

Illness perceptions, attitudes to substance use and medication adherence. How are these linked with, and what is the rate of, substance abuse in people with a mental illness in two Sydney mental health NGOs.

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## **Summary**

The study was conducted to determine the relationships amongst illness perceptions, drug and alcohol comorbidity, attitudes towards comorbidity, medication adherence and some aspects of recovery amongst clients of two mental health NGOs. In addition the staff of the two services were surveyed in relation to their attitudes towards those with comorbidity as well as towards the mentally unwell. Staff and client attitudes towards those with comorbidity were then compared to those of the general public. A total of 333 clients and 81 staff of the two services were surveyed and 547 members of the general public. Parametric and Non-parametric Analysis of Variance, Chi Square, Structural Equation Modelling and Partial Least Squares Regression were used to find mean, frequency differences and models of comorbidity stigma and recovery, respectively. A Single Category Implicit Attitudes Test was used to investigate implicit staff attitudes towards those with mental illness. The results showed that there was no strong relation between drug and alcohol comorbidity and the recovery measures and that, amongst this client group, a mental illness model of stigma was more applicable to comorbidity attitudes than a drug and alcohol stigma model. Staff at the services do not show evidence of explicit negative attitudes towards those with comorbidity or the mentally ill, but there is some indication that there is a negative implicit attitude. Factor analyses of the scales revealed that one scale, a modified Social Distance Scale would be useful as a brief tool to investigate the level of comorbidity stigma. Rates of problematic drug and alcohol use amongst clients were found to be higher than was found at either NGO from screening at entry to the service.

## **Introduction**

Substance abuse has been shown to be strongly associated with poorer outcomes for mental health service consumers (eg. Mueser et al 1998) and one influence on behaviour is attitudes. In the case of mental illness support services the attitudes of both the staff and the clients can influence the substance using behaviour of the service clients. Stigmatising attitudes towards clients with comorbidity can result in lower help seeking behaviour and a disruption to the therapeutic alliance. While the complete effects of staff attitudes towards client drug use are currently unknown at least one study conducted in Sydney methadone clinics has found that where staff have a more abstinence focussed approach to drug use the clients were more likely more likely to be discharged (Capelhorn, Lumley and Irwig, 1998) A more targeted investigation of attitudes towards drug use in Australian NGOs could be expected to be of benefit to both service delivery and workforce training and planning for the comorbid population. Additionally, the investigation of client attitudes to non-medical psychoactive substance use will shed light on the propensity for such use and suggest the reasons clients believe make substance use acceptable or unacceptable. Research conducted to date suggests that the self reported reasons given by people with severe mental illness for using non-medically prescribed psychoactive substances are similar to the self reported reasons that are given by the general population such as: alleviation of social problems, insomnia and depression (Dixon et al 1991). Additionally dysphoria has been found to be a strong self reported indicator of substance use in a number of studies (Addington & Duchak, 1997; Baigent, Holme, & Hafner, 1995; Carey & Carey, 1995; Dixon et al.1990, Warner et al., 1994).

Both mental illness and substance abuse are associated with stigmatising attitudes and stigmatising attitudes are associated with lower help-seeking behaviour (Corrigan 2004) There are a number of psychological attributes that contribute to the formation of stigmatising attitudes and amongst these are perceptions of dangerousness and personal responsibility for illness (Corrigan et al 2002). Personal responsibility, in particular, plays a role in the formation of stigmatising attitudes in relation comorbid substance use, key relatives of people with a mental

illness and comorbid substance abuse have more negative affect and thought that their dually diagnosed relative was more responsible for their psychiatric symptoms than relatives of someone with severe mental illness only (Niv et al 2007). While it has been shown that contact with the stigmatised group can reduce stigmatising attitudes (Corrigan et al 2001) it has also been shown that not all types of contact reduce stigma, but that some forms of contact seem to induce stigmatising attitudes and this seems to be particularly so for health professionals (Servais and Saunders 2007, Bell et al 2006, Rose and Treloar 2008). Health professionals are not, therefore, rendered immune from holding stigmatising attitudes towards the mentally ill and comorbid population simply due to their regular contact, indeed it seems that some health professionals can hold more stigmatising attitudes within their area of speciality than the general public (Bell et al 2006).

Patrick Corrigan has identified two forms of stigma; public stigma and self stigma (Corrigan and Watson 2002) the causes and effects of which are each quite complex. Looking at public stigma, which means the attitudes of those not a part of the stigmatised group, Corrigan et al 2001 have identified a model that identifies familiarity and perceptions of dangerousness as components of social distance. Corrigan et al (2002) used a 20 question attribution scale to investigate the attitudes of people towards those with severe mental illness. That study found that dangerousness attributions made for a better model of the stigma than personal responsibility. In the field of drug and alcohol research Niv et al (2007) have identified personal responsibility as being a factor in the negative attitudes of carers towards those with comorbidity. Thus a model of stigmatising attitudes related to comorbidity may be expected to differ from that elucidated by Corrigan et al (2002) and that differences would probably be the incorporation of a stronger personal responsibility component, but would still include familiarity and perceptions of dangerousness. Private stigma is stigma that the marginalised group apply to themselves. People with severe mental illness, for example, are less likely to engage in help seeking behaviour due to the stigma involved (Holmes and River 1998). Private stigma may

even, in part at least, be beneficial for those with substance abuse problems, as those with substance abuse problems may feel let down by other heavy users of substances who lack the control to adequately 'handle themselves' and who thus experience difficulties that result from their substance use (Room 2005, Gusfield 1996 pp124-5, Slavin 2004). This attitude relates to the personal responsibility attribution for stigma, but may have a group norming effect that offers some assistance to users not to lose control, but does little to reduce the problem behaviour below what most would see to be an unacceptable level of risk of harm.

Substance abuse has also been shown to be one of the strongest factors influencing medication adherence amongst the mentally ill/substance abusing comorbid population (Elbogen et al 2005, Owen et al 1996). Additionally, there is strong evidence to show that mental illness service consumers generally have poorer outcomes when they are non-adherent to medication (eg. Dolder et al 2003, Elbogen et al 2005). While the academic literature on the reasons that some consumers are more adherent to medication than others can be inconsistent and weak, there is good evidence that one of the contributory factors to medication adherence is the mental illness service consumers' perception of their illness and treatment efficacy (Liu-Siefert et al 2007, Amdor et al 1991, Diamond et al 1983, Janz and Becker 1984, McEvoy et al 1981) and that comorbid substance abuse can alter the relationship between insight and adherence (Kamali et al 2001). Intriguingly it has been noted in a meta-analysis of published literature that the negative symptoms of schizophrenia were less in consumers who had comorbid substance abuse (Potvin et al 2006) which supports the 'self medication' hypothesis of the aetiology of substance abuse. Further Elbogen et al (ibid) found that depression was directly related to medication adherence and therefore to poorer outcomes for consumers and thus a thorough investigation of the factors affecting substance abuse should include an evaluation of depression and its relationships to the other variables being investigated. Although the authors are not aware of any published outcome studies of mental health service consumers that investigates all of these factors and their relationships it could be expected that as they have

each individually been associated with non-adherence to medication then each would increase the likelihood of poorer outcomes for comorbid consumers.

There are as yet no studies that systematically explore the relationships between medication non-adherence, illness perceptions, depression and substance abuse in mental illness service consumers, let alone in Australian NGOs. However, there is some evidence (Kamali et al 2001) that substance use mediates both insight and compliance, and an understanding of this relationship would be of significant benefit to workforce training and development to be able to deliver higher quality services to comorbid consumers and to deliver better outcomes to the consumers and to the general community thereby. The current study then explored the relationships between illness perception, efficacy of treatment, depression, substance abuse and medication adherence. The aim is to create a greater understanding of the relationships amongst these factors which can act as a guide for future planning and provision of services for comorbid consumers.

