

Psychiatric Comorbidity in Tropical Far North Queensland

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Abstract

Psychiatric comorbidity can be defined as the occurrence of at least one mental disorder plus one substance abuse disorder in the same person. Much research has been conducted on how to identify psychiatric comorbidity, and the barriers that mental health professionals have towards individuals with psychiatric comorbidity. The objective of this study is to provide baseline data that is required for researching such issues as prevalence rates, demographic indicators and possible links between disorders. The research was conducted in a community setting within the Crisis Assessment Treatment Team (CATT) of Cairns, a city situated in the tropical far north of the state of Queensland, Australia. The analyses focused on descriptive statistics and determining the predictors of comorbidity. The general finding of this study indicated that within this region the prevalence rate of psychiatric comorbidity was 52 percent. It is estimated that in Australia, between 32% to 87% of psychiatric patients also have alcohol or other drug problems. Age, residential area and poly-drug usage were significant predictors of comorbidity.

In 1994, Miller put forward the term psychiatric comorbidity as a definition for the occurrence of at least one mental disorder plus one substance abuse disorder in the same person. Mental disorders are frequently complicated by comorbid disorders, for example, medical illnesses, mental retardation and substance abuse (Drake & Mueser, 1996; Phillips & Johnson, 2001). Substance abuse was found to be the most frequent and clinically the most significant comorbid disorder amongst clients with mental disorders (Cuffel, 1996; Kandel, Huang & Davies, 2001). Furthermore, alcohol seemed to be the most commonly abused substance.

It was suggested by Cuffel (1996) that psychiatric comorbidity rates tended to be particularly high among young males and clients in high risk settings such as hospitals, emergency rooms

and homeless shelters. One reason given for the high rate among young males was deinstitutionalisation (Mullen, Burgess, Wallace, Palmer & Ruschena, 2000). A whole generation of people have developed their disorder in the community with few vocational, recreational and social opportunities. They suffer from the same pressures as any other young adult in the community, e.g. peer pressure, experimentation and peer socialisation. Several additional factors could also explain the high rates. These include the downward social drift into poor living settings; self-medication in an attempt to alleviate the side effects of the psychotropic medications and dysphoria associated with the mental illness; and attempts to avoid being labelled a “mental patient”(Minkoff & Drake, 1991).

The term substance refers to any drug, medication or toxin that people ingest, in any number of ways, in order to alter their mood or behaviour (Barlow & Durand, 1995; DSM-IV, 1994; Hamilton & Timmons, 1995). Both illegal drugs such as heroin, cocaine, marijuana, LSD, speed and ecstasy and legal drugs such as alcohol, caffeine and nicotine are included in the definition of a drug. Medication refers to such prescription drugs as codeine, mogodon, serapax, valium and amphetamines. Petrol, glue, thinners and carbon monoxide are toxins. Psychoactive substances refer to all drugs, whether legal or illegal, toxic or medicative that alter mood and/or behaviour, and all are potentially addictive. It is important to note that substance-use problems are more matters of degree than of kind. Therefore, one of the main problems is in trying to define what constitutes a moderate amount of an ingested substance. How much is too much?

The DSM-IV (1994) addresses this problem by defining substance use as the ingestion of psychoactive substances in moderate amounts that does not notably interfere with a person's social, educational or occupational functioning. Therefore, a person would be diagnosed with Substance Abuse (DSM-IV, 1994) if recurrently over a twelve month period that person (a) has failed to fulfil major role obligations (b) was using substances while operating machinery (c) was having substance related legal problems or d) was having social and interpersonal problems. Substance Abuse (DSM-IV, 1994) refers to the harmful consequences of repeated use and is more likely to appear in individuals who have recently started taking the substance.

Substance Dependence on the other hand, refers to a pattern of repeated self-administrations that usually result in tolerance, withdrawal and compulsive drug-taking behaviour (DSM-IV, 1994). Tolerance is the need for greater and greater amounts of the substance to experience the desired effect. Withdrawal relates to the negative physical responses of the body when the

substance is no longer taken. Compulsive drug-taking behaviour refers to the amount of time and energy spent in obtaining the substance. This includes visiting multiple doctors, stealing to obtain money to buy substances and going to great lengths to hide the substance from others.

