were “frequently” screamed at or cursed. Sixty eight women had been experiencing severe domestic violence with a HITS score of >10. The results of these are as depicted in the tables below-

Table 12: Details of Domestic Violence

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (%)</td>
<td></td>
</tr>
<tr>
<td>DOMESTIC VIOLENCE</td>
<td></td>
</tr>
<tr>
<td>N=100</td>
<td></td>
</tr>
<tr>
<td>HITS score &lt; OR = 10</td>
<td>32 (32)</td>
</tr>
<tr>
<td>HITS score &gt;10</td>
<td>68 (68)</td>
</tr>
</tbody>
</table>
5.2. PREVALENCE OF PSYCHIATRIC MORBIDITY AMONG SPOUSES

The primary objective of the study was to find out the prevalence of the psychiatric morbidity among the spouses of men with alcohol use. This was done with the help of the CISR Tamil validated version. We define psychiatric morbidity in terms of CISR score, the cut off for which is scores ≥ 12. "Caseness" is the term used for CISR scores of ≥ 12, at which point the subject is said to have significant psychiatric morbidity. At CISR cut off of 12 score, seventy percent (N=73) of spouses satisfied for the ‘caseness’ criteria.

The results were also computed using the ICD 10 algorithm to get specific syndromal diagnosis.

The frequency of various psychiatric syndrome were – 48% (N=48) had moderate depression; 11% (N=11) had Obsessive Compulsive Disorder. Considering anxiety spectrum symptoms, like generalized anxiety and phobic avoidance, 75% (N=75) had reported these anxiety symptoms and 14% (N=14) had panic attacks.
The frequency table below shows the total participants with a CISR cut off prevalence.

**Table 13: Details of psychiatric morbidity (CISR SCORES)**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (%)</td>
<td></td>
</tr>
<tr>
<td>PSYCHIATRIC MORBIDITY (CISR SCORES &gt; OR = 12)</td>
<td>N=100</td>
</tr>
<tr>
<td>NIL PSYCHIATRIC MORBIDITY</td>
<td>27 (27)</td>
</tr>
<tr>
<td>SIGNIFICANT MORBIDITY PSYCHIATRIC</td>
<td>73 (73)</td>
</tr>
</tbody>
</table>

**5.3. CORRELATES OF PSYCHIATRIC MORBIDITY AMONG SPOUSES**

The second objective of our study was to find the factors associated with psychiatric morbidity in spouses. We tried to correlate CISR caseness with the following variables, details of which are as follows-

Correlation between demographic variables and morbidity

This includes socioeconomic class, family type and place of residence, We could not analyze correlation between religion and psychiatric morbidity as the sample was skewed towards Hindu religion.
5.3.1. Correlation between Family type and spouses’ psychiatric morbidity

When we correlated family type (joint/nuclear) with CISR caseness or spouses psychiatric morbidity we found that couples in joint families had less number of spousal psychopathology (62.5%) as against 73.5% in nuclear families. However this was not found to be statistically significant (chi square of 1.766 and p value of 0.184).

Table 14: Correlation between Family type and psychiatric morbidity

<table>
<thead>
<tr>
<th>Type of family</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR &gt; or= 12</td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>9(37.5)</td>
<td>15(62.5)</td>
<td>24(100)</td>
</tr>
<tr>
<td>Nuclear</td>
<td>18(23.7)</td>
<td>58(76.3)</td>
<td>76(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.184

5.3.2. Correlation between Place of residence and spouse’s psychiatric morbidity

When the place of residence was correlated with CISR caseness or spouses psychiatric morbidity, it was evident that slightly more number of women from rural background (38%) were CISR case positive as compared to women from urban background (35%);
however this was not found statistically significant with a chi square value of 1.708 and p=0.191.

Table 15: Correlation between place of residence and psychiatric morbidity

<table>
<thead>
<tr>
<th>Type of family</th>
<th>Case negative (%) CISR &lt;12</th>
<th>Case positive (%) CISR&gt; or= 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>18(32.1)</td>
<td>38(67.9)</td>
<td>56(100)</td>
</tr>
<tr>
<td>Urban</td>
<td>09(20.5)</td>
<td>35(79.5)</td>
<td>44(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.191

5.3.3. Correlation between Religion and psychiatric morbidity-

We categorized participants into Hindu, Christian and Muslim and computed correlation of the same with CISR caseness or psychiatric morbidity and found no statistically significant correlation with a chi square of 0.641 and p=0.726.
Table 16: Correlation between religion and psychiatric morbidity

<table>
<thead>
<tr>
<th>Religion</th>
<th>Case negative (%) CISR &lt;12</th>
<th>Case positive (%) CISR ≥ 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
<td>24(27.0)</td>
<td>65(73.0)</td>
<td>89(100)</td>
</tr>
<tr>
<td>Christian</td>
<td>02(22.2)</td>
<td>07(77.8)</td>
<td>09(100)</td>
</tr>
<tr>
<td>Muslim</td>
<td>01(50.0)</td>
<td>01(50.0)</td>
<td>02(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.726

5.3.4. Correlation between Socio-economic class (SES) and psychiatric morbidity

For the purpose of analysis we clubbed the middle and upper SES into one category and lower SES into a separate one and then compared with CISR caseness. We did not find a statistically significant correlation between the two (chi square=0.412; p=0.516).
Correlation between marital details and psychiatric morbidity in the spouse

5.3.5. Correlation between Family support and psychiatric morbidity

About 86.7% (N=65) women who did not have a good family support had CISR \( \geq 12 \) as against 32% (N=8) who did express having a good family support. This seemed like family support playing a protective factor against psychological distress. This found to be statistically significant with a chi square of 28.429 and a \( p=0.000 \) confirming the protective role of a supportive family.
5.3.6. Correlation between Number of minor child (<18 years) and psychiatric morbidity

We divided couples into those with none and those with 1 or more minor children and compared this with CISR caseness. Since one cell had a count less than 5, we used the Fisher Exact test. We found that women with no minor children had more incidence of psychiatric morbidity than women with 1 or more minor children to look after with a p of 0.063

<table>
<thead>
<tr>
<th>Family support</th>
<th>Case negative (%) CISR &lt;12</th>
<th>Case positive (%) CISR&gt; or= 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17(68.0)</td>
<td>08(32.0)</td>
<td>25(100)</td>
</tr>
<tr>
<td>No</td>
<td>10(13.3)</td>
<td>65(86.7)</td>
<td>75(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.000
Table 19: Correlation between number of minor children and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>Number of minor children</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR &gt;= 12</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>01(6.7)</td>
<td>14(93.3)</td>
<td>15(1000)</td>
</tr>
<tr>
<td>1 or more</td>
<td>26(30.6)</td>
<td>59(69.4)</td>
<td>85(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.063

5.3.7. Correlation between Number of male child and psychiatric morbidity.

We compared women with no male child and those with 1 or more male child and the CISR caseness. Those women with no male child had slightly more prevalence of psychiatric morbidity than those with 1 or more male children; however this was not found to be statistically significant (chi square=0.096; p=0.757).
Table 20: Correlation between number of male children and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>Number of male children</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR ≥ 12</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>08(25.0)</td>
<td>24(75.0)</td>
<td>32(100)</td>
</tr>
<tr>
<td>1 or more</td>
<td>19(27.9)</td>
<td>49(72.1)</td>
<td>68(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

p=0.757

5.3.8. Correlation between Number of female child and psychiatric morbidity.

We compared women with no female child and those with 1 or more female child and the CISR caseness. Those women with no female child had slightly more prevalence of psychiatric morbidity than those with 1 or more female children; however this was not found to be statistically significant (chi square=0.170;p=0.680)
Table 21: Correlation between number of female children and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>Number of female children</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR ≥ 12</td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>07(24.1)</td>
<td>22(75.9)</td>
<td>29(100)</td>
</tr>
<tr>
<td>1 or more</td>
<td>20(28.2)</td>
<td>51(71.8)</td>
<td>71(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

p=0.680

5.3.9. Correlation between HITS rating and psychiatric morbidity

The severity of domestic violence and psychiatric morbidity in spouse were found to be positively correlated and this correlation was statistically significant (chi square=9.431; p=0.002).
Table 21: Correlation between HITS rating and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>HITS score</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR ≥ 12</td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>15(46.9)</td>
<td>17(53.1)</td>
<td>32(100)</td>
</tr>
<tr>
<td>&gt;10</td>
<td>12(17.6)</td>
<td>56(82.4)</td>
<td>68(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.002

Since both HITS and CISR are continuous variable, we also analyses the relation between these two variables using Pearson correlation. The Pearson correlation was found to be positive with a correlation coefficient of 0.373. the p value for this correlation is 0.000. There was a statistically significant correlation between the two (p=0.000). This indicates that the psychiatric morbidity in the spouse increases with increased domestic violence.

Correlation between husband’s alcohol use and psychiatric morbidity in the spouse

5.3.10. Correlation between when the patients start alcohol abuse and psychiatric morbidity in the spouse-
We did not find a statistically significant ($p=0.733$ and $\chi^2=0.117$) correlation between the onset of alcohol use in the patient i.e. before/after marriage, and psychiatric morbidity in the spouse.

