2011

The dual diagnosis capability of residential addiction treatment centres: Priorities and confidence to improve capability following a review process

Harold Matthews
Illawarra Institute for Mental Health UOW

Peter Kelly
University of Wollongong, pkelly@uow.edu.au

Frank P. Deane
University of Wollongong, fdeane@uow.edu.au

The dual diagnosis capability of residential addiction treatment centres: Priorities and confidence to improve capability following a review process

Abstract

Abstract Introduction and Aims. The Dual Diagnosis Capability of Addiction Treatment (DDCAT) index is used to assess the capacity of substance abuse services to work with individuals with co-occurring mental health problems. The current study aimed to: (i) examine the dual diagnosis capability of residential substance abuse programs in Australia; (ii) identify managers' perceptions regarding both priorities and confidence for change following the completion of the DDCAT; and (iii) to examine the usefulness of the DDCAT to residential substance abuse programs. Design and Methods. The DDCAT was completed across 16 residential substance abuse units.An external researcher administered and scored the DDCAT.A Unit Manager from each site completed the Comorbidity Priorities and Confidence Survey following the completion of the DDCAT review. This survey examined the usefulness of the DDCAT, and the unit's priorities to improve its capability, and confidence to improve its DDCAT score. Results. Across the services, program structure and staff training were the DDCAT domains that required the most improvement.While training was the highest endorsed priority area for improvement, program structure was the lowest priority. Overall the Unit Managers reported positive attitudes towards use of the DDCAT and were confident that their unit could improve their DDCAT scores. Discussion and Conclusions. DDCAT scores of Australian residential substance abuse programs are comparable with previous published results.However, there is still substantial work required to improve the capability of these programs. Future research should examine strategies to promote sustained improvements in the capability of residential substance abuse programs. [Matthews H, Kelly PJ, Deane FP. The dual diagnosis capability of residential addiction treatment centres: Priorities and confidence to improve capability following a review process. *Drug Alcohol Rev* 2010]

Keywords

residential, addiction, treatment, centres, dual, priorities, diagnosis, confidence, improve, following, review, process, capability

Disciplines

Arts and Humanities | Life Sciences | Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Matthews, H, Kelly, P and Deane, FP, The dual diagnosis capability of residential addiction treatment centres: Priorities and confidence to improve capability following a review process, Drug and Alcohol Review, 30(2), 2011, 195-199.

The Dual Diagnosis Capability of Residential Addiction Treatment Centres: Priorities and Confidence to Improve Capability Following a Review Process.

Harold Matthews[1], Peter J. Kelly, Ph.D[2] and Frank P. Deane, Ph.D[1]

[1]Illawarra Institute for Mental Health, University of Wollongong, Australia.

[2]School of Psychology, Newcastle University, Australia.

Author for correspondence: Peter J. Kelly, School of Psychology, University of Newcastle, NSW, Australia, 2308. Telephone: 02 49 21 6319 email: pkelly@uow.edu.au

Key Words: Substance abuse, Co morbidity, mental health, residential treatment

The Dual Diagnosis Capability of Residential Addiction Treatment Centres: Priorities and Confidence to Improve Capability Following a Review Process.

Abstract

Introduction and Aims: The Dual Diagnosis Capability of Addiction Treatment (DDCAT) Index is used to assess the capacity of substance abuse services to work with individuals with co-occurring mental health problems. The current study aimed to (1) examine the dual diagnosis capability of residential substance abuse programs in Australia, (2) identify managers' perceptions regarding both priorities and confidence for change following the completion of the DDCAT, and (3) to examine the usefulness of the DDCAT to residential substance abuse programs.

Design and Methods: The DDCAT was completed across sixteen residential substance abuse units. An external researcher administered and scored the DDCAT. A Manager from each site also completed a survey following the completion of the DDCAT review. The survey examined the usefulness of the DDCAT, and the unit's priorities to improve its capability, and confidence to improve its DDCAT score.