Substance-related disorders can be further complicated by the presence of symptoms of other disorders such as schizophrenia and mood disorders. For example, does the person drink because they are depressed or are they depressed due to the circumstances surrounding their drinking? The DSM-IV(1994) tries to address this problem by stating that psychiatric symptoms such as depression or hallucinations would disappear within six weeks of stopping drug usage. If after six weeks the psychiatric symptoms were still present a separate psychiatric disorder would need to be considered.

For the purposes of this study alcohol will be isolated as the substance for analysis. Alcohol is considered the most assessable, socially acceptable and legal drug in Australian society. Therefore, it is anticipated that alcohol would be the most easily identified substance among staff and the most likely to be reported amongst clients.

The nature of the diagnosis and treatment for problems related to alcohol and other drug use is largely determined by models of dependence (Butt, 1992; Woody, 1996; Wheatley, 1998). These models can be distinguished by the manner in which the aetiology of the problem is conceptualised. This has lead to many interpretations concerning the relationship between substance abuse and the onset and progress of psychiatric disorders. However, in an attempt to explain the development of psychiatric comorbidity four hypotheses appear frequently in the literature. These are: (1) that psychiatric comorbid patients suffer from a primary mental illness which has substance abuse consequences (substance abuse sequelae); (2) that patients suffer from an addictive condition that has psychiatric consequences (psychiatric sequelae); (3) that patients have dual independent primary conditions; and (4) that the dual conditions have a common aetiology.

Much research (Miller, 1993; McKenna & Ross, 1994; Lennings, Meldrum & Walsh, 1996; Pols & Jurd, 1997) has been conducted to support the first three hypotheses. The fourth hypothesis is not supported in the literature and is thought to be statistically unlikely (Pols, 1992). It could be implied that the different hypotheses probably account for different segments of the psychiatric comorbid population. However, the main implication is that

psychiatric comorbidity is not simply a statistical phenomenon of co-occurrence but rather an interactive phenomenon placing mentally-ill people at a high risk of substance abuse and substance abusers at a high risk of mental illness.

The goal of using screening questionnaires is to discover the early signs of harmful substance habits in people. Screening tests can be administered in a face-to-face interview by a clinician or be self-administered by the client as a pen-and-paper or computerised test. Much debate and uncertainty prevails around the issues of not only how to access and classify comorbid clients but also what must be assessed to classify clients appropriately.

It would appear that a combination of a clinical assessment tailored to a specific population accompanied by structured data collection would lead to more reliable and valid diagnosis amongst the comorbid population than any single approach alone.

Demographic factors such as age, gender, education, income, mobility, ethnicity and occupation are considered important indicators for psychiatric disorders (Marsella, 1998; O'Dell, Turner & Weaver, 1998; Ross & Shirley, 1997). These factors are used because they may affect the person's psychological outlook, coping strategies and utilisation of psychiatric services. Alternatively, psychiatric comorbidity is thought to be associated with gender and age of onset (Hartung & Widiger, 1998; Lewis, Bucholz, Spitznagel & Shayka, 1996). However, such indicators as homelessness and marital status, although seen as less important (Marsella, 1998), could possibly be meaningful indicators for recidivism and the accessing of community services and programs.

Brady, Grice, Dustan and Randall (1993) and Crome (1997) reported that there was a high prevalence of somatization disorder, obsessive compulsive disorder (OCD) and major depression amongst female alcoholics. Male alcoholics were reported to have higher prevalence rates of antisocial personality disorder (ASPD) and schizophrenia. They also had more severe clinical presentations (Hoffman, DiRito & McGill, 1993).

Brady et al. (1993) reported that men were more than five times as likely to have alcoholism than women. However, the clinical portrayal of male and female alcoholics with ASPD is similar. They present younger, have an earlier onset of problem drinking with a higher rate of consumption, present with more medical complaints with poorer treatment outcomes, and more physical symptoms than non-alcoholics with ASPD. The Hoffman et al. (1993) study

also found that people with schizophrenia were ten times more likely than other mental illness people to be alcohol abusive or alcohol dependent and approximately eight times more likely to be drug abusive or drug dependent.