This study gained information on the attitudes towards substance misuse in two large NSW based NGOs giving supported accommodation and outreach support to people with severe mental illness. The study gained information from both staff and clients of those services as well as those of the general public and involved clients with a substance abuse comorbidity and those with no comorbidity. The proposed project would aim to find differences in attitudes between those clients who have self reported having a substance comorbidity and those who do not. Information on differences in attitudes would be expected to be useful for workforce development and planning by the NGOs involved as well as other organisations in NSW and Australia and in the planning of future interventions aimed at reducing the incidence of comorbid substance abuse in mental health services. Additionally, the study compared the results between the two NGOs to assist in determining some of the reasons for the self-reported substance use rate being approximately 3% in one service and 29% in the other.

## Method

The study was approved by the Human Research Ethics Committee at the University of New South Wales, approval HREC 08137.

A 125 question survey was given to clients of two NSW mental health NGOs. The client survey was conducted using either of two methods. In the first method, surveys were self completed at a central location with the researchers present and direct care staff excluded from the area. Where clients were illiterate the researchers assisted with completion of the survey in a private location. In the second method, as many of the services are outreach based, surveys were distributed by staff while performing their normal daily duties of client care. The survey was self-completed and then placed by the client in a sealed envelope to be returned to the researchers. Scales included previously validated screening tools, AUDIT (Alcohol Use Disorders Identification Test and the DAST (Drug Abuse Screening Test), both scales were reviewed as appropriate for use in this population in Dawe, Loxton, Hides Kavanagh and Mattick 2002. Additionally, brief scales were used that have been previously been used to develop path models of stigmatizing attitudes towards the mentally ill (Corrigan et al. 2002), the Social Distance Scale (SDS), and Attributions Questionnaire (AQ). The Attributions Questionnaire is composed of a number of sub scales; Pity, Helping Behavior, Anger, Responsibility, and Avoidance. The Level of Contact Report (LOCR), (Corrigan et al. 2001) was also used. These scales refer to mental illness only but the wording of the scales was changed to asking about "people who heavily use drugs or alcohol and have a mental illness". A short measure of medication adherence, the Medication Adherence Report Scale (Horne, Clatworthy, Polmear and Weinman 2001) was used to assess interactions of attitudes with adherence to psychotropic medication. Clients were paid \$25 to complete the survey. Staff completed the questionnaires that related to attitudes only, the SDS, LOCR and AQ. The staff questionnaire

was individually completed on a laptop computer at the usual workplace within normal work hours.

Statistical analysis was conducted in SPSS 18.02 (2010), The Unscrambler 10.1 (2010) and EQS 6.1 (2010). One way, and three way between groups Analysis of Variance were used to determine significant mean differences,  $\chi^2$  tests were used for determining differences in frequencies, Pearson correlations were used to investigate the relationships between variables. Non-parametric Kruskal Wallis independent samples test with stepdown post hoc analysis, was used where there were large differences between group Ns, as well as heteroscedasticity. Principal Components Factor Analysis, set to report all factors with an Eigenvalue greater than 1 was used to investigate the factorability of the SDS. Where Analysis of Variance was used and there was significant heteroscedasticity in the data the Brown-Forsyth robust test was applied. Missing data was replaced using median replacement in SPSS. Factor Analysis in SPSS 18 was used to assess the factorability of scales. The Unscrambler 10.1 is a multivariate analysis package that was used to derive Partial Least Squares Regression type 2 (PLSR2) analysis of all factors of the questionnaire to assess their relationship with client recovery. EQS 6.1 is Structural Equation Modelling (SEM) software that was used to model the stigma associated with comorbidity. Staff also completed a Single Category Implicit Attitudes Test (SCIAT) (Karpinski & Steinman, 2007), which is a timed test aimed at investigating implicitly held attitudes compared to those explicitly stated. To serve as a comparison staff were also asked to rate how 'warmly' or 'coldly' they felt towards those with mental illness, which is an explicit measure of attitude.

## **Results**

A total of 82 staff surveys, 333 client, and 547 public based surveys were received. There were 51 Aftercare staff and 31 New Horizons staff surveyed as well as 163 New Horizons clients and

170 Aftercare clients. All clients in appropriate services within the organisation were approached by staff, with a response rate of approximately 25%. The level of missing client data was acceptable with less than 5% missing values on each variable. As the staff data were collected via computer there were no missing data. Data on four age ranges were collected, 18-25, 26-40, 41-60, and over 60. As the numbers in the youngest and oldest age groups were too low for valid statistical comparison the ranges were collapsed to under 41 and over 40, with less than 30 clients and 20 staff being under 26 or over 60.

### **Rates of problematic drug and alcohol use.**

The overall rate of problematic alcohol use amongst these mental health service clients as defined by the AUDIT measure was 25.5%, the rate of problematic drug use amongst clients as defined by the DAST was 39%, and the percentage of people with problematic use of both drugs and alcohol was 14.7%. When the NGOs were compared it was found that there was a significantly higher rate of problematic alcohol use amongst NH clients (33%) compared with AFC clients (19%),  $\chi^2(1, N=333)=8.2, p<0.05$ . There were no differences between organizations in the rate of problematic drug use or alcohol/drug use, 40%/38%  $\chi^2(1, N=333)=0.28, p>0.05$ , 12%/18%,  $\chi^2(1, N=333)=2.41, p<0.05$  respectively. Comparing those clients under 41 with those over 40 shows that younger people tended to have higher rates of problematic alcohol use and drug problematic use 31%/20%,  $\chi^2(1, N=333)=5.6, p<0.05$ , 46%/32%,  $\chi^2(1, N=333)=7.2, p<0.05$  respectively.

### **Self Stigmatization of Comorbid Clients**

One way Analysis of Variance of each attribute, with two levels of problematic alcohol use as the fixed factor (no problematic use, problematic use), found that clients who were identified as having problematic alcohol use were; less afraid of people with comorbidity, less likely to avoid those people and to have a greater level of contact (Table 1).

**Table 1: Attitudes of those with problematic alcohol use compared to others. (Significant results only)**

Attribute	<u>No Alcohol issue</u>		<u>Alcohol issue</u>		F	Df	p
	Mean	SD	Mean	SD			
<b>Fear</b>	10.70	4.69	12.24	4.52	6.95	1/331	0.01
<b>Avoidance</b>	4.92	2.14	5.58	1.92	6.33	1/331	0.01
<b>Level of contact</b>	17.75	14.42	25.36	15.22	16.72	1/331	0.00

One way Analysis of Variance of each attribute, with two levels of problematic drug use as the fixed factor (no problematic use, problematic use) found that people with mental illness and drug issues are; more likely than those without drug issues to help others similarly affected, to be less angry towards them, to be less fearful, to have a greater level of contact and to be more adherent to their psychiatric medication (Table 2).

**Table 2: Attitudes of those with problematic drug use compared to others (significant results only)**

Attribute	<u>No drug issue</u>		<u>Drug issue</u>		F	Df	p
	Mean	SD	Mean	SD			
Helping Behavior	7.61	3.21	6.62	2.71	8.47	1/331	0.00
Anger	5.77	2.51	6.40	2.25	5.43	1/331	0.02
Fear	10.54	4.64	11.95	4.65	7.27	1/331	0.01
Level of contact	15.57	12.81	26.21	15.87	44.16	1/331	0.00
Medication Adherence	22.18	3.39	20.21	4.69	19.73	1/331	0.00

### **Comparison of Staff and Client Attitudes to Comorbidity**

When the data from the staff of the two organisations were combined and compared with client data, staff were significantly more certain than clients that they would help someone who had a drug and alcohol comorbidity. They felt less pity, less anger, and felt that these people were less dangerous. Staff were less fearful of people with comorbidity than clients, felt that they were less likely to avoid, and had a higher level of contact with people with comorbidity than clients (Table 3).

