



# An evaluation of the ARC Fitness - Addiction Recovery Coaching Programme

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# ARC Evaluation

## Introduction

This paper reports the evaluation of the ARC fitness Addiction Recovery Coaching programme. This section sets out the background to the evaluation by providing an overview of the current research evidence on the use of exercise as a treatment option for those living with substance use disorders. This is followed by an overview of the ARC programme and organisation as well as a brief overview of a previous evaluation of ARC.

## Literature Review

### Introduction

Addiction is a major public health issue across the globe. In the United Kingdom it is estimated that as many as 8.3/ 10,000 people have a problematic relationship with substances such as alcohol (Thompson et al, 2017). Treatments for substance use disorders range from managed access to the drugs ingested, for example supervised heroin injection and managed alcohol programmes to abstinence-based approaches (Marchand et al, 2018). Pharmacological and psychological approaches can be used independently and jointly to improve outcomes (Jhanjee, 2014; Magill & Ray, 2009). Several recent systematic reviews, however, offer little

evidence for the effectiveness of these approaches. For example, Klimas et al (2018) reviewed seven studies of psychosocial interventions for people with concurrent problem alcohol and drug use. They report that talking therapies led to no difference in drug taking behaviour (Klimas et al, 2018). Likewise, in the only Cochrane review available investigating pharmacological intervention for prevention of relapse in alcohol use Leone et al (2010) conclude that there is insufficient evidence that Gamma-hydroxybutyrate (GHB) reduces rates of relapse. It is noted that relapse can occur in over 60% of people diagnosed with a substance use disorder (Abrantes & Blevins, 2019).

## **Why exercise may be beneficial.**

Incorporating some form of physical activity into the treatment plans for people living with problematic alcohol or substance use has been becoming more popular in recent times. However relatively little is known about how and why adding physical activity may be helpful. Several hypotheses have been suggested, although the evidence base for any of these is scant.

In the same manner that drug, and alcohol use impact the dopamine neurotransmitters it has been suggested that exercise and physical activity also activates the dopaminergic brain reward system (Abrantes & Blevins, 2019). In effect suggesting that undertaking exercise mimics the effects felt when ingesting alcohol or illicit drugs (Lynch et al, 2013). This results in the person having the same physiological response to exercise as they would have to drug use.

Endogenous opiates are naturally occurring substances that are distributed widely through a person's central and peripheral nervous systems. Amongst other things, these opiates regulate emotions, pain, reward and motivation (Farnia et al, 2021).

Endogenous opiates are produced through engagement in exercise, and it has been hypothesised that, as a result of this, cravings for drugs, in particular alcohol, can be reduced by taking part in exercise. For example, Ellingsen et al (2018) compared the effectiveness of short (45 minute) bouts of exercise in self reported cravings immediately prior to the exercise and 1, 2, and 4 hours post exercise. Using soccer and circuit training as their exercise regimes they found statistically significant ( $p=0.000$ ) reductions in cravings compared to those that had no exercise. The small sample size ( $n=25$ ) should counsel against making too general a claim on this, however it provides some evidence that taking part in physical activity may reduce cravings in people being treated for problematic alcohol use.