The age of onset was also significant, in that 80 percent of people with schizophrenia who abused alcohol did so before the age of 30 years. The medium age of the onset of mental illness is reported by Hoffman et al. (1993) to be 16 years, with 75 percent of people having their onset before 24 years. Rohde, Lewinsohn and Seeley (1996) found that in an adolescent population, alcohol disorders did follow psychiatric disorders. Research by Rohde et al. (1996) found that 85 percent of substance-abusing adolescent (14-18 years) inpatients had some form of comorbid disorder. They also found that alcohol dependence was more likely to follow the onset of adolescent anxiety and disruptive behavioural disorders such as attention-deficit hyperactivity disorder (ADHD), conduct disorder and separation anxiety.

However, a large proportion of adolescents with alcohol disorders have been found to have a childhood psychiatric disorder (Grilo, Becker, Walker, Levy, Edell & McGlashan, 1995; Hovens, Cantwell & Kiriakos, 1994). This is quite probably due to these disorders beginning in childhood and alcohol use not starting until adolescence. Although this area has not been researched adequately, these findings do suggest the efficaciousness of a procedure that screens all people presenting to a psychiatric unit, and especially those people under the age of 30 years for possible alcohol use/abuse.

Substances in general, and alcohol in particular are also capable of producing psychotic symptoms in vulnerable individuals. However, drug-induced psychosis is usually short-lived with recovery occurring within a couple of days of ceasing substance use. In effect, substance abuse not only diminishes the effectiveness of the medication but also enhances the likelihood of drug-induced psychosis and relapse (Wheatley, 1998). Additionally, a mentally-ill individual who is abusing substances runs a higher risk of social complications such as homelessness (Woody, 1996).

Studies (Dennis, Buckner, Lipton & Levine, 1991; Levy, 1993; Fischer & Breakey, 1991; Opler, White, Caton, Dominguez, Hirshfield & Shrout, 2001) have indicated that a pattern of comorbidity is emerging within the homeless population. Men are more likely to be singly diagnosed as alcoholics, while women are more likely to have a sole mental disorder. Alcoholics are less likely to abuse drugs while drug abusers are more likely to abuse alcohol.

Prevalence rates of homelessness among the psychiatric comorbid population have been reported as being as high as 26 percent (Fischer cited in Drake & Mueser, 1996). Other reviews (Dennis et al., 1991; Drake, Osher & Wallach, 1991) have indicated prevalence rates ranging from 10 - 46 percent. It is also estimated that over half of the psychiatric comorbid population are single, have little or no contact with family and friends and do not access help (Fischer & Breakey, 1991). Further to these findings, single, homeless psychiatric comorbid clients are usually excluded from housing and treatment programs as these services are specifically designed for people with single disorders.

These are a few of the issues suggested for further research into psychiatric comorbidity. However, before any of these issues can be researched it is essential to have established a baseline study indicating the prevalence of psychiatric comorbidity, possible demographic indicators, and the possible relationships between specific mental disorders and substance abuse. This study aims to provide this data along with an evaluation of the effectiveness of the current substance abuse questions conducted by Crisis Assessment Treatment Team (CATT). The initial assessment form presently used by CATT will be evaluated for its effectiveness in documenting psychiatric comorbidity.

Method

Subjects

Using a descriptive research approach, this study gathered information from the Crisis Assessment Treatment Team (CATT) at Community Mental Health Service. The sample was drawn from all client files accessing the CATT over a period of nine weeks. Subject files had to meet certain criteria which included the completion of a full initial assessment with an initial diagnosis based on the DSM-IV of a mental and/or substance related disorder. From the total population of 369, 243 client files were evaluated for inclusion in the study. Excluded were client files that were inadequately filled out for the purposes of this study (N = 126). Not all referrals to CATT proceed to full initial assessment. Some referrals are regarding information only and others are regarding the possibility of a particular person presenting to CATT in the near future.