**Table 3: Attitudes of clients compared to those of staff**

Attribute	<u>Client</u>		<u>Staff</u>		F	df	p
	Mean	SD	Mean	SD			

Helping Behavior	7.225	3.056	4.671	1.656	53.4	1,233*	0.00
Pity	6.931	3.402	7.878	3.000	5.3	1,413	0.01
Anger	6.020	2.425	7.988	1.659	48.4	1,176*	0.00
Danger	4.913	2.201	6.683	1.563	47.1	1,169*	0.00
Fear	11.089	4.688	15.476	3.100	64.8	1,183*	0.00
Responsibility	6.008	2.096	6.159	1.795	0.4	1,413	0.51
Avoidance	5.086	2.101	6.195	1.659	19.8	1,151*	0.00
Level of contact	19.695	14.980	33.902	12.465	62.8	1,145*	0.00
Social distance	21.842	4.978	19.915	3.920	10.7	1,152*	0.00

\*Brown-Forsyth robust test.

Pearson correlations of staff and client attitudes with the SDS, a proxy of discriminatory behaviour, show that anger, danger and fear are more strongly related to social distance than responsibility but that none are very strongly related (Table 4).

**Table 4: Relationships of attitudes with desired Social Distance to those with comorbidity.**

<b>Attribute</b>	<b>Client (N=333)</b>	<b>Staff (N=82)</b>
<b>Anger</b>	-0.22**	-0.16*
<b>Danger</b>	-0.27**	-0.34**
<b>Fear</b>	-0.19**	-0.18*
<b>Responsibility</b>	0.07*	0.02*
<b>Avoidance</b>	-0.41**	-0.54**

\*Significant at  $p < 0.05$ , \*\* Significant at  $p < 0.01$ .

Factor Analysis of the SDS using the Principal Components method set to display all factors with an Eigenvalue greater than 1 found a single factor accounting for 58.6% of the variance, with a Kaiser-Meyer-Olkin Index statistic of 8.7, and Cronbach's  $\alpha$  of 0.88, with the  $\alpha$  becoming lower if any item was deleted.

### **Within Organisation Demographic information and Demographic Effects.**

There were no differences between the staff or clients of the two organizations on the basis of age  $\chi^2(1, N=82) = 0.85$   $p > 0.05$ ,  $\chi^2(1, N=333) = 0.002$   $p > 0.05$ , respectively. Aftercare (AFC) had a greater percentage of female clients compared to New Horizons (NH), though there was

no such difference for staff,  $\chi^2(1, N=331) = 10.04$   $p < 0.05$ ,  $\chi^2(1, N=82) = 0.85$   $p = 0.17 > 0.05$  (Table 5, Table 6).

**Table 5: Ages of surveyed staff and client at Aftercare and New Horizons**

<b>AFC</b>				<b>NH</b>			
<b>Client</b>		<b>Staff</b>		<b>Client</b>		<b>Staff</b>	
18-40	Over 40	18-40	Over 40	18-40	Over 40	18-40	Over 40
46.5%	53.5%	60.8%	39.2%	51.5%	48.5%	61.3%	38.7%

**Table 6: Gender comparison of staff and clients at Aftercare and New Horizons**

<b>AFC</b>				<b>NH</b>			
<b>Client</b>		<b>Staff</b>		<b>Client</b>		<b>Staff</b>	
Male	Female	Male	Female	Male	Female	Male	Female
44.7%	54.7%	37.3%	62.7%	62.0%	37.4%	38.7%	61.3%

Three way between groups Analysis of Variance of staff attitudes, age\*gender\*organization, each with two levels, found that there were no differences in staff attitudes based on gender or age, and only one difference between organizations, being that staff at New Horizons were more likely to show pity towards people with comorbidity than those at Aftercare, ( $F_{(1,80)} = 4.65$ ,  $p < 0.05$ ).

Three way between groups Analysis of Variance of the client data, organization\*gender\*age, each with two levels, found that there were a number of differences in client attitudes based on age and gender. There were, however, no differences between the organizations on any of the attitudes investigated. The older clients are; less likely to help a person with comorbidity, more angry about their condition, feel that they are more dangerous, are more afraid of 'them', would avoid these people, and are likely to behave in a discriminatory manner towards someone with comorbidity. (Table 7)

**Table 7: Client attitudes, based on age, towards those with comorbidity (significant differences only).**

<b>Attribute</b>	<b>18-40</b>		<b>Over 40</b>		<b>F</b>	<b>Df</b>	<b>p</b>
	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>			

Helping Behavior	6.85	2.83	7.59	3.22	4.96	1,331	0.03
Anger	6.35	2.29	5.71	2.52	5.89	1,331	0.02
Danger	5.20	2.08	4.64	2.29	5.60	1,331	0.02
Fear	12.15	4.60	10.07	4.55	17.28	1,331	0.00
Avoidance	5.39	2.05	4.79	2.12	6.94	1,331	0.01
Social distance	20.95	4.79	22.70	5.02	10.53	1,331	0.00

Similarly, women were angrier than men at people with this comorbidity, felt that they were more dangerous, were more afraid, would avoid these people and would behave in a more discriminatory manner. (Table 8)

**Table 8: Client attitudes based on gender towards those with comorbidity (significant differences only).**

Attribute	Male		Female		F	Df	p
	Mean	SD	Mean	SD			
Anger	6.27	2.36	5.73	2.46	4.17	1/329	0.04
Danger	5.34	2.17	4.43	2.16	14.62	1/329	0.00
Fear	12.16	4.48	9.83	4.63	21.67	1/329	0.00
Avoidance	5.36	2.06	4.78	2.12	6.35	1/329	0.01
Social distance	20.96	4.98	22.79	4.80	11.48	1/329	0.00

### **Comparison of staff and client attitudes to attitudes of the public.**

When staff and client attitudes to drug and alcohol comorbidity were compared to the attitudes of the general public using the Kruskal Wallis independent samples test with stepdown post hoc analysis, it was found that there were significant differences between groups on all attitudinal variables with the exception of whether people felt that other people with comorbid mental illness/drug and alcohol conditions were responsible for their condition,  $\chi^2(2, N=333)= 1.72$   $p>0.05$ . Clients and public would be less likely to help someone with comorbidity than staff,  $\chi^2(2, N=333)=84.03$ ,  $p<0.05$ ; less likely to pity compared to staff  $\chi^2(2, N=333)=8.96$ ,  $p<0.05$ ; were more angry with them compared to staff  $\chi^2(2, N=333)= 61.2$ ,  $p<0.05$ ; compared to staff clients and the public thought that those with comorbidity were more dangerous  $\chi^2(2, N=333)=70.79$ ,  $p<0.05$ ; clients and the public were more afraid than staff  $\chi^2(2, N=333)= 78.80$ ,  $p<0.05$ ; were more likely to avoid,  $\chi^2(2, N=333)= 45.14$ ,  $p<0.05$ ; the public were less likely than

clients who were less likely than staff to have had contact with people with comorbidity and the public were far less likely to have had contact with comorbid people  $\chi^2(2, N=333)= 135.02$ ,  $p<0.05$ ; and the public wanted greater social distance from those with comorbidity compared to clients who in turn wanted more social distance than staff  $\chi^2(2, N=333)= 35.93$ ,  $p<0.05$ .