**Table 22: Correlation between start of alcohol use and spouse’s psychiatric morbidity**

<table>
<thead>
<tr>
<th>Start of alcohol use</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Case ISR $&lt;12$</td>
<td>Case ISR $\geq 12$</td>
<td></td>
</tr>
<tr>
<td>Before marriage</td>
<td>24(27.6)</td>
<td>63(72.4)</td>
<td>87(100)</td>
</tr>
<tr>
<td>After marriage</td>
<td>03(23.1)</td>
<td>10(76.9)</td>
<td>13(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

$P=0.733$

**5.3.11. Correlation between Being aware of husband’s alcohol use at marriage and psychiatric morbidity**

We did find a small drop in the percentage of women with psychiatric morbidity (65.6%; $N=21$), if they knew that their partner were abusing alcohol at the time of marriage as against being unaware of this fact (76.4%, $N=63$). However this difference was statistically insignificant ($\chi^2=1.168; p=0.280$)
Table 23: Correlation between being aware of alcohol use and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>Being aware</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR ≥ 12</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11(34.4)</td>
<td>21(65.6)</td>
<td>32(100)</td>
</tr>
<tr>
<td>No</td>
<td>13(23.6)</td>
<td>42(76.4)</td>
<td>55(100)</td>
</tr>
<tr>
<td>Total</td>
<td>24(27.6)</td>
<td>63(72.4)</td>
<td>87(100)</td>
</tr>
</tbody>
</table>

P=0.280

5.3.12. Severity of alcohol dependence and psychiatric morbidity

For analysis, we divided the patients with low and medium dependence into one class and high dependence into a separate one. A statistically significant correlation (chi square =5.710; p=0.017) was noted between the severity of alcohol use and psychiatric morbidity in the spouse.
Table 24: Correlation between severity of alcohol dependence and spouse’s psychiatric morbidity

<table>
<thead>
<tr>
<th>Severity of alcohol dependence</th>
<th>Case negative (%)</th>
<th>Case positive (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CISR &lt;12</td>
<td>CISR ≥12</td>
<td></td>
</tr>
<tr>
<td>Low and medium dependence</td>
<td>12(44.4)</td>
<td>15(55.6)</td>
<td>27(100)</td>
</tr>
<tr>
<td>High dependence</td>
<td>15(20.5)</td>
<td>58(79.5)</td>
<td>73(100)</td>
</tr>
<tr>
<td>Total</td>
<td>27(27.0)</td>
<td>73(73.0)</td>
<td>100(100)</td>
</tr>
</tbody>
</table>

P=0.017

Since both SADD and CISR are continuous variable, we also analyses the relation between these two variables using Pearson correlation. The Pearson correlation was found to be positive with a correlation coefficient of 0.236. The p value for this correlation is 0.018. There was a statistically significant correlation between the two (p=0.018). This indicates that severity of alcohol uses increases the psychiatric morbidity in the spouse also increases.

5.4. Logistic regression

Binary logistic regression models were run for independent variables after excluding those that were closely related to each other. Each model was adjusted for age. In bivariate analysis socioeconomic status, recent stressful life event, history of mental illness and family history of mental illness were not significantly associated with spouses’ psychiatric
morbidity. However those variables were adjusted for in the logistic regression models since they are potential risk factors for psychiatric morbidity. After adjusting for age, socioeconomic status, recent stressful life event, history of mental illness and family history of mental illness, it could be established that the odds of having significant psychiatric morbidity was 5.04 times higher among spouses experiencing domestic violence than among those not experiencing domestic violence; 26.29 times higher among spouses without perceived family support than among those with perceived family support. The correlation between spouse’s psychiatric morbidity and husband’s severity of alcohol use was not found significant in the regression model.
The table below depicts the above results

**Table 25: Factors associated with spouse's psychiatric morbidity adjusted for other factors**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Adjusted Odds ratio (95% confidence interval)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOMESTIC VIOLENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>5.04 (1.412-18.02)</td>
<td>0.013</td>
</tr>
<tr>
<td>PERCEIVED FAMILY SUPPORT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>26.29 (6.29-109.79)</td>
<td>0.000</td>
</tr>
<tr>
<td>HUSBAND’S ALCOHOL USE SEVERITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low or medium dependence</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>High dependence</td>
<td>2.53 (0.67-9.52)</td>
<td>0.169</td>
</tr>
</tbody>
</table>
6.0. DISCUSSION

In this chapter we discuss the results in the order mentioned and draw inferences relevant to the study.

The main objectives of this study were to estimate the prevalence of psychiatric morbidity in spouses of men with alcohol dependence and to identify the factors related to it. In our study we found high prevalence of psychiatric morbidity among spouses of men with alcohol dependence with a frequency of 73% (N=73). The factors that had high correlation with the psychiatric morbidity in the spouses were domestic violence, severity of alcohol dependence and a good family support to the spouse.

6.1. SAMPLE CHARACTERISTICS

Here we discuss the study results with respect to the demographic characteristics of the spouses, the medical and psychiatric characteristics of the spouses, the details of patient’s alcohol use and the marital details.

6.1.1. DEMOGRAPHIC CHARACTERISTICS OF THE SPOUSES

In this study it was evident that the maximum numbers of women were in the age group of 21-40 years. This reflects the fact that majority of women get married in the early 20’s.
With respect to literacy rates, the majority of women were literate, educated at least up to middle school and above showing the overall increasing literacy rates in India in the last few decades. Nearly three fourth of women lived in a nuclear family with relatively minimal support from their extended families. The majority of the participants were from the upper lower socio-economic class. This could be interpreted as either a result of alcohol dependence and its adverse consequences on employment leading on to financial setbacks. This is also similar to another Indian study done by Murthy et al(63). The majority of sample represented Hindu population with least representation of Muslims.

6.1.2. Medical and psychiatric DETAILS OF the SPOUSES.

In this study we found a small number (8%) women suffering from chronic medical illnesses like Type II Diabetes Mellitus, Systemic Hypertension, Bronchial Asthma, Hypothyroidism and seizure disorder. It was noted that these women had higher rates of somatic complains and fatigue on CISR questionnaire. We could find only three women with a positive family history of mental illness suggesting that psychiatric morbidity among spouses of men with alcohol dependence, is possibly more driven by psychosocial factors than by genetic loading. Nearly one third of women had reported suicidal ideas (35 percent) and 19 percent had attempted suicide in the past. The prevalence of suicidal ideas in this study is higher than that reported in another Indian study by Ponnudurai et al (61). This study reported 19 percent prevalence of suicidal ideas. The reasons for this, needs to be looked in to. Only one per cent of the spouses in this study reported abuse of substances, much lower than reported by Sidhaye and Patel(64). Almost all participants,
except two, expressed that their major stressor was husband’s alcohol use. This reflects the impact that patients alcohol abuse has on his partner’s psychological well being. Majority of women (75%) also expressed their concerns about poor family support. This finding was similar to a previous study done by Kumar et al.(65), where perceived social support was only thirty percent. Statistical analysis revealed that women with poor family support have greater psychiatric morbidity than those who are adequately supported. Family support may be protective against psychiatric morbidity.

6.1.3. Details of the patient’s alcohol use.

We enquired about whether the patient had started alcohol use before or after marriage and if before marriage, whether the spouse was aware of it at the time of marriage. Most men (87%) had started abusing alcohol prior to marriage however in majority of cases (55%), this was not known to their wives at the time of marriage. Many women feel betrayed when important information like habitual drinking is concealed from them at marriage, which leads to adjustment issues with the partner. However in this study we did not find a statistically significant difference between knowledge of spouses drinking before marriage or after and CISR caseness.

Nearly three fourths of participant patients had a high degree of dependence on alcohol in this study. The important reason for this being the fact that severe cases of alcohol dependence are more likely to go to a tertiary care referral center. Very few patients (14%)
had a past failed deaddiction treatment history. This possibly reflects the widespread ignorance of the problem as well as poor motivation and other psychosocial issues. As a result, a long standing untreated problem leads to more distress to the patient and his family including his spouse. Alcohol dependence is known to be associated with psychosis(66). In this study 16% participants had a history of expressing ideas of infidelity towards their wives and 1% had an alcohol induced psychotic disorder-delusional type. These results are similar to a previous study done by Aggrawal et al (67). The consequences of alcohol on the cognitive, economic, occupational and legal aspects are well known. We enquired about the same in this study and it was evident that more than half of the participants suffered from low self esteem and increased absenteeism at work and spent more than half of their monthly income in alcohol thereby increasing the financial burden on the family. This reflects the global socio-economic impact that alcohol has.(31).

### 6.1.4. Marital details

The marital relationship is the one that’s most seriously affected by the effects of partners alcohol use. We enquired into the details of the number of children each couple has including the age and sex of each child. This was considered to be important since the presence of children can be a significant support as well as an added responsibility on the couple that colors many aspects of marital interactions. This study showed a significantly high prevalence of domestic violence (68%) as assessed by the HITS questionnaire. Previous Indian study by Nayak et al had recorded a prevalence of 4 percent (68). The reason for this difference may need further probing. It was also noteworthy that physical
violence was associated with maximum psychiatric morbidity. This was similar to the study done by Kumar et al(65).