Results: Across the services Program Structure and Staff Training were the DDCAT domains that required the most improvement. Whilst Training was the highest endorsed priority area for improvement, Program Structure was the lowest priority. Overall the Unit Managers reported positive attitudes towards use of the DDCAT and were confident that their unit could improve their DDCAT scores.

Discussion and Conclusions: DDCAT scores of Australian residential substance abuse programs are comparable with previous published results. However, there is still substantial work required to improve the capability of these programs. Future research should examine strategies to promote sustained improvements in the capability of residential substance abuse programs.

The Dual Diagnosis Capability of Residential Addiction Treatment Centres: Priorities and Confidence to Improve Capability Following a Review Process.

People with co-occurring substance abuse and other mental health disorders (SAMDs) are a significant and underserved group. People with SAMDs often find themselves as "system misfits" (1) caught between addiction treatment and mental health services, neither of which is well equipped to meet their unique needs. To improve services for people with SAMDs, an integrated approach has been recommended (1). This involves the concurrent treatment of both the individual's substance abuse and mental health concerns. Recent studies have demonstrated the efficacy of integrated treatment approaches in residential settings (see 2 for a review). However, it is not clear how well Australian residential substance abuse programs are able to effectively address the needs of individuals with SAMDs.

There exist several measures for assessing a service's capability for providing assistance to persons with SAMDs (e.g., 3, 4). Within Australia, the Dual Diagnosis Capability in Addiction Treatment (DDCAT) index (5) has been increasingly used. For example, as a component of a recent national funding scheme, residential substance abuse services in Australia have been required to complete the DDCAT. Advantages of the DDCAT include its brevity and the use of specific descriptors for scoring each of the items. This makes criteria for scoring clear and results in an acceptable level of interrater reliability (e.g., median kappa coefficient .67; 5).

Whilst the DDCAT has been used to assess addiction treatment facilities in the United States (5, 6) and Australia (7), there is still very limited published data for the DDCAT. Previous research has not specifically examined the capacity of Australian residential substance abuse programs to work with co-occurring mental health problems. Additionally, research has not examined the actual experiences of

substance abuse workers using the DDCAT as a tool to improve their organisations dual diagnosis capability. The aims of the current study were to (1) describe the capability of Australian residential substance abuse programs to work with individuals with SAMDs, (2) identify Unit Managers perceptions regarding both priorities and confidence for change following the completion of the DDCAT, and (3) to examine the usefulness of the DDCAT to residential substance abuse programs.

Method

Participants

Data was collected from 5 organisations that provided residential substance abuse programs located across the Australian states of Queensland, New South Wales, and the Australian Capital Territory. These organisations were selected opportunistically, as it was a funding requirement that each site complete the DDCAT. As some of these organisations provided multiple substance abuse programs, the DDCAT was completed for 16 different residential rehabilitation units. These programs ranged in length between 4-weeks to 10-months in duration and incorporated a broad range of therapeutic approaches across the different units (e.g. cognitive-behavioural, therapeutic communities, self-help). A Unit Manager from each unit (N = 16) completed the survey. All of the Unit Managers worked in a management or team leader position and there were 11 males and 5 females. They were on average 45.47 years of age (*SD* = 11.87), had been working in their current position for 4.29 years (SD = 2.84), and had been working in the substance abuse field for 12.97 years (*SD* = 5.74, range 4-22 years).

Measures

The Dual Diagnosis Capability of Addiction Treatment (DDCAT) index (5) consists of 35 items across 7 domains. This includes Program Structure (4-items),

Program Milieu (2-items), Clinical Process: Assessment (7-items), Clinical Process: Treatment (5-items), Continuity of Care (5-items), Staffing (5-items), and Training (2-items). These items are scored on a 5-point Likert scale with higher scores reflecting greater dual diagnosis capability. Specific descriptive anchors are provided for a score of 1, 3 or 5 for each item of the DDCAT. Within the current study, items relating to Financial Incentives, and Certification and Licensure were not used because they were not considered clear in the context of the Australian substance abuse field and were not a requirement of the Commonwealth Funding agreement to participating organisations. The Financial Incentives item refers to "billing" for services whereas in the participating Australian services block funding allocations are typically made to organisations rather than billing on a per client basis. This made interpretation of the Financial Incentive item in the DDCAT difficult. Similarly, Australian residential services are not required to obtain specific certification or licensure to provide services for individuals with SAMDs.