**Table 9: Mean ranks of staff, client and public attitudes towards those with comorbidity.**

	<b>Staff</b>	<b>Client</b>	<b>Public</b>
<b>Helping behaviour</b>	220	482	519
<b>Pity</b>	566	456	484
<b>Anger</b>	707	454	462
<b>Dangerousness</b>	723	467	454
<b>Fear</b>	739	452	459
<b>Avoidance</b>	672	457	466
<b>Level of contact</b>	765	521	406
<b>Social distance</b>	320	467	513

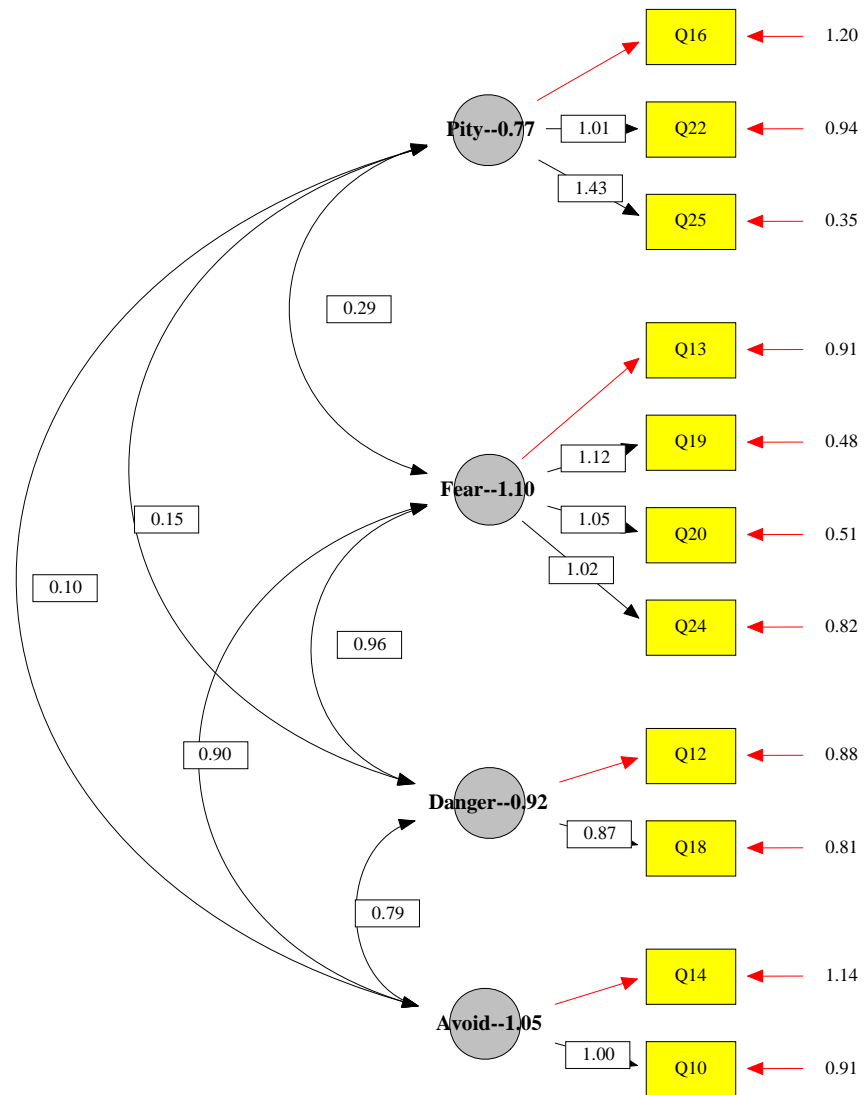
**Path model of stigma surround comorbidity.**

Using questions adapted from the Patrick Corrigan’s model of stigma in mental illness (Corrigan et al 2002) adapted to drug and alcohol comorbidity the result was a valid model of the stigma, though one of only moderately good fit (Figure 1). Prior to fitting the model below an additional variable was included, personal responsibility, that may be expected to have more relevance to a model of drug and alcohol comorbidity than a mental illness model, however, as was found in Corrigan et al 2002, personal responsibility did not enter into a well fitting model of stigma.

The robust measures of fit provided by EQS 6.1 (2010) were used as the variables used were not normally distributed (Mardia’s Normalised Coefficient >3). The Satorra-Bentler scaled  $\chi^2$  was significant, ( $\chi^2 38, N=333$ )= 109.88,  $p<0.05$ ) which indicates less than perfect fit, but does not rule out good fit. The Bentler-Bonnett Normed Comparative Fit Index (0.954) suggests good fit was achieved by the model and Aikake’s Information Criterion (AIC) also indicates the model was more parsimonious than the full independence model, (Independence AIC =1508.31, Model AIC=33.885). The Root Mean Square Error of Approximation (RMSEA), however, suggests that

that the result may only have reasonable, rather than good, application to the true population, (RMSEA= 0.075, 90% Confidence Interval 0.59-0.91).

**Figure 1: Stigma model of comorbidity, adapted from mental illness model.**



### **Qualitative responses**

After members of the public had completed the survey they were invited to comment in a forum on their impressions of the survey. Many demonstrated the persons' commitment to the area of mental health

“A survey to make you think. Any research into Mental Health is a positive one. I just wish more money could be spent on educating people about Mental Illness and helping people in need with Mental Illness.”

“I agree, more money should be spent, especially on educating people that mental illness is not contagious. I am married to a person with a mental illness, but does not abuse drugs, alcohol. We are treated very differently from so called normal people.”

“This survey was very relevant to me as I live with severe depression and have abused alcohol in the past, so I know how easy it is to fall in to the trap and how hard it is to get back on the straight and narrow.”

There were some comments on how the survey might be improved.

“I would have liked 'severe' mental illness defined. Is depression and anxiety considered severe? A breakdown? Or do they have to be admitted?”

Finally, a comment that shows the survey could be confronting for those completing it:

“Well that exposed me for the fraud I am!  
I have all the pity in the world, just keep them away from my family...  
Hmmm”

There were 23 people who gave no response to the open ended question: *Please rank in order the three most important factors that you believe caused your illness.* There were 57 who gave only one response and 90 who gave only two responses. The grouped response percentages are shown in the table below.

**Table 10: Consumer identified causes of their own mental illness**

First Ranked	Count	Second Ranked	Count	Third Ranked	Count
Stress	79	Stress	65	Stress	67
Drugs	58	Drugs	43	Social alienation	28
Trauma	33	Trauma	27	Drugs	25
Genetic	28	Family dysfunction	26	Symptom	28
Family dysfunction	24	Symptom	25	Family dysfunction	19
Social alienation	19	Social alienation	24	Trauma	18
Physical Illness	17	Genetic	20	Unknown	13
Unknown	15	Physical Illness	19	Genetics	11
Physical accident	8	Unknown	13	Physical illness	10
Sexual abuse	8	Abuse	6	Abuse	8
Abuse	5	Iatrogenic	3	Iatrogenic	8
Symptom	5	Domestic violence	2	Sexual abuse	3
Iatrogenic	3	Sexual abuse	2	Ideation	2
Onset period	3	Physical accident	1	Self	2
Domestic violence	2	Physical injury	1	Physical accident	1
Ideation	1				
Not ill	1				
Unsure	1				

Stress is the highest ranked in all three rankings. Often though, this was not the word used by the consumer and thus a number of terms were subsumed under this heading; anxiety, lifestyle, neighbours, and breakdown, for example. Drugs feature prominently, and this category includes both illicit drug use and alcohol, as many people mentioned abuse of both. Trauma also figured prominently in people's descriptions, this area included events such as: tragic family death, divorce, homelessness and torture. Many people were aware that they had a genetic predisposition to their mental illness, whereas family dysfunction was used generally by people to describe a chaotic family life. Many reported a symptom as being causal to their illness, writing, hearing voices, for example, or depression.

### **Illness perceptions:<sup>1</sup>**

In regard to clients own perceptions of their illness a three way ANOVA with organisation, gender and age as the fixed factors and credibility as the dependent variable showed that there was only one significant difference on the basis of age, with those under 41 feeling that their psychiatric treatment was less credible than those over 40,  $F_{(1,308)}=5.88$ ,  $p<0.05$ . There were no significant differences in whether clients expected their treatment to work, the length of time they expect their treatment to last, how strongly people identify with their illness how concerned they were about the mental illness or how much personal control they had over the illness. Males in Aftercare thought that they were more heavily affected by their mental illness than females did, whereas at New Horizons females were felt they were more heavily affected by their illness  $F_{(1,323)}=5.52$ ,  $p<0.05$ . Females were more likely to be emotionally affected by their illness compared to males  $F_{(1,323)}=10.4$ ,  $p<0.05$ . Younger people were more likely to think that their treatment was helpful  $F_{(1,323)}=7.09$ ,  $p<0.05$ . Young males at Aftercare felt that they understood their illness less than young males at New Horizons, whereas young females at Aftercare felt they understood their illness better than young females at New Horizons and the

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<sup>1</sup> ANOVA tables and tables of means are in appendix 3-to be added

exact opposite was true for older males and females at the two organisations,  $F_{(1,323)}=6.58$ ,  $p<0.05$ .