6.2. PREVALENCE OF PSYCHIATRIC MORBIDITY AMONG SPOUSES

One of the primary objectives of this study was to estimate the prevalence of psychiatric morbidity among spouses of men with alcohol dependence. We used the CISR Tamil validated version for the same. In this study significant psychiatric morbidity was found in nearly three fourth of spouses. This could be attributed to the high rates of domestic violence, a poor family support system and high alcohol dependence in majority of the study participants. The high incidence of Obsessive Compulsive Disorder however needs further probing to explore if there is any causal correlation with partner violence or alcohol use. In a similar study done in India recently, the rate of psychiatric morbidity among spouses of men with alcohol dependence was found to be 65% with prevalence of depressive disorder being the highest(43%) (69)

6.3. CORRELATES OF PSYCHIATRIC MORBIDITY AMONG SPOUSES

The other primary objective of this study was to determine the factors related to psychiatric morbidity among spouses of men with alcohol dependence. Correlation between a number of independent variables and psychiatric morbidity among spouses were done.
Correlation between demographic variables and morbidity

6.3.1. Correlation between Family type and spouses psychiatric morbidity.

When we correlated family type with psychiatric morbidity in spouses we found that spouses living in joint families had lesser psychopathology. In our country joint families are still common especially in semi urban and rural areas. It is generally believed that joint family offers a better support system and hence buffers stress. Its been shown by a study done by Math et al that joint families show high resilience during stressful times(69).

6.3.2. Correlation between Place of residence and spouse’s psychiatric morbidity.

We correlated place of residence (rural or urban) with spouse’s psychiatric morbidity. This study showed slightly more percentage of psychiatric morbidity in women from rural background as compared to those from an urban background; however it was not statistically significant. This result is similar to the study by Nayak et al(68).

6.3.3. Correlation between Religion and psychiatric morbidity.

This study sample was skewed towards Hindu religion with a very small number of Muslims and Christians. One reason for this is the fact that a majority of population in India is of Hindus and the major patient population coming to CMC, Vellore is also Hindu. However further study is warranted to find any possible positive correlation between religion and psychiatric morbidity among spouses.
6.3.4. Correlation between Socio-economic class (SES) and psychiatric morbidity.

We correlated socio-economic class with psychiatric morbidity which revealed more percentage of women with psychiatric morbidity in the lower socio-economic class than in the middle and upper class. This throws light on to the fact that financial disadvantage is a significant stressor. It also brings to the front that spending excessively on alcohol can also lead to added financial burden.

Correlation between marital details and psychiatric morbidity in the spouse.

We considered the marital dyad as an important factor determining the psychological well being of an individual. Hence we also correlated aspects of marital details with the spouse’s psychiatric morbidity.

6.3.5. Correlation between perceived Family support (support from husband, children, parents and siblings) and psychiatric morbidity.

It has been time and again proven by many researchers that a good family support (perceived support from the husband, children, parents and siblings) plays key protective role against common mental disorders (65),(62),(52). We found a statistically significant correlation between family support and psychiatric morbidity among spouses. This emphasizes a protective role of a supportive family against psychological distress. Family
support was not elicited in a standardised or structured way. Ideally parameters of "sufficiency" or "adequacy" should be determined and all spouses should have been asked to comment on all dimensions. For example one spouse may consider financial support as most important whereas another may consider emotional support more important. Financial support is easier to alter through treatment or training than emotional support. Therefore it is important that the sub units of family support be identified and measured more thoroughly especially as there is strong correlation with psychological burden or caseness.

6.3.6. Correlation between Number of minor child (<18 years) and psychiatric morbidity.

Taking care of minor child can be very challenging and demanding and indeed a stress by its own. In this study however we found that women with more than one minor children to look after had lesser psychiatric morbidity than those with no minor child. The possible explanation to this is that having minors to care for helps to distract from marital stressors and also offers a ray of hope and something to look forwards in life. The other possibility is that ‘having minor children denotes being at an earlier point in the whole process of ‘living with an alcoholic spouse’: the shorter the duration of exposure/marriage ( the younger the age of the children) to the problems of an alcohol dependent husband the less the “stress” due to alcoholism.
6.3.7. Correlation between Number of male child and psychiatric morbidity.

We did not find any statistically significant correlation between the number of male child and psychiatric morbidity among spouses.

6.3.8. Correlation between Number of female child and psychiatric morbidity.

We did not find a statistically significant correlation between spouses with female child and psychiatric morbidity. This was in contradiction with the popular belief in Indian society where female child is still considered to be a major responsibility facing huge discrimination across many cultures and socio-economic classes.(70). We believe that a larger sample size needs to be studied for further knowledge about this aspect.

6.3.9. Correlation between HITS rating and psychiatric morbidity.

There has been an increasing debate about relationship of alcohol with domestic violence. Many studies do support the fact that increased alcohol use perpetuates domestic violence (65),(68). There are some studies that say that the association between the two is present but weak and may need further research(33). This study showed a statistically significant (p=0.01) correlation between domestic violence and psychiatric morbidity among spouses. We found that physical violence had the most effect on partners’ psychological well being. This study also uses the domestic violence scale HITS, which has never been used in an Indian study prior to this. It may be worth assessing the usefulness of this tool for assessing domestic violence.
Correlation between husband’s alcohol use and psychiatric morbidity in the spouse

Aspects of husband’s alcohol use like when he started to abuse alcohol (prior to or after marriage), if prior to marriage whether spouse was aware of this at the time of marriage and the severity of alcohol dependence were also correlated with the psychiatric morbidity among spouse.

6.3.10. Correlation between when the patients start alcohol abuse and psychiatric morbidity in the spouse.

We enquired about the total years of alcohol use as well as whether alcohol use started before or after marriage. This was considered significant in the context of not just estimating the severity of patients alcohol use, but also as a reflection of his and his partner’s attitude towards drinking and if marital stressors had a role to play in the initiation of the habit. We did not find a statistically significant correlation between the start of alcohol use by patient and spouse’s psychiatric morbidity.

6.3.11. Correlation between Being aware of husband’s alcohol use at marriage and psychiatric morbidity.

Marriage is a system that stands strongly when there’s trust between partners. We see many instances where certain information is deliberately concealed from the partner due to
fear of a break up. We found in this study that more than eighty percent (87%) of patients had started alcohol use prior to marriage, however more than half of the spouses of these men (55%) were not aware of it at the time of marriage. It was also evident that these women had more psychological distress than women who were aware of their husband’s alcohol use. The difference however was not statistically significant. The possible explanation for this lies in the fact that being aware a priori, makes the woman mentally prepared for what to be expected from the relationship. Being unaware also gives a sense of betrayal and hence more psychological distress.


This study showed a positive correlation between increased severity of alcohol dependence in the patient and increased psychiatric morbidity among spouses. It’s a known fact that severe alcohol dependence poses risks to both physical as well as psychological well being of the individual. It also increases the incidence of severe domestic violence and other behavioral problems in the addict. (30)(45). As a result of these factors, the psychological distress in the spouse also increases.
The table below summarizes the findings in this study.

<table>
<thead>
<tr>
<th>VARIABLES COMPARED</th>
<th>CORRELATION WITH CISR CASENESS</th>
<th>SIGNIFICANCE (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived to have a supportive family</td>
<td>negative</td>
<td>0.000</td>
</tr>
<tr>
<td>Domestic violence</td>
<td>positive</td>
<td>0.002</td>
</tr>
<tr>
<td>Severity of alcohol dependence</td>
<td>positive</td>
<td>0.017</td>
</tr>
<tr>
<td>No minor children</td>
<td>positive</td>
<td>0.063</td>
</tr>
<tr>
<td>Joint family</td>
<td>negative</td>
<td>0.184</td>
</tr>
<tr>
<td>Rural vs urban residence</td>
<td>positive</td>
<td>0.191</td>
</tr>
<tr>
<td>Being aware of husband’s drinking prior to marriage</td>
<td>positive</td>
<td>0.280</td>
</tr>
<tr>
<td>Lower socio-economic status</td>
<td>positive</td>
<td>0.516</td>
</tr>
</tbody>
</table>

**Logistic regression**

We did a logistic regression analysis adjusting for age, socio-economic class, severity of alcohol dependence, family history of mental illness, stressful life event, past history of psychiatric treatment and domestic violence. Domestic violence was still significantly associated with psychiatric morbidity among spouses.
7.1. Strengths of the study

To the best of our knowledge, studies specifically looking into psychiatric morbidity among spouses of alcoholics are minimal. Researchers so far have looked into aspects of domestic violence and alcohol use alone with spouse’s psychological distress being largely ignored. Moreover, most Indian studies are population based. Hospital-based study had a small sample size. This study has taken care of all the above-mentioned limitations.

7.2. Limitations of the study

The major limitation of this study we believe is the generalisability. The important reason to say so is the fact that the sample was a hospital sample at a tertiary care centre where most patients referred are suffering from severe forms of illness. Also, the study population took only Tamil population. It thus remains to be seen what the results would be like in the non-Tamil speaking population with different socio-cultural background.

7.3. Policy implications

There is a usual tendency to cater to the needs of an alcohol dependent person alone. Rarely are the spouses’ distress addressed or for the matter of fact even enquired into. Considering the significant role that the spouse plays in the treatment and recovery of the patient as well as the health burden that the psychiatric morbidity among spouse poses to the health care system, it would be worth making it a policy to regularly enquire about
spouses mental health and offer care and if needed treatment sooner than later. Also, considering the results of this study, since there is a strong correlation between domestic violence and spousal burden it may be useful to increase the briskness of the legal response towards controlling domestic violence.

7.4. Conclusion

High psychiatric morbidity among spouses demands urgent attention. This would be of advantage to the spouses themselves as well as for their alcohol dependent partner’s therapeutic needs.

Considering the fact that high degree of domestic violence increases the psychological distress among spouses it is a need of time to look into legal and social aspects of the security of the vulnerable population.

Protective factors like a healthy and supportive family environment should be encouraged. Prompt treatment to those who have significant psychiatric morbidity can be given only when spouses are questioned or screened for the same keep a high index of clinical suspicion.
References


47. Rychtarik RG, McGillicuddy NB. Coping skills training and 12-step facilitation for women whose partner has alcoholism: effects on depression, the partner’s drinking, and partner physical violence. J Consult Clin Psychol. 2005 Apr;73(2):249–61.


