

An Evaluation of the first UK Dual Diagnosis
Anonymous pilot for individuals with
co-existing mental and addictive disorders

Final Report

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Executive Summary

Results

DDA members: qualitative interviews

Qualitative interviews revealed that DDA had a positive impact on members' life in six main areas: (1) DDA increased members' acceptance of self, of others and from others; (2) it improved social functioning; (3) it facilitated self-development by enhancing DDA members' social functioning and coping skills; (4) it aided recovery in mental health and addictive behaviors; (5) it empowered DDA members by increasing their hope in the possibility to recover from both conditions and (6) it enhanced their motivation towards future aspirations.

The mechanisms through which DDA enabled the aforementioned positive changes were: (1) the integrated approach to mental health and addiction problems; (2) the uniqueness of DDA format: the additional 5 steps, the workbook and the structure; (3) the group; (4) the facilitator as experienced role model who was always available to help in case of need.

In terms of recommendations, DDA members expressed their desire to be involved in social activities outside the regular DDA meetings. They also commented that there is a need for DDA to expand in different locations in London and in the UK. Finally, they suggested that DDA should have a stronger social media presence.

DDA members: quantitative data

The quantitative data corroborated the qualitative findings in terms of positive impact of DDA on mental health and quality of life. Psychiatric Symptoms improved in all sub-scales of the Brief Symptoms Inventory. Participants were also significantly more adherent to medications and felt more confident in their ability to manage their mental health.

DDA facilitators

The DDA facilitators confirmed that they witnessed life changing progresses in DDA members, with some of them being able to engage in voluntary work outside DDA and find a job for the first time in their life.

Conclusions

DDA has proved to be an inclusive, non-judgemental and welcoming approach. The integrated approach allows all members to address both mental health and addiction issues simultaneously, this aspect is currently lacking in statutory services and other self-help groups.

DDA members in this study showed an improvement in their mental health, social functioning and quality of life in general. They also acquired skills to stop or control their addictive behaviours and they felt empowered to take up activities, volunteering and in some cases employment. Participants have expressed their desire to expand the social aspect of DDA by offering activities and social opportunities outside the regular meetings, this development has the potential to give DDA members the possibility to get involved in organising and leading the events. Finally, the present evaluation has shown that DDA has the potential to benefit individuals with dual diagnosis and their families by tackling isolation and enabling reintegration into society. On-going evaluation with a larger sample is needed to confirm these findings and to explore strategies to engage hard to reach groups, for example the homeless population.

1. Introduction

Dual Diagnosis

Co-morbidity of mental illness with substance misuse (also known as “dual diagnosis”) is highly prevalent in the UK. People affected by dual diagnosis have been recognised to be one of the most vulnerable in society with a significantly higher risk of homelessness and of committing violence to self or others in comparison to the general population (DoH, 2002). Yet, people with dual diagnosis are often failed by the system. Mental health services lack adequate knowledge and capacity to deal with substance misuse issues while substance misuse services fail to recognise and respond to mental health problems (Rethink, 2007). In addition, it is well known that both conditions of mental illness and substance misuse are often stigmatised and misunderstood by members of society as well as professionals (Evans-Lacko and Thornicroft, 2010). This can lead to individuals with dual diagnosis feeling isolated and marginalised (Sokratis et al., 2004). Often, the underlying reasons why co-existing conditions occur are complex, such as domestic violence and trauma (Humphreys et al. 2005; Kessler, 2004) and this can further complicate accessing appropriate treatment.

As research has repeatedly demonstrated, mental illness and substance misuse are strongly interlinked and the best outcomes are obtained when both conditions are treated simultaneously rather than sequentially (e.g. Drake et al., 2001; Ducharme et al., 2007). However, current practice focuses on treating the person based on their “primary need first”; for example, individuals might be told to resolve their alcohol problem before they can access counseling or psychotherapy. A recent survey of 140 services working with people with multiple needs found that co-existing conditions are often employed as exclusion criteria in various health and social care services preventing access to vital care and support (MEAM coalition, 2015), this can leave people feeling unsupported and isolated within their own community. Consequently, vulnerable individuals fall in between the gaps and services fail to adequately address their needs (Public Health England, 2017).

Dual Diagnosis Anonymous (DDA)

There is evidence that individuals diagnosed with substance-use and psychiatric disorders can benefit from 12-Step involvement (e.g. Bogenschutz, 2007; Laudet, Cleland et al., 2004). However, this group often have more and greater challenges in their recovery process and poorer

outcomes than individuals with only a substance use disorder (Laudet et al., 2000). One aspect related to this is that individuals with dual disorders may feel more comfortable and safe discussing their dual recovery needs and their use of psychotropic medications as part of their ongoing treatment than would be true in traditional 12-Step groups (Bogenschutz et al., 2006; Magura et al., 2002).

DDA was founded by Corbett Monica in 1996 with the aim of meeting the needs of dual diagnosis patients who were experiencing similar treatment gaps in Oregon (USA) and has been running successfully since 2005. Corbett was a Vietnam Veteran who endured alcohol and mental health problems; he soon realised that people suffering from dual diagnosis did not benefit from existing peer-support group Alcoholic Anonymous (AA), and after asking permission to AA, he decided to add 5 additional steps to specifically tackle mental health issues (see Appendix 1 for the 12+ 5 steps). These additional steps include: accepting help for both conditions, understanding the importance of a variety of interventions, combining illness self-management with peer support and spirituality, and working the program by helping others. In a nutshell, Dual Diagnosis Anonymous is a fellowship of persons sharing their experiences, strengths, weaknesses, feelings, fears and hopes with one another to resolve their dual diagnosis and learn to manage unresolved problems (Monica, et al. 2010). To this day, DDA now runs over 100 meetings in the State of Oregon alone; with over 3,500 meeting contacts per month in 32 Oregon Counties. It has over £0.5 million worth of contracts in various prison; mental health and community settings within Oregon; and has a strong social media presence. DDA USA runs regular social events that are attended by 100s of people who are dually diagnosed; and it has a strong presence in both the Oregonian local communities and within the Oregonian professional networks (that work with dually diagnosed people).

Before Corbett Monica died in 2016, Dan Ware (DDA UK Director) met Corbett as part of Programme run by the LHF (London Housing Foundation) for 'Emergent Leaders' in the Social Care field – In 2014. Dan had specialised both academically and professionally as a Substance Misuse Worker in the Homelessness Field, so was inspired by what DDA had achieved in USA. As a result of his visit, Dan was given permission by Corbett to set up DDA in the UK. Dan then persuaded his friend Alan Butler, to help him set up DDA in the UK. Alan and Dan had met whilst both working at a Homeless Day Centre in West London, very early on in Alan's recovery from a 30-year drug/alcohol dependency; which had been punctuated by numerous visits to prisons and mental health wards around the UK (and Europe). Seven years into his recovery, Alan is now a respected and established peer support worker within the NHS Mental Health and Addiction Services, whilst Dan manages a 33-bed homeless hostel in South London.

In 2016, Dan and Alan set up *Dual Diagnosis Anonymous* as a Ltd Company (non-profit social enterprise) and persuaded Ealing Mental Health and Substance Misuse Services to jointly commission 2 weekly DDA meetings in Ealing, West London. Through the popularity and value of these 2 meetings, a further 4 DDA meetings have been established in West London by DDA attendees; as well as a meeting in Newbury, Berkshire.

The evaluation Project

Aims

The present project sought to evaluate the first DDA program in the UK by collecting data from the perspectives of the service users, group facilitators and the commissioner who funded the pilot. Added to that, the project aimed to develop recommendations that will inform future implementation of the program and its roll out in other parts of the country.

Overall Design

The evaluation was designed as a mixed qualitative and quantitative methods. The reason for choosing mixed methods, was to expand and strengthen the conclusions of this project (Johnson and Christensen, 2017). Four case studies were also provided in order to cross-validate findings and to capture a different view on the impact that DDA has been having on its members. Different methods and perspectives, or “triangulation”, was therefore employed to help produce a more comprehensive set of findings (Noble and Smith, 2015).

2. Qualitative evaluation

2.1 Method

A recurrent cross-sectional longitudinal qualitative model (Holland, 2007) was adopted for the purpose of this study. It has often been utilised in health services research to measure transitions in recovery (Calman et al., 2013; Carduff et al. 2015; Bélanger et al. 2017). Unlike other qualitative approaches, this model focuses on duration, time and change and also allows these changes to be analysed at multiple time points (Saldana, 2003; Grossoehme & Lipstein, 2016).

Narratives from the DDA members were collected 3 times, at about 3 to 4 months after they started attending DDA (T1), at about 4 months (T2) and 9 months (T3) after the first interview. The time of the year varied depending on when the participant joined the group.

Collecting qualitative data on multiple points of time enabled researchers to measure changes or transitions in recovery pathways for individual participants. Developments of the DDA program itself were also captured via this method. Findings also revealed how suitable DDA programme was for the population it was targeting (Oakley, Strange, Bonell, Allen, Stephenson, RIPPLE Study Team, 2006).

2.1.1 Participants and recruitment procedure

DDA members

Six participants were recruited from attendants of DDA. Five participants self-identified as having both mental health and substance misuse or addiction issues. One participant cared for someone experiencing both conditions. The size of the sample was decided based on the concept of “saturation”. Saturation means that a researcher can be reasonably assured that further data collection would yield similar results and serve to confirm emerging themes and conclusions (Saunders et al., 2018). Recruitment of participants was done through the researchers and the DDA facilitators. Participation was voluntary and no monetary reward was given.

DDA founders and facilitators

The three DDA facilitators, two of which are also the founders of DDA UK, were interviewed at two points in time: the first time (T1) at about 1 year from the start of DDA and the second time (T2) after about 1 year from the first interview.

Commissioner

The Addiction Services commissioner for Ealing (West London) who co-founded (together with the Commissioner of Mental Health Services in Ealing) was interviewed face to face once, 1 year and a half after the DDA UK pilot started.

2.1.3 Procedure

The research proposal and all materials, including the semi-structured interviews, information sheet and consent form, were scrutinized and approved by the University of West London ethics committee. All interviews were carried out, recorded and transcribed by the same investigator. Semi-structured interviews (Mason, 1994) were conducted at three time points Between August 2017 and July 2018. DDA facilitators and the leading investigator were aware of time and location

of the interviews. For time 1, participants were interviewed face-to-face. These interviews were conducted either before or after the DDA meeting and always at the location of meetings. This continued for T2 and T3 for any participant who chose not to have their interview audio recorded. All participants were explained the aims of the study and were made aware that they could stop their participation at any time if they chose to, they were also given the opportunity to ask questions. The participants consented to being audio-recorded or having notes written during their interview.

2.1.2 Interviews

DDA members

The interview comprised of 3 primary questions (Creswell, 2007). The primary questions at T1 were: (1) *Has your life changed in any way since you started attending DDA. If so what changed and how? Prompts concerned psychological well-being, physical health, social relationships, employment.* (2) *Has DDA helped your recovery, if so what helped?* (3) *do you have any recommendation for improvement?* At T2 and T3 participants the first question was: (1) *Can you tell me how your life has been since the last interview? Has there been any change?* After each time point these questions were adapted according to the content received from participants.

DDA facilitators

The focus of these interviews was to explore their background, their motivation for beginning the DDA, the status of the programme at the time of interview, any logistic difficulties they were experiencing and whether they felt their involvement in the DDA had helped them on a personal level. These interviews were held six months apart from each other and lasted 30-40 minutes.

NHS Commissioner

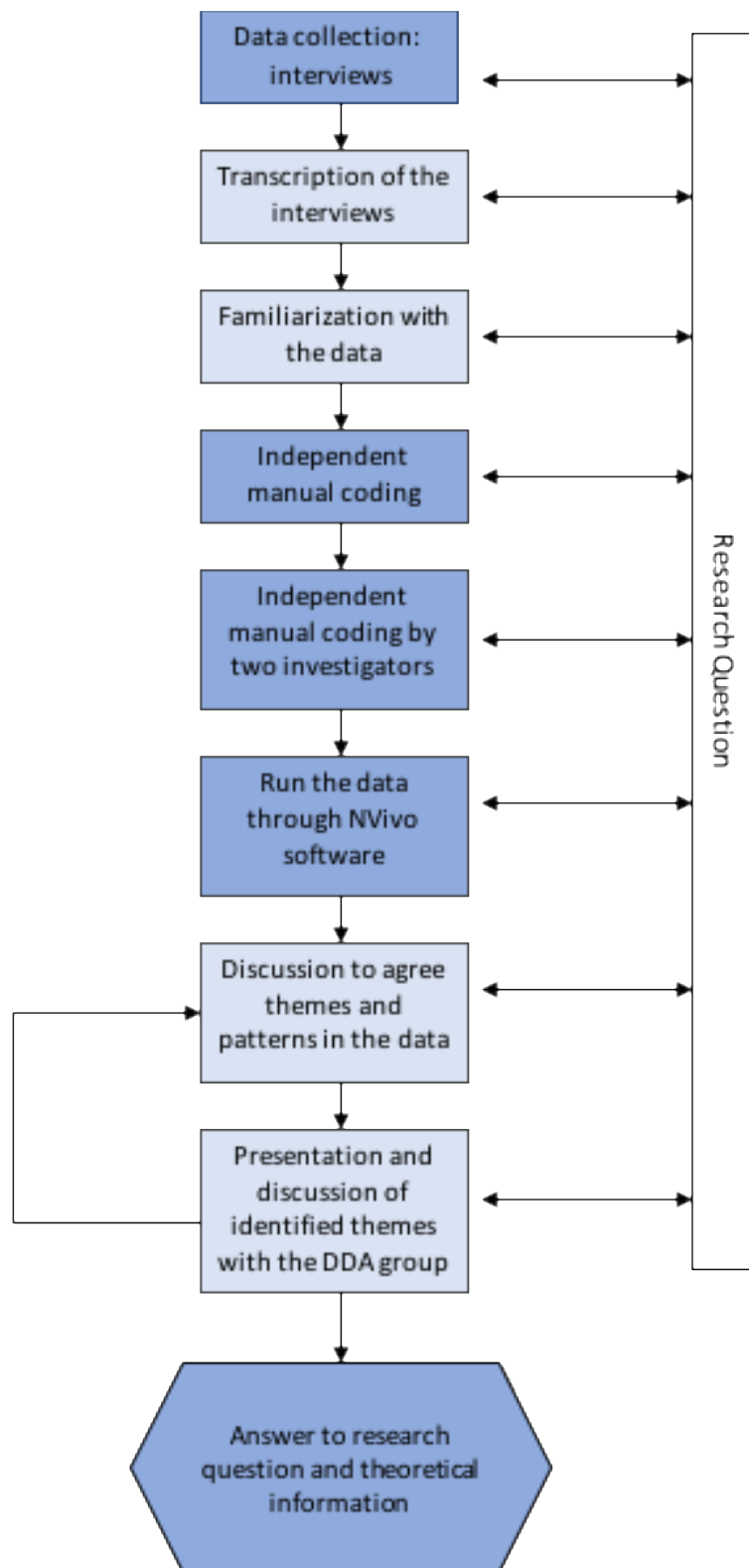
The interview with the commissioner lasted 45 minutes and explored her point of view regarding the usefulness, feasibility and future directions of DDA.

2.1.4 Data Analysis

Thematic Analysis (TA) was used to analyse the data. TA is a widely adopted method for identifying and reporting themes due to its flexibility, it allows the researcher to identify similarities and differences between participants and reveal unanticipated insights (Lorelli et al. 2017; Braun & Clarke, 2006; King, 2004). Arguably this flexibility could also lead to inconsistency and a lack of coherence when developing themes from the dataset (Holloway and Todres, 2003, Braun & Clarke, 2006). To minimise biases, researchers worked independently to code and

thematically analyse the interviews by-hand, findings were then shared and discussed and the emerged themes agreed. Data were also run through program NVivo 10 for Windows, a software which has been designed to help researchers analyse and code rich text-based data. Finally, themes and concepts derived from the interviews were anonymously shared in a DDA group meeting, which provided feedback and further insight into the interpretation of the data. A trajectory analysis was carried out using an adaptation of the sequential matrices proposed by Grosseohme and Lipstein (2016), Table 3 shows the development of the themes over time for each participant. The research process is illustrated in figure 1.

Figure 1: Research process



2.2 Results

2.2.1 DDA members characteristics

Participants characteristics are shown in Table 1. Age ranged from 25 to 60 years, with most participants being in their forties or fifties ($n = 4$). The majority of participants were White British ($n = 4$) and Christian ($n = 4$). There were seven participants (2 females) in Time 1 (T1) and 6 for Time 2 (T2) and Time (T3). The highest education level ranged from A levels to undergraduate degrees ($n = 3$). Half of the participants were in employment ($n = 3$) while the other half were either volunteers or students ($n = 3$). All the participants were single and lived alone ($n = 6$) however one participant stayed with family occasionally.