Of the three recovery measures used, younger clients of the services were more likely to have a goal and success orientation,  $F_{(1,323)}=7.10$ ,  $p<0.05$ . Young males at Aftercare had more confidence and hope than young males at New Horizons, females at Aftercare had less confidence and hope than those at New Horizons, whereas for older clients males at Aftercare had less confidence and hope than males at New Horizons, whereas females had the same level of hope and confidence in both organisations  $F_{(1,323)}=7.01$ ,  $p<0.05$ . Young males at Aftercare felt less dominated by their symptoms than those at New Horizons, whereas young females felt more dominated by symptoms than their counterparts at New Horizons, the exact opposite was true for older females and males at the two organisations,  $F_{(1,323)}=5.15$ ,  $p<0.05$ . Males were less stressed than females in the two organisations  $F_{(1,303)}=4.16$ ,  $p<0.05$ , but there were no differences in anxiety and depression levels on the basis of age organisation or gender. Younger people were less likely to report being non-adherent to their medications than older people,  $F_{(1,323)}=5.68$ ,  $p<0.05$ .

### **Path model of recovery**

Investigation of models of recovery using Structural Equation Modelling failed to yield a model that adequately fitted the data, and thus an alternative path modelling technique was used, Partial Least Squares Regression 2 (PLSR2). While this method has the disadvantage that the factors are not easily interpretable, it is more robust to non-normality and multicollinearity than Structural Equation based path analysis or Ordinary Least Squares Regression (OLSR), particularly when the sample size is large in relation to the number of variables. PLSR2 can also accommodate multiple dependent variables, whereas OLSR, or PLSR1 cannot. Analysis was conducted in The Unscrambler V10.1, which incorporates a Bootstrapped estimate of variable significance. Bootstrapped estimates in the current analysis were based on the 'leave one out' method yielding 333 model calculations. Variables whose Beta weight did not cross

Zero during the bootstrap calculations are defined as being significant in the model. An initial run found that 12 people were outliers on the XY relations plot, which suggests those people would have large influence on the outcome and thus the model may yield a more reliable result with their data removed. The model was then recalculated using the remaining data and then re-calculated using only those variables that were significant according to the Bootstrap estimates. Dependent variables were the three Recovery Assessment Scale variables that were used in the analysis, confidence and hope, goal and success orientation, and not feeling dominated by symptoms. The final solution includes three valid dimensions, but as the third dimension added little to variance accounted for in the recovery factors and adds considerably to the complexity of interpretation it is not reported. Figure 2 shows that the important factors in predicting recovery are two of the factors from the Depression Anxiety and Stress Scale, Depression and Stress. In this case, as they are far from the recovery measures on the map, they indicate that lessening stress and depression are the strongest indicators of these components of recovery. Overall the independent variables account for 38% of the variance in the recovery measures in this two dimensional model.

**Figure 2: Partial Least Squares Regression Model of 3 Recovery Factors**

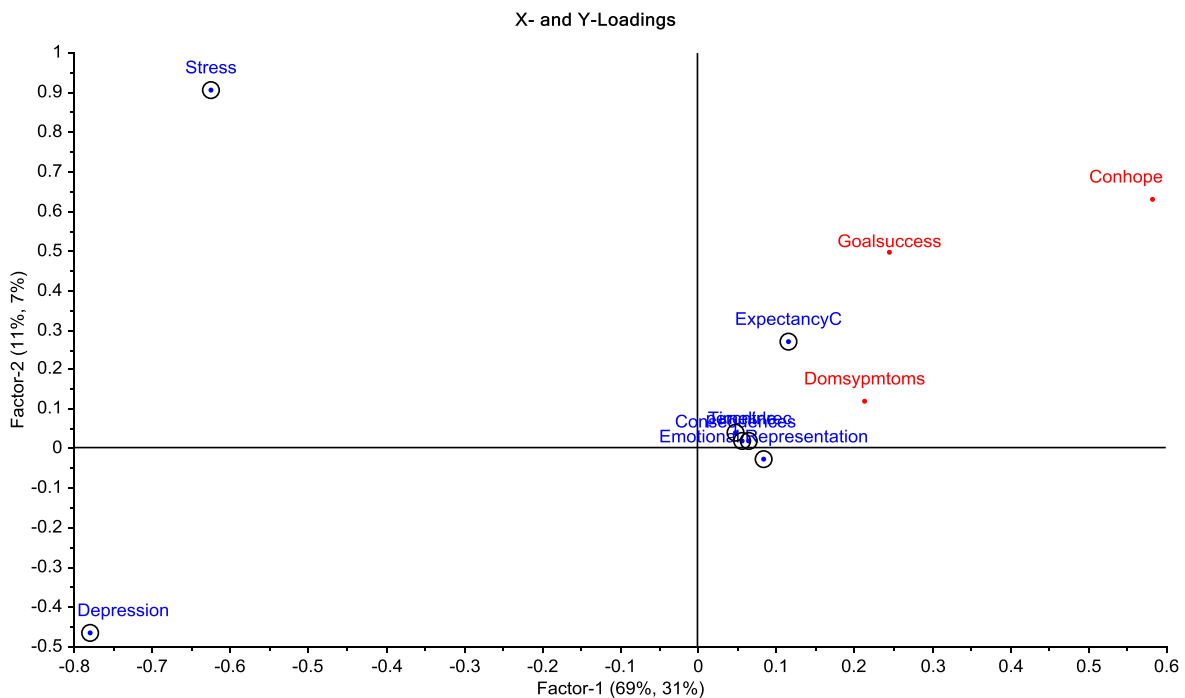
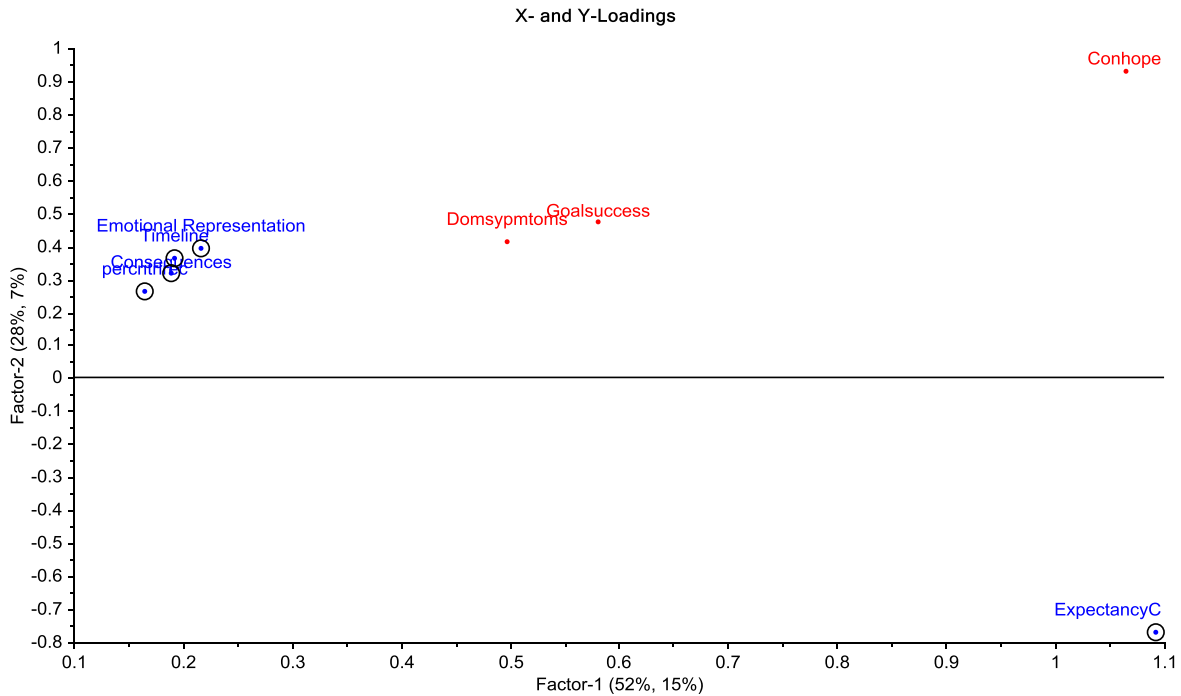


Figure 3 shows the same model recalculated without Depression and Stress. The reduced model accounts for far less variance in recovery. 22%, compared to 38% in the more fully specified model. All variables in this model were still significant using bootstrap estimation, and thus appear nevertheless, to be stable predictors of recovery.