APPENDIX-I

STUDY AMONG SPOUSE OF PEOPLE WITH ALCOHOL DEPENDENCE

NAME-                                                                 Serial No -          DATE-

ADDRESS-                                                               CONTACT NO-

DEMOGRAPHIC DETAILS
1. AGE (completed yrs as on 31/12/2011)    -
2. SEX-                                      - 1. Male       2. Female
3. LITERACY                                  - 1. Illiterate  2. Literate
4. If Literate                               - (Kuppusamy)

SOCIOECONOMIC DETAILS
1. TYPE OF FAMILY                               - 1. Joint       2. Nuclear
2. SOCIOECONOMIC STATUS                        - (Kuppusamy)
3. CURRENT EMPLOYMENT (held for at least 6mths)
   - 1. Unemployed 2. Employed
   3. Homemaker
4. If Employed/homemaker                       - (Kuppusamy)
5. AVERAGE MONTHLY INCOME NOW                  - Rs.
6. LIFETIME EMPLOYMENT (held for at least 6mths)
   - 1. Unemployed 2. Employed
   3. Homemaker
7. If Employed/homemaker                       - (Kuppusamy)
8. AVERAGE MONTHLY INCOME THEN                  - Rs.

MARITAL DETAILS
1. TOTAL YEARS OF MARRIAGE (completed years as on date)    -
2. TYPE OF MARRIAGE                                  - 1. Arranged  2. Love
   marriage
3. NUMBER OF CHILDREN                                -
4. AGE OF EACH CHILD                                  - 1)......2)..... 3)....  4)...
5. GENDER OF EACH CHILD  - 1)……  2)…… 3)…… 4)….

PERSONAL HISTORY

1. DO YOU HAVE ANY CHRONIC MEDICAL ILLNESS?  - 1. Yes
    2. No
2. If Yes, DETAILS  - 1. HT 2. DM 3. BA 4. Others
    (Specify)
3. IS THERE LIFETIME USE OF ANY SUBSTANCE OF ABUSE?
   (Specify)
4. IS THERE CURRENT USE OF ANY OTHER SUBSTANCE OF ABUSE?  -
   1. Yes 2. No
   a) If Yes,
      i) Tobacco 1. Yes 2. No
         (1) If Yes,
            (b) What amount now? 1. 2. 3.
      ii) Others 1. Yes 2. No
         (1) If Yes,
            (b) What amount now? 1. 2. 3.

5. COPING SKILLS

MENTAL HEALTH DETAILS

1. HAVE YOU EVER MET A PSYCHIATRIST?  -
   1. Yes  2. No
2. HAVE YOU EVER BEEN DIAGNOSED OF ANY PSYCHIATRIC ILLNESS?  -
   1. Yes  2. No
3. If Yes, WHAT WAS THE DIAGNOSIS?  -
4. ARE YOU TAKING ANY PSYCHIATRIC MEDICATIONS NOW? -
   1. Yes     2. No

5. If Yes, DETAILS -

6. IS ANY MEMBER IN YOUR FAMILY SUFFERING FROM MENTAL ILLNESS? - 1. Yes     2. No

7. IF Yes, DETAILS -

8. HAVE YOU EVER THOUGHT OF SUICIDE - 1. Yes     2. No

9. If Yes, HAVE YOU EVER ATTEMPTED SUICIDE - 1. Yes     2. No

10. If Yes, EXPLAIN -

11. HAS THERE BEEN A RECENT STRESSFUL EVENT IN YOUR FAMILY? - 1. Yes     2. No

12. If Yes, specify

13. WHAT IS YOUR MAIN SOURCE OF DISTRESS? -

14. CURRENT PSYCHOPATHOLOGY (CIS-R SCORE) -

15. DO YOU FEEL THAT YOUR FAMILY IS SUPPORTIVE? - 1. Yes     2. No

SPOUSE’S ALCOHOL USE DETAILS

1. WHEN DID YOUR SPOUSE START ALCOHOL USE? 1. From before marriage 2. After marriage

2. IF BEFORE MARRIAGE, WERE YOU AWARE OF THIS? 1) Yes 2) No

3. FOR HOW LONG IS YOUR SPOUSE CONSUMING ALCOHOL? -

4. SEVERITY OF ALCOHOL USE (SADD SCORE) -

5. IS THERE ANY PAST HISTORY OF FAILED DEADDICTION? - 1. Yes 2. No

6. DOES YOUR SPOUSE EXPRESS SUSPICION OF INFIDELITY? -1. Yes 2. No

7. IS THERE ANY OTHER AXIS 1 DIAGNOSIS? - 1. Yes 2. No

8. If Yes, DETAILS -

9. IS THERE LIFETIME USE OF ANY OTHER SUBSTANCE OF ABUSE?
1. Non-smoke tobacco  
2. Tobacco  
3. Others (Specify)

10. IS THERE CURRENT USE OF ANY OTHER SUBSTANCE OF ABUSE? -1. Yes  
2. No

11. If Yes,

1. Tobacco  
1. Yes 2. No

I. If Yes,

a. What form?  
1. Smoking 2. Chewing 
3. Sniff

b. What amount now?  
1. 2. 3.

c. How much is spent per day?  
1. 2. 3.

2. Others  
1. Yes 2. No

I. If Yes,

a. What form?  
1. Cannabis 2. Drug 
3.

b. What amount now?  
1. 2. 3.

c. How much is spent per day?  
1. 2. 3.

12. DOMESTIC VIOLENCE (HITS SCORE)

13. OTHER CONSEQUENCES OF ALCOHOL USE

1. Cognitive-emotional

I. None

II. Loss of self esteem/dysphoria

III. Loss of motivation

IV. Despair

2. Economic

• WHAT PORTION OF HIS INCOME IS SPEND FOR ALCOHOL USE?

3. Occupational
• Has alcohol abuse affected the job?
  o Yes
  o No
• If yes explain

4. Legal – any case or police complaint as direct or indirect consequence of alcohol use-
  I. Yes
  II. No
    If yes – details
APPENDIX II

Serial No.

The Revised Clinical Interview Schedule (CIS-R)

<table>
<thead>
<tr>
<th>Section</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Somatic symptoms</td>
<td></td>
</tr>
<tr>
<td>B Fatigue</td>
<td></td>
</tr>
<tr>
<td>C Concentration and forgetfulness</td>
<td></td>
</tr>
<tr>
<td>D Sleep problems</td>
<td></td>
</tr>
<tr>
<td>E Irritability</td>
<td></td>
</tr>
<tr>
<td>F Worry about physical health</td>
<td></td>
</tr>
<tr>
<td>G Depression</td>
<td></td>
</tr>
<tr>
<td>H Depressive ideas</td>
<td></td>
</tr>
<tr>
<td>I Worry</td>
<td></td>
</tr>
<tr>
<td>J Anxiety</td>
<td></td>
</tr>
<tr>
<td>K Phobias</td>
<td></td>
</tr>
<tr>
<td>L Panic</td>
<td></td>
</tr>
<tr>
<td>M Compulsions</td>
<td></td>
</tr>
<tr>
<td>N Obsessions</td>
<td></td>
</tr>
</tbody>
</table>

Total score: Sections A to N

102
Introduction

(Ask name. Do not record on form.)

I would like to explain a few things about this interview.

- Firstly, it has been designed to assess your general health and well being for research purposes.
- It mainly asks about the PAST WEEK, by that I mean the SEVEN DAYS since last --------.
- The questions have already been written out and so it will not sound like a normal interview and some questions may be somewhat inappropriate for you.
- Finally, all answers will be kept confidentially.

1. Have you noticed a marked loss in your appetite in the past month?
   - Yes .............. Mk; 1
   - No .............. iy; 2

2. Have you lost any weight in the past month?
   - Yes.............. Mk; 1 Go to 2a
   - No/DK.............. iy; Go to 3

2a. Were you trying to lose weight or on a diet?
   - Yes.............. Mk; 1 Go to Section A
   - No.............. iy; 2 Go to 2b

2b. Did you lose 3 Kgs or more, or did you lose less than this?
   - lost 3 Kgs or more.... f F Nky; 1 Go to Section A
   - lost less than 3 Kgs... f F 2 Go to Section A

3. Have you noticed a marked increase in your appetite in the past month?
   - Yes.............. .... 1
   - No.............. .... 2

4. Have you gained weight in the past month?
   - Yes.............. .... 1
   - No/DK.............. .... 2
A. Somatic symptoms

A1 Have you had any sort of ache or pain in the past month?

Yes.............. இல்லை 1 Go to A3
No................ இல்லை 2 Go to A2

A2 During the past month have you been troubled by any sort of discomfort, for example, headache or indigestion?

Yes.............. இல்லை 1 Go to A3
No................ இல்லை 2 Go to Section B

A3 Was this ache or pain/discomfort brought on or made worse because you were feeling low, anxious or stressed?

Yes.............. இல்லை 1 Go to A4
No................ இல்லை 2 Go to Section B

A4 In the past seven days, including last (DAY OF WEEK), on how many days have you noticed the ache or pain/discomfort?

4 days or more ....... 4 மாத்திரமும் செய்யவும் 1* Go to A5
1 to 3 days ......... 1–3 பின்னர் 2 Go to A5
None.............. இல்லை 3 Go to A9

A5 In total, did the ache or pain/discomfort last for more than 3 hours on any day in the past week/on that day?