Diagnosis varied, but half of the participants experienced multiple psychiatric diagnoses ($n=3$) and the majority experienced more than one form of substance misuse ($n = 5$). Attendance to DDA meetings varied between each participant and between time-points. During time 1, most participants attended at least 2-3 sessions per week ($n=5$). During time 2 this dropped to 1-2 times per week ($n = 4$) for most participants. During time 3 half of the participants attended 2-3 sessions per week while the other half attended 1-2 times per month due to changing circumstances.

Table 1: Participants' characteristics for qualitative study (DDA members)

Participants	Sex	Age	Marital Status	Ethnicity	Religious Beliefs	Living Status	Living Arrangements	Employment Status	Occupation	Educational Level	Diagnosis	Addiction	Medication
A	F	43	Single	White British	Christian	Renting	Alone	Unemployed	Volunteer	Undergraduate Degree	-Paranoid Schizophrenia -Severe clinical depression -Psychotic symptoms	Eating disorder not specified – bingeing symptoms	Yes, Paliperidone/Certraline
B	F	25	Single	African	Muslim	Renting	Alone	Unemployed	Student	BTEC	-Psychosis -Emotionally unstable personality disorder	Alcohol/Marijuana	Yes
C	M	45	Single	White British	Christian	Renting	Alone	Unemployed	Volunteer	College Diploma	OCD/anxiety schizoaffective disorder, psychosis	Alcohol/drugs (cocaine and MDMA)	Yes, Mirtazapine/Seroxat
D	M	59	Single	White British	Hindu	Renting	Alone but sometimes stays with Daughter	Employed	IT analyst	A level	Sons' diagnosis: Schizophrenia	Alcohol and cannabis	No
E	M	36	Single	White British	Christian	Supported housing	Alone	Employed	DJ	Undergraduate Degree	OCD	Drugs/alcohol	
F	M	54	Single	White British	Christian	Renting	Alone	On benefits	Volunteer	Undergraduate Degree	Bipolar Disorder	Alcohol/Drugs	Yes, Mirtazapine

2.2.2 DDA members interviews

Overall 3 themes and 11 sub-themes emerged from the DDA members are summarised in the table below.

Table 2: Overall main themes and sub themes for each question

Question	Themes	Sub-theme
1. <i>“Has your life changed since you started attending DDA, if so, can you explain what changed and how?”</i>	Acceptance	- Acceptance of self and own diagnosis - Acceptance of others - Acceptance from others
	Social Functioning	- Social interaction and - Establishing boundaries
	Self-development	- Acquired coping strategies - Took up hobbies and life-skills, self-care - Spirituality
	Recovery progression	- Reduction of psychiatric symptoms - Reduced addictive behavior - Relapse prevention and management
	Hope	- Hope in the ability to achieve recovery - Hope and motivation towards future aspirations - Sense of purpose

Question	Themes	Sub-theme
2. <i>"Has DDA helped your recovery, if so what helped?"</i>	Integrated approach (mental health and addiction)	<ul style="list-style-type: none"> - Being able to talk about mental health problems and addiction at the same time - Accepting medications and being able to talk about them
	The facilitator	<ul style="list-style-type: none"> - Experienced role model - Availability
	The group	<ul style="list-style-type: none"> - Identification/Role models - Support and empathy - Sharing - Receiving feedback - Safe environment
	The format of the program	<ul style="list-style-type: none"> - Steps - Exercises in the workbook - Structure
3. <i>"Do you have any suggestions for improving the DDA, if so can you explain?"</i>	Social activities	<ul style="list-style-type: none"> - Opportunities to socialise outside the group - Opportunities to use and showcase talents and skills of DDA attendees
	Expansion	<ul style="list-style-type: none"> - Take DDA to other locations in London and UK - Social media presence
	Linking in with specialize services, especially for trauma	

Table 3: A longitudinal representation of the development of the themes over the three interviews at T1, T2, and T3 for each participant

Participants	A	B	C	D	E	F
Acceptance	Acceptance from others, authenticity and self-acceptance Increased from T1, to T2 and 3	Acceptance from others and acceptance towards others increased. In T2 feelings of acceptance from the group increased. No mention of acceptance in T3 due to relapse.	Self-acceptance and acceptance from others and acceptance of diagnosis were present, there was no mention of these things in T2 due to relapse. No mention of acceptance in T3 as focus was on future plans and aspirations.	Acceptance of son's diagnosis and self-acceptance continued to grow.	Acceptance wasn't mentioned during T1 but implied from ability to maintain abstinence. It was not mentioned in T2 due to relapse.	Acceptance from others became less important but awareness of self-acceptance increased from T1 to 2 and 3.
Self-development	Coping strategies decreased due to relapse. Increased self-awareness and ability to recognize triggers. At T3 also increased faith	More awareness of triggers and coping strategies. Improved time-keeping. Maintained Employment from T2 to 3.	Increased educational pursuits but less engagement with the DDA workbook or steps at T2. Continued progress in education at T3.	Consistent use of coping strategies and physical activity from T1 to T3.	Increased faith, voluntary pursuits and responsibilities.	Consistent engagement in voluntary pursuits and physical activity at T2, took up voluntary work at T3.
Recovery progression	Relapsed in addiction and mental health symptoms At T2. Fewer symptoms at T3.	Became abstinent. Increased use of coping strategies. Sleep hygiene had improved. Relapsed at T2 but DDA helped go back to abstinence at T3.	Consistent in recovery, was maintaining reduced drug use. At T3 abstinent, mental health improved.	Experienced a period of low-mood and depression.	Remained abstinence but experienced a low in mental health.	Remained abstinent but experienced a low in mental health at T2. Relapse was contained and was back to abstinence at T3.

Participants	A	B	C	D	E	F
Improved social functioning	Interacting more with others, going out and re-engaging with family and friends from T1 to 2 and 3. More able to establish boundaries.	Relationships with family and friends had all improved at T2, relationships became difficult at T3 due to relapse.	Consistent in their engagement with friends and family at T2. Awareness of unhealthy relationships at T3.	Plans to do more social engagement at T1, took up cycling and other activities and T2 which continued to T3	Re-engaged with family and continued to maintain close friendships and healthy boundaries from T1 to T3.	Reduced social contact with friends, not close to family at T2. Reconnected with friends, family at T3. More confident with setting boundaries
Integrated Approach	Increased appreciation of the DDA's integrated approach from T1 to T3.	Consistent from T1 to T2 was the importance of an integrated approach.	Less mention of the DDA's integrated approach, more focus on future plans at T3.	Consistent appreciation of the DDA's integrated approach from T1 to T3.	Consistent appreciation of the DDA's integrated approach, medication acceptance.	Importance of integrated approach was not mentioned further in T2 or T3.
Facilitator influence	Increased appreciation of the facilitator's support from T1 to T3.	Increased appreciation of the facilitator at T2, No mention at T3.	From T1 to T3 their view of the facilitator remained consistent. They felt the facilitator was a supportive figure.	During both T1 and T2 view of the facilitator remained consistent. Facilitators being has been of great support.	Consistent appreciation of the facilitator. From T1 to T3	Slight decrease in their positive perception of the facilitator at T2, increased at T3.
Group influence	Felling valued and accepted. Felt able to be their authentic selves. Increased perception of other members as role models at T2. More importance placed on listening and receiving feedback at T3.	Consistent view that the group was a safe environment to listen and share experiences. At T3, benefit of sharing and feedback.	During T1 they placed importance on listening to members further along in their recovery. This decreased in T2. At T3 re-engaged with the group and had gone back for support.	At T1 and T2, they emphasised the importance of listening and talking in understanding their son's condition. At T3 the focus shifted from his son to himself, <i>he realised that he group was helping his own self-development</i>	During T1 it was useful for them to be in an environment where they could speak and share. During T2 appreciated that attended meetings prevented relapse.	During T1 they valued the members of the group as role models. During T2 they felt less connected to the group.

Participants	A	B	C	D	E	F
Suggestions for improvement	The need to expand DDA to different locations was consistently mentioned from T1 to T3. Expressed the need of having social opportunities.	Had no suggestions during T1 but did during T2, insisting on presence on social media. At T3 reported the desire to organize events and play music.	No suggestions during T1. At T2 suggested to increase the number of meetings and need of <i>support when disclosing trauma</i> . At T3 mentioned <i>opportunities to organize social activities</i> .	Consistently commented on the need to expand, also for people to take on tasks in the group. At T2 appreciated having a role in the group. <i>Importance of the social element at T3.</i>	Consistently commented on the need to expand, also for people to take on tasks in the group. At T3 had been given a task and was happy about that.	Consistently commented on the need to expand, also for people to take on tasks in the group and having social events.

Question 1: “Has anything changed for you since you started attending DDA, if so, can you explain what changed and how?”

Theme: Acceptance

Acceptance of self

At T1, there was an overall sense of positivity from participants, both towards the DDA and towards themselves. Most notably, participants identified that they felt more self- acceptance at the DDA. Participants explained that learning to accept themselves meant accepting the areas of themselves that they perceived as imperfect and flawed and coming to the realisation that these qualities do not indicate they are inherently bad. DDA also encouraged participants to see their addiction or mental health issues as something that they needed to work with.

“It’s made me realise that perfection is impossible and I need to accept myself as I am.” (T1, P (participant) B)

“You see yourself as a good person. See your flaws more as something that needs improving.” (T1, PA)

“After coming here, I’ve had to accept this diagnosis and that there is a problem.” (T1, PB)

Across interviews, T1 demonstrated that for most participants, their diagnoses carried a great deal of negative weight and stigma, which made them feel inherently bad. The ability to accept themselves completely meant much stronger acknowledgment of their co-existing conditions. In the process, they began to view themselves as separate from the negative circumstances they had experienced.

“It’s made me more self-accepting of my mental health condition and that I’m not a bad person.” (T1, PD)

For many participants, accepting the presence of any issues, was a huge hurdle, and prevented them in the past from reaching out for help and embracing the help offered to them, with some participants noting they had become much more aware of past self-sabotaging and the repercussions that could have been avoided.

“It stopped me sabotaging the help I’ve got...I now reach out more to others” (T1, PE)

Self-acceptance also promoted a forward-thinking attitude amongst participants during T1, especially those who were particularly troubled by past experiences which concerned not only their substance misuse or mental health issues but also issues with family or relationship conflict, involvement in abusive circumstances or homelessness.

"You have to learn to accept yourself for who you are and you just have to accept your life is the way it is. You can't just keep dwelling on the past and thinking I made all these mistakes and I wish I could change them" (T1, PA)

This new-found self-awareness amongst members of the DDA left a lasting impression on Participant D. It quelled feelings of anxiety, stress and guilt surrounding their son's diagnoses but also pushed them to take a deeper look at themselves and adopt more self-understanding. This participant admitted feeling burdened because of the high standards they felt they should be living up to. Before attending the DDA, they believed their son's diagnosis was an indicator of poor parental skills and reflected badly on their character. As explained:

"It deepened my understanding because I was finding it very irrational and just wanted him to pull himself together but of course I've realised it's not as straightforward as that. I've started to understand just what addiction is" (T1, PD)

"Seeing the emotions and universal struggle, you know, that it's not just my son but thousands struggling in similar ways made me feel less anger and stress towards myself and my son"

"It hasn't just made me more understanding to my son but given me more understanding of myself in a massive way" (T1, PD)

At T2 participant D came to the realisation they didn't need to solve everything by themselves. This counter-productive mindset is experienced by sufferers and those involved in their care alike and often results in feelings of undue stress, anxiety and pressure.

"This whole thing about DDA, it helps us as individuals realise we don't need to try and fix things all on our own. It makes you realise there is help out there." (T2, PD)

At T1, self-acceptance also helped participants understand that their path to recovery may not be straightforward. For many the notion of relapse was regarded as an insurmountable failure, so to be in a space where it was acknowledged as a normal part of recovery was a source of reassurance and meant participants did not feel discouraged when re-engaging in services and groups.

"For me being here is also about learning I'm going to slip up, I'm going to make mistakes, I'm going to get it wrong sometimes, and give myself permission to get it wrong sometimes" (T2 PE)

The development of self-acceptance continued to be an important aspect of DDA attendance in T2 but became a less prominent focus (see Table 3). For example, participant E, who felt the brunt of their son's diagnosis, and became overwhelmed by depression and anxiety, it emphasised the importance of *self-care*, something which is often neglected in those with active addiction or mental health difficulties. Their words exemplify that it is not only those who are diagnosed who suffer, but the impact is felt by all involved. As they went on to explain:

"I think it's about looking after me..." (T 2, PE)

Self-acceptance received no mention in T3. Much of this could be attributed to the participants shifts in focus with the majority of T3 interviews focused on what participants now felt capable of doing and their aspirations for the future, arguably a by-product of the self-acceptance they mentioned in T1 and T2.

Acceptance of others

For all participants at T1, there was an overall acknowledgement that accepting others was integral to accepting themselves and it emphasised to them, the importance of self-love. For many participants, this reduced conflict experienced in interpersonal relationships, particularly with family. This could be attributed to an improvement in their awareness of their own and other people's emotional states. Often when experiencing active addiction or mental health issues, an individual can become so fixated on their own struggles they devote less time and energy to those around them. As demonstrated by the following:

"As I go further along the journey I become more selfless and more able to be aware of other people's emotions, to be able to consider them whereas before when I was in the pain I was just so caught up in it I wasn't able to do that" (T1, PA)

Acceptance from others

Receiving affirmations and acknowledgment from others reinforced a more positive self-image and made participants feel like people genuinely cared about what they were going through, encouraging them to be more open with how they feel. This in turn, reduced feelings of shame surrounding their diagnoses. As participants explained:

"When I feel suicidal and depressed and shutdown the DDA has still accepted me and made me feel cared for" (T1, PB)

This continued in T2 as participants explained, whether they were in a bad place or had been unable to attend for a while they never felt rejected by the group.

“DDA gives me a place you can go to where you feel more accepted, no labels. Like an alternative family, where you can realise your potential” (T2, PF)

During T2 acceptance from others led two participants to feel they could also be their authentic selves. As demonstrated by the following:

“It means I’m more authentic and more transparent, not pretending everything’s okay when it’s not” (T2, PF)

Theme: Hope, motivation towards future aspirations

“Hope” was one of the most frequent words picked up by the software NVivo, meaning that this concept was very prevalent in participant’ accounts. In T1, T2 and to a lesser extent T3, the groups’ diverse age-range inspired hope, as it gave members the chance to learn from the experiences of older members of the group. Younger members of the DDA saw older members as role models and those further along on their journey to recovery as individuals to aspire to. Participants also reported that the group was supportive and encouraging and gave them the strengths and confidence to come out from their shell.

“most of them are a bit older, so they give life advice and life lessons and say you know, you don’t have to go through everything we did, you don’t have to go to rock bottom, learn from our mistakes basically.” (T1 PB)

Theme: Improved social functioning

Social Interaction

Another prominent theme was social interaction. During active addiction, healthy interpersonal relationships are often not present. For many members of the DDA, their isolation was often preceded by high levels of interpersonal conflict, ostracization and an increasing avoidance of social gatherings. What emerged was that the DDA became a source of friendship and support, as participants explained:

“I used to socially isolate myself for years. I’ve become more aware of the fact I need to invest time into relationships with others.” (T1, PE)

This was true not just within the DDA but outside of it too. Many DDA members spoke about moments where they became very closed off from the world while suffering from symptoms of their co-existing conditions, and that due to the way they had been treated in the past, they had found it difficult to trust others. For our participants, as friendships grew within the support network of the DDA, their social functioning began growing in other areas too, such as with family and friends. Participants who felt highly anxious and stigmatised in social settings, now felt able to go out freely and engage in more activities. For others, there was newfound confidence in forming friendships, trusting others and allowing people into their lives. There were also participants who rekindled family relations. For some they had grown apart from their family due to the issues surrounding their diagnoses and past behaviour. At T2 this pattern continued. As participants explained:

"This group has allowed me to reconnect more often with friends outside the DDA...I feel more able to go out for coffee, pick up the phone" (T1, PF)

"I can go out more for walks with my mum, drive a car, go bowling, ice-skating, and play football with my son and go cinema with family. During the last interview, things were okay but I was using heavily a few times a month so it wasn't like it is now, now it's like normal life" (T2, PC)

For participant D, developing a deeper understanding of what their son may be experiencing due to his co-existing conditions meant not only improved family relations but also a better working relationship with colleagues:

"As I've gotten myself into a better frame of mind I am able to be a better father and carer. The time I spent in the DDA helped not just with understanding my son's issues but also my daughter and the guilt, anger which permeated every facet of my life so the benefits of DDA are felt everywhere even with colleagues." (T2, PD)

Alternatively, for one participant the DDA was a source of strength and a method of combating the toxicity of their family relations:

"Unlike when I'm with my family the DDA strengthens me, gives me a feeling I am not my illness, I'm more than that. It gives me self-esteem which makes me normal and a stronger. Since the last time we spoke family dynamics have been shifting. I'm able to see myself as someone who is an individual in their own right and have a better opinion of myself the DDA is like back up and I don't have to be pigeonholed. I have a support system and a life outside my family and am in a stronger position to take no crap." (T2, PF)

Establishing boundaries

Across all the interviews, all participants highlighted the vulnerabilities that substance misuse and mental health populations can face, with many of them having been exposed to unfair treatment. Being shown value and consideration allowed participants to learn what types of behaviour were acceptable. It also gave them insight into their own behaviour and what was and wasn't appropriate. As participants explained:

"Being here made me realise the way I should be treated because everyone has been so accepting and also how to have better boundaries with people" (T1, PB)

This led to positive changes in social interaction as, one participant noted, it gave them insight into the unhealthy relationships that were maintaining their addiction.