Materials

Demographic information formed part of the admission or initial contact procedure. Therefore, no specific instructions to staff were necessary. The variable ratings chosen are as follows:

Regional Address. Staff recorded addresses in either suburbs, towns, cities or states. To standardise the recording of these categories the Australian Bureau of Statistics guidelines were used. The categories were; metro, non-metro, rural, remote, isolated, interstate, itinerant and overseas. Metro referred to the State capital, Brisbane. Non-metro included the other cities in the state, for example Townsville, Cairns and Mount Isa. Atherton, Mareeba, Innisfail, Tully, Cardwell, Mossman and Malanda related to towns within a rural setting. Remote areas were considered to be Weipa, Cooktown, Normanton and Burketown. Isolated areas referred to Hopevale, Yarrabah, Horn Island, Wujal Wujal, Lockhart River, Napranum, Kowanyama, Pormpuraaw, Aurukun and Mapoon. Interstate referred to any other State or Territory within Australia. The classification of itinerant referred to people who had no fixed address. An overseas address constitutes people on holiday, whether for pleasure or working, from any country that is not considered to be a part of Australia.

Psychiatric Diagnosis. After initial assessment the Medical Officer or Registrar summarises the assessment and makes a tentative diagnosis on the client. The diagnosis of clients who already have a file are usually more accurate. These diagnoses are based on the DSM-IV categories. Although the initial diagnosis of the disorder is tentative the overall DSM-IV category usually remains unchanged. For the purpose of this study all diagnoses were considered tentative and the categories used were in accordance with the DSM-IV. These were as follows; Delirium, Dementia and Amnestic and Other Cognitive Disorders, Substance Related Disorders, Schizophrenia and other Psychotic Disorders, Mood Disorders, Anxiety Disorders, Eating Disorders, Personality Disorders.

Substance Use. A section within the initial assessment form relates to substance use. Although this study was primarily interested in alcohol, information was collected in regards to poly-drug use. In relation to poly-drug use, the substance that was the most frequently used was considered the main substance and was recorded as substance one. The second most frequently used substance was substance two and so on. Initially each substance was recorded, however, for the purposes of this study these substances were further categorised into alcohol or other drugs, and only substance one was considered for analysis.

Ratings of light, moderate and heavy alcohol consumption were made according to the guidelines Pols and Hawks recommended in 1992. This is also consistent with the World Health Organisations (WHO, 1989) recommendations on safe drinking patterns. One unit of alcohol is equivalent to one standard drink or ten grams of alcohol content. One standard drink is one middy of full strength beer or two middies of light beer or one glass of wine or one single nip of spirits. There are distinct differences in recommended alcohol consumption levels between males and females (see Pols & Hawks, 1992). Thus, it is critical when recording the rating, that the client's gender, amount consumed and the frequency or regularity of that consumption be taken into consideration.

Screening Measures

Ewing (1984) developed the CAGE questionnaire for the detection of alcoholism in 1968. The four yes/no questions focus on identifying substance abusers by concentrating on the person's lifetime, as opposed to current drinking history. The name is derived from the four questions: Have you ever felt you ought to CUT down on your drinking? Have people ANNOYED you by criticising your drinking? Have you ever felt bad or GUILTY about your drinking? Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (EYE opener)? (Ewing, 1984). Two or more yeses (positive) answers to the questions suggest the client is at risk of, or suspected of having alcohol problems, indicating a need for further assessment. The CAGE questionnaire is popular and has been extensively used in primary-care settings as it only takes one minute to complete and is easy to administer either verbally or in written form (Liskow, Campbell, Nickel & Powell, 1994). The CAGE questionnaire appears to have good face validity.

CAGE has been administered in different settings and populations. Various medical, surgical and psychiatric inpatient settings have demonstrated a sensitivity of 75 to 91 percent and a specificity of 77 to 96 percent (Liskow et al., 1994). Similar results have been reported in various outpatient clinical settings.