Yes.............. இல்லை 1*
No................ இல்லை 2
**A6**  In the past week, has the ache or pain/discomfort been

<table>
<thead>
<tr>
<th></th>
<th>Ring Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>very unpleasant</strong></td>
<td>1*</td>
</tr>
<tr>
<td>a little unpleasant</td>
<td>2</td>
</tr>
<tr>
<td>or not unpleasant?</td>
<td>3</td>
</tr>
</tbody>
</table>

**A7**  Has the ache or pain/discomfort bothered you when you were doing something interesting in the past week?

<table>
<thead>
<tr>
<th></th>
<th>Ring Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>1*</td>
</tr>
<tr>
<td>No/has not done anything interesting...</td>
<td>2</td>
</tr>
</tbody>
</table>

**A8**  How long have you been feeling this ache or pain/discomfort as you have just described?

<table>
<thead>
<tr>
<th></th>
<th>Ring Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 2 weeks</td>
<td>1</td>
</tr>
<tr>
<td>2 weeks but less than 6 months ....</td>
<td>2</td>
</tr>
<tr>
<td>6 months but less than 1 year........</td>
<td>3</td>
</tr>
<tr>
<td>1 year but less than 2 years........</td>
<td>4</td>
</tr>
<tr>
<td>2 years or more</td>
<td>5</td>
</tr>
</tbody>
</table>

**A9**  Interviewer check: Sum codes which you ringed at A4, A5, A6 and A7.  

*Go to Section B.*
B. Fatigue

B1 Have you noticed that you've been getting tired in the past month?

Yes..........  1  Go to B3
No................  2  Go to B2

B2 During the past month, have you felt you've been lacking in energy?

Yes..........  1  Go to B3
No................  2  Go to Section C

B3 Do you know why you have been feeling tired/lacking in energy?

Yes..........  1  Go to (a)
No................  2  Go to B4

(a) What is the main reason? (Mention items from list)

Problems with sleep............  1  Go to B4
Medication............  2  Go to B4
Physical illness............  3  Go to B4
Working too hard (inc. housework, looking after baby).....  4  Go to B4
Stress, worry or other psychological reason.....  5  Go to B4
Physical exercise.......  6  Go to Section C
Other............  7  Go to B4

--------------------------------------------------------------------------------
**B4**  In the past seven days, including last (DAY OF WEEK) on how many days have you felt tired/lacking in energy?

<table>
<thead>
<tr>
<th>Days</th>
<th>Response</th>
<th>Go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 days or more</td>
<td>1*</td>
<td>B5</td>
</tr>
<tr>
<td>1 to 3 days</td>
<td>2</td>
<td>B5</td>
</tr>
<tr>
<td>None</td>
<td>3</td>
<td>B10</td>
</tr>
</tbody>
</table>

**B5**  Have you felt tired/lacking in energy for more than 3 hours in total on any day in the past week? (Exclude time spent sleeping.)

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1*</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**B6**  Have you felt so tired/lacking in energy that you had to push yourself to get things done in the past week?

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, at least once</td>
<td>1*</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**B7**  Have you felt tired/lacking in energy when doing things that you enjoy during the past week?

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, at least once</td>
<td>1*</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

*(Spontaneous) Does not enjoy anything......... Go to B8*

**B8**  Have you in the past week felt tired/lacking in energy when doing things that you used to enjoy?

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1*</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
**B9**  How long have you been feeling tired/lacking in energy in the way you have just described? (Mention items from list)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 2 weeks</td>
<td>1</td>
</tr>
<tr>
<td>2 weeks but less than 6 months</td>
<td>2</td>
</tr>
<tr>
<td>6 months but less than 1 year</td>
<td>3</td>
</tr>
<tr>
<td>1 year but less than 2 years</td>
<td>4</td>
</tr>
<tr>
<td>2 years or more</td>
<td>5</td>
</tr>
</tbody>
</table>

**B10**  Have you felt dizzy when you been anxious/nervous/tense?

<table>
<thead>
<tr>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
</tbody>
</table>

**B11**  Interviewer check: Sum codes which you have runged at B4, B5, B6, B7 and B8.  
Go to Section C.
C. Concentration and forgetfulness

C1 In the past month, have you had any problems in concentrating on what you are doing?

Yes, problems concentrating........ 1
No................. 2

C2 Have you noticed any problems with forgetting things in the past month?

Yes..... 1
No...... 2

C3 Interviewer code: Informant has problems concentrating or forgets things
(coded 1 at C1 or C2)........ Go to C4
Others............ Go to Section D

C4 Since last (DAY OF WEEK), on how many days have you noticed problems with your concentration/memory?

4 days or more....... 4 இணைந்த நாள் 1* Go to C5
1 to 3 days ........ 1 – 3 இணைந்த நாள் 2 Go to C5
None ............... 3 Go to C9

C5 Informants who had concentration problems

DNA: others (coded 2 at C1)........ Go to C7

In the past week could you concentrate on a TV program, read a newspaper article or talk to someone without your mind wandering?

T.V. நடத்திய தினம், பதிவு செய்யப்பட்ட வரலாறு, வழங்கிய விளக்கத்தில் கேட்ட யொரு தொடர்கள் எப்படி முக்கியமானது?
Yes....... 2
No/not always....... 1*
C6 In the past week, have these problems with your concentration actually stopped you from getting on with things you used to do or would like to do?

Yes.....  1*
No......  2

C7 Informants who had memory problems

DNA: others (coded 2 at C2).....  1 Go to C8

(Earlier you said you have been forgetting things)

Have you forgotten anything important in the past seven days?

Yes.....  1*
No......  2

C8 How long have you been having the problems with your concentration/memory as you have described?

Less than 2 weeks.......  1
2 weeks but less than 6 months.......  2
6 months but less than 1 year.....  3
1 year but less than 2 years.....  4
2 years or more.......  5

C9 Interviewer check: Sum codes which you have ringed at C4, C5, C6 and C7.----

Go to Section D.
D. Sleep problems

D1 In the past month, have you been having problems with trying to get to sleep or with getting back to sleep if you woke up or were woken up?

ஆது மாதமுள்ள முன்போன்று போற்றும் காலமாக போற்றும் வேறுபாடு எது? - உயர்க்கும் விளக்கம்?

Yes.... 1 Go to D3
No...... 2 Go to D2

D2 Has sleeping more than you usually do been a problem for you in the past month?

பிறகு பிறகு போற்றும் காலமாக போற்றும் விளக்கம்?

Yes..... 1 Go to D3
No...... 2 Go to Section E

D3 On how many of the past seven nights did you have problems with your sleep?

வாழ்வின் முன்போன்று சோழ் வேறுபாடு எது?

4 nights or more..... 4 வருடாக வேறு 1* Go to D4
1 to 3 nights.... 1 - 3 வருடாக 2 Go to D4
None........ 3 Go to D11

D4 Do you know why you are having problems with your sleep?

உயர்க்கும் விளக்கம் என உயர்க்கும் விளக்கம் எது?

Yes..... 1 Go to D4a
No...... 2 Go to D5

(a) Can you tell me the main reason for these problems? (Mention items on list.)

முடிக்காரை பெயராக விளக்கம்?

Noise........ சுருக்கும் 1
Shift work/too busy to sleep..... இராய்கிறோம் 2
Illness/discomfort...... தோற்றம் 3
Worry/thinking...... தோற்றம் - தோற்றம் 4
Needing to go to the toilet...... தோற்றம் - தோற்றம் 5
Informants who had problems trying to get (back) to sleep

DNA: Others (coded 2 at D1)... 1 Go to D8

Thinking about the night you had the least sleep in the past week, how long did you spend trying to get to sleep? (If you woke up or were woken up I want you to allow a quarter of an hour to get back to sleep).

112
D8  Informants who slept more than usual

Thinking about the night you slept the longest in the past week, how much longer did you sleep compared with how long you normally sleep for?

Less than 1/4 hr........ 3  Go to D11 and code ‘0’

At least 1/4 hr but less than 1 hr ......

At least 1 hr but less than 3 hrs.....

3 hrs of more.....

D9  In the past week, on how many nights did you sleep for more than 3 hours longer than you usually do?

4 nights or more..... 4  Go to D10

1 to 3 nights...... 2

None........ 3

D10  How long have you had these problems with your sleep as you have described?

less than 2 weeks ......... 2

2 weeks but less than 6 months..... 2

6 months but less than 1 year...... 6

1 year but less than 2 years..... 1

2 years or more....... 2

D11  Interviewer check: Sum codes which you have ringed at D3, D5, D6, D8 and D9.---------

Go to Section E.
E. Irritability

E1 Many people become irritable or short tempered at times, though they may not show it. Have you felt irritable or short tempered with those around you in the past month?

Yes/no more than usual... Yes 1 Go to E3
No........... No 2 Go to E2

E2 During the past month did you get short tempered or angry over things which now seem trivial when you look back on them?

Yes..... Yes 1 Go to E3
No...... No 2 Go to Section F

E3 Since last (DAY OF WEEK), on how many days have you felt irritable or short tempered/angry?

4 days or more.... 4 days or more 1* Go to E4
1 to 3 days.... 1-3 days 2 Go to E4
None....... None 3 Go to E11

E4 What sort of things made you irritable or short tempered/angry in the past week?

E5 In total, have you felt irritable or short tempered/angry for more than one hour (on any day in the past week)?

Yes..... Yes 1*
No...... No 2
During the past week, have you felt so irritable or short tempered/angry that you have wanted to shout at someone, even if you haven't actually shouted?