"I've cut contact with a lot of friends who were triggering me...If they really cared, especially knowing what I've been through they wouldn't keep asking me to smoke weed with them or to go out and get drunk." (T1, PE)

Theme: self-development

Acquiring Coping Strategies

Participants explained that through DDA they learnt a set of strategies that helped them manage their mental health condition and better cope with cravings.

"...it's given me a toolbox full of new strategies and ways to reprogram my brain from thinking about drugs or sex and parties to other ones. Tools like being mindful of what I'm doing, avoiding certain places like clubs and avoiding triggers and just enjoying life at home with family. If someone approaches on the street, I would know how to say no to drugs" (T1, PC)

The recognition of triggers and the best way of dealing with them was important for one participant who was making the transition from college to university:

"It's going to be a massive trigger for sure...and that's the thing you need to fight it. There's going to be temptations, it's the environment of student life but I need to make sure I don't give in." (T3, PE)

Enhanced life skills, taking up hobbies, volunteering, applying for job

The encouragement participants received from the group meant a move towards taking up new activities. Participants found they were engaging in more physical activity such as cycling and social activities such as church events. There was also an increase in altruistic and pro-social behaviour, with many participants engaged in voluntary work, some of whom were helping someone who was struggling with similar issues. During active addiction, old hobbies can get left behind, and for many participants their journey to recovery was also about re-discovering the activities and hobbies they enjoyed before the addiction took hold. The pursuit of new activities followed participants through to T2 and T3 as well.

“I got back into cycling, which is something I used to do with friends but stopped once all these problems started mounting up” (T2 and T3, PD)

Alongside this new-found motivation to do more, there was an improvement in attending to responsibilities and a better daily routine both within and outside the group. Participants felt that the DDA meetings gave them a sense of purpose and allowed them to do something productive with their time. They also felt the group gave them structure and routine which helped them outside of the group to carry out daily tasks and responsibilities without becoming overwhelmed. For many participants, they now felt more able to pay bills, budget their money, attend appointments and take their medication. As participants explained:

“you make tea and coffee and have a bit of a duty in the group and that gives you a bit of a purpose, it definitely helps” (T2, PC)

This also seemed to lend itself to a pro-active attitude in other areas, such as being considerate towards others, and wanting to assist the DDA in any capacity possible, most notably in T2 and T3, as demonstrated by the following:

“When I am at home, I try to be pro-active and help around the house. So, for example if toothpaste runs out, I go and buy more and not just waiting around for someone else to do it” (T2 and T3, PE)

Having regained control of daily responsibilities and established better routine, participants felt renewed belief in their capabilities, and as one participant put it, according to them ‘the world was their oyster’ since becoming part of DDA and reaching abstinence. At T2 and T3 this resulted in increased voluntary and educational pursuits and a move towards paid employment. As participants explained:

"I suppose just more belief in myself, confidence to do things I couldn't do before. I visit more places now and work more hours, feel I have something to contribute and feel I've learnt to go out and do these things and be confident from being part of the DDA. (T2 and T3, PF)

"I've got my GCSEs, I'll do my level 3 BTEC and then my aim is to get this degree." (T3, PC)

Enhanced Spirituality

At T2 and T3, participants reported that after attending DDA they have started to use faith and spirituality as a method of coping during difficult times.

"It's pushed me to take up meditation and prayer" (T2, PD)

"I was raised a strict Jehovahs witness and was never baptised because I didn't connect with it however the DDA showed me that there are other ways of being spiritual that aren't so extreme and, knowing if you have issues you have this higher power watching over you is so powerful and a comfort to me." (T2, PF)

Theme: Recovery progression

Reduced psychiatric symptoms

The development of healthier coping strategies led to a reduction in symptoms for both substance misuse and mental health symptoms. Most of the participants mentioned that they felt more grounded and experienced less anxious thoughts. There were a few that also mentioned their *suicidal thoughts had lessened considerably*. This was attributed to acceptance from others, as one participant demonstrated, when they felt suicidal, the other members of the DDA rallied around to remind them of their good qualities.

"I often want to kill myself. But when I feel that way everyone here points out...the good things I don't see...helped give me self-respect and dignity"

Reduced addictive behaviors, help manage relapses

Participants also spoke about engaging in *fewer addictive behavioural patterns*, and for a few, maintaining abstinence due to the use of the workbook. This was most notable in T2 and T3.

"Going to the DDA meetings keeps me sober therefore it's vital to me doing anything. And that's what I've been doing. I've been clean from alcohol since October 2016 and it's thanks to this programme." (T2 and T3, PB)

If not abstinence, DDA helped to reduce use, as demonstrated by one participant during T2:

"I'm doing well, I don't drink, and I smoked cannabis only a few times." (T2, PC)

For many people, DDA was instrumental in preventing relapses, or in some cases it helped them contain or go back on track after relapsing.

"I was close to relapsing in March when my surgery first got cancelled because I was so disappointed but I rang [the facilitators] and they convinced me to come to a meeting that day, and I'm so grateful they did because it worked." (T1, PC)

"I've fallen back into eating problems, bingeing since September. So there have been drawbacks but I also find I have more faith so there's been some positives...I've got symptoms like hearing things and my best friend has an illness that has left me all shaken up so that stresses me out but I find having the DDA to go to is a great help." (T1, PE)

Question 2: "Has DDA helped your recovery, if so what helped?"

All participants reported that DDA helped their recovery progression (see "reduced addictive behaviors" and "reduced psychiatric symptoms" themes identified in the previous question.

Theme: integrated approach (tackling mental health and addiction at the same time)

A defining quality that distinguishes the DDA from other fellowships is its approach. It embraces all mental health-conditions and addictions. Participants thought that the single-purpose fellowships such as Alcoholics Anonymous and Narcotics Anonymous are less accepting, and amongst the members of the DDA, the issue of stigmatisation and prejudice is prominent. Not only does the DDA embrace a diverse range of conditions, it also accepts the need for prescribed medication. Crucially, DDA allows its members a space to speak about their mental health concerns without the fear of judgement. As explained by participants:

"I think the most important thing about the DDA is that it fills a gap where other fellowships are lacking. It's a reassuring place where you can talk about your [addiction] issues but also your mental health" (T1, PB)

Medication acceptance

All participants mentioned the importance of being able to talk about their medication and how they make them feel.

“A lot of the time if you go to AA or NA...they’ve said they don’t want me to use any drugs, whether they’re prescribed drugs, whether it’s anything. So, it makes it difficult because...you have to take your medication but they don’t support that” (T1, PB)

Theme: The facilitator

Experienced role model

Across the interviews, the facilitator’s shared experience of dual diagnosis gathered admiration from participants. Not only was the facilitator seen as a *role model*, and like older and more *experienced* members of the DDA, someone to aspire to, they were also seen as someone who could be approached for advice and guidance. Many participants felt the facilitator understood their symptoms more than other health professionals and intervened more quickly to signs of relapse and symptom triggers, before these issues developed into something more serious. As participants explained:

“he’s...like a role model to the rest of the group.” (T1, PC)

“He’s gotten to know which state of my illness I’m in before I realise it sometimes. It’s stopped me from hurting myself on top of the struggles I’m having” (T1, PD)

“He knows everything about the steps and the DDA, and he’s very knowledgeable. He understands the patterns and how to deal with them.” (T1, PB)

Availability

For most of the participants, the presence of a stable and supportive figure in their lives was rare. The facilitator was important not just for their many internal qualities but also because they were readily available and accessible, going beyond what was expected in order to make participants feel supported and valued. Outside of meetings participants were able to communicate with the facilitator through phone calls and discuss any issues they were experiencing. As participants explained:

“Ring[ing] [the facilitator] and checking in helps me to feel supported” (T1, PF)

Theme: The group

The group environment was important across all interviews in T1, T2 and T3. Alongside acceptance, improved *identification* developed through the group’s format of sharing

experiences and having the opportunity to receive feedback, an aspect not yet utilised in other fellowships. For many DDA members the opportunity to receive positive feedback and encouragement was one they were rarely afforded. Participants also mentioned how the group acted as a motivator and encouraged them to become more forward-thinking and hopeful about future prospects.

Identification/Role Models

DDA members explained that they wanted to emulate the successes they would hear about. They stated that they could identify with what the other members were going through. The group also made participants realise mistakes and setbacks were a normal part of recovery and that these should be used as an opportunity to learn and reflect. In turn, these more experienced members of the DDA adopted a mentoring role and offered feedback and advice. For Participant E, being able to see individuals whose journey's correlated with his son's and witness their recovery was a source of immense reassurance. His son was not engaging with mental health services, addiction services or fellowships and often displayed challenging behaviour that was difficult to manage.

"Being here also gives me hope because in the group there are people like my son but here at DDA they are getting help and some have come through and out to the other side just by taking it one day at a time" (T1, PE)

Safe Environment

During T1 and T3, participants also felt the DDA provided them with a safe environment which made it possible for them to share their experiences so openly. For most of the participants the group offered an environment where they could speak freely about concerns which related to both their mental health and substance misuse issues, without feeling judged or unsafe. The safe atmosphere present in DDA meetings meant participants also felt like they could be truer to their values and be their authentic selves rather than constructing a false image to project out during meetings. Participants mentioned how *acceptance from others* and the dynamic of the group contributed to this. As participants explained:

"I felt safe enough to be myself" (T1, PA)

"I feel safe and I think that's due to the group dynamic and how accepting everyone is." (T1, PF)

Theme: the format of the program

Workbook and steps

For most of the participants, the use of the DDA workbook helped them reach complete abstinence from their addiction. Most of the participants also found it helped develop their self-insight, as they looked deeper into the issues which their substance misuse may have stemmed from. Meditation exercises and emphasis on spirituality were also found to be helpful. Finally, participants reported that the steps allowed them to feel grounded and contributed to reduced symptoms of rumination and suicidal ideation. As participants explained:

"One of the strongest things that underpins my abstinence from drugs and alcohol is the steps"
(T1, PA)

"I wouldn't have done those things without the book so in that way it's been good because I searched deeper and thought about why some things have turned out the way they have and it's been useful in that way." (T2, PB)

Question 3: "Do you have any suggestions for improving the DDA, if so can you explain?"

Expansion, Social Media presence

Throughout T1, T2 and T3 views on how the DDA should move forward remained consistent, with the majority of participants focused on the necessity of more sessions in more locations and more facilitators/professional influence to enable this.

"It would be good to have more meetings in other areas of London. Because when I'm in other areas I can't attend the meetings as they're too far away, so it would be good to have more facilitators." (T1, PC)

In T2 we could already see evidence of this emerging for one participant who was undertaking new tasks for the DDA. One participant in T1 suggested the addition of more female facilitators as they felt some experiences were uncomfortable to discuss with a male.

"I also wish there were more woman facilitators and women attending the sessions as it is mainly male, and I feel it would be easier to talk about relationships and boundaries." (T1, PC)

Another participant felt during T3 their also needed to be more professional influence in the DDA as some members could turn up quite unwell, as explained by the following:

"There's no mediator in case someone gets aggressive or violent or something else happens. I feel like there needs to be a professional ensuring it's a safe environment for everyone." (T3, PF)

Two participants felt the current social media presence for the DDA was lacking and the current website outdated. They felt the DDA would benefit from a stronger presence on sites such as Twitter and Facebook too, in order to reach a wider audience. As participants explained:

"I think if used positively the use of social media could mean the DDA is able to reach a big audience" (T1, PE))

Active involvement

At T1, there was also a call for more DDA members to have more responsibilities within the groups.

"I would like it if other people chaired the meeting, and in the group had more responsibilities...rather than the same people doing the same thing in each session. This could establish a routine too." (T1, PB)

At T2 and T3 this aspect had been addressed and more people got actively involved, at this was valued very positively by participants. For example:

"I am now secretary for the Saturday group and collect and look after money, by making an expense sheet which I send to [the facilitator] and I nominate a chair for the next meeting. We can't rely on one person to do all the work..." (T2,T3, PB)

The program/tools

Some participants held concerns over steps from the 12 + 5 workbook and felt the wording of some steps needed to be altered or that such information was too personal to be discussed in a group setting. As explained by the following:

"I couldn't have done it without the years of therapy I had, years and years. Step 4 and step 6 are worrying as left to your own devices it could lead to doing too much too soon which could lead to relapse." (T1, PA)

"I feel step 6 is too big a chunk psychologically to do in one go, so it should be cut smaller, like into three smaller steps, so people do a little bit each week." (T1, PF)

There were also concerns the subject matters of some steps could be triggering without appropriate support in place to alleviate this. It was suggested the workbook may benefit from revision. As participants explained:

“Here there are no safety mechanisms in place when digging up traumatic events/or trying to stop self-harm behaviour” (T1, PF)

“Going back to childhood could make you blame yourself, which is bad if you’ve suffered abuse where you already feel at fault. Steps need to be reassessed and maybe certain ones need to be done on to one.” (T1, PB)

Social Opportunities

Related to the DDAs future expansion was the consistent mention of wanting more social outings to give the members a chance to integrate more into the community and socialise with other members outside of the meetings, as demonstrated by the following:

“I would also like it if there were more gatherings and trips outside of the session because everyone has social issues and it could strengthen this.” (T1, PE)

“I went on a retreat to Mt. Saint Bernard and it was so calming and caring and peaceful. Hopefully at some point this is something the DDA can offer.” (T2, PA)

2.2.3 Feedback from the DDA group

Twenty-two DDA members participated in the discussion about the evaluation study. Participants valued the fact that researchers fed back what they found from the study. During the session, the investigators presented the aims and the finding of the study to the group. Confidentiality was maintained throughout and no personal cases were discussed. Overall, the group confirmed the themes that were identified, in particular they stressed the importance of *“feeling accepted no matter what”*. They confirmed the fact that DDA was felt as being more inclusive in comparison to other groups, and that they could talk about their mental health issues as well as their addiction problems. They stated that the main facilitator was an important reference point for them. In terms of future developments, they discussed possible ways of expanding and they reinforced the need to organise more social event, some of which could be co-led by them and be open to the community. Several members have talents, for example one is a musician, one is singer and one is DJ, all of them said that they would be happy to help and perform for an event.

2.2.4 DDA founders and facilitators

Table 4 shows the questions and themes identified for each participant in the first and second interview.

Table 4: Questions and themes identified from DDA founders and facilitators

Questions	Themes at T1	Themes at T2
<p>1. (Time 1)</p> <p><i>From your perspective, what impact has DDA been having on its members?</i></p>	<p>Improved quality of life</p> <p>Impact on taking up volunteering and employment</p> <p>Filling a gap in service provision</p> <p>Improved social life/family</p> <p>Inclusivity of DDA in comparison to other fellowships</p>	<p>Since T1 improvement of people's life outside the DDA meetings is more evident</p> <p>More people are getting involved</p> <p>DDA complementary to other therapies, services</p>
<p>2. (Time 2)</p> <p><i>How have things been with the DDA since the last interview?</i></p>	NA	<p>Increased number of attendees</p> <p>Developments (web-page, video, new meetings)</p>
<p>1. <i>Where do you see things going for the DDA now?</i></p>	<p>Expansion</p> <p>Evaluation</p> <p>Involvement of other professionals and organizations in the community</p>	<p>Expansion, interest from other parts of London and UK</p> <p>Data of the evaluation has been presented at several conferences</p> <p>Need to expand the social aspect</p>

<p>2. <i>What logistical difficulties have you encountered?</i></p>	<p>Funding</p> <p>Time/Commitment</p> <p>Complex needs /Ensuring continued attendance</p>	<p>Actively seeking additional funding opportunities, CNWL NHS Trust renewed for 1 year</p> <p>Principal facilitator sickness led to members taking on more responsibilities and chairing</p> <p>Improved link with external organizations</p>
<p>3. <i>How has your involvement in the DDA helped on a personal level?</i></p>	<p>Sense of purpose</p> <p>Help with own issues and mental well-being</p>	<p>Sense of purpose</p> <p>Help with own issues and mental well-being</p>

The three interviewees agreed that they have witnessed the “*huge*” difference DDA can make to individuals, they reported that “*people are in a much better place*”, more compliant with their medication, returning to employment or volunteering, socialising more and creating more support networks. The facilitators were pleased that they have received interest from lots of other London boroughs and other parts of UK too and they expressed their desire to see the DDA develop on a larger scale. However, they are aware of the challenges:

“Despite demand, meetings need to be governed and overseen properly so without our full commitment we could be setting ourselves up for failure. So our next steps will require lots of planning to make sure it’s done right. More funding would also allow us to train more facilitators.” (Facilitator 1)

An additional challenge is to form new facilitators; however, they already have plans and have been discussing to develop an accredited course in collaboration with the University of West London. In the meantime, some of the more experienced DDA members have been given more responsibilities and some of them started facilitating the meetings:

“I experienced health problems myself which meant I was having to delegate my duties to others, it wasn’t a bad as it got other people involved and doing a service. It took some of the burden off my shoulder as I was running a lot of the meetings at that time. The mutual support which is the ethos of the DDA was evident during that time, as members took part in facilitating.” (Main facilitator)

Facilitator 1 expressed the importance of involving other professionals so that members can be signposted to and from other services, such as housing, employment. One of the main challenges ahead is to ensure more funding, this would help organize social outings out in the community helping to tackle the loneliness and isolation that many dual diagnosis sufferers experience.