Procedure

Ethical clearance was obtained from both James Cook University and the Cairns Base Hospital. The current initial assessment forms used by CATT were utilised to evaluate their effectiveness in eliciting accurate information on substance abuse. The clients' gender, age,

marital status, residential area, mental disorder diagnosed, when first diagnosed, along with substance used, amount used, frequency of use and any previous presentation to Drug and Alcohol Services was drawn from client files. For a period of nine weeks, one of the researchers, at regular intervals (once a week) collected the above mentioned information from current client files, which was immediately coded and transferred to the master file for analysis.

Results

Sample Characteristics. The study sample of 243 subjects consisted of 113 male and 130 female clients who ranged in age from 16 to 72 years. The median age was 32 years, and sixty-one percent of clients had no partners. The most common place of residence for clients was in non-metropolitan areas (72 percent), followed by itinerants (12 percent), interstate (7 percent), and rural areas (4 percent). The remaining five percent consisted of clients from metropolitan, remote and isolated areas and overseas visitors.

The most common psychiatric diagnosis was mood disorders (28 percent of entire sample), followed by substance related disorders (19 percent), anxiety disorders (14 percent), and schizophrenia and other psychotic disorders (13 percent). Although not classified in the DSM-IV(1994) as a disorder, 14 percent of clients were attempting suicide. The remaining 12 percent consisted of other diagnoses. The onset of a psychiatric disorder within this population ranged from one month ago to 35 years ago, with the median time of onset being six months ago.

Psychiatric Diagnosis. As shown in Table 1, females (53.5 percent) were marginally more likely than males (46.5 percent) to be referred to the CATT. However, substance related disorders were 20 percent more prevalent within the male population, while mood disorders and anxiety disorders and eating disorders were 30 percent more prevalent within the female population. Additionally, males were no more likely than females to be referred to CATT for attempted suicide.

Table 1: Gender differences in relation to mental disorders

Male	Female	Total Population
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	N	%	N	%	N	%
Schizophrenia	16	14	15	11	31	13
Substance Related	33	30	14	10	47	19
Mood Disorder	24	21	44	34	68	28
Personality Disorder	10	9	9	7	19	8
Eating Disorder	-	-	4	3	4	2
Dementia & Cognitive	2	1	1	1	3	1
Anxiety Disorder	8	7	27	21	35	14
Suicide	19	17	15	12	34	14
None	1	1	1	1	2	1
Total	113	100	130	100	243	100

Overall, 42 percent of clients were aged between 30 and 44 years (See Table 2). Within this age group mood disorders were the most prevalent of the mental disorders. The prevalence of mood disorders was also high within the 45 years and over age group. The majority of client's between 15 - 29 years were diagnosed as having substance related disorders and mood disorders. Of interest were the clients diagnosed with anxiety disorders. The majority of these clients were within the 45 years and over age group.

Table 2: Age in relation to mental disorders

	Age						Total Population	
	15-29		30-44		45+			
	N	%	N	%	N	%	N	%
Schizophrenia	10	11	13	13	8	16	31	13
Substance Related	24	26	15	15	8	16	47	19
Mood Disorder	23	25	31	30	14	28	68	29
Personality Disorder	7	8	11	11	1	2	19	8
Eating Disorder	2	2	2	2	-	-	4	1.5
Dementia & Cognitive	-	-	-	-	3	6	3	1

Anxiety Disorder	9	10	15	15	11	22	35	14
Suicide	17	18	12	12	5	10	34	14
None	-	-	2	2	-	-	2	0.5
TOTAL	92	100	101	100	50	100	243	100

Substance Abuse. As Table 3 indicates, males (59 percent) were more likely to be abusing substances on referral to the CATT than females (43 percent). Overall, 49 percent of people accessing CATT were not abusing substances. However, of the 51 percent of subjects who were abusing substances, alcohol was the most common substance (80 percent).

Table 3: Gender differences in substance abuse

	Male		Female		Total Population	
	N	%	N	%	N	%
Alcohol	53	47	46	35	99	41
Other Drugs	14	12	10	8	24	10
None	46	41	74	57	120	49
Total	113	100	130	100	243	100

As shown in Table 4, the majority of clients aged 30 and over were not abusing substances. However, the majority of clients aged between 15 - 29 years were abusing substances. Of interest is the comparison between alcohol and other drugs. More clients within the 15 - 29 age group were reporting the use and/or abuse of drugs other than alcohol.