As such, the DDCAT used in the current study was 33 items in length. Mean scores can be obtained from each of the 7-domains to develop a service profile of strengths and areas for improvement (8). To determine the services overall capability rating, the authors of the DDCAT suggest that a service is considered Dual Diagnosis Enhanced (DDE) if 80% of the items are rated as 5 (i.e. the service is able to equally address both substance abuse and mental health problems). Services are considered Dual Diagnosis Capable (DDC) if 80% of the scores are 3 or greater (i.e. the service is able to address the needs of some people with co-occurring mental health problems, although has a greater capacity to work with substance abuse problems). Addiction Only Services (AOS) are those where 80% of the scores are 1's (i.e., these services just focus on substance abuse problems). For the purposes of the current analysis a

mean of all 33 items was also calculated to provide an index of overall capacity to address dual diagnosis needs.

A questionnaire was developed for the purposes of the current study to assess respondents' priorities and confidence for making change to improve dual diagnosis capacity, and the usefulness of the DDCAT process for their organisation. Several experienced residential rehabilitation managers reviewed the content of the survey prior to implementation. The first section comprised eight items that asked how useful the process of completing the DDCAT was across various domains (e.g., "It helped to recognise where there are gaps in our service to working with people who experience co-morbid mental health and substance abuse problems"). All items were rated on a Likert scale from, 1 (Strongly disagree) to 7 (Strongly agree) and a mean of all items was calculated as a measure of overall usefulness. Cronbach alpha for the Usefulness items in the present study was .81.

Section 2 comprised three items that assessed what Unit Managers felt their unit's role *should* be with regard to screening, assessment, and treatment (e.g.," To what extent do you believe your organisation should screen for the presence of mental health problems?"). Items were rated on a 5-point Likert scale from 1 (not at all) to 5 (very large extent). Cronbach alpha for these three "Necessity" items was .68. Section 3 comprised seven items that assessed the extent to which improvement in each of the domains of the DDCAT was a priority. All items in this section started with the stem, "Based on your current resources, to what extent is improving the [DDCAT domain] a priority to you? (For DDCAT domains see Table 1). Items were rated on a 5-point Likert scale from 1 (not at all) to 5 (very large extent). A mean of all items was calculated to assess overall priority for making change to better address dual diagnosis in the service. Cronbach alpha for these "Priority" items was .84.

The fourth section comprised four items that assessed the confidence and importance for the organisation reaching the dual diagnosis "Capable" or "Enhanced" levels described in the DDCAT. These were rated from 1 (Not at all) to 5 (Extremely). Confidence and importance items were highly correlated ($r > .90$) so results for only Confidence ratings are reported.

Procedure

The methodology outlined in the DDCAT Toolkit (8) was used to rate the DCCAT. A site inspection was conducted to observe the physical location. Interviews with staff, management and clients were also conducted. On average, 3 to 4 staff members and 4 to 5 clients were involved in the interviews. However, this varied depending on the size of the unit and availability of staff and clients at the time of the interviews. A review was also conducted of the unit's clinical files (approximately 10 files selected by the unit), program manuals, promotional material, and the policy and procedures manual. Approximately 4 to 6-hours were spent at each site completing the DDCAT. Unit Managers were asked to complete a preliminary DDCAT prior to the formal ratings made by the researchers. This document was used to help develop the open-ended interview questions. Once the DDCAT was scored, one Unit Manager at each site was asked to complete the self-report "Priorities" survey. One of the researchers (PK) completed the DDCAT for 15 of the sites. A consultant completed the DDCAT for the remaining site, with the researcher (PK) completing a telephone interview with the Unit Manager from this site to validate these ratings. The University of Wollongong's Human Research Ethics Committee provided ethical review and approval to conduct the study.