The needs of developing the social aspect of DDA has been expressed by all three facilitators, they also explained how extending the DDA network beyond the weekly meetings has been instrumental for the success of the DDA program in Oregon.

When asked how DDA helped affected them personally, they explained that, like other members, helping others is very rewarding, it gives them a sense of purpose and helps them with their own mental health issues.

“I find joy in helping others in the group and that’s great when you have mental health issues because it takes your focus away from your problems and focused on something positive.”

“DDA made me feel useful, it’s given me a purpose.” (Facilitator 2)

“I think in a way it’s been like therapy to me. I feel more able to discuss my Mental health issues too. I suffer with anxiety and OCD.” (Facilitator 1)

“DDA gives me a focus on a weekly basis, something to think about other than myself, in an area that is relevant to my personal wellbeing and abstinent. It’s good for me to socialise and participate in meetings as it reinforces my abstinent and allows me to around people on a similar path and journey.” (Main facilitator)

2.2.5 Commissioner

The NHS Commissioner for Addiction Services was interview at about one year and a half after the project started. She explained that the fact that DDA had been commissioned jointly by Addiction and Mental Health Services was a success in itself.

“There is aa need for joined up working, people with multiple problems are let down by the system, they fall in between the gaps and their needs are not addressed. It is important that services and commissioners from different sectors work together”.

Asked about where does she see DD going, she answers that there is a need for the team to expand, draw in new resources and apply for different funding to support various aspects of the project. She discussed about the difficulties that she has been having since NHS funding has been

drastically cut. She suggested that that a step approach should be taken, establish a solid base first, develop more groups in London and then roll out in the rest of the UK.

The commissioner is committed to support DDA also in terms of getting other services in the community know about it so that referrals to the group can be made.

She valued the fact that the program has been evaluated as this will provide evidence base for further funding.

2.3 Discussion of qualitative findings

There were unique advantages to capturing the longitudinal perspective of the DDA members over three points in time. Existing literature is more focused on what recovery means to people, rather than the processes which have instigated it (Stott and Priest, 2018), our findings allowed a realistic insight into the mechanisms facilitating recovery, and into how the DDA was useful during the ups and down of the recovery journey

Individualised outcome measures for those with co-existing conditions (a substance disorder with mental health issues) have rarely been studied (Stott and Priest, 2018). Current psychometric measures often fail to cover every area of relevance in a person's recovery journey (Alvis et al. 2017). Similar service-user perspectives within a dual diagnosis population have been used as a practical tool, allowing commissioners and practitioners to identify areas of improvement (Hawkings et al. 2011), therefore, it is hoped that the utilisation of semi-structured interviews in this study will provide feedback which can help develop the DDA programme further. Finally, the present findings also provided an insight into each participant journey and the individual processes occurring in their recovery. By understanding these processes, self-help groups such as the DDA, are better placed to help its members maintain their recovery and minimise relapse.

The themes emerged from the interviews with the DDA facilitators converged with those of the DDA members and the final feedback from the overall group discussion. The following sections discuss the findings within the context of previous research and current theories in the field of addiction and mental health recovery.

Impact of DDA on members' recovery journey

Overall, there was a general agreement that DDA had been instrumental in aiding recovery and improving the quality of life of its members. The uniqueness of DDA in comparison to other groups such as Alcoholic Anonymous, or Narcotic Anonymous, was the possibility of talking about mental illness as well as addiction issues at the same time, without feeling obliged to disentangle two conditions that are naturally interlinked. Participants particularly valued having a safe place where to discuss how they felt about their mental illness and their medications. Participants felt that they were not judged for who they were and felt free to attend the meetings whatever the status they were in, as one member put it "With DDA you are seen as more than your diagnosis".

From T1 to T2 there was an overall increase in *acceptance*, *social functioning* and *self-development*. This was especially evident in the participants ability to form *coping strategies* and feel *self-acceptance* and *acceptance from others*. These findings are consistent with the qualitative findings from the DDA Oregon paper (Roush et al. 2015), especially concerning acceptance from others, recognition of how co-occurring disorders interact, group discussion, feedback from others in the group and hope.

Acceptance is one of the five extra steps the DDA uses and was mentioned frequently during T1, T2 and T3, and cited as a reason some participants had overcome relapsing in the period between T2 and T3. Addiction and mental health conditions often carry feelings of shame and self-stigmatization and this can hamper acceptance of self and of others. Research by Matthews et al. (2017) suggests that this is partially due to the internalization of public stigma, often via negative stereotypes (Lloyd, 2013; Luo a et al. 2007). The DDA members that were interviewed associated their ability to accept themselves and others with receiving acceptance from others. The acceptance they received led to a cessation in self-stigmatization and stigmatization of those experiencing the same condition. This could be due to more public support through the DDA group, and as a result an increase in positive internalisation. Self-help groups have previously been shown to foster the rejection of stereotypes and appear to replace a poor social identity with valued personal identities, increasing feelings of self-worth and self-acceptance too (Corrigan et al. 2005; Kaplan & Liu, 2000).

By becoming more accepting DDA members also began expressing more self-forgiveness and self-compassion. Though limited, the growing research on the association of self-forgiveness with health and addiction suggest it can play a crucial role in recovery (Webb et al. 2017; Webb et al.

2018). This could be explained by the stress-and-coping model of self-forgiveness which suggests it can act as a unique coping mechanism, reducing levels of self-condemnation and self-stigma, especially resentment (Webb et al. 2017; Webb et al. 2018). What also emerged was an acceptance of flaws and positive attributes. This corroborates research by Sun Kyung Kan et al. (2018) who identified “embracing the essence of one's own existence” as pivotal in drug addict recovery.

Participants also spoke of how important it was to *share* their own experiences and *listen* to others. This emerged in T1, T2 and T3. Mental health and addiction symptoms appeared to fluctuate during T2 to T3 with many members struggling, and some relapsing. During T3, most of the participants who struggled managed to re-establish abstinence or minimize use thanks to the support of the facilitator and the group. There was also more mention of *faith* and hope in T3 and much more emphasis on *future plans* and *aspirations* with many participants.

Social functioning amongst our participants was an issue during T1 but there was a significant increase in social activities during T2 and T3. Issues were often perpetuated by interpersonal conflict, financial difficulty, housing difficulty, abuse and isolation, all undesirable factors which accompany substance use and mental health issues (Sinha, 2009; Turner, 2018; Davidson & Roe). Research on substance users by Dingle (2012) demonstrated this struggle. Their research found 63% of substance users single and 42% alone. A motivator for attendance to the DDA was the need for social connectedness. This is consistent with findings by Baumeister and Leary (1995) and Chou et al. (2011). Positive social relationships are also vital for maintaining a healthy mental state (Cruwys et al, 2014a). Participants described a sense of belonging and community within the DDA, with one participant referring to the group as an ‘alternate family’. Previous research has shown that positive social interactions in recovery communities can support individual recovery by developing recovery capital (Dingle et al. 2015).

This encourages the members to bind to groups, such as the DDA, which support positive changes in identity, reducing the risk of seeking value and identity from ‘using’ social groups (Dingle et al. 2015). This is consistent with self-attribution theories which suggest being part of a meaningful group and engaging in meaningful activity can enhance self-worth and self-efficacy (Markowitz, 2001; Powell & Knight, 1995). Being part of the DDA promoted a sense of belonging and becoming part of a social community which supports abstinence (Bond et al. "2003; Groh et al. 2008; Kelly et al. 2012; Kelly et al. 2011). This shift in the participants social network could have helped prompt some of the participants to decrease their involvement in drink-related activities, identify and avoid cues which induced cravings and helped them build rewarding social

relationships outside of the group, as many participants spoke of becoming much closer to family and friends since attending (Kelly et al. 2012 and Kelly et al. 2011). During T1 and T2, some of the participants were experiencing conflict in their social and family relationships, however during T3 this improved, with a few participants re-connecting with family they had stopped speaking to or spoke to minimally.

Identity and the process of identity change is one that has gained increasing focus within the alcohol and drug field, particularly its relation to social functioning. Research by Dingle et al. (2015) suggests there are two social identity pathways (Dingle et al. 2015). The findings from our study provide evidence of these two pathways, as some members began attending DDA to regain the loss of pre-existing social identities, consistent with the current narrative of an identity loss pathway and redemption (Dingle et al. 2015), whilst others pursued a second pathway, hoping to gain a new social identity. As the DDA encourages both social interaction and a space to engage in meaningful discussion and activities, it offered the opportunity to voice socially-motivated aspirations and pursue goals. For example, seeing family and friends, working, studying and pursuing hobbies.

This strengthens the view that addiction recovery is a journey of identity transition, dependant partly on changes not just in a social network but engagement in meaningful social activities (Best et al. 2015). The DDA helped provide the confidence to pursue other social activities and a sense of purpose in participants, which supports findings by Jacob et al. (2015). This is encouraging, as recent research by Dingle (2012) found 69% of substance users were not in any full-time employment. Outside the parameters of the addictive behaviour, it appeared the DDA was also an alternative source of routine that contributed to a sense of control and ability to do more. This led many participants to take more charge of daily responsibilities (Rotter, 1966; Ersche et al. 2012). A reason for this could be a shift from an external locus of control to an internal locus of control, where participants accepted successful recovery was dependent on their willingness to change their lifestyle (Donovan & Leary, 1978; Rotter, 1966, Ersche et al. 2012).

Amongst our participants, there was a positive shift in *coping ability*, and one such reason was having more *faith*. This ties in with the DDA's step on spirituality and was especially evident during T3, where some participants cited faith as a factor which helped to re-establish abstinence. Within the field of addiction research, acknowledgement of the role spirituality and faith plays as a coping mechanism has been growing (Morjaria and Orford, 2002) and can help prevent engagement in high-risk drinking and drug-taking behaviours. This is supported by previous research that associates spirituality with decreased alcohol and drug consumption

(Berry et al. 2013; Sher et al, 2009; Sukhwal & Suman, 2013 and Giordano et al. 2015). Research in mental health populations also demonstrates its usefulness in facilitating recovery, often decreasing mental and physical symptoms (Turner, 2018; Hill & Pargament, 2003, 2008).

Spirituality could also counteract substance use behaviour by allowing individuals to develop a more positive self-image (Turner, 2018; Cannon & Morton, 2015; Sukhwal & Suman, 2013). Previous research on mental illness has also shown a critical element for recovery is the ability to *hope* (Jacob et al. 2015; O' Connor & Delaney, 2007) and many participants felt they became more hopeful about their recovery as their faith increased. Increased faith may also have acted as a motivation for decreasing use, due to the secure attachment participants built with God, a behaviour rooted in attachment theory. This secure relationship has been associated with improved psychological health, especially in relation to self-esteem, depression and loneliness (Hill & Pargament, 2003). The description of 'spiritual awakening' as 'a change in consciousness' by the fellowship, could also contribute to recovery, by lending a new perception to its role in sustaining positive behaviour change (Tonigan, 2007).

Another important coping strategy that participants felt had developed was the *ability to identify and recognize triggers* associated with their co-occurring conditions was a skill that appeared to develop over T1, T2 and T3, due to sharing and learning from the experiences of others. This appeared to increase self-awareness and self-regulation (Hull, 1981; Baumeister, Heatherton & Tice, 1994; Carver and Scheier, 1982). Previous research has provided evidence alcohol users experience a loss in self-awareness, and an impaired ability to self-regulate, which can lead to a cycle of increasing consumption (Baumeister et al. 1994). By working through the steps in sessions, DDA participants were better able to understand the ways in which their mental health and addictive behaviour could influence each other. This may have lent itself to the participants ability to positively recognise intense emotions and distractions in their social settings, and form ways to minimise their effect (Baumeister, Heatherton & Tice, 1994). By helping to obtain coping skills and identify high-risk situations, the DDA programme appeared to create better self-efficacy and confidence in participants, similar to findings by Brown et al. (2013) and this may have played a role in their increased involvement in social activities. Participants also cited meditation as another way to cope with their addiction. Previous research has shown that the use of mindfulness techniques such as meditation can help lower stress and anxiety in those with a substance use disorder and can also contribute to increased self-awareness (Caroll & Lustyk, 2017).

Changes made within the areas of acceptance, self-development and social interaction all appeared to contribute towards *improved quality of life* amongst participants, similar to previous research on self-help groups for dually-diagnosed individuals (Magura, 2008; Magura et al. 2002). This was more evident in T1 and T3 than in T2, where some participants struggled. This ties in with the DDA's step on willingness to change, as progress would not have been possible without this. This could be due to social-psychological processes occurring, such as 'empowerment', which increased confidence, self-esteem, self-efficacy and stigma-reduction (Markowitz, 2015, Markowitz, 2005; Magura, 2008; Magura et al. 2002). Markowitz (2015) suggests the use of 'empowerment' to be a critical interrelated component of recovery, alongside meaningful relationships and employment. This could explain why improvement in acceptance, self-development and social interaction was followed by positive psychological and physiological changes, such as a reduction in symptoms (Roos, 2017); less suicidal ideation (Agrawal et al. 2017) and less likelihood of relapse (Dolsen et al. 2017). There was also an improvement in poor sleep hygiene and medication adherence. Both have been associated with poor mental health, substance use problems, and a risk of relapse (Arnedt et al. (2012); Chokroverty (2000); Krystal et al. (2008); Vandrey et al. 2014; Schoeler, 2017; Dolsen et al. 2017; Magura, 2008; Magura et al. 2002). The 'empowerment' approach could have also influenced self-acceptance, by encouraging the rejection of negative stereotypes and offering strategies for managing any experienced stigma (Corrigan et al. 2005). The need for 'empowerment' has been growing, with acknowledgment that the way in which recovery is approached should not only focus on the symptoms of a disorder but the broader 'life-context' of affected individuals, this is especially true for those with co-occurring disorders (Anthony, 1993; Ralph & Corrigan, 2005).

How had the DDA influenced these changes?

In T1, T2 and T3 it emerged in our findings that one reason participants attended the group was due to its acceptance of co-occurring substance-use and mental illness, tying in with the *five extra steps*. This is unlike other self-help groups where discussing mental health could be received poorly. Previous research on Double Trouble in Recovery (DTR) and Dual Recovery Anonymous (DRA) has suggested that specialized 12-step support groups for dually diagnosed individuals can be of more benefit than traditional 12-step groups for this reason (Bogenschutz, 2005, 2007; Magura, 2008; Timko, 2008; Vogel, Knight, "& , 1998). Participants appreciated a space to discuss both conditions, helped by the addition of five extra steps for mental health, alongside the traditional 12-steps. Participants also spoke of the freedom the DDA offered when discussing prescribed psychiatric medications as part of their treatment, something traditional groups such as Alcoholics Anonymous discourage (Bogenschutz, 2005, 2007; Magura, 2008; Timko, 2008; Vogel, Knight, ",).

As a peer-led programme, a strong element of attending the DDA appeared to be the social support it provided and this was mentioned during T1, T2 and T3 as pivotal to continued attendance. Participants gained insight and knowledge from ‘peers’ and ‘*peer-facilitators*’ in the group who had undergone similar experiences with their mental health and addiction. This was through sharing stories about recovery (Humphreys et al. 2004) which provided *role-models* to aspire towards, especially for those at the beginning of their recovery journey and for those who had experienced a relapse. The subsequent group ‘bonding’ the DDA provides may have also helped the participants formulate aspirations for the future by providing structure and goal-directed discussion, contributing to positive changes in self-identity (Dingle et al. 2015; Donovan, 2013).

With the use of role-models it also possible participants were modelling their behaviour onto those they looked up to, through the process of social-learning, helping them learn behaviours and techniques to cope with their co-occurring conditions (Bandura, 1977). The positive influence of self-help groups and peers was also noted in a review by Worrall et al. (2018). Unlike other fellowships the DDA offers its members the opportunity to *give and receive feedback* and alongside peer-led discussions this may have helped facilitate acceptance of self and others. It may have also enabled the cognitive changes necessary for improved functioning and quality of life (Goffman, 1963; Jacobs & Goodman, 1989). There is also research suggesting self-efficacy can increase when members transform from the role of ‘one who is helped’ to ‘one who helps others’; and this is often facilitated by the provision of successful role models, such as in the DDA (Carpinello & Knight, 1991; Weaver & Salem, 2005). This ties in with the DDA's step on service to others.