Table 4: Age differences in substance abuse

	15-29		30-44		45+		Total Population	
	N	%	N	%	N	%	N	%
Alcohol	39	42	43	43	17	34	99	41

Other Drugs	15	16	6	6	3	6	24	10
None	38	41	52	52	30	60	120	49
Total	92	100	101	100	50	100	243	100

Psychiatric Comorbidity. Overall, there were more females presenting to CATT than males (see Table 5). Males were more likely to be abusing substances.

Table 5: Comorbidity in relation to gender

	Male		Female		Total Population	
	N	%	N	%	N	%
Comorbidity	67	59	56	43	123	51
No Comorbidity	46	41	74	57	120	49
Total	113	100	130	100	243	100

Table 6 indicates that 51 percent of people accessing CATT during the research period were abusing substances. The most prevalent age group was 30 - 44 year olds where 49 percent were abusing substances. However, 58 percent of the 15 - 29 age group were also abusing substances. Of interest is that with the increase of age there are less people accessing CATT.

Table 6: Comorbidity in relation to age

	15-29		30-44		45+		Total Population	
	N	%	N	%	N	%	N	%
Comorbidity	54	58.5	49	49	20	40	123	51
No Comorbidity	38	41.5	52	51	30	60	120	49
Total	92	100	101	100	50	100	243	100

As expected, the majority of people live in the non-metropolitan areas. However, of interest from Table 7 is the high rate of substance abuse in the rural areas and within the itinerant population.

Table 7: Comorbidity in relation to residential area

Population	Metro		Non Metro		Rural		Remote		Isolated		Interstate		Itinerant		Overseas		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Comorbidity	2	33	92	53	4	40	-	-	1	50	9	50	15	52	-	-	123	51
No Comorbidity	4	67	82	47	6	60	3	100	1	50	9	50	14	48	1	100	120	49
Total	6	100	174	100	100	100	3	100	2	100	18	100	29	100	1	100	243	100

Table 8 indicates alcohol was the most prevalent substance and people with mood disorders were the highest abusers of alcohol.

Table 8: Substance abuse in relation to mental disorder

	None		Alcohol		Other Drugs		Total Population	
	N	%	N	%	N	%	N	%
Schizophrenia	7	6	20	20.2	4	17	31	13
Substance Related	28	23	13	13.1	6	25	47	19.5
Mood Disorder	35	29	29	29.3	4	17	68	28
Personality Disorder	8	7	9	9	2	8	19	8
Eating Disorder	3	2.5	1	1	-	-	4	1.5
Dementia & Cognitive	3	2.5	-	-	-	-	3	1

Anxiety Disorder	23	19	11	11.1	1	4	35	14.5
Suicide	13	11	14	14.2	7	29	34	14
None	-	-	2	2.1	-	-	2	0.5
Total	120	100	99	100	24	100	243	100

Comorbidity Predictors Discriminant analysis was considered the most appropriate technique for this part of the study. Although there were 243 subjects only 123 cases did not contain missing data. This number of subjects is just above the minimum required for the sample size criterion.

As reported in Table 9 the univariate ANOVA procedures and Multiple Discriminant Analysis (MDA) reveal that at the .05 level, three groups are statistically different, residential address, age and poly drug use. The direction of the discriminant loading for residential address confirms that the majority of clients live in non-metropolitan areas. The negative loadings for age are relative to the majority of clients being younger than 40 years. The positive loadings for poly-drug use indicate that clients are users of multiple substances including heroin, speed, and marijuana. With a hit ratio of 42 percent being consistent with a 'chance only' predictability, there is no real confidence in the predictive validity of any of the discriminant functions.

Table 9: Results for differences in predictors of Comorbidity

Predictors	One Way ANOVA		MDA	
	F Ratio	Significance Level	Discriminant Loadings	Group Mean
Age	5.53	0.00	-0.619	1.704 (2)
Gender	0.25	0.97	0.671	1.452 (4)
Partner	1.06	0.39	0.726	1.356 (5)
Residential Address	9.57	0.00	-0.748	2.937 (1)
Poly Drug Use	3.88	0.00	0.649	1.855 (3)
Percent correctly classified (Hit Ratio) 42%				

In summary, though three demographic variables did rank as significant in predicting comorbidity, the validity of these variables are questionable due to the low percentage of correctly classified cases.