**Figure 3: Two dimensional model with Stress and Anxiety removed.**



**Attitudes of staff towards those with mental illness**

When staff were asked to rate on a 100 point scale how they felt towards those with mental illness, where 0 was negative feeling and 100 represented positive feeling, the mean score amongst staff from two organisations was 81 (SD 20.5). This indicates that staff generally had positive feelings towards those with mental illness. The results of the SCIAT, where a positive score means that the attitudes were negative shows that staff had significantly negative attitudes (Mean 0.386, SD 0.26,  $t_{78}13.16$ ,  $p<0.01$ ). Additionally, the SCIAT scores can be seen as effect sizes as they are expressed as Standard Deviations (von Hippel, Brener & von Hippel 2008) and thus the effect size of the implicit attitudes is not small, just as the positive

value of explicit attitudes towards those with mental illness expressed as a score out of 100 were quite strong.

## **Discussion**

Many of the questions in the survey were of an intrusive nature, they asked about drug and alcohol use and medication adherence, as well as attitudes. To ensure accurate responses it was necessary to not only ensure anonymity of the answers but also to give the clear appearance of anonymity. The best way to ensure both is to have the questionnaire to be self-completed and then given directly to the researchers. The complete survey comprised 125 questions divided amongst 10 different surveys each of which were scaled differently and often in different directions. As all client participants in the study were affected by mental illness, and many by severe mental illness, an initial concern was that self completion would result in large amounts of unusable data. The missing data rates and the clear significant differences found in the analyses each suggest that there were no major difficulties encountered by this population while completing this rather complex survey instrument.

As expected, the rates of problematic alcohol and drug use were far higher than had previously been estimated using entry questionnaires at the NGO and were much closer to informal estimates made by direct care staff of approximately 30%. This suggests that clients perhaps lacked insight into their drug and alcohol use on entry into the services. As noted in the Australian National Comorbidity Initiative, comparisons of rates of substance use suffer from conflicting definitions. Using data from that study The National Drug and Alcohol Research Centre (NDARC) reports data that has rates of drug use in the general population as low as 1.2%, (NDARC 2003) but the definition used is that of 'drug dependence' which is different from the problematic drug use studied here. Burns and Teeson (2002) found rates of alcohol use as high as 32% amongst some mentally ill populations. The estimates of use for this study then should be accepted as baseline rates of problematic use in these services and used for policy and training development rather than more generally comparative data. Having said that, the

surveys used in this study are both validated screeners that assess problematic substance use within a particular framework and thus allow for some comparison with comorbidity statistics from other sources.

The current study found that people who had problematic drug or alcohol use were less likely to hold stigmatizing attitudes towards heavy drug and alcohol users than those who did not have this comorbidity. Additionally to the lower level of stigmatizing attitudes it was found that the comorbid group had greater contact with the comorbid population in general. It is probably not the case that this contact was limited to those people who were responsibly seeking help for their condition in NGOs or other services, and thus it appears that the overall level of contact per se, might have influenced the attitudes of this group. This group had no greater belief that people with comorbidity were responsible for their behaviour compared with other clients, and thus would not be expected to be affected by the 'group norming' effect that has been described in previous research (Room 2005, Gusfield 1996, Slavin 2004).

A number of researchers have previously reported that mental health professionals hold stigmatizing attitudes towards those with mental illness (eg. Bell et al. 2006), and there is no reason to suppose that the addition of a highly stigmatized comorbidity would lessen the tendency to stigmatize. Conversely, the staff in the current survey held less stigmatizing attitudes towards those with comorbidity when compared with clients. The 'contact hypothesis' surmises that contact with the stigmatized group can reduce stigmatizing attitudes and some research has shown that the type of contact might be important. Some research suggests that contact with representatives of the stigmatized group should be disconfirming of the stigmatizing attitude (Reinke, Corrigan, Lenahard, Lundkin and Kubiak 2004). However, during the period that a person requires professional intervention their behaviour may not disconfirm negative stereotypes and thus the negative attitudes of staff may persist or build. This does not appear to be the case in this instance. Staff had greater contact with people with comorbidity and had less negative attitudes towards people with comorbidity than clients. Clients of these services,

however, are usually voluntarily seeking help, and may not represent the typical negative stereotype. Further, the organizations are predicated on the ability of the person to recover to at least some degree from their difficulties and thus there may both be the disconfirmation of negative stereotypes of comorbid mentally ill during the process of recovery and the organizational mindset that individual recovery through a collaborative process is an appropriate strategy, thereby promoting positive contact. One caveat on this interpretation however may be that research in implicit attitudes, as opposed to the explicit measures used in this study, has found that while explicit attitudes may improve through contact, implicit attitudes may nevertheless deteriorate through professional contact (Brener, von Hippel, and Kippax 2007). While it is possible that implicit measures may yield a different result, the current findings stand in contrast to previous studies that also used explicit measures of professionals' attitudes towards the mentally ill (Servais and Saunders 2007, Bell et al. 2006).

Age and gender analyses showed that women and older people held more stigmatizing attitudes regardless of level of contact. These attitudes centred on fear, danger, avoidance and a desire for increased social distance. Anti-stigma education based around the risks associated with people with comorbidity might reduce these fears. A number of authors have indicated that the most effective way to reduce the stigmatizing attitudes of people with stigmatized conditions is to have appropriate contact with a person from the stigmatized group (Bell et al. 2006, Reinker et al. 2004).

No differences were found between any groups on attitudes towards the personal responsibility, and this suggests that personal responsibility plays little part in the formation of stigmatizing attitudes towards comorbidity amongst this group, Pearson correlations of staff and client data support this surmise and the SEM model of comorbidity stigma also supports that surmise. Two slightly differing models of stigmatizing attitudes have been suggested (Corrigan et al. 2002, Niv et al. 2007) each of the models centre around dangerousness and responsibility with the latter model placing more emphasis on responsibility. The current study supports the model of

Corrigan et al. more closely than that of Niv et al., even though the latter model was developed with the comorbid population.

The SDS is regarded as a proxy of discriminatory behaviour towards the mentally ill and has been widely used internationally as well as in Australia (eg. Bell et al. 2006). In the current study the wording has been changed to investigate attitudes towards comorbidity without degrading the robust psychometric properties of this scale. The re-worded SDS comorbidity scale is a brief, 7 question, easy to use, scale that the authors believe may be used for the investigation of stigmatizing attitudes towards people with substance abuse/mental illness comorbidity.

Of particular interest is the comparison of client, staff and the public's attitudes towards people with comorbidity. Staff had far greater contact with the comorbid population which suggests that their attitudes should have been improved if the style of contact was appropriate. The scores on the SDS and level of contact further support this conjecture as the public had less contact than either clients or staff and wanted more social distance than either clients or staff. The comorbidity attitude findings are consistent with are gaining, in some appropriate fashion, contact with comorbid clients that is reducing their stigmatising attitudes towards those clients. However, a competing hypothesis might be that the types of people that work for mental health organisations hold less stigmatising attitudes than others in the community, though the earlier research cited regarding the attitudes of health professionals would not support this hypothesis. Another hypothesis is that staff in community health organisations might feel pressure to give a socially acceptable response. This is suggested by the SCIAT results on staff attitudes towards those with mental illness, which found that staff explicit and implicit attitudes were at variance. There are, however, two significant limitations that must be taken into account before applying the findings from that section of the study directly to comorbidity attitudes. Firstly, it was asked about mental illness, and not comorbidity, and thus is merely suggestive that there may be social desirability pressures on comorbidity responses. Secondly, the target words were mental illnesses, rather than 'a person with a mental illness'. It is the professional opinion of an expert

in the field, Professor William von Hippel, that the degree of interrelationship between the illness and the person is sufficiently strong at the unconscious level that it does not strongly affect the results of the SCIAT (Von Hippel 2010), but the test requires replication using stronger methodology to assess the reliability of the finding.