Results

Nonparametric tests and 2-tailed analyses were used throughout the study to reduce the chance of type-1 error and account for non-normal distributions resulting from the small sample size.

DDCAT

The average rating across all items on the DDCAT was 2.36 (*SD* = 0.48), indicating that on average services do not meet criteria for Dual Diagnosis "Capable". However, 2 of the 16 services did reach this criterion by scoring at or above "3" overall. Mean scores and the standard deviations in each domain were also calculated and these are presented in Table 1. A nonparametric Friedman test indicated there was a significant difference between the ranks of the seven domains of the DDCAT, $X^2(6, N = 16) = 42.19$, $p < .001$. Mean ranks from the Friedman's test are provided in Table 1 along with the results from post-hoc Wilcoxon Signed Ranks tests. All Wilcoxon tests were 2-tailed. The results indicated that Structure was significantly lower than all but Training (all $p \leq .01$). Training was also significantly lower than Continuity, Treatment, Assessment, Staffing and Milieu (all $p < .04$).

Insert Table 1 here

Unit Manager Perceptions

Priorities for improving interventions for mental health problems. After receiving feedback on the DDCAT scores for their service the Unit Managers were asked to rate the priority for improving various components of their program (see Table 1.). The mean Priority score for all seven items was 4.11 (SD = .61) on the 5-point scale, indicating that improving across the DDCAT domains was considered a priority to a "Large extent". A Friedman's test indicated there were significant differences in priority ratings between the seven domains $X^2(6, N = 16) = 14.18$, $p < .03$. Mean ranks from the Friedman's test are provided in Table 1 along with the

results from post-hoc Wilcoxon Signed Ranks tests. These indicate that Training was viewed as the highest priority and rated significantly higher than both changes to the Program Structures (Z = -2.65, p = .008) and Therapeutic Milieu (Z = -3.26, p = .001).

Should the service provide interventions for mental health problems? The mean "Necessity" rating was 4.15 (SD = .61) on the 5-point scale, indicating overall that Unit Managers felt their units should be providing interventions for mental health problems. However, the relatively low Cronbach alpha (.66) for this scale suggested it might not be measuring a unitary construct, so differences between the three items were assessed. Friedman's test indicated a significant difference in the ranks, $X^2(2, N = 16) = 6.06$, $p < .05$. Wilcoxon Signed Ranks test indicated that Unit Managers more strongly believed that their unit should "Screen" than provide "Treatment" for mental health problems, Z = -2.31, p < .03. Similarly, they believed they should conduct Assessment more strongly than provide Treatment but this difference did not quite reach statistical significance, Z = -1.90, p = .057, 2-tailed. There was no difference between beliefs about screening and assessment.

Confidence in reaching Dual Diagnosis capability.

Unit Managers indicated that they were on average very confident they could reach Dual Diagnosis Capable (DDC) level (Rank = 8.18, *M* = 4.13, *SD* = 1.59), but significantly less confident they could reach the Dual Diagnosis Enhanced (DDE) level (Rank = 5.00, *M* = 3.06, *SD* = 1.29), Z = -2.43, p < .02.

Confidence in reaching the DDC level was significantly correlated with the DDCAT overall mean score ($r_s = .78$, $p < .005$). It also approached statistical significance for the mean Priority score ($r_s = ..45$, p = .08). It was not significantly related to the overall Usefulness ratings ($r_s = -,17$ p = .53), and this may have been in

part due to uniformly high levels of perceived usefulness. The mean Usefulness rating was 6.02 (SD = .41) on the 7-point scale indicating that overall participants "agree" that the DDCAT process was useful. Confidence in reaching the DDE level was only significantly correlated with the DDCAT overall mean ($r_s = .72$, $p < .001$).

Discussion

Results from the DDCAT review indicated that most of the 16 services still had some work to do to reach dual diagnosis capability. This appeared to be particularly in the area of staff training and program structures. Overall, staff felt that they should be providing services for people with mental illnesses, but tended to feel more strongly that they should provide screening and assessment compared to treatment. In terms of priorities for change, training was seen as the highest priority. This is consistent with the DDCAT findings where training was the second lowest area of capability. However, while the DDCAT identified program structures as the highest area in need of improvement, this was the lowest priority from the perspective of Unit Managers.