Yes..... 1*  
No...... 2  

In the past seven days, have you had arguments, rows or quarrels or lost your temper with anyone?

Yes..... 1* Go to (a)  
No...... Go to E10  

(a) Did this happen one or more than once (in the past week)?

Once...... 1 Go to E8  
More than once...... 2 Go to E9  

Do you think this was justified?

Yes, justified...... 2 Go to E10  
No, not justified...... 1* Go to E10  

Do you think this was justified on every occasion?

Yes........... 2 Go to E10  
No, at least one was unjustified........ 1* Go to E10
E10 How long have you been feeling irritable or short tempered/angry as you have described?

less than 2 weeks............ 2

two weeks but less than 6 months....... 2

6 months but less than 1 year...... 6

1 year but less than 2 years...... 1

2 years or more....... 2

E11 Interviewer check: Some codes which you have ringed at E3, E5, E6, E8 and E9.----------

Go to Section F.
F. Worry about physical health

F1 Many people get concerned about their physical health. In the past month, have you been at all worried about your physical health?

Many people get concerned about their physical health. In the past month, have you been at all worried about your physical health?

Yes, worried..... 1 Go to F3
No/concerned..... 2 Go to F2

F2 Informants who have no problems with physical health

DNA: has a physical health problem 1 Go to Section G

During the past month, did you find yourself worrying that you might have a serious physical illness?

During the past month, did you find yourself worrying that you might have a serious physical illness?

Yes..... 1 Go to F3
No……. 2 Go to Section G

F3 Thinking about the past seven days, including last (DAY OF WEEK), on how many days have you found yourself worrying about your physical health/that you might have a serious physical illness?

Thinking about the past seven days, including last (DAY OF WEEK), on how many days have you found yourself worrying about your physical health/that you might have a serious physical illness?

4 days or more....... 4 days or more....... 1* Go to F4
1 to 3 days....... 1-3 days 2 Go to F4
None...... None...... 3 Go to F8

F4 In your opinion, have you been worrying too much in view of your actual health?

In your opinion, have you been worrying too much in view of your actual health?

Yes..... 1*
No...... 2
In the past week, has this worrying been (Running prompt)

very unpleasant.....  மிகுதியான எதிர்ப்பு 1*

a little unpleasant....  பொதுமக்கல் எதிர்ப்பு 2

or not unpleasant......  குறைந்த எதிர்ப்பு 3

In the past week, have you been able to take your mind off your health worries at least once, by doing something else?

Yes...........  ஒத்து 2

No, could not be distracted once.....  எதிர்ப்பு 1*

How long have you been worrying about your physical health in the way you have described?

less than 2 weeks.......  மேலும் 1

2 weeks but less than 6 months.....  மேலும் 6  மாதங்கள் 2

6 months but less than 1 year.....  மேலும் 1  ஆண்டு 3

1 year but less than 2 years.....  மேலும் 2  ஆண்டு 4

2 years or more.....  மேலும் 5

Interviewer check: Sum codes which you have ringed at F3, F4, F5 and F6. ----

Go to Section G.
G. Depression

G1 Almost everyone becomes sad, miserable or depressed at times.

Have you had a spell of feeling sad, miserable or depressed in the past month?

Almost everyone becomes sad, miserable or depressed. Have you had a spell of feeling sad, miserable or depressed in the past month?

Yes..... 1

No..... 2

G2 During the past month, have you been able to enjoy or take an interest in things as much as you usually do?

During the past month, have you been able to enjoy or take an interest in things as much as you usually do?

Yes..... 1

No/no enjoyment or interest..... 2

G3 Interviewer check: Code first that applies.

Informant felt sad, miserable or depressed (coded 1 at G1).... 1 Go to G4

Informant unable to enjoy or take an interest (coded 2 at G2).... 2 Go to G5

Others...................... 3 Go to Section I

G4 In the past week have you had a spell of feeling sad, miserable or depressed? (Use informants own words)

In the past week have you had a spell of feeling sad, miserable or depressed? (Use informants own words)

Yes..... 1 Go to G5

No..... 2 Go to G5

G5 Informants who were unable to enjoy or take an interest in things

DNA: coded 1 at G2........ 1 Go to G6
In the past week have you been able to enjoy or take an interest in things as much as usual?

Yes.....  2

No/no enjoyment or interest.....  1*

G6 Informants who felt sad, miserable or depressed or unable to enjoy or take an interest in things in the past week (coded 1 at G4 or G5)

DNA:others........  1  Go to G11

Since last (DAY OF WEEK) on how many days have you felt sad, miserable or depressed/unable to enjoy or take an interest in things?

4 days or more......  4  1*

2 to 3 days.....  2

1 day.......  3

G7 Have you felt sad, miserable or depressed/unable to enjoy or take an interest in things for more than 3 hours in total (on any day in the past week)?

Yes.....  1*

No......  2
(a) What sorts of things made you feel sad, miserable or depressed/unable to enjoy or take an interest in things in the past week? (Mention items on list.)

Members of the family....... 1
Relationship with spouse/partner.... 2
Relationships with friends..... 3
Housing....... 4
Money/bills............ 5
Own physical health (inc. pregnancy).... 6
Own mental health...... 7
Work or lack of work (inc. student)..... 8
Legal difficulties............ 9
Political issues/the news............ 10
Other............ 11
Don't know/no main thing....... 12

(b) DNA: Only one item coded at (a) 1 Go to G9

What was the main thing? (List code on G8a)

In the past week when you felt sad, miserable or depressed/unable to enjoy or take an interest in things, did you ever become happier when something nice happened, or when you were in company?

Yes, at least once...... 2
No............ 1*
G10   How long have you been feeling sad, miserable or depressed/unable to enjoy or take an interest in things as you had described?

less than 2 weeks........  2  மாதம் 1
2 weeks but less than 6 months......  2  மாதம் 6  மாதம் 2
6 months but less than 1 year.....  6  மாதம் 1  மாதம் 3
1 year but less than 2 years......  1  மாதம் 2  மாதம் 4
2 years or more.......  2  மாதம் 5

G11   Interviewer check: Sum codes which you have ringed at G5, G6, G7 and G9. ---
   Go to Section H.
H. Depressive Ideas

H1 Informants who scored 1 or more at Section G, Depression

DNA: Others (coded 0 or blank at G11)...... Go to Section I

I would now like to ask you about when you have been feeling sad, miserable or depressed/unable to enjoy or take an interest in things. In the past week, was this worse in the morning or in the evening, or did this make no difference? (Prompt as necessary)

in the morning...... தற்காலம் 1
in the evening...... தற்காலம் 2
no difference/other..... அருங்கல் தற்காலம் 3

H2 Many people find that feeling sad, miserable or depressed/unable to enjoy or take an interest in things can affect their interest in sex. Over the past month, do you think your interest in sex has

(Running prompt)

increased....... வளர்ச்சி 1
decreased....... மூட்டல் 2
or has it stayed the same?..... மீது வேறு 3
not applicable........ வைத்தியம் 4

H3 When you have felt sad, miserable or depressed/unable to enjoy or take an interest in things in the past seven days,

(a) have you been so restless that you couldn't sit still? ...........

Yes..... ஈம் 1; No....... உயர்வா 2
(b) have you been doing things more slowly, for example, walking more slowly?

Yes..... 1; No....... 2

(c) have you been less talkative than normal?

Yes..... 1; No....... 2

H4  Now, thinking about the past seven days have you on at least one occasion felt guilty or blamed yourself when things went wrong when it hasn't been your fault?

Yes, at least once...... 1*
No...... 2

H5  During the past week, have you been feeling you are not as good as other people?

Yes........ 1*
No........ 2

H6  Have you felt hopeless at all during the past seven days, for instance about your future?

Yes........ 1*
No........ 2
H7  Interviewer Check
Informant felt guilty, not as good as others
or hopeless (coded 1 at H4 or H5 or H6)........  1  Go to H8
Others (coded 2 at H4, H5 and H6)..............  2  Read H10

H8  In the past week have you felt that life isn't worth living?
මෙම අතරය අරියන් කළේදරේ අදහසිය අරිසේම් පැලීමෙන්න?
Yes........  1  Go to H9
Yes, but not in the past week...
  අතරය අදහසිය අරිසේම් පැලීමෙන්න?
  2  Read H10
No........  3  Read H10

H9  In the past week, have you thought of killing yourself?
මෙම අතරය කළේදරේ ආරක්ෂාන්තය අදහසිය අරිසේම් පැලීමෙන්න?
Yes........  1  Go to H9a
Yes, but not in the past week.....
  අතරය ආරක්ෂාන්තය අදහසිය අරිසේම් පැලීමෙන්න?
  2  Read H10
No........  3  Read H10

(a) Have you talked to your doctor about these thoughts (of killing yourself)?
ජාතික නාදාෂිකයාstraints යන අදහසිය ආරක්ෂාක්මාන්තයට අනතුරු?
Yes........  1  Read H10
No, but has talked to other people......
  ආරක්ෂාක්මාන්තයට අනතුරු?
  2  Read H9b
No........  3  Read H9b
(b) (You have said that you are thinking about committing suicide)

Since this is a very serious matter it is important that you talk to your doctor about these thoughts.

H10  (Thank you for answering those questions on how you have been feeling. I would now like to ask you a few questions about worrying)

H11  Interviewer check: Sum codes which you have ringed at H4, H5, H6, H8 and H9. -------

Go to Section I
I. Worry

11 (The next few questions are about worrying)

In the past month, did you find yourself worrying more than you needed to about things?