The Structural Equation model surrounding comorbidity surprisingly showed greater similarity to that previously generated for mental illness alone than one for comorbidity. Personal responsibility was not seen as a strong factor in this stigma. The principal and most strongly related factors were fear, danger and willingness to avoid, with pity accounting for smaller part of comorbidity stigma. Modelling of recovery was less reliable and a PLSR2 model was developed which showed that, for the clients of the two services in the study, medication adherence was not a part of a good model of recovery. The two strongest indicators of the recovery measures were an absence of depression and stress, and thus it may be useful for these types of organisations to focus more on working with these mental states to better assist their clients. Staff training on effective methods for working on stress and depression may help this procedure. Other factors that figured in the client recovery measures used included, whether the client expected their treatment to work, how emotionally involved they were with their illness, how much personal control they felt they had over their illness (but not how much they felt control their treatment had) and whether they feel they are aware of the timeline and consequences of their illness.

The measure of medication adherence used yielded a number of surprising results. Firstly that medication adherence was not a factor in recovery, secondly that those who had a comorbid drug and alcohol condition were significantly more likely to be adherent to medication than those with a mental health issue alone, and thirdly that people in the younger age group were more likely to be adherent than those in the older age group. The first finding contrasts with that of Elbogen et al (2005), and other literature which shows that psychotropic medication adherence is lower in people who have substance abuse issues. There is no gold standard for measuring medication adherence, and it has been found that self-report measures, such as the one used in

this study often overestimate medication adherence (Wagner and Rabin 2000). Once again there is the possibility of a social desirability response, where substance abusers, and the young (a related cohort) would be more likely to mislead or lack insight when reporting on their medication adherence.

A limitation in the current study is the low response rate. As the client recruitment was conducted by direct care staff, it is not known whether the response rate was due to staff approach or client reluctance. Due to involvement in a client advisory committee four clients at one time were directly recruited by a researcher, and the response rate was 100%. It is conjectured that involvement of the staff was low and this reduced the response rate. The challenge for researchers is to demonstrate to staff the utility of research in a sector that is not familiar with research.

The current study forms one of a number of initiatives to develop and support NGOs in NSW. It is part of an initiative to integrate mental health and drug and alcohol services to better assist people with both mental illness and substance use disorders. An additional aim of the program is to build the capacity of non government drug and alcohol organisations and non government mental health organisations to engage in research and the dissemination of research findings. The overall aim is thus to contribute to the evolving knowledge and practice in a developing area of comorbidity treatment and care, the non-government sector. Data collected on mental illness and comorbidity often do not involve the NGO sector, for example the Mental Health National Outcomes and Casemix Collection (2009), collects data from government health services only, according to their technical specifications. The mental health NGO sector is a growing part of service delivery yet data on comorbidity is not collected. As mental health evolves to more community based treatment, and toward more integration of mental health and drug and alcohol services, knowledge of rates of substance using standardised screening tools such as the DAST and AUDIT which tightly define 'problem substance use' as well as of the

level of discriminatory attitudes amongst staff and clients can inform program development for mental health NGOs.

This study adds to the limited body of research on comorbidity in NSW mental health NGOs yielding information on the rate of substance use issues, and the levels of stigmatizing attitudes amongst some groups. It is hoped that this knowledge can assist the development of more targeted anti-stigma training and support the need for specialized comorbidity training in the sector.

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## Appendix 1 Questionnaire

The questions below ask about your mental health concerns, about alcohol and drugs and how you use any medications that you are prescribed. We are not collecting information about you, we are collecting information about Aftercare and New Horizons. All your information is confidential and your identity will only be known to the researchers and will not be used for any other purpose than for the research. Any information distributed to Aftercare, New Horizons or any other organisation will contain no information that can be used to identify any person who has participated in this study. (any information will be averaged and de-identified)

Please read the questions and give the best answer you can. There are no right or wrong answers and the first answer you think of is probably the best one, just put a cross in the space provided. Don't spend long on any question.

Thank you for taking the time to help us provide better service.

Site of service or service name: \_\_\_\_\_

Your age range:

18-25      26-40      41-60      Over 60  
<sub>1</sub>      <sub>2</sub>      <sub>3</sub>      <sub>4</sub>

Your gender:

Male      Female  
<sub>1</sub>      <sub>2</sub>

**First please tell us how satisfied you are with the service provided by Aftercare.**

	<b>Very dissatisfied</b>	<b>Slightly dissatisfied</b>	<b>Neither satisfied or dissatisfied</b>	<b>Somewhat satisfied</b>	<b>Very satisfied</b>
<b>How satisfied are you with this service?</b>	1	2	3	4	5

**In relation to a person who heavily uses drugs or alcohol and has a mental illness, how willing would you be to...**

	<b>Definitely willing</b>	<b>Probably willing</b>	<b>Probably unwilling</b>	<b>Definitely unwilling</b>
1. Share a flat with that person	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
2. Work alongside that person	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
3. Have that person as a neighbour	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
4. Have that person as a baby-sitter for your child	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
5. Have one of your children marry that person	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
6. Introduce that person to a single friend as a potential relationship partner	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
7. Recommend that person for a job	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>

	<b>Very certain</b>				<b>Not at all certain</b>
8. How certain do you feel that you would help a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
	<b>Very much</b>				<b>None at all</b>
9. How much concern would you have for a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
	<b>Definitely</b>				<b>Definitely not</b>
10. If I were a landlord I would probably rent a house or flat to a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>

		Very much			Not at all	
11	I would feel aggravated by persons who have a mental illness and heavily uses drugs or alcohol.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
12	I would feel unsafe around persons with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
13	Persons with mental illness who heavily uses drugs or alcohol terrify me	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
14	I feel angry at persons with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
15	I think persons with a mental illness who heavily use drugs or alcohol pose a risk to other people unless they are hospitalised	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
16	I feel pity for persons with a mental illness who heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
17	How controllable do you think having a mental illnesses and heavily using drugs or alcohol is	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
18	How dangerous do you feel a person with a mental illness who heavily uses drugs or alcohol is	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
19	I would feel threatened by a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
20	How scared of a person with a mental illness who heavily uses drugs or alcohol would you feel	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
21	I would help a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
22	I would feel sympathy for a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
23	A person with a mental illness who heavily uses drugs or alcohol is responsible for their present condition	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
24	Do you feel frightened of a person with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
25	Do you feel sorry for persons with a mental illness who heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>

		<b>Yes</b>	<b>No</b>
<b>26</b>	I have watched a show on TV where a character had a mental illness and heavily used drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>27</b>	My job involves giving services or treatment to people with mental illness who heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>28</b>	I have seen on the street a person who I think had mental illness and heavily used drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>29</b>	I have frequently seen people who have mental illness and heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>30</b>	I have a mental illness and heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>31</b>	I have worked with a person who had a mental illness who heavily used drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>32</b>	I have never seen a person who I knew had a mental illness and heavily used drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>33</b>	My job involves giving services to people with a mental illness who heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>34</b>	I have a relative who has a mental illness and heavily uses drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>35</b>	I have watched a documentary on the television about people with a mental illness who heavily use drugs or alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>36</b>	I live with a person who has a mental illness who heavily uses drugs and alcohol	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>

Now, thinking about your psychological/psychiatric therapy.