To reach a level of DDC on the Program Structure domain the organisations mission statement should indicate that services are provided for people with co-occurring mental health problems. However, across the 16-units studied, only one unit included this. While not viewed as a high priority by the Unit Managers, this explicit statement about who is treated is likely to have implications for access and the identity of the unit itself. The other area where the order of need and priority are potentially mismatched was the Staffing domain. This was the 3rd highest area of need but only the 6th highest priority area. Across the 5-items of the Staffing subscale, the lowest ranked item indicated that less than a quarter of the staff within the unit had engaged in formal mental health training. It is possible that the low priority ratings

reflect the difficulties the unit would have in improving staff qualifications in the short-term.

Overall, Unit Managers were confident that they could reach the DDC level, but the high correlations with actual DDCAT scores indicate that this confidence is strongly influenced by how close they already are to this level. The extent to which the DDCAT process was viewed as useful did not appear to be related to levels of confidence. Although, any potential relationship may be attenuated by high overall levels of perceived usefulness (ceiling effects), it may also reflect that the DDCAT process does not directly lead to solutions or strategies to increase capability. The lowest endorsed usefulness item indicated that Unit Managers only slightly agreed that the DDCAT provided clear structure for the service to improve their capacity. Anecdotally, we found that staff and management consistently requested guidance from the researchers on how their unit could improve their ratings. It is likely that services would benefit from reviewing the DDCAT Toolkit (8) as it provides instructions to improve ratings across each of the DDCAT items. By way of example, "Training" was identified in the current study as a high priority area. The DDCAT Toolkit (8) recommends the need for a clear strategic training plan that includes advanced training in specialized treatment approaches along with cross-training of staff in mental health and substance use disorders. Under "Program Milieu" specific suggestions related to the inclusion of posters and informational pamphlets in reception areas are suggested in order to communicate that the treatment program provides services for those who have co-occurring mental health disorders. Each domain has several specific recommendations to improve dual diagnosis capacity. With regard to Treatment, specialised treatment programs are suggested with links to

treatment manuals (e.g., Cognitive behavioural group therapy for specific problems and populations).

A primary aim of the current study was to develop a profile of the capacity of Australian residential rehabilitation services to work with individuals with SAMDS. Overall, the units were rated between Addiction Only Services and DDC. This is consistent with other published studies that have found substance abuse services to be rated below the DDC cut-off (5-7). For organisations looking to improve their scores, and hence improve services for individuals with co-occurring mental health problems, it is suggested that each unit develop an implementation plan. This could involve prioritising areas of the DDCAT that are relatively easy to achieve in the shorter-term and planning towards areas that may require additional resources. Additionally, previous researchers have suggested the need for "intensive implementation" strategies (6). Examples of such strategies include, funding to employ a program change agent, provision of intensive implementation coaching, intensive training on specific evidence based treatments and visits by external evaluators to check program fidelity (6).

A limitation of the current study is the small sample of 16 units, which came from only 5 different organisations. Due to the biases inherent in generalising from a small sample, a broader sampling of residential services is recommended. A further limitation was that interrater reliability was not obtained for the current study. However, previous research suggests that reliability has been found to be acceptable for the DDCAT (5).