Discussion

This study presents preliminary findings on the first investigation into psychiatric comorbidity in Far North Queensland. Researchers (Butt, 1992; Case, 1991; Drake & Mueser, 1996; Hall, 1996; McKenna & Ross, 1994; Wheatley, 1998) have found that not enough is known about psychiatric comorbid clients. Better communication of information between services and the accessibility of the history of client needs is required for adequate assessment, effective treatment and appropriate service provisions. A lack of research in psychiatric comorbidity could lead to a cycle of hospitalisation and a bleak recovery for dually-diagnosed clients.

Currently, substantial information on people with comorbid problems is not available in Australia. However, it is thought that the number of people recognised as having psychiatric comorbidity is increasing. Some literature (Hall, 1996; Harkness, 1994; Pols, 1992) suggests that clients within the clinical setting would have higher levels of comorbidity than clients in the community setting. This is due mainly to the increased chances of receiving treatment for the mental disorder. Other research (Lennings et al., 1996; McKenna & Ross, 1994) suggests that the reported prevalence of psychiatric comorbidity is highly variable and influenced by population characteristics and methodological factors.

The results of this study clearly support the literature in relation to the prevalence rates of psychiatric comorbidity. Alcohol abuse was more prevalent amongst clients with mood disorders. Itinerancy rates were reported as low compared to the overseas literature. Females were more likely than males to be accessing the services of CATT. However, males were more likely than females to be abusing substances.

Alcohol was reported as the most commonly used or abused substance. This is also consistent with previous research (Cuffel, 1996; Drake & Mueser, 1996). Despite the implications that alcohol is a major problem in substance abusers, caution should be heeded on the reliability of these implications. Denial and minimisation on the part of the client can be expected at the time of initial assessment (Levy, 1993; Wheatley, 1998).

The most common psychiatric diagnosis was mood disorders. However, substance-related disorders, schizophrenia, anxiety disorders and attempted suicide were fairly prevalent. The results have indicated that substance-related disorders were 20 percent more prevalent within the male population. Whereas mood disorders and anxiety disorders were 27 percent more prevalent within the female population. Once again, these findings are generally consistent with the studies examined.

Overall, this study has indicated that within the community setting, mood disorders are the most prevalent psychiatric disorder and alcohol is the most abused substance. Additionally, the rate of psychiatric comorbidity is reported at 51 percent. From the quality and depth of the information collected it could be suggested that the staff at CATT are either very aware of psychiatric comorbidity or at least very aware of potential substance abuse within the general population. Furthermore, the completion of standardised initial assessment forms are compulsory at initial interview.

There are several limitations of this study. Firstly, information was gathered from the initial assessment forms in client files. It is probable that substance abuse information was neither forthcoming from the clients' perspective nor important enough from the admitting person's perspective. Additionally, substance abuse may not be apparent nor diagnosed until medication for the symptoms associated with the mental disorder have been administered and monitored. Therefore, the estimates of substance abuse are probably conservative. Secondly, the accuracy of classifying disorders is also problematic and should only be considered as tentative. The data collected was dependent on the initial assessment. Therefore, the diagnosis could have changed by the time the client was passed over for case management.

Additional psychiatric comorbidity research in Far North Queensland is needed. Studies using larger samples would allow for more accurate information regarding substance abuse among the mentally ill and the mentally ill substance abusers. Longitudinal studies would permit the examination of the possible relationships between the disorders over time. These studies are important in identifying a very vulnerable subgroup of people who may require specific treatment.

In spite of the limitations of this study, the authors conclude that within this preliminary study the overall prevalence rate of psychiatric comorbidity in Far North Queensland was 52 percent. This not only underlines the importance of further research in this area but also the

need for a more accurate screening procedure for substance abuse at the time of initial assessment.

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