Feedback and suggestions for improvements

Participants who had experienced trauma struggled with the step work, as it felt emotionally overwhelming and this was mentioned during T1 and T2. As step work revolves around admitting one’s own faults and making amends, it was perceived to be encouraging self-blame and guilt (Kaskutas et al. 2002; Donovan et al. 2013). Going forward step work may need to be revised for this population. During T1, female participants also wanted to see more female facilitators and attendees, as the group is predominately male. Women’s only groups could be an option, having been successful when employed by Alcoholics Anonymous (Kaskutas, 1994). Following the success of other fellowships and DDA Oregon, participants also wanted more social outings, which could further help foster positive social relationships and reduce isolation (Kelly et al. 2012 and Kelly et al. 2011) and this was consistently mentioned during T1, T2 and T3.

2.4 Conclusions for the qualitative study

This study was able to track the recovery journey of a sample of individuals over three points in time, capturing their individual struggles and achievements. It demonstrated that DDA is a community resource which can complement other therapies and self-help groups. This program tackles effectively the issue of isolation and fits in perfectly in the current Government's agenda of reducing loneliness (GOV.UK, 2016). DDA members, facilitators and the commissioner consistently agreed that DDA bridges the gap between addiction and mental health services which are struggling to support co-occurring illnesses. Most importantly, DDA gave its members the hope and the confidence necessary to motivate themselves in pursuing their own aspirations. This resulted in people taking up voluntary positions, seeking employment or going back to their studies. DDA can therefore be an important resource for reintegrating vulnerable individuals back into society. One of the most frequent suggestions from participants was that DDA should offer social opportunities outside the regular meetings. Finally, it is recommended that DDA founders work in conjunction with the commissioners and relevant organization to develop a strategy that will enable them to expand and reach vulnerable individuals in other boroughs of London and the UK.

3. Quantitative Study

3.1 Method

A longitudinal cohort design was used for this part of the study. Questionnaires were collected at about 3 to 4 months into the program (T1) and after about 4-6 months (T2). Time of data collection varied according to when the participant joined the program and their availability to fill in the questionnaire.

3.1.2 Participants

Twenty-seven participants (19 females) completed the questionnaires at Time 1, of which 20 completed the questionnaires at Time 2. Of the 7 who did not complete the questionnaire at T2, 2 left DDA, 2 did not return the questionnaire and for 3 it had passed only 2 months since their filled in the first questionnaire. As shown in Table 5, the majority of participants were males (70.2 %), between 45-50-year-old (48.2%) and single (74.1%). Most participants were White (73%) of which 44.7% were British, 21.3% Irish and 17% classify themselves as Other. However other ethnicities were present too (see table below). The majority were born in England (57%), the remaining participants were born from a wide range of countries (see table below). Religion beliefs varied, although the majority were Christian (59.3%). About a third had achieved a Degree qualification, another third had A levels and about a quarter achieved GSC level; 11.1% did not have any qualification. As shown in the table, a range of occupations were represented (participants were asked what kind of job are doing at the present or did in the past). With regard to employment status, 22.2% were either employed or self-employed, while 33.3% were students, 14.3 % said that they were unemployed and not looking for work, while 7% were actively seeking for employment, see the Table below for details. Thirty-seven percent of participants had been involved with the Criminal Justice System some time in their lifetime (Jail or Probation).

Table 5: Participant's demographic characteristics

	Category	Number	%
Gender	Males	19	70.2
	Females	7	29.8
Age			
	18-30	5	18.4
	30-40	4	14.8
	41-50	18	63.0
Marital status			
	Married/living together	3	11.1
	Divorced/separated	4	14.8
	Single	20	74.1
Ethnicity			
	White British	13	44.7
	White Irish	5	18.5
	White background: other	5	18.5
	Indian	3	11.1
	African	1	3.7
Birth country			
	USA	2	7.4
	Ireland	2	7.4
	England	16	59.3
	Sweden	2	7.4
	Zimbabwe	1	3.7
	India	1	3.7
	Poland	1	3.7
	Canada	1	3.7
	Not declared	1	3.7
Highest qualification			
	GCSE/O level or equivalent	7	25.9
	A level or equivalent	8	29.6
	First degree (BA, BSc)	8	29.6
	Post grad qualification	1	3.7
	No qualifications	3	11.1

Employment status			
	Employed	5	18.5
	Self-employed	1	3.7
	Out of work and looking for work	2	7.4
	Out of work but not currently looking for work	4	14.8
	Student	9	33.3
	On benefit	1	3.7
	Retired	4	14.8
	Other	1	3.7
Type of occupation			
	Food services	3	11.1
	Business owner	2	7.4
	Unemployed	7	25.9
	Care services	3	11.1
	Public Transportation	3	11.1
	Health Care	1	3.7
	Distribution logistics	3	3.7
	Trades	2	7.4
	IT	1	3.7
	Volunteering	1	3.7
Religious belief			
	No religion	5	18.5
	Christian	16	59.3
	Buddhist	1	3.7
	Hindu	2	7.4
	Sikh	1	3.7
Accommodation			
	- I pay rent for my housing	5	18.5
	-I own my home	4	14.8
	-I live in housing were rent is covered/partly covered by housing benefit	11	40.7
	-I live in temporary accommodation/hostel/supported housing	5	18.5
		1	3.7
	-I'm staying with family	1	3.7
	-Not declared	1	3.7
Involvement with the Criminal Justice System Justice System			
	Yes	10	48.1
	No	16	63.0

3.1.2 Materials

A range of questionnaires were used to assess mental well-being, drug and alcohol use, service utilization, adherence to medication, quality of life and DDA experience and affiliation (questionnaires are included in Appendix 2).

Demographic characteristics questionnaire: demographics included age, gender, ethnicity, religion, county of origins, level of education, employment status, living arrangements and accommodation.

Drug use: an adaptation of the Maudsley Addiction Profile (MAP) was used to assess drug use and related harms. The Map is a well validated measure that has been developed to be used for research purposes and for monitoring progression in various areas affected by drug misuses (including the physical, criminal activity, mental health and social functioning).

Mental Health: BSI (Brief Symptoms Inventory, Derogatis, 1983).

BSI or Brief Symptom Inventory is an instrument that evaluates psychological distress and psychiatric disorders in people. BSI collects data reported by patients for the evaluation. The test can be used for areas such as patient progress, treatment measurements, and psychological assessment. The test is a 53-item self-report scale that uses the 5 point Likert scale. It takes approximately 4 minutes to administer. The BSI instrument has good internal reliability showing an average rating above 0.7 for the scales. The range for test-retest reliability was 0.68 to 0.91.

Medications: Questions will be included in the semi-structured interview and will be derived from the Brief Adherence Rating Scale (BARS) (Byerly et al., 2008).

Mental health and addiction problems: visual analogues scales from 1 to 10 were used to assess perceived level of moderation, importance and confidence in tackling alcohol, drug and mental health problems. E.g. “On a scale from 0 to 10, how troubled or bothered have you been in the past 30 days by these problems?”; “On a scale from 0 to 10, how confident are you that you will be able to make positive changes with regard to” (alcohol, drug, other addiction, mental health problems).

Quality of life: The Quality of Life Enjoyment and Satisfaction Questionnaire – Short Form (Q-LES-Q-SF, Endicott et al, 1993) was used to assess quality of life. This is a widely used standardised measure and has been used in a variety of settings.

DDA attendance and affiliation: questions were derived from the Alcoholics Anonymous Affiliation Scale (Humphereys et al., 1998).

3.1.3 Procedure

The investigators were introduced to the participants by the investigators before the meetings, where they had the opportunity to explain the study and the reason for collecting questionnaires. DDA members were given an information sheet to take home and read in their own time. They were also given the Consent Form to sign in case they wanted to take part in the study. Questionnaires were distributed the following time, investigators and facilitators were available

to help and answer questions. Participants were given the choice whether they preferred to complete in their own time, or at the meeting with the help of the investigator or the facilitator. They could also take it home and bring it back the following time. For the T2, participants were also given the opportunity to answer the questionnaires' questions over the phone.

3.1.4 Data analysis

Data were analysed using the software SPSS version 14. Frequencies were run to explore demographic characteristics and prevalence of mental health and addictive disorders. Repeated measures ANOVA were used to explore differences between T1 and T2 in BSI, Quality of Life and the Likert scale scores measuring perception of importance and confidence in change behaviour regarding mental health and addictive behaviours. Chi-square analysis was utilised to explore statistical significance of difference in frequencies, when possible.

3.2 Results

3.2.2 Participants' characteristics

All participants who took part in the study (27) were included for this analysis, even if they did the only the first questionnaire. The investigators made this decision because they believed that exploring the participants' characteristics of as many DDA members as possible would provide a better insight into the kind of population that DDA might be able attract and serve. The sections below present frequencies in relation to demographics, mental health, substance use and other addictive behaviours.

Mental Health and general well-being

Frequencies related to mental health and general well-being are displayed in Table 7. As expected, a large percentage of participants (78.9%) were in treatment for mental health disorders and 81.5 % were taking medications for psychological problems. The most represented mental disorders were Bipolar Disorder (33.3%) and Depression (18.5%), 18.5% reported having multiple mental health diagnosis. Eleven percent of the sample declared that they were affected by some form of learning difficulties, which was interfering with their everyday life, 22.2% were unsure whether they had any and 22.2% thought they had learning difficulties although they had never been diagnosed. Finally, 44.4% reported suffering from one or more chronic physical conditions that interfere with their life.

Table 6: Frequencies and Percentages for Mental Health variables

Variable	Category	N (27)	%
In treatment for mental health (excluding DDA)	Yes	22	78.9
	No	4	12.1
	Not declared	1	3.7
On medications	Yes	22	81.5
	No	3	11.1
	Not declared	2	7.4
Kind of treatment (excluding DDA)	Psychotherapy	4	14.8
	Community Team	11	40.7
	Psychiatrist	4	14.8
	Support group	1	3.7
	Not declared	7	15.9
Diagnosis	Bipolar Disorder	9	33.3
	Depression	5	18.5
	Anxiety	1	3.7
	Obsessive Compulsive Disorder	1	3.7
	PTSD	1	3.7
	Multiple diagnosis	5	18.5
	Bipolar Personality Disorder	1	3.7
	Psychosis	2	7.4
Learning Difficulty affecting their life	Yes	3	11.1
	No	12	44.4
	Not sure	6	22.2
	Not diagnosed but I think I do	6	22.2
Chronic Physical Disease that affects their life	Yes	11	40.4
	No	14	55.3

Substance use

As shown in Figure 2, alcohol was the problematic substance for about a third of the sample (33%), 30% reported that they had been misusing both drugs and alcohol sometime in their lifetime and for 26% drug use was their main issue. Fourteen participants had gone through alcohol or drug detoxification, most of them multiple times (see Table 8). Interestingly, 7% of participants reported that they had never had substance misuse problems. Table 7 shows a breakdown of substance use divided by days of use in the last month and years of use in the lifetime. Six participants experienced alcohol intoxication in the previous 30 days, however, apart from cannabis, there was no use of in the previous month. This is not surprising given the fact that they completed the questionnaires after they had been attending DDA for 3 to 4 months and had been in treatment or attending other groups as well.

Figure 2: Primary problematic substance use (in number of participants)

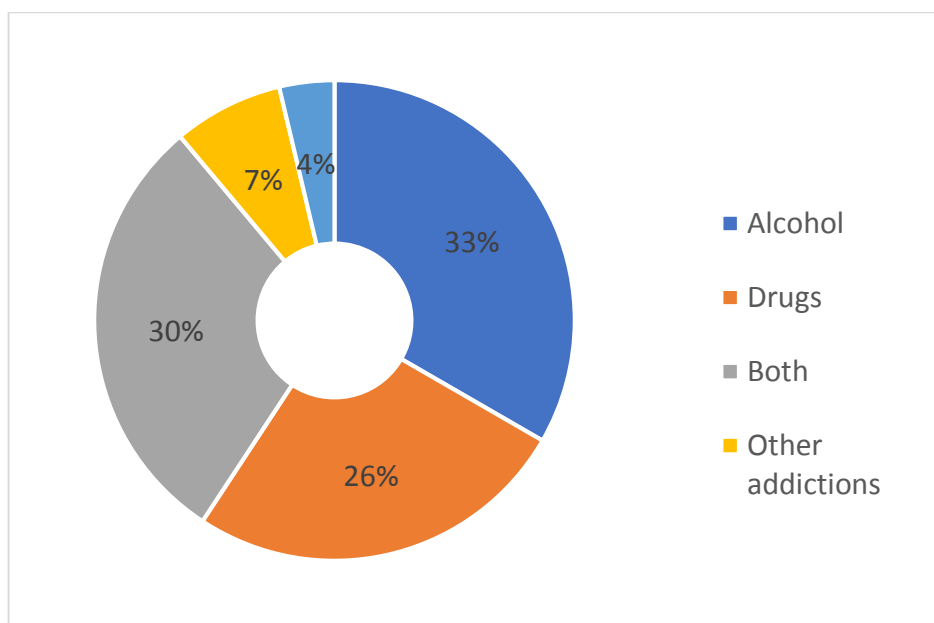


Table 7: Breakdown of substance use in the last 30 days and in the lifetime

	Days of Use in the Past 30 Days			Years of use		
	Categories	N of participants	%		N	%
Alcohol intoxication	Never	21	77.8	Never	18	29.8
	Yes	6	23.2	6-10	1	3.7
				11-15	7	25.9
				Over15	11	41.2
Tobacco	No use	19	70.4	Never	14	51.9
	Weekly	5	18.5	1-5 years	1	3.7
	Daily	3	11.1	5-10 years	2	7.4
				Over 10 years	10	37.0
Heroin	No use	27	100	Never	23	88.5
				For 15 years	3	7.4
				For 20 years	1	3.7
Methadone	No use	27	100	Never	26	96.3
				21-25 years	1	3.7
Other opiates, analgesic. Painkillers	No use	26	96.3	Missing information		
	6-10 days	1	3.7			

	Days of Use in the Past 30 Days			Years of use		
	Categories	N of participants	%		N	%
Barbiturates	No use Daily	25 2	92.6 7.4	Missing information		
Sedatives, Tranquilizers, Sleeping tablets	No use 20 times Daily	21 1 3	70.4 3.7 11.1	Never 1-5 years 5-10 Over 20	19 3 1 3	70.4 11.1 3.7 11.1
Cocaine	No use	27	100	Never used 1-5 years Over 10 years	20 3 3	74.1 11.1 11.1
Amphetamines, Speed, Chrystal Meth	No use	27	100	Never used 5-10 years Over 10 years	25 1 1	92.6 3.7 3.7
Cannabis	No use Every other day daily	24 1 2	88.9 3.7 7.4	Never used 1-5 years 6-10 years Over 10 years Over 20 years	14 4 1 4 4	51.9 7.4 7.4 7.4 7.4

Table 8: number of alcohol/drug detoxification in their lifetime

Detoxifications	Times	N (total 27)	%
Alcohol	Never	14	51.9
	1-5 times	6	22.2
	6-10 times	5	18.5
	11-15 times	2	22.2
Drug	Never	18	66.7
	1-5 times	6	22.2
	6-10 times	1	3.7
	11-15 times	2	7.4

Dual Diagnosis

With regard to the comorbidity of mental and substance misuse disorders, about a third of participants reported that their mental disorder was diagnosed before their substance misuse problem, while for another 30% it was the other way round. Interesting, 20% of the sample reported that they were not concerned about the order and 15% were unsure (see Figure 3). When asked which one was the most problematic condition, 40% responded substance misuse, 25% said mental health and 15% thought that both conditions were equally problematic.