As outlined in the DDCAT Toolkit (8), it is recommended that reviewers administering the DDCAT collect information from multiple sources, including site reviews, interviews and written documentation. In practice we found this to be a very

useful approach. The interviews provided an opportunity to examine multiple perspectives on processes within the organisation. For example, it was common to find differences between staff perceptions and actual client experiences. Similarly, a unit's policy and procedures documentation often did not reflect staff practices. Anecdotally, we found staff, management and clients quite willing to engage in the DDCAT review. In the current study the DDCAT was completed at the commencement of a three-year funding period to improve the capacity of these organisations to work with co-occurring mental health problems. As a result, it is likely that the organisations felt limited pressure to 'perform', and were open to identifying strategies to improve their capacity. However, it is possible that staff and management would be more cautious if there were a perception that future funding was linked to their DDCAT results. Clients appeared to appreciate the opportunity to be involved in the review and were very willing to highlight both the strengths and ways in which the unit could improve. The preliminary DDCAT ratings made by the Unit Manager provided useful information to guide the interview process. It is likely that it also increased the Unit Managers overall engagement in the DDCAT process. It was initially intended that the preliminary DDCAT ratings would be compared to the scores obtained by the researchers. However, in practise we found that the Unit Managers consistently did not read the DDCAT instructions, resulting in incorrect ratings. Whilst it would appear that the DDCAT could be useful as a self-audit tool, it is important that the raters are familiar with the rating instructions.

Whilst the capacity of Australian residential substance abuse programs is consistent with other national and international DDCAT results, there is certainly room to improve the way these programs respond to individuals with SAMDs. It is important that future research examine practical implementation strategies to assist

organisations to both improve, and maintain their capacity to work with co-occurring mental health problems. Future research should also examine if improvements in DDCAT scores are positively related to client outcome.

References

1. Minkoff K, Cline C. Changing the world: the design and implementation of comprehensive continuous integrated systems of care for individuals with co-occurring disorders. Psychiatric Clinics of North America. 2004;27:727-43.

2. Brunette M, Mueser K, Drake R. A review of research on residential programs for people with severe mental illness and co-occuring substance use disorders. Drug and Alcohol Review. 2004;23:471-81.

3. Minkoff K, Cline C. COMPASS: Co-morbidity program audit and self-survey for behavioral health services (for dual diagnosis capability). Mexico: Zialogic; 2001.

4. Mueser K, Noordsy D, Drake R, Fox L, Barlow D. Integrated treatment for dual disorders: A guide to effective practice. New York: Guildford Press; 2003.

5. McGovern M, Matzkin A, Giard J. Assessing the dual diagnosis capability of addiction treatment services: The Dual Diagnosis Capability in Addiction Treatment (DDCAT) index. Journal of Dual Diagnosis. 2007;3(2):111-23.

6. Gotham HJ, Claus RE, Selig K, Homer AL. Increasing program capability to provide treatment for co-occurring substance use and mental disorders: Organizational characteristics. Journal of Substance Abuse Treatment. 2010;38:160-9.

7. Lee N, Cameron J. Differences in self and independent ratings on an organisational dual diagnosis capacity measure. Drug and Alcohol Review. 2009;28:682-4.

8. McGovern MP, Giard J, Kincaid R, Brown J, Comaty J, Riise K. The Dual Diagnosis Capabilty in Addicition Treatment (DDCAT) Index: A toolkit for enhancing Addicition Only Service (AOS) Programs and Dual Diagnosis Capable (DDC) Programs (Version 3.2 CT). 2010 [cited 2010 12th May, 2010]; Available from: http://dms.dartmouth.edu/prc/dual/pdf/ddcat_toolkit.pdf.

Table 1.

Ranks and Means for DDCAT ratings and Improvement Priorities

	DDCAT Ratings			Improvement Priorities		
Domain	Ranks	M	SD	Ranks	M	SD
Structures	1.91 [a]	1.84	.81	3.16 [a]	3.87	.83
Milieu	5.38 [c]	2.59	.76	3.22 [a]	3.87	.52
Staffing	5.09 [c]	2.59	.61	3.84	4.06	.68
Continuity	3.81 [b, c]	2.30	.52	4.25	4.19	.83
Assessment	4.94 [c]	2.45	.56	4.41	4.25	.77
Treatment	4.66 [c]	2.45	.52	4.50	4.25	.68
Training	2.22 [a, b]	1.88	.92	4.62 [b]	4.31	.60

Note. [a,b,c] Ranks with a different superscript within a column are significantly different from each other. Higher ranks and means indicate greater capability and priorities to for providing services to people with mental illness.