<b>37</b>	At this point, how logical does the therapy offered to you seem?	<b>Very Logical</b> <input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<b>Not at all logical</b> <input type="radio"/> <sub>5</sub>
<b>38</b>	At this point, how successfully do you think this treatment will be in reducing your symptoms?	<b>Very Useful</b> <input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<b>Not at all useful</b> <input type="radio"/> <sub>5</sub>
<b>39</b>	How confident would you be in recommending this treatment to a friend who experiences similar problems?	<b>Very Confident</b> <input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<b>Not at all confident</b> <input type="radio"/> <sub>5</sub>

**40** By the end of the therapy period, how much improvement in your symptoms do you think will occur?

0%    10%    20%    30%    40%    50%    60%    70%    80%    90%    100%

**Now close your eyes for a few moments, and try to identify what you really *feel* about the therapy and its likely success. Then answer the following questions.**

**41** At this point, how much do you really *feel* that therapy will help you to reduce your mental health symptoms?

Very Much <sub>1</sub> <sub>2</sub> <sub>3</sub> <sub>4</sub> Not at all <sub>5</sub>

**42** By the end of the therapy period, how much improvement in your mental health symptoms do you really *feel* will occur? (please circle one)

0%    10%    20%    30%    40%    50%    60%    70%    80%    90%    100%

- Many people find a way of using their mental health medicines which suits them
- This may be different from the instructions on the label or from what their doctor has said
- We would like to ask you a few questions about how you use your medicines
- Please put a cross in the box that best describes what you do.

Here are some ways in which people have said that they are using their mental health medications, please put a tick in one box for each question.

	Always	Often	Sometimes	Rarely	Never
<b>43</b> I forget to take them					
<b>44</b> I alter the dose					
<b>45</b> I stop taking them for a while					
<b>46</b> I decide to miss out a dose					
<b>47</b> I take less than I'm told to					

48 How much do your mental health concerns affect your life?

No affect at all

Affects my life severely

49 How long do you think your mental health concerns will continue?

A very short time

Forever

50 How much control do you feel you have over your mental health concerns?

Absolutely no control

Extreme amount of control

51 How much do you think your treatment can help your mental health concerns?

Not at all

Extremely helpful

52 How much do you experience symptoms from your mental health concerns?

No symptoms at all

Many extreme symptoms

53 How concerned are you about your mental health?

Not at all concerned

Extremely concerned

54 How well do you feel you understand your mental health concerns?

Don't understand at all

Understand very clearly

55 How much do your mental health concerns affect you emotionally? (e.g. does it make you angry, scared, upset or depressed?)

Not at all affected emotionally

Extremely affected emotionally

56 Please list in rank-order the three most important factors that you believe caused your illness.

*The most important causes for me are:-*

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Please read each statement and put a cross in the circle under the sentence which describes **how you felt over the past week** for every statement. There are no right or wrong answers. Do not spend too much time on any statement.

		Applied to me most of the time	Applied to me a good part of the time	Applied to me to some of the time	Did not apply to me at all
57	I found it hard to wind down	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
58	I was aware of dryness in my mouth	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
59	I couldn't seem to experience any good feeling at all	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
60	I had breathing difficulty (breathing rapidly, breathless when I wasn't physically active.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
61	I found it difficult to start doing things	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
62	I tended to over-react to situations	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
63	I experienced trembling	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
64	I felt that I was using a lot of nervous energy	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
65	I was worried about situations in which I might panic and make a fool of myself	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
66	I felt that I had nothing to look forward to	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
67	I found myself getting agitated	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
68	I found it difficult to relax	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
69	I felt down-hearted and blue	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
70	I couldn't tolerate anything that kept me from getting on with what I was doing	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
71	I felt I was close to panic	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
72	I couldn't become enthusiastic about anything	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
73	I felt I wasn't worth much as a person	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
74	I felt that I was rather touchy	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
75	I was aware of the action of my heart even though I wasn't physically active (eg. heart rate increased, or missed a beat)	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
76	I felt scared without any good reason	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>
77	I felt that life was meaningless	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>

**INSTRUCTIONS:** In the statements below the term “drug abuse” refers to (1) the use of prescribed or over the counter drugs in excess of the directions and (2) any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g., marijuana, hash), solvents, tranquillisers (e.g., Valium) barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g.,heroin). Remember that the questions do not include alcoholic drinks.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right. The first answer you think of is probably the best one, please don't think too long about any one question.

<b><u>In the last 12 months:</u></b>		<b>Yes</b>	<b>No</b>
<b>78</b>	Have you used drugs other than those required for medical reasons?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>79</b>	Have you abused prescription drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>80</b>	Do you abuse more than one drug at a time?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>81</b>	Can you always get through the week without using drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>82</b>	Are you always able to stop using drugs when you want to?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>83</b>	Have you had “blackouts” or “flashbacks” as a result of drug use?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>84</b>	Do you ever feel bad or guilty about your drug use?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>85</b>	Does your spouse (or parents) ever complain about your involvement with drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>86</b>	Has drug abuse created problems between you and your spouse or your parents?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>87</b>	Have you lost friends because of your use of non-medical drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>88</b>	Have you neglected your family because of your use of non-medical drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>89</b>	Have you been in trouble at work because of drug abuse?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>90</b>	Have you lost a job because of drug abuse?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>91</b>	Have you gotten into fights when under the influence of drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>92</b>	Have you engaged in illegal activities to obtain drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>93</b>	Have you been arrested for possession of illegal drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>94</b>	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>95</b>	Have you had medical problems as a result of your drug use(e.g., memory loss, hepatitis, convulsion, bleeding, etc?)	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>96</b>	Have you gone to anyone for help for a drug problem?	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>
<b>97</b>	Have you been involved in a treatment program specially for drug use	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>

Please circle the answer that is correct for you:

**98** How often do you have a drink containing alcohol? **If you answer never at Q 98 please go to Q 108**

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Monthly or less                    | 2-4 times per month                | 2-3 times per week                 | 4 or more times per week           |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**99** How many drinks containing alcohol do you have on a typical day when you are drinking?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 1 or 2                             | 3 or 4                             | 5 or 6                             | 7 to 9                             | 10 or more                         |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**100** How often do you have six or more drinks on one occasion?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**101** How often during the last year have you found that you were not able to stop drinking once you had started?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**102** How often during the last year have you failed to do what was normally expected from you because of drinking?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**103** How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**104** How often during the last year have you had a feeling of guilt or remorse after drinking?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**105** How often during the last year have you been unable to remember what happened the night before because you had been drinking?

- |                                    |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Never                              | Less than monthly                  | Monthly                            | Weekly                             | Daily or almost daily              |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> | <input type="radio"/> <sub>4</sub> | <input type="radio"/> <sub>5</sub> |

**106** Have you or someone else been injured as a result of your drinking?

- |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|
| No                                 | Yes, but not in the last year      | Yes, during the last year          |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> |

**107** Has a relative or friend or a doctor or other health worker, been concerned about your drinking or suggested you cut down?

- |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|
| No                                 | Yes, but not in the last year      | Yes, during the last year          |
| <input type="radio"/> <sub>1</sub> | <input type="radio"/> <sub>2</sub> | <input type="radio"/> <sub>3</sub> |

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Not Sure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>108</b>	I have a desire to succeed	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>109</b>	I have my own plan for how to stay or become well	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>110</b>	I have goals in life that I want to reach.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>111</b>	I believe I can reach my current personal goals.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>112</b>	I have a purpose in life.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>113</b>	Fear does not stop me from living the way I want.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>114</b>	I can handle what happens in my life	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>115</b>	I like myself.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>116</b>	If people really knew me, they would like me	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>117</b>	I have an idea of who I want to become.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>118</b>	Something good will eventually happen.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>119</b>	I'm hopeful about my future	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>120</b>	My mental health problems are completely out of my own control.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>121</b>	I continue to have new interests	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>122</b>	I can handle stress	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>123</b>	Coping with mental illness is no longer the main focus of my life	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>124</b>	My symptoms interfere less and less with my life	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>
<b>125</b>	My symptoms seem to be a problem for shorter periods each time they occur.	<input type="radio"/> <sub>1</sub>	<input type="radio"/> <sub>2</sub>	<input type="radio"/> <sub>3</sub>	<input type="radio"/> <sub>4</sub>	<input type="radio"/> <sub>5</sub>

## **Appendix 2: Illness perception ANOVAs**