Figure 3: What diagnosis was made first (in number of participants)

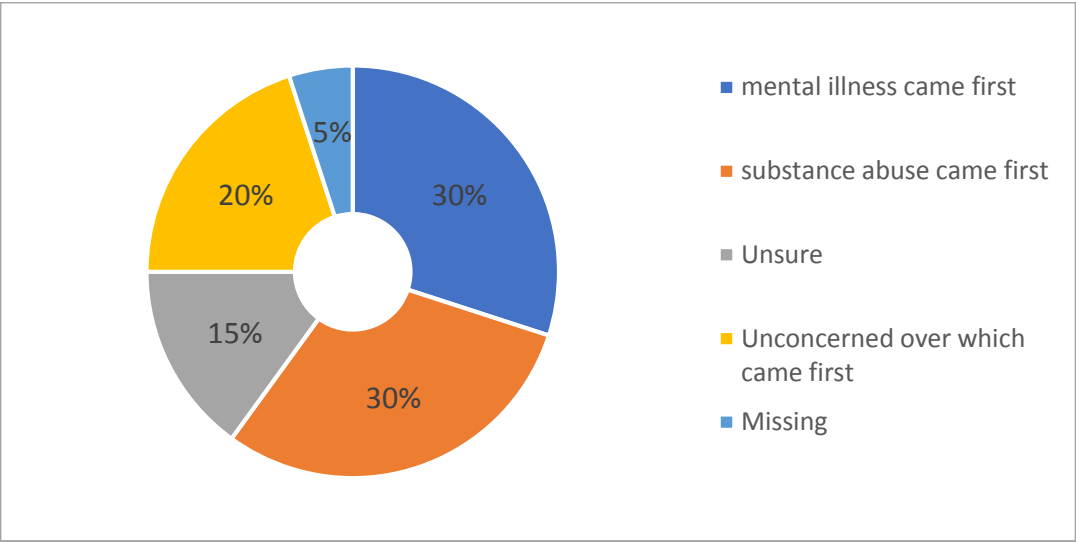
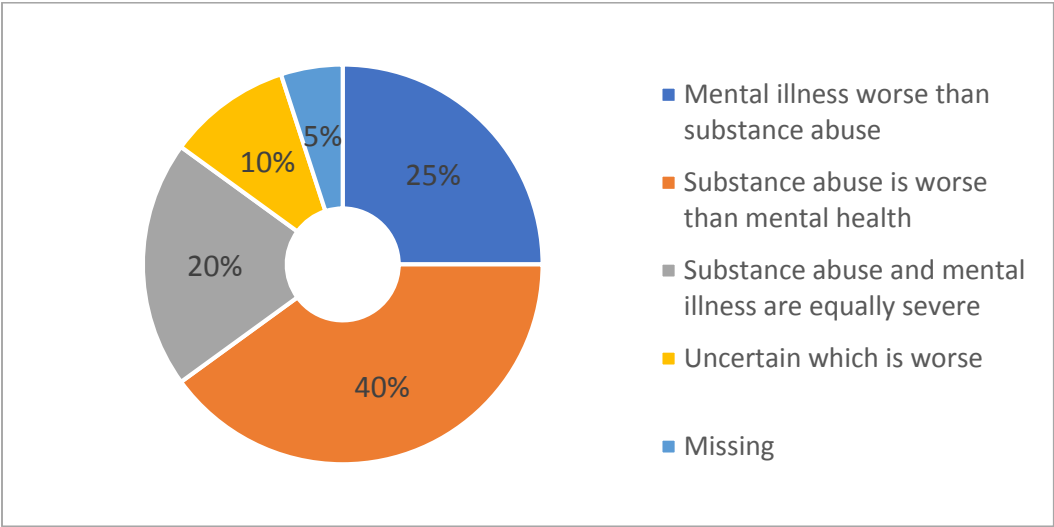


Figure 4: Perceived severity of mental illness vs substance misuse



3.2.3 Differences between Time 1 and Time 2

Mental Health

Repeated measure ANOVA revealed highly significant improvement in all BSI sub-scales. There was a significant difference between T1 and T2 on all BSI scales showing an improvement in all dimensions (see Table 9 and Figure 7).

Table 9: BSI and Quality of life scores at T1 and T2

MEASURE	TIME 1	TIME 2	REPEATED MEASURES ANOVA
	Mean (\pm SD)	Mean (\pm SD)	
BSI			
PSYCHOTICISM	2.77 (\pm 1.50)	1.70 (\pm 1.53)	F(1-19)=77.03, p<0.001
SOMATIZATION	2.40 (\pm 1.80)	1.63 (\pm 1.32)	F(1-19)=19.86, p<0.001
PHOBIC ANXIETY	2.42 (\pm 1.80)	1.64 (\pm 1.52)	F(1-19)=14.73, p=0.001
PARANOID IDEATION	2.74 (\pm 1.48)	1.71 (\pm 2.03)	F(1-19)=45.28, p<0.001
ANXIETY	2.90 (\pm 1.50)	1.83 (\pm 1.50)	F(1-19)=61.79, p<0.001
DEPRESSION	2.94 (\pm 1.62)	1.76 (\pm 1.51)	F(1-19)=77.03, p<0.001
OBSESSIVE COMPULSIVE DISORDERS	2.80 (\pm 1.48)	1.75 (\pm 1.54)	F(1-19)=82.23, p<0.001
QUALITY OF LIFE	2.77 (\pm 0.5)	3.50 (\pm 0.5)	F(1-19)=84.22, p<0.001

Figure 5: BSI and Quality of Life scores at T1 and T2

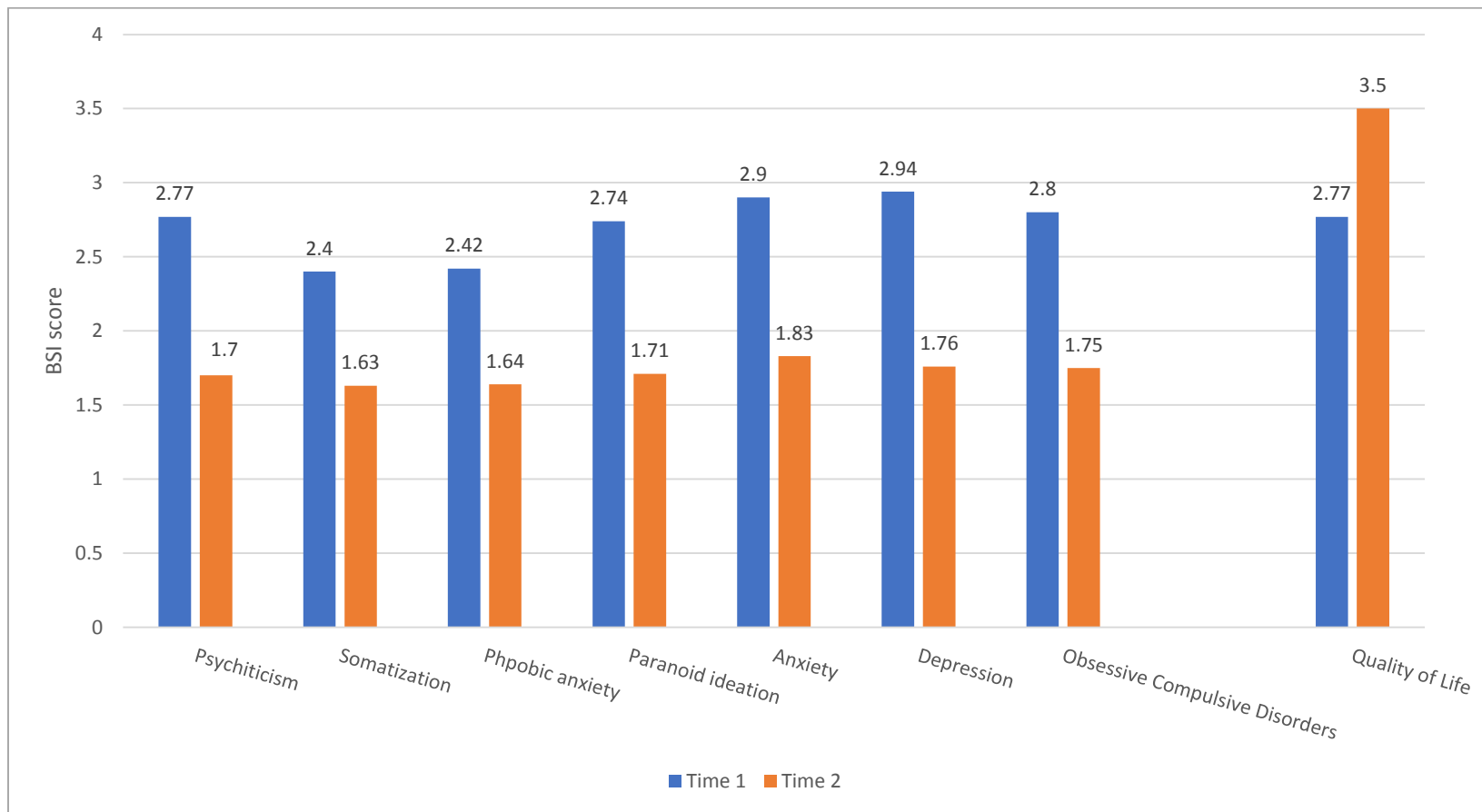
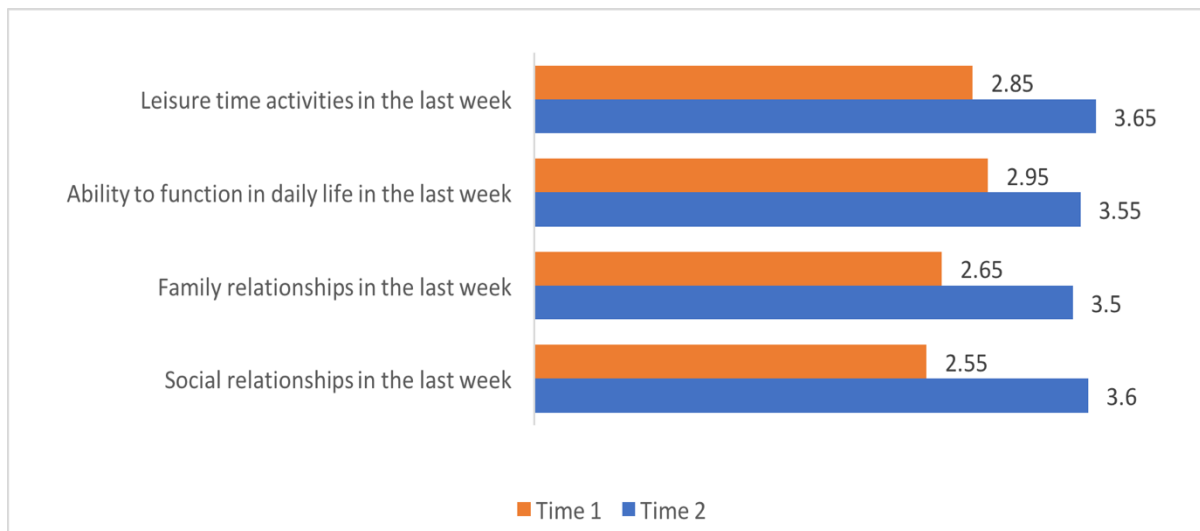


Table 10: Selected items of from the Quality of Life Questionnaires *Taking everything into consideration, during the past week how satisfied have you been with your:*

	Time	Mean	Std. Deviation	Independent t-test
Social relationships	1	2.55	0.75	$t_{(1-38)} = 4.34, p < 0.001$
	2	3.60	3.60	
Family relationships	1	2.65	0.93	$t_{(1-38)} = 2.95, p < 0.001$
	2	3.50	0.88	
Ability to function in daily life	1	2.95	0.99	$t_{(1-38)} = 2.14, p = 0.005$
	2	3.55	0.68	
Leisure time activities	1	2.85	0.93	$t_{(1-38)} = 2.89, p = 0.003$
	2	3.65	0.81	

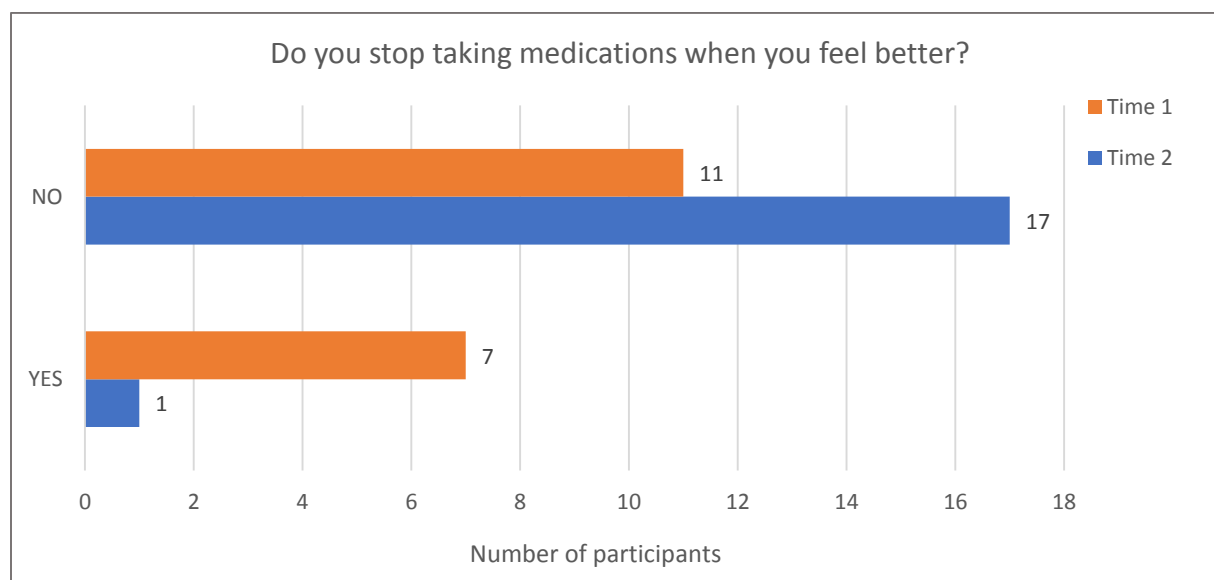
Figure 6: Selected items of from the Quality of Life Questionnaires: “Taking everything into consideration, during the past week how satisfied have you been with your”:



Medication Adherence

There was a significant improvement with regard to medication adherence, with significantly fewer participants reporting that they stopped taking them when they felt better at T2 in comparison to T1 (see Figure below), $\chi^2(3) = 8.00$, $p=0.46$. There was no other significant difference between T1 and T2 on the adherence to medication scale.

Figure 7: number of DDA members who said that they would stop medication if they felt better, at T1 and T2



Substance Misuse

Given the small sample and the low number of individuals who used in in the previous 30 days it was not possible to perform statistical analysis. However, amongst the 20 participants that completed both questionnaires, there was a reduction in number of people who relapsed on alcohol (from 3 to 1). Similarly, 3 people reported having smoked cannabis at T1, whereas only one did so at T2. There was also one relapse in amphetamine use at T2. Barbiturates, sleeping tablets and anxiolytics were used consistently at T1 and T2, however it was difficult to establish whether it was use or misuse, as in all cases they had originally been prescribed by the GP.

As shown in Table 11 below, participants reported being significantly less troubled or bothered about mental health problems at T2 in comparison to T1 [$F_{(1-19)}=54.03$, $p=0.035$]. They also

stated that they felt more confident in their own ability to make positive changes with regard to their mental health [$F_{(1-19)} = 68.04$, $p = 0.007$].

Table 11: Level of botheration, perception of importance of treatment and confidence in the ability of making positive change

Question	Time	Time 1	Time 2	Repeated measures ANOVA
On a scale from 0 to 4, how troubled or bothered have you been in the past 30 days by these problems?		Mean	Std. Deviation	P value
Drug Problems	1 2	1.80 2.00	1.73 1.74	0.718
Other addictive behaviours	1 2	2.10 1.80	1.55 1.64	0.556
Mental health problems	1 2	2.85 2.15	0.74 1.22	0.035*
On a scale from 0 to 4, how important to you now is treatment for				
Drug problem	1 2	2.95 3.25	1.79 1.60	0.582
Alcohol problem	1 2	2.40 2.95	1.90 1.73	0.345
Other addictive behaviour	1 2	2.35 2.70	1.89 1.71	0.545
Mental health treatment: Level of perceived importance	1 2	3.00 3.05	1.05 1.02	0.880
On a scale from 0 to 4, how confident are you that you will be able to make positive changes with regard to				
Alcohol problems	1 2	3.30 3.35	0.92 1.03	0.873
Drug problems	1 2	3.00 3.45	1.25 0.75	0.178
Mental health problems	1 2	2.50 3.60	0.88 1.46	0.007**
Other addictive behavior	1 2	2.75 3.55	1.73 1.95	0.182

DDA affiliation and attendance

As shown in the table below, 95% of participants at T1 and all participants at T2 considered themselves being DDA members. Attendance varied from 1 to 4 times per week with the majority (65% at T1 and 70% at T2), with about a third attending up to 3 times per week. The number of participants who read the Workbook increased from T1 to T2, from 65% to 85%. The number of participants that engaged in their homework increased from T1 to T2, and those who “never” do the homework decreased from 45% to 20%. Attendance to the workshops remained similar from T1 and T2, with only 2 and 3 DDA members respectively attending every time, about never attended and 35% attended “sometimes” at T1 and T2. The vast majority (90%) said that they had attended other group in the past and 95% reported that DDA was as useful or more useful than other groups. At both T1 and T2 participants reported having experienced some kind of spiritual awakening (70% and 75% respectively) and all of them stated at both T1 and T2 that DDA had made a positive difference to their life.