Did you find yourself worrying more than you needed to about things?

Yes, worrying..... 1 Go to I3
No/concerned....... 2 Go to I2

12 Have had any worries at all in the past month?

Have you had any worries at all in the past month?

Yes........ 1 Go to I3
No.......... 2 Go to Section J

13 (a) Can you look at this card and tell me what sorts of things you worried about in the past month? (Mention items in list.)

- Members of the family....... 1
- Relationship with spouse/partner.... 2
- Relationships with friends..... 3
- Housing........ 4
- Money/bills........ 5
- Own physical health (inc. pregnancy).... 6
- Own mental health...... 7
- Work or lack of work (inc. student)..... 8
- Legal difficulties....... 9
- Political issues/the news....... 10
- Other........ 11
Don't know/no main thing......

(b) DNA : Only one item coded at (a)  1  Go to I4

What was the main thing you worried about?
What was the main thing you worried about?

(List code)

I4  Interviewer check: Informant worries about physical health

coded 06 at I3(1))  1  Go to I5

Others (not coded 06 at I3 (a)).................  2  Go to I6

Make a note to go to section F to record this worry about physical health, if not already, if not already recorded.

I5  Interviewer check: Informant is only worried about physical health

(only code 06 is rung at I3(a)).............. 1  Go to Section J

Informant had other worries

(I3 (a) is multi-coded)  2  Read (a)

For the next few questions, I want you to think about the worries you have had other than those about your physical health.

I6  On how many of the past seven days have you been worrying about things (other than your physical health)?

4 days of more...... 4 மாத்திய நாள் 1*  Go to I7
1 to 3 days....... 1 – 3 மாத்திய நாள் 2  Go to I7
None.......  என்றால் 3  Go to I11
I7  In your opinion, have you been worrying too much in view of your circumstances?

(Refer to worries other than those about physical health)

Yes....... 1*

No....... 2

I8  In the past week, has this worrying been: (Running prompt)

(Refer to worries other than those about physical health)

very unpleasant....... 1*

a little unpleasant.... 2

or not unpleasant..... 3

I9  Have you worried for more than 3 hours in total on any one of the past seven days?

(Refer to worries other than those about physical health)

Yes..... 1*

No....... 2

I10 How long have you been worrying about things in the way that you have described?

less than 2 weeks..... 1

2 weeks but less than 6 months..... 2

6 months but less than 1 year.... 3

1 year but less than 2 years....... 4

2 years or more....... 5

I11 Interviewer check: Sum codes which you have ringed at I6, I7, I8 and I9. -------

Go to Section J.
**J. Anxiety**

**J1** Have you been feeling anxious or nervous in the past month?

Yes, anxious or nervous........ 1 Go to J3

No........... 2 Go to J2

**J2** In the past month, did you ever find your muscles felt tense or that you couldn't relax?

Yes...... 1

No...... 2

**J3** Some people have phobias; they get nervous or uncomfortable about specific things or situations when there is no real danger. For instance they may get nervous when speaking or eating in front of strangers, when they are far from home or in crowded rooms, or they may have a fear of heights. Others become nervous at the sight of things like blood or spiders.

In the past month have you felt anxious, nervous or tense about any specific things or situations when there was no real danger?

Yes....... 1

No....... 2

**J4** Interviewer check:

Informant reports anxiety and also a phobia

(coded 1 at J1 or J2, and coded 1 at J3)..... 1 Go to J5

Informant reports only general anxiety

(coded 1 at J1 or J2, and coded 2 at J3).... 2 Go to J7

Others....... 3 Go to Section K
J5  In the past month, when you felt anxious/nervous/tense, was this always brought on by the phobia about some specific situation or thing or did you sometimes feel generally anxious/nervous/tense?

Always brought on by phobia.....  1  Go to Section K
Sometimes felt generally anxious....  2  Go to J6

J6  The next questions are concerned with general anxiety/nervousness/tension only. I will ask you about the anxiety which is brought on by the phobia about specific things or situations later.

On how many of the past seven days have you felt generally anxious/nervous/tense?

4 days or more......  1*  Go to J8
1 to 3 days......  2  Go to J8
None......  3  Go to J12

J7  On how many of the past seven days have you felt generally anxious/nervous/tense?

4 days or more......  1*  Go to J8
1 to 3 days......  2  Go to J8
None......  3  Go to J12
J8  In the past week, has your anxiety/nervousness/tension been: (Running prompt)

1*  very unpleasant
2  a little unpleasant
3  or not unpleasant

J9  In the past week, when you’ve been anxious/nervous/tense, have you had any of physical symptoms? (Mention symptoms on list)

Yes......  1*  Go to (a)
No.......  2  Go to J10

(a) Which of these symptoms did you have when you felt anxious/nervous/tense?

1  Heart racing or pounding
2  Hands sweating or shaking
3  Feeling dizzy
4  Difficulty getting your breath
5  Butterflies in stomach
6  Dry mouth
7  Nausea or feeling as though you wanted to vomit

J10  Have you felt anxious/nervous/tense for more than 3 hours in total on any one of the past seven days?

Yes......  1*  
No.......  2
J11  How long have you had these feelings of general anxiety/nervousness/tension as you described?

less than 2 weeks....... 2 பார்வையிட்டு 1
2 weeks but less than 6 months..... 2 பார்வையிட்டு 6 பார்வையிட்டு 2
6 months but less than 1 year..... 6 பார்வையிட்டு 1 பார்வையிட்டு 3
1 year but less than 2 years..... 1 பார்வையிட்டு 2 பார்வையிட்டு 4
2 years or more...... 2 பார்வையிட்டு 5

J12  Interviewer check: Sum codes which you have ringed at J6, J7, J8, J9 and J10.---------
Go to Section K.
K. Phobias

K1 Interviewer check: Informants who had phobic anxiety in the past month
(coded at 1 at J3)..... 1 Go to K3(a)
Others......... 2 Go to K2

K2 Sometimes people avoid a specific situation or thing because they have a phobia about it. For instance, some people avoid eating in public or avoiding going to busy places because it would make them feel nervous or anxious. In the past month, have you avoided any situation or thing because it would have made you feel nervous or anxious, even though there was no real danger?

முடிய வருந்தும் அடங்கம் ஆண்டுப் பெயர் - பெயர் செய்ய நழுவுத்தொடர்?

Yes....... யாது 1 Go to K3(b)
No....... யாது 2 Go to Section L

--------------------------------------------------- --------------------------------------------------- -----------------------

K3(a) Can tell me which of the situations or things listed made you the most anxious/nervous/tense in the past month? **Ring code at (b), then go to K4**

K3(b) Can you tell me, which of these situations or things did you avoid the most in the past month? **(Code only one)**

Crowds or public places, including travelling alone or being far from home

மறுப்பு குழி உடன் வந்த போற்றும் பகுதிகள்?

Enclosed spaces................. குழி நோக்கி போற்றும்

Social situations, including eating or speaking in public, being watched or stared at

செயல் நோக்கி உடன் வந்த போற்றும், செயல் வாசிக்கும், நோக்கி கைசெயல் தீர்வு

The sight of blood or injury....... புல்லால் காண்கள் கைசெயல் 4

Any specific single cause including insects, spiders and heights....... 5

Other (specify).................. மறுப்பு நோக்கி 6
K4  Informants who had phobic anxiety in past month

DNA: others (coded 2 at K1)......  1  Go to K7

In the past seven days, how many times have you felt nervous or anxious about (SITUATION/THING)?

4 times or more......  4  Go to K5
1 to 3 times.....  1 – 3  Go to K5
None.......  3  Go to K6

K5  In the past week, on those occasions when you felt anxious/nervous/tense did you have any of the symptoms?

Yes...........  1  Go to (a)
No............  2  Go to K6

(a)1  Which of these symptoms did you have when you felt anxious/nervous/tense?

Heart racing or pounding....  1
Hands sweating or shaking.....  2
Feeling dizzy.......  3
Difficulty getting your breath....  4
Butterflies in stomach.....  5
Dry mouth......  6
Nausea or feeling as though you wanted to vomit......  7
K6 In the past week, have you avoided any situation or thing because it would have made you feel anxious/nervous/tense even though there was no real danger?

Yes.......  1  Go to K7

No.......  2  Go to K8

K7 How many times have you avoided such situations or things in the past seven days?

1 to 3 times.....  1 - 3  1*

4 times or more....  4  2*

None........  3

K8 Informants who had phobic anxiety/avoidance in the past week (coded 1 or 2 at K4 or K7)

DNA: others.......  1  Go to K9

How long have you been having these feelings about these situations/things as you have just described?

less than 2 weeks.....  2  1

2 weeks but less than 6 months......  2  6  2

6 months but less than 1 year.....  6  1  3

1 year but less than 2 years......  1  2  4

2 years or more.......  2  5

K9 Interviewer check: Sum codes which you have ringed at K4, K5 and K7.-------

Go to Section L.
L. Panic

L1 Informants who felt anxious in the past month

DNA: others (coded 3 at J4, page 31)........ 1  Go to Section M

Thinking about the past month, did your anxiety or tension ever get so bad that you got in a panic, for instance make you feel that you might collapse or lose control unless you did something about it?

Yes........ 1  Go to L2
No........ 2  Go to Section M

L2 How often has this happened in the past week?

Once...... 1*  Go to L3
More than once...... 2*  Go to L3
Not at all...... 3  Go to L8

L3 In the past week, have these feelings of panic been: (Running prompt)

a little uncomfortable or unpleasant..... 2
or have they been very unpleasant or unbearable ?........ 1*

L4 Did this panic/the worst of these panics last for longer than 10 minutes ?