Table 12: attendance and engagement with the DDA program

DDA Experience Questionnaires		Time 1 (N=20)		Time 2 (N=20)	
Question	Categories	N	%	N	%
Do you consider yourself a member of DDA?	Yes No	19 1	95 5	20 0	100 0
How many meeting do you attend per week?	1 2 3 4	7 5 7 1	35 25 35 5	6 6 6 2	30 30 30 5
Have you ever read the DDA workbook?	YES NO	13 7	65 35	17 3	85 15
How often do you complete the weekly homework?	Never Sometimes Every time	9 7 4	45 35 20	4 13 3	20 65 15
How frequently have you participated in the DDA workshops?	Never Sometimes Every time	11 7 2	55 35 10	10 7 3	50 35 15
How frequently have you contacted the group facilitator for support?	Never Once Once a week Everyday Occasionally	3 4 8 4 1	15 20 40 20 5	2 4 9 1 2	15 20 40 20 5
DDA Experience Questionnaires		Time 1 (N=20)		Time 2 (N=20)	
Question	Categories	N	%	N	%
What other groups have you attended, if any?	AA ¹ CA ² NA ³ SAA ⁴ Various None	3 2 3 1 8 2	15 10 15 5 40 10	3 2 3 1 8 2	15 10 15 5 40 10
How does DDA compare to other groups?	As useful More useful Less useful	9 11 0	45 55 0	8 11 1	40 55 5
Have you ever had any kind of spiritual awakening or conversion since being involved in DDA?	YES NO	14 6	70 30	15 5	75 25
Has DDA made a positive difference to your life (well-being, recovery, health...)?	YES NO	20 0	100 0	20 0	100 0

¹ Alcoholic Anonymous ² Cocaine Anonymous ³ Narcotic Anonymous ⁴ Sex Addicts Anonymous

4. Case Studies and attendance at DDA meetings

DDA currently holds 5 meetings in different locations in West London, see below the location where each meeting takes place:

Monday: Shepherd's Bush, The Old Coach House – Chair John O' Donell

Tuesday: Chelsea & Westminster Hospital

Wednesday: Ealing, EACH

Thursday: Shepherd's Bush, W12 Shopping Centre

Friday: Shepherd's Bush, The Old Coach House

Saturday: Ealing Hospital

Attendance is fluid, at present overall there are 30 core DDA members that attend regularly, some of them attend more than one meeting per week. The average attendance for each group varies. The Wednesday meeting has an average attendance of 10 people each week (2 females), the Tuesday meeting 7 (1 females), the Friday meeting an average of 13 attendees (4 females) and the Saturday meeting an average of 5 attendees (2 females) each week. A new meeting has started in December 2019 on Thursday and meetings in December 2018 and up to early January 2019 were attended by 2 people (1 female).

Case Studies

The case studies were provided by one the DDA co-founders and facilitators who followed the progress of its members from the start of their attendance. Pseudonyms have been used to maintain confidentiality.

Case Study 1

Eric has a long history of alcohol and cocaine addiction as well as multiple severe mental disorders. He has been diagnosed with Schizo-Affective Disorder; Psychosis; OCD; and anxiety. History of hospital admissions, often preceded by a large alcohol/cocaine binge. New Year Eve is a big trigger for him, so this is often followed by a big drug/alcohol and mental health relapses. When he relapses with mental health and drug use he tends to become aggressive and gets often involved in violent episodes. After his last psychotic relapse, a DDA member managed to convince the Police to hospitalise Eric instead of incarcerating him.

Despite his severe mental health and addiction disorders, Eric consistently attended almost all DDA meetings. For 8 months (since July 2018) he has not touched cocaine and has not been in hospital for over a year. Although E still drinks alcohol, he is managing his intake a lot better than

before. Eric is committed to DDA meetings and finds a lot of support, friendship and good advice in the group.

Case Study 2

Claire is a regular attendee at most DDA meetings. She has a long history of psychotic episodes combined with eating disorders. Over the past 12 months, Claire has gained more self-confidence through attending regular DDA meetings and as a result, got her first ever paid job (part time) at a coffee shop in 2018. She also volunteers at a charity shop. She has also started chairing and being secretary for the Tuesday DDA meeting. Therefore, over time, she has taken on more responsibility and meaningful occupation in her life, due to improved wellness and increased self-belief and self-confidence. Claire places a lot of value on the DDA meetings she attends and finds DDA essential to maintaining her wellbeing.

Case Study 3

Frances is one of the first DDA attendees, she started about 2 years ago when she was drinking daily and using drugs to self-medicate, she was unwell mentally and homeless. She has attended DDA meetings regularly since then and in that time, she managed to make a benefits claim; access housing; access support around her MH; and around her substance misuse. Now, she has not used alcohol or drugs for over a year; and is a full-time volunteer at a local Drug treatment service, with a view to gaining full time employment soon. F is also the regular tea maker at the Wednesday meeting.

Case Study 4

Robin started attending about 18 months ago. At that time, he was homeless and living in a temporary hostel. He hated where he lived because there was a lot of anti-social behaviour and many temptations to relapse. He was very low in mood, paranoid and anxious. Robin has had a history of mental health issues and substance misuse since childhood. With the support of DDA (who advocated for him about his right to long term accommodation), Robin was able to find private rented accommodation in a peaceful area. He is very happy in his current home and this has helped reduce his mental health symptoms. Robin is clean and sober and still a regular attendee at DDA. He is currently attending lots of football matches and recently took a holiday to South East Asia.

5. Overall Discussion

This mixed method study evaluated the first DDA program in UK. The longitudinal qualitative study provided a useful insight on the lived experience of six DDA members at three different points in time of their recovery journey. Interviews with the DDA founders, facilitators and the commissioner contributed to a better understanding of the usefulness and feasibility of DDA. Four case studies were also used to capture a different perspective on the impact of DDA on its members' life. The quantitative study was instrumental in gaining comprehensive data regarding the demographic characteristics and the mental health profile of a sample of DDA members. Most importantly, it allowed to quantify and statistically analyse differences in mental health and quality of life at two different points in times. The results from the qualitative data were discussed in depth in section 2.2 of this report, the section below draws upon both qualitative and quantitative data to discuss the overall findings, their implications for practice and for the expansion of DDA in the UK.

5.2 Profile of DDA members

Sample characteristics of both qualitative and quantitative studies demonstrated the inclusive nature of DDA in terms of gender, ethnicity, educational level, employment status, religion, mental disorders, and addiction problems (see Table 5). This aspect is unique to DDA, as stated by one of the members *"it doesn't matter what mental health problem or addiction you have, unlike NA, CA or other groups, anyone can come to DDA and feel accepted"* (Participant A). The inclusivity of DDA is extremely important in a multicultural context such as London and the UK, it should be noted that eight different birth countries and five ethnicities were represented in the sample of 27 participants. The fact that DDA attracts people from different religions shows that the "spiritual" element of the 12-steps program, which was originally linked to Christianity (Knippel, 1987), did not constitute a barrier for individuals from different religious backgrounds. DDA members vary also in terms of age, one young participant was a University student who stated *"for me it's important that there are older people with more experience, they taught me a lot"* (Participant B). The majority of participants in the quantitative sample had an undergraduate qualification (15/27) or no qualification (3), however 8 participants had achieved BSc qualification and one had a post-graduate qualification. The fact that an individual with a high qualification joined DDA shows that the program has the potential to break down social barriers and overcome the fear of stigmatization of people who come from a higher social status.

Ten participants out of 27 had been involved with the Criminal Justice System sometime in their life, this is in line with statistics showing that people with co-existing mental and substance use disorders are more likely to commit crime in comparison to the general population (Weaver et al., 2003). Also, the prevalence of dual diagnosis in prison has been found to be between 18% to 56% (Young et al., 2018). In addition, individuals with Dual Diagnosis are more likely to be homeless or live in temporary accommodation, interestingly none of the participants in our sample declared to be homeless, however, 11/27 (40.7%) were receiving benefit and 5 were living in supported housing or temporary accommodation and 7/27 participants (24.4%), were unemployed.

The DDA program encourages its members to recognise the common denominator of all mental health disorders and of all addictions, as a result individuals feel accepted and welcome whatever their problems or diagnosis are. This is reflected by the wide range of mental health problems present in our sample (Bipolar Disorder, Depression, Anxiety, Psychosis, Obsessive Compulsive Disorder, Post-Traumatic Stress Disorder). Bipolar Disorder was the most prevalent diagnosis (33.3%), and 5 participants had multiple diagnosis (18.5%, see Table 6). The majority of participants had a problem with alcohol misuse (33%), 26% stated that they had drug addiction, almost a third said that they had problems with both alcohol and drugs (30%) and 7% reported having other addictions (eating disorders, sex addiction, gambling). The high number of participants suffering from Bipolar Disorders in our sample concurs with the literature showing that there is a large overlap between the two conditions (Merikangas et al., 2013), for example in a previous study they found that 60% of people with a diagnosed Bipolar Disorder had history of substance misuse (Regier et al., 1990). It also concurs with national data reporting that individuals with substance misuse problems are likely to suffer from multiple mental health disorders, for example Weaver et al. (2003) found that half of alcohol treatment population suffered of co-occurrence of several psychiatric disorders.

In this study, we explored the participants' perception of the relationship between the two disorders by asking them to rate which one in their view was the most severe and which one had been diagnosed first. With regard to perceived severity, 20% thought that the two disorders were equally serious, 10% were unsure and 40% thought that their substance misuse was the most severe problem (see Fig 2), even if most participants reported not using substances during the period between the T1 and T2 questionnaires. In support of the integrated approach, 20% were unconcerned about what came first and 15% were unsure (See Fig 3), however 30% stated that their mental disorder was diagnosed first and the same percentage stated that their substance misuse problem was diagnosed first.

5.3 Improvement in recovery and quality of life

Repeated measures ANOVA between scores at T1 and T2 revealed that at T2 participants had significantly improved their confidence in own ability to make positive change with regard to their mental illness ($p=0.007$), they were also significantly less ($p=0.035$) troubled by their mental health problems at T2 in comparison to T1 (see Table 11). These findings tie in with the results on the Brief Symptom Inventory, which showed a highly significant improvement in all BSI scales (see Table 9 and Figure 5) from T1 to T2. Consistently, scores on Quality of Life was significantly higher at T2 in comparison to T1 ($p<0.001$), indicating an overall improvement in life satisfaction at T2. These results support the qualitative data showing that *Hope in the ability to achieve recovery* and *Reduction in Psychiatric Symptoms* where two of the main areas where interviewees felt they had improved the most since attending DDA. In particular, they explained that they had experienced *fewer suicidal thoughts* and less *rumination*. The DDA facilitators also confirmed that they witnessed participants improving in their mental health and various aspects of their life outside DDA, including social life, their relationship with their family and friends and overall management of everyday life (see table 4). Analysis of individual items of the Quality of Life Questionnaire showed significant improvement in the relationship with their friends and family (see Table 10 and Figure 7), which confirms what participants reported in the qualitative interviews. Improvements in this area are particularly important for people with dual diagnosis as they are affected by two stigmatising and debilitating conditions which often lead to marginalisation and isolation. Loneliness has been found to be one of the major causes of death (Holt-Lunstad et al., 2015), tackling isolation is therefore vital especially considering that 20/27 (74.1%) are single at increased risk of experiencing loneliness.

Adherence to medications improved significantly from T1 to T2 (see Figure 7). Specifically, at T2, fewer participants reported that they had stopped taking medications when they felt better in comparison to T1, this may partly explain the reduction in psychiatric symptoms at T2. This result is in accordance with the third additional step of DDA “Mental Health”, which emphasises the importance of addressing the mental health issues and accepting that medications can aid recovery. Improvements in this area may be related to the possibility of talking openly about medications in the group, as frequently mentioned during the qualitative interviews. DDA members valued this opportunity greatly and they considered this aspect to be one of the factors that differentiates DDA from the other 12-steps fellowships, where they felt frowned upon or judged for taking psychiatric medications. AA has in the past taken the position that members should not take any psychoactive medication because of the associated risk of misuse, however,

given the serious consequences that stopping medications can have on the individual, in a recent publication, AA has clarified “It becomes clear that just as it is wrong to enable or support any alcoholic to become readdicted to any drug, it’s equally wrong to deprive any alcoholic of medication, which can alleviate or control other disabling physical and/or emotional problems” (AA, 2018, pp6). Nevertheless, DDA members reported feeling uncomfortable disclosing and discussing their use of psychiatric medications in other groups, and this prevented them from addressing an important aspect of their recovery.

There were no significant differences between T1 and T2 in the quantitative scores of participants’ perceived ability to achieve positive change with regard to alcohol/drug misuse or other addictive behaviours. This contradicts the qualitative interviews where participants reported a reduction in addictive behaviours and feeling more confident in their ability to prevent or manage relapse. It is possible that despite having acquired strategies to manage their addiction, participants still feel vulnerable and at risk of relapse, however, most participants reported not having used any substance between T1 and T2 indicating that DDA attendance has helped maintaining their sobriety. This is also exemplified by the case studies reported in section 4. For example, Eric (Case Study 1) has serious multiple psychiatric comorbidities and had been using multiple drugs for many years, which led him to violent behaviour and numerous convictions, yet, since attending DDA he managed to stay abstinent from drugs for 8 months. Isolating the effect of the influence of the DDA program itself from other variable is extremely challenging from a methodological point of view, however, a meta-analysis of 6 randomized clinical trials found that for most individuals seeking help for alcohol problems, increasing AA attendance leads to short- and long-term decreases in alcohol consumption that cannot be attributed to self-selection (Humphreys et al., 2014). This confirms that the format of DDA is likely to have contributed to the decreases addictive behavior observed in DDA members.

5.4 Self-development and social integration

As discussed presented in section 2 of the present report, in the qualitative interviews, DDA members explained how attending DDA made them acquire a range of skills that improved their social functioning within and outside the group (e.g. with family and friends). DDA members also commented that their newly found increased sense of self-esteem and motivation led them to taking up voluntary work, getting back to hobbies and activities that they had abandoned and in some cases actively seeking job opportunities. Members also felt that DDA gave them a structure and taught them skills that improved their ability to cope with day to day demands. These accounts are confirmed by the facilitators who witnessed the positive change in DDA members. For example, Claire (case Study 2) had a long history of psychosis combined with eating disorders.

During the year that she attended DDA she started chairing some of the meetings and being the secretary for group. Realising that she could perform these tasks successfully increased her self-confidence to the point that she started volunteering at a charity organization, and soon after she started her first ever paid job. The quantitative data of the Quality of Life questionnaire also cross-validate these findings: participants scored significantly higher on their satisfaction regarding their “ability to function day to day” and their engagement in leisure activities. Taken together, these findings suggest that the DDA program has the potential to empower people with dual diagnosis and facilitate their reintegration back into society, this is extremely valuable, considering that people with mental illness, anxiety or depression have substantially lower employment rates (TUC, 2017).

5.5 How did DDA facilitate positive change?

The longitudinal qualitative interviews in this evaluation shade light on the process of change and on what elements of the program were perceived to be most useful, these are discussed in depth in the Discussion of the qualitative study (see section 2.3). Figure 8 illustrates areas of improvements that led to self-development according to participants’ accounts of their own positive changes. There was a clear progression from T1 to T2 and T3 showing an increased central role of Spirituality and meditation as valuable tools to enhance resilience and coping strategies. In the quantitative study, 70% at T1 and 75% at T2 reported that they experienced some sort of spiritual awakening following DDA attendance. This finding supports previous research that showed the important role that Spirituality can have in aiding recovery (e.g. Galanter et al., 2007). Meditation and mindfulness practice have also been proved to effective in preventing relapse (e.g. Garland and Howard, 2018).

The format of the program itself was also important, in particular the additional steps enabled the participants to address their mental health issues. The workbook was also mentioned, but the qualitative study showed that a minority had been doing the homework and few were taking part in the workshops, although the engagement with the workbook improved from 35% at T1 to 65% at T2 saying that they were doing their homework “sometimes”, while the number of those who never did them decreased from 45% to 20% from T1 to T2. Most people attended more than one meeting per week (see Table 12), however, given the small sample size it was not possible to run correlation analysis to explore whether the number of meeting attended predicted better outcomes.

The integrated approach was one the most re-occurring themes, confirming previous research showing that tackling mental illness and substance misuse simultaneously (rather than in a sequential fashion) is the most effective approach (Kelly and Daley, 2014). Participants in this study also stressed the prominent role of the main facilitator, with a large percentage of them (40% at T1 and 45% at T2) contacting him weekly, and few (20% at T1 and 5% at T2) every-day. Participants regarded him as a role model to aspire to, someone who was always available of help in case of need.

Previous research has investigated the mechanisms of action of 12-Step programs that contribute to their effectiveness in increasing the likelihood of abstinence and improved psychosocial function. The general categories of potential mediators that have been investigated include 12-Step specific practices, social and spiritual processes, and processes that are common across different types of therapies or behavior change (Kelly, Magill, & Stout, 2009).

Membership in such groups contributes to a shift in one's social network, with a reduction in the number of individuals who support drinking to an expanding network of those who support abstinence (Kelly, Hoepfner, Stout, & Pagano, 2012). This adaptive shift in the social network is also accompanied by decreased exposure to drinking-related activities and cues that induce craving, as well as increased nondrinking activities, social abstinence self-efficacy, and rewarding social relationships (Kelly et al., 2012; Kelly, Stout, et al., 2011). These include the groups' encouraging bonding with other members, providing structure and a sense of goal directedness; the provision of behavioral norms about and role models for how to work toward abstinence; the development and engagement in non-substance-related activities that are rewarding and can take the place of substance-related activities; and the development of more effective coping skills with an associated increase in self-efficacy (Kelly et al., 2009; Moos, 2008).

Figure 8: Impact of DDA on self-development

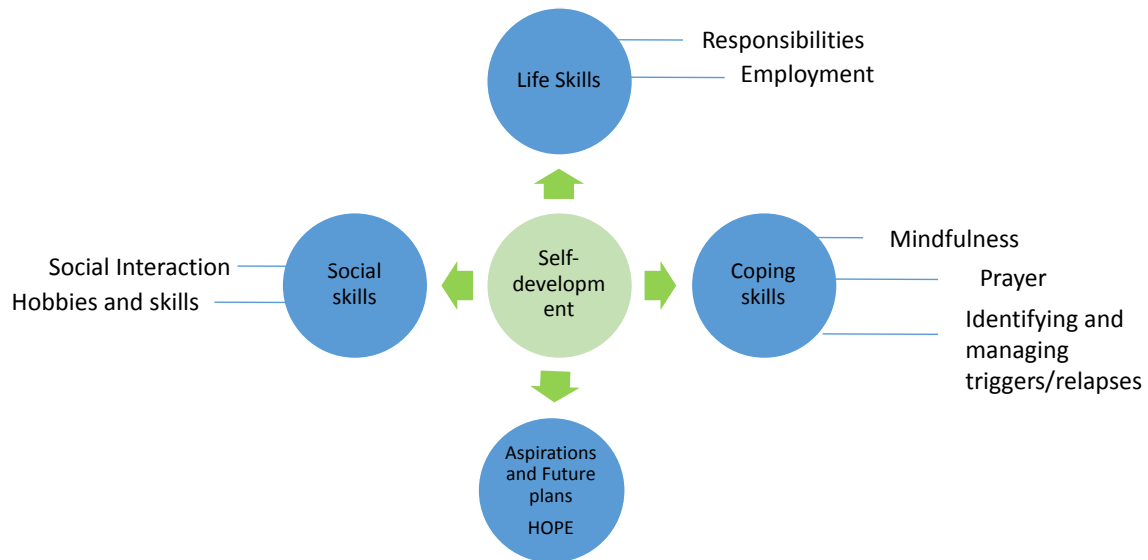
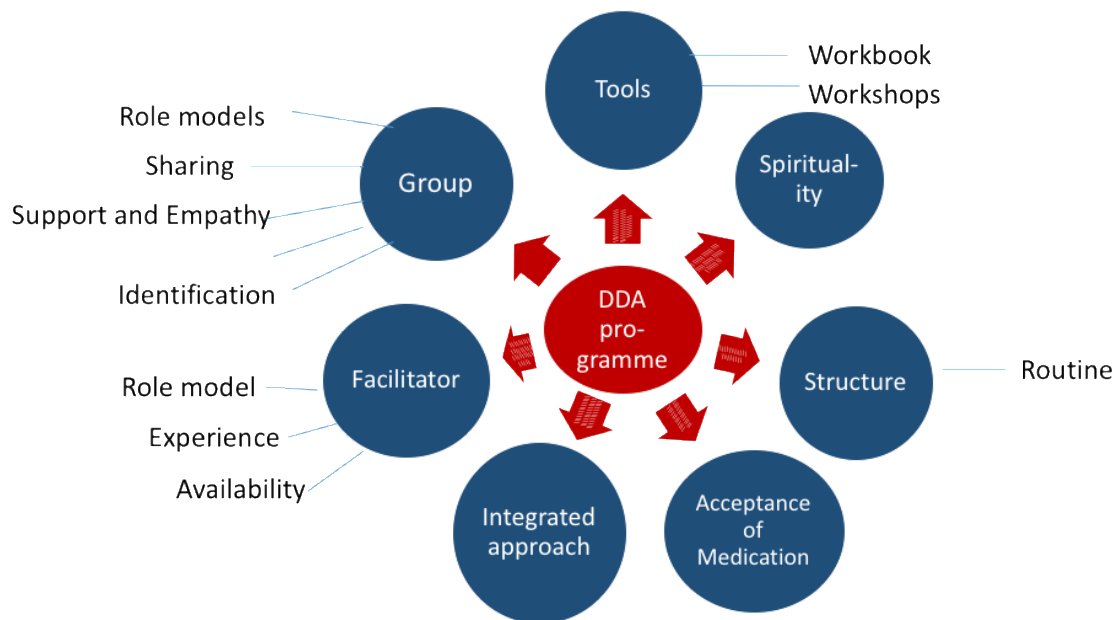


Figure 9: How DDA helped recovery progression



5.6 Challenges and limitations

A number of challenges and limitations of this evaluation should be noted. First of all, the nature and the complexity of the conditions that affected the participants made imperative that their well-being and their needs had been given priority. This meant that the researchers had to be flexible with the timing of the interview and the collection of the questionnaires. The latter proved to be particularly challenging, participants clearly preferred to be interviewed rather than filling in the questionnaires. Some of them preferred to be helped by the investigator and in some cases, they were guided over the phone. These difficulties meant that the sample size was smaller than expected and the questionnaires were distributed twice instead of three times as originally planned. However, for repeated measures ANOVA a smaller sample size is needed in comparison to cross-sectional studies (Field, 2009).

In some cases, participants were keen to show the value of DDA, this desire to comply may have skewed positively the scoring of the questionnaire at T2. Nevertheless, quantitative results are in line with the qualitative accounts of the participants and the observations of the facilitators, it is therefore likely that the improvements in mental health symptoms and quality of life are genuine. In a future study, it is advisable to reduce the length of the questionnaire and possibly use a more user-friendly tool, for example the Recovery Star (Mental Health Providers Forum, 2008).

Some participants found challenging to recall their drug and alcohol use, although they seemed comfortable disclosing any relapse during the interviews. In future research it is advisable to use a more detailed timeline follow back technique and possibly collect drug and alcohol data in a structured face to face interview rather than a self-report questionnaire.

The ideal design for a future study would be a controlled trial, however this would be challenging from ethical, methodological and resource perspectives. For example, given the diversity of DDA members and the complexity of their problems, it would be extremely difficult to follow up a matched group (with similar characteristics) who does not attend any self-help groups. Also, self-selection biases would be a confounding variable for any possible between groups difference in outcomes.

Despite the above limitations, being the first and only evaluation of the first pilot of DDA in UK this study provides very important information. The use of triangulation (data collected from different sources and using different methods) enabled to cross-validate the findings presented in this report. For the qualitative data in particular, data were coded independently by two investigators, compared to the analysis run by the software NVivo and validated by the feedback received by the DDA group. The authors are therefore confident about the credibility and validity of the findings (Noble and Smith, 2015).

5.7 Recommendations

The following recommendations are based on the findings and on the feedback collected from DDA members, the facilitators and the commissioner:

- All DDA members expressed their desire to expand social opportunities outside the group meetings. They suggested that this could help them further enhance their social life and could also get some members to put into practice their talents and skills. An application has been submitted to Sir Halley Stewart Trust to fund the implementation and evaluation of this new element DDA, which is an integral part of the success of DDA Oregon.
- There is a demand for DDA to expand in other localities in and outside London. In order to do so additional funding is needed to enable one or two facilitators to dedicate full time to the coordination and development of the program. New facilitators also need to be trained. The DDA founder has already sought funding opportunities and is discussing possible formats for the training.
- Some of the DDA members have IT skills and are familiar with social media, they could therefore be engaged in enhancing the social media presence of DDA, as this was one of the needs expressed by both DDA members and the facilitators.
- In the first interview DDA members expressed their will to be given more tasks and responsibilities in the group. This has already started to happen, with more members being engaged in various tasks at T3 in comparison to T1. "Service" is one of the 5 additional steps and has been proved to be an important enabling factor for the recovery process of the DDA members.
- The main facilitator has to be commended for his total dedication to the program and for his competent and invaluable contribution. However, some members contact him on a daily basis, it might be beneficial for him to set boundaries to prevent burn-out. It is recommended that the DDA program includes regular meetings (e.g. every months) where DDA facilitators can share ideas, offload emotions and support each other.
- DDA is already connected with local services, this should continue to be expanded and strengthened to ensure joint working with other resources available in the community.
- It is advised that DDA establishes strong links with services who deal with Post Traumatic Stress Disorder and trauma, as there is a strong link between trauma, mental health and substance misuse. DDA members value the possibility to discuss openly in meetings, however recalling memories of trauma could be stressful and may trigger relapses in mental health or substance misuse. DDA facilitators assured that mechanisms have been put in place to protect members who may find themselves in such circumstances. The DDA team should make sure that these mechanisms are implemented when opening new groups in other locations.

- Some DDA members have commented that they found some of the exercises in the workbook challenging, in this case they may need individual support to go through them.
- Family members of people with Dual Diagnosis can be severely mentally and physically affected by extremely high level of stress. The qualitative interview of the father of two children with dual diagnosis (who never engaged with the program themselves) has shown that DDA can support parents in their own right. The improved carers' well-being can result in healthier family relationships, which in turn would positive influence the recovery process. DDA should explore further how to support the needs of families and carers.
- Despite the high prevalence of homelessness amongst people with dual diagnosis, this category was not represented in the current sample, the facilitators confirmed that at present there are no homeless DDA members. This indicates that there might be a need to introduce a form of outreach strategy to engage this group.

6. Implications for policy and practice and overall conclusions

Mental illness and substance use disorder are the leading causes of non-fatal burden of disease globally (Whiterford et al, 2013), and are risk factors for injury (Wan et al., 2006), suicides (and criminal offences. In the UK, all patients (22, 100% excluding unknowns) with a primary diagnosis of schizophrenia who committed homicides had a history of alcohol and/or drug misuse (National Confidential Enquiry into Suicide and Homicide by People with Mental Illness - 2017). In 2016/17, there were 7,545 hospital admissions with a primary diagnosis of drug-related mental health and behavioural disorders. This is 12% higher than 2006/07 and deaths related to drug misuse are at their highest level since comparable records began in 1993 (National Statistics, 2018). It is therefore clear that neglecting the needs of people with mental illness and substance misuse disorders can lead to serious consequences for the affected individuals, as well as their family and community. DDA attendance has shown to have a positive impact on members' ability to manage their psychiatric symptoms and their substance misuse and these changes are linked to decreased risk of harm to self and others. In line with NICE (2016) guidelines, DDA is an integrated and inclusive approach and "it is there when needed". This program cannot and does not intend to replace statutory services, but can complement them by encouraging adherence to treatment and by providing continuity of care in the community.

Importantly, DDA has proved to be effective in breaking isolation, which can have major implications on both psychological and physical health. For example, a meta-analysis of more than 3.4 million participants indicated that social isolation, living alone and loneliness are linked with about a 30% higher risk of early death (Holt-Lunstad et al., 2010). This year (2018), the UK

Prime Minister Theresa May announced a cross-government strategy to reduce loneliness in society, and appointed a Minister for Loneliness (Tracey Crouch MP) to tackle the issue at policy level. Therefore, the work of DDA fits in perfectly with this specific governmental strategy.

A recent report by a national Union organization (TUC) has shown that only 1 in 4 (26.2%) people with a mental illness lasts (or is expected to last) more than a year are in work, and less than half (45.5%) of people with depression or anxiety lasting more than 12 months are in work (TUC, 2017). Findings from the qualitative interviews, the case studies and the quantitative data consistently showed that DDA members increased their sense of self-confidence in their social functioning as well as in their ability to cope with day to day life. The structure of the program and the opportunity to take on responsibilities in a safe environment functioned as a trampoline to the external world, as a result some of them took up volunteering and /or started a payed position. These achievements show that DDA can help integrate a very marginalised group into employment.

Finally, the positive experience of participant D (father of two young people who are affected by dual diagnosis and never engaged with the program), showed that DDA can effectively support family members too. Data show that family members of individuals affected by mental illness and/or substance misuse problems suffer a wide range of physical and mental distress. These symptoms can be severe and long-lasting and are associated with high use of primary care services (UK Drug Policy Commission, 2009). Therefore, by supporting family members, DDA has the potential to reduce the social cost associated with these chronic conditions.

In conclusion, our results add knowledge into the understanding of the components and mechanisms that underlie engagement, participation, and change for people with co-existing mental and addictive disorders. Findings are line with those of DDA in Oregon (Roush et al., 2015) and suggest that, if rolled out in the UK, DDA could provide a cost-effective resource for people with dual diagnosis, their families and the community as a whole. Participants have expressed the desire to expand the social aspect of DDA by offering activities and social opportunities outside the regular meetings, this development has the potential to give DDA members the opportunity to get involved in organising and leading the events as well as participating in them. On-going evaluation and a larger sample are needed to provide further insight on the effectiveness of DDA, in particular with regard to substance misuse and other addictions. Future research should also explore how the program can be strengthened and developed to engage hard to reach populations, such as homeless and black ethnic minority groups.

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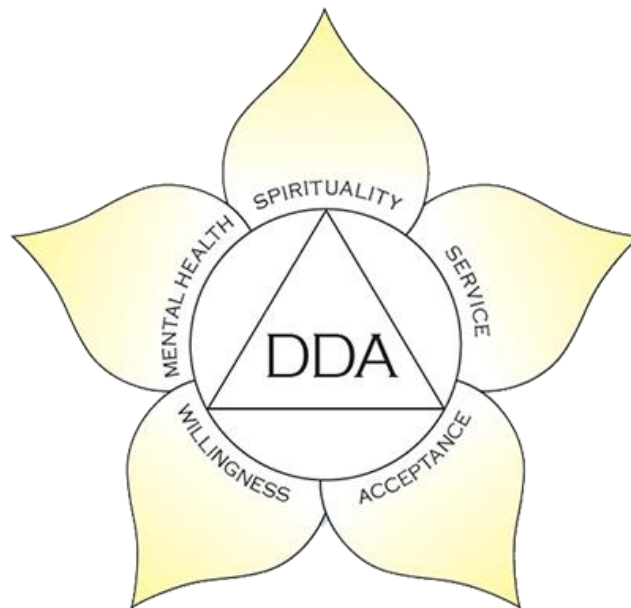
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Appendixes

Appendix 1: Dual Diagnosis Anonymous additional steps



“The base of our triangle represents Solidarity. Solidarity is the very foundation of DDA, and it is where the seed of recovery germinates, and grows into the beauty of the flower in our symbol. The left side of our triangle represents Strength. DDA recognizes that there is Strength in diversity. Together, Solidarity and Strength acknowledge the awesome power of our group consciousness. The right side of our triangle represents Hope. Hope is a core principle of recovery in DDA and it is a natural outcome of our Solidarity and Strength.

The circle that surrounds the triangle reminds us that from the very first time we attend DDA, regardless of how often we attend meetings thereafter, we shall always be connected to one another. This interconnectedness further reinforces the Strength, Solidarity, and Hope of our fellowship. The circle also represents the circle that we form at the end of every DDA meeting as we close with the Serenity Prayer.”

“Each petal in the flower represents a key concept of the 5 Steps in DDA.

- The lower right petal represents Step 1. The core meaning of Step 1 is Acceptance. This confirms that it is our ability to accept our dual diagnosis of substance abuse and mental illness that opens the door to our spiritual journey of healing and recovery.
- The lower left petal represents Step 2. The core meaning of Step 2 is Willingness. After accepting our dual diagnosis at Step 1, our willingness to accept help at Step 2 reinforces the reality that we are not alone in our recovery.

-The left upper petal represents Step 3. The core meaning of Step 3 is Mental Health. Step 3, emphasizes the importance of addressing our mental health issues if we are to be successful in our recovery.

-The top petal of our symbol represents Step 4. The core meaning of Step 4 is Spirituality. Spirituality is the very essence of recovery. The ultimate culmination of all the Steps.

-The right petal of our flower represents Step 5. The core meaning of Step 5 is Service. There can be no recovery without service, and there can be no service unless we are willing to work an honest program of recovery. Wherever we find ourselves on our spiritual journey of recovery there shall be opportunities to serve because we can work an honest program at any stage of our recovery efforts". (from Crobett Monica, iDual Diagnosis Anonymous, Our Symbol, year not specified)

Traditional 12 steps

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character
7. Humbly asked Him to remove our shortcomings
8. Made a list of persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

Appendix

DDA achievement

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1. Milani, R.M., Butler, A., and Ware, D. (2017) Dual Diagnosis Anonymous: a peer support programme for people with mental health and substance misuse problems. *In panel discussion: A look at the spectrum of mental health problems in drug and alcohol service - what does and what doesn't get covered. Royal College of General Practitioners & Substance Misuse Management GP* (2017) Managing Drug & Alcohol Problems in Primary Care Conference. 3rd November 2017, London.

2. The DDA evaluation was mentioned at this conference too:

Milani, R.M. (2017) Implementing the new NICE guidelines for severe mental illness and substance misuse (Dual Diagnosis). *Improving the management of severe mental illness and substance misuse: Dual Diagnosis: Implementing the NICE Guidance*. December 2017, London.

3. The principle investigator participated in the event “Dual Diagnosis Roundtable”, (24 October 2-5pm) organized by Adfam (beneficiary of a Sir Halley Stewart grant) to discuss how DDA can support families that are affected by “Dual Diagnosis” related problems.
4. A video about DDA was produced to explain what it is and to be disseminated via the DDA webpage <http://www.ddauk.org/> (currently been finalized)

5. The research assistant presented the preliminary findings at the University of West London to students on the Substance Use and Misuse courses