Yes...... 1*
No....... 2
L5 Are you relatively free of anxiety between these panics?

Yes........  1
No........  2

L6 Informants who had phobic anxiety

DNA:others (coded 2 at K1)..........  1 Go to L7

Refer to situation/thing at K3.

Is this panic always brought on by (SITUATION/THING)?

Yes........  1
No........  2

L7 How long have you been having these feelings of panic as you have described?

less than 2 weeks.......  2
2 weeks but less than 6 months.....  2
6 months but less than 1 year.....  6
1 year but less than 2 years.....  1
2 years or more........  2

L8 Interviewer check: Sum codes which you have ringed at L2, L3, and L4.-------

Go to Section M.
M. Compulsions

M1 In the past month, did you find that you kept on doing things over and over again when you knew you had already done them, for instance checking things like taps or washing yourself when you had already done so?

- Yes........... 1 Go to M2
- No........... 2 Go to Section N

M2 On how many days in the past week did you find yourself doing things over again that you had already done?

- 4 days or more.... 1* Go to M3
- 1 to 3 days..... 2 Go to M3
- None..... 3 Go to M9

M3 Since last (DAY OF WEEK) what sorts of things have you done over and over again?

M4 During the past week, have you tried to stop yourself repeating (BEHAVIOUR)/doing any of these things over again?

- Yes...... 1* No...... 2

M5 Has repeating (BEHAVIOUR)/doing any of these things over again made you upset or annoyed with yourself in the past week?

Yes...... 2 No...... 3
Yes, upset or annoyed......  1*

No, not at all.......  2

M6  If more than one thing is repeated at M3

DNA:others.........  1  Go to M7

Thinking about the past week, which of the things you mentioned did you repeat the most times?

Describe here.........  Go to M7

M7  Since last (DAY OF WEEK), how many time did you repeat (BEHAVIOUR) when you had already done it?

3 or more repeats.....  3  1*  2
2 repeats......  2  2
1 repeat......  3

M8  How long have you been repeating (BEHAVIOUR)/any of the things you mentioned in the way which you have described?

less than 2 weeks............  1
2 weeks but less than 6 months......  2
6 months but less than 1 year......  3
1 year but less than 2 years......  4
2 years or more............  5

M9  Interviewer check: Sum codes which you have ringed at M2, M4, M5 and M7.

Go to Section N.
N. Obsessions

N1 In the past month did you have any thoughts or ideas over and over again that you found unpleasant and would prefer not to think about, that still kept on coming into your mind?

Yes........ 1   Go to N2
No........  2   Go to Section O

N2 Can I check, is this the same, thought or idea over and over again or are you worrying about something in general?

Same thought...... 1   Go to N3
Worrying in general...... 2   Go to Section O

Make a note on check flap to go to section I to record this worry, if not already recorded.

N3 What are these unpleasant thoughts or ideas that keep coming into your mind?

(Do not probe, Do not press for answer.)

N4 Since last (DAY OF WEEK), on how many days have you had these unpleasant thoughts?

4 days or more..... 4   Go to N5
1 to 3 days...... 2   Go to N5
None....... 3   Go to N9

N5 During the past week, have you tried to stop yourself thinking any of these thoughts?

Yes........ 1   
No.......  2
N6 Have you become upset or annoyed with yourself when you have had these thoughts in the past week?

Yes, upset or annoyed..... 1*
Not at all..... 2

N7 In the past week, was the longest episode of having such thoughts: (Running prompt)

a quarter of an hour or longer... 1*
or was it less than this?....... 2

N8 How long have you been having these thoughts in the way which you have just described?

less than 2 weeks........ 1
2 weeks but less than 6 months..... 2
6 months but less than 1 year....... 3
1 year but less than 2 years....... 4
2 years or more......... 5

N9 Interviewer check: Sum codes which you have ringed at N4, N5, N6 and N7.----

Go to Section O.
O. Overall effects

Informants who scored 2 or more on any section, A to N.

DNA: Others (All section scores 9 or 1 on check card).... 1

Now I would like to ask you how all of these things that you have told me about have affected you overall.

In the past week, has the way you have been feeling ever actually stopped you from getting on with things you used to do or would like to do?

Yes...... 1  Go to (a)
No..... 2  Go to (b)

(a) In the past week, has the way you have been feeling stopped you doing things once or more than once?

Once...... 1
More than once.... 2

(b) Has the way you have been feeling made things more difficult even though you have got everything done?

Yes...... 1
No...... 2
HITS™ A domestic violence screening tool for use in the community

HITS Tool for Intimate Partner Violence Screening: Please read each of the following activities and fill in circle that best indicates the frequency with which you partner acts in the way depicted.

<table>
<thead>
<tr>
<th>How often does your partner?</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physically hurt you</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Insult or talk down to you</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Threaten you with harm</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Scream or curse at you</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Clinical Research and Methods (Fam Med 1998;30(7):508-12.)

Each item is scored from 1-5. Thus, scores for this inventory range from 4-20. A score of greater than 10 is considered positive.
<table>
<thead>
<tr>
<th></th>
<th>பெயர்</th>
<th>மேல்புறம்</th>
<th>வாய்ப்பு</th>
<th>மீதமே வாய்ப்பு</th>
<th>பொருள் பண்ணைச் செய்யும் வாய்ப்பு</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>தமிழ் எழுதிய ஆராய்ச்சி வெளியீட்டு வாய்ப்பு வைக்கப்பட்டுள்ளதா?</td>
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<td>02.</td>
<td>எழுத்துப் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<tr>
<td>03.</td>
<td>தமிழ் எழுதிய ஆராய்ச்சி வெளியீட்டு வாய்ப்பு வைக்கப்பட்டுள்ளதா?</td>
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<td>04.</td>
<td>தமிழ் எழுதிய ஆராய்ச்சி வெளியீட்டு வாய்ப்பு வைக்கப்பட்டுள்ளதா?</td>
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<td>05.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>06.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>07.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>08.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>09.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>10.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<tr>
<td>11.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<tr>
<td>12.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>13.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<td>17.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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<tr>
<td>18.</td>
<td>எழுத்து மற்றும் பொருள் வைக்கப்பட்டுள்ளதா?</td>
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APPENDIX V

Kuppuswamy's Socioeconomic Status Scale – A Revision

TABLE 1. Socioeconomic Status Scale of Kuppuswamy (Urban, 1976).

<table>
<thead>
<tr>
<th>Score Card</th>
<th>Score</th>
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<tbody>
<tr>
<td>(A) Education</td>
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<tr>
<td>1. Professional or Honours</td>
<td>7</td>
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<tr>
<td>2. Graduate or Post-Graduate</td>
<td>6</td>
</tr>
<tr>
<td>3. Intermediate or Post-High-School Diploma</td>
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</tr>
<tr>
<td>4. High School Certificate</td>
<td>4</td>
</tr>
<tr>
<td>5. Middle School Certificate</td>
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</tr>
<tr>
<td>6. Primary School or Illiterate</td>
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</tr>
<tr>
<td>7. Illiterate</td>
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<table>
<thead>
<tr>
<th>Score</th>
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<tbody>
<tr>
<td>(B) Occupation</td>
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<tr>
<td>1. Profession</td>
</tr>
<tr>
<td>2. Semi-Profession</td>
</tr>
<tr>
<td>3. Clerical, Shop-owner, Farmer</td>
</tr>
<tr>
<td>4. Skilled worker</td>
</tr>
<tr>
<td>5. Semi-skilled worker</td>
</tr>
<tr>
<td>6. Unskilled worker</td>
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<tr>
<td>7. Unemployed</td>
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<table>
<thead>
<tr>
<th>Score</th>
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<tbody>
<tr>
<td>(C) Family Income Per Month (in Rs.)</td>
</tr>
<tr>
<td>1. &gt;2000</td>
</tr>
<tr>
<td>2. 1000-1999</td>
</tr>
<tr>
<td>3. 750-999</td>
</tr>
<tr>
<td>4. 500-749</td>
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<tr>
<td>5. 300-499</td>
</tr>
<tr>
<td>6. 101-299</td>
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<td>7. &lt;100</td>
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**Total Score**

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<th>Socioeconomic Class</th>
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<td>26-29</td>
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<td>16-25</td>
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<td>11-15</td>
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<td>5-10</td>
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<td>&lt;5</td>
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TABLE 2. Modified Family Income Groups of the Kuppuswamy’s Socioeconomic Status Scale (Modified for 1998)

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<thead>
<tr>
<th>Family Income Per Month (In Rs.)</th>
<th>Score</th>
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<tbody>
<tr>
<td>Original</td>
<td>Modified (Rounded off to nearest 50)</td>
</tr>
<tr>
<td>1. &gt;2000</td>
<td>13000</td>
</tr>
<tr>
<td>2. 1000-1999</td>
<td>6750-13499</td>
</tr>
<tr>
<td>3. 750-999</td>
<td>5050-6249</td>
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<tr>
<td>4. 500-749</td>
<td>3075-5049</td>
</tr>
<tr>
<td>5. 300-499</td>
<td>2025-3749</td>
</tr>
<tr>
<td>6. 101-299</td>
<td>675-2024</td>
</tr>
<tr>
<td>7. &lt;100</td>
<td>675</td>
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APPENDIX VI
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<th>chldmake</th>
<th>chldskn</th>
<th>med1f</th>
<th>medwhl</th>
<th>meddet</th>
<th>sabsi</th>
<th>sbsci</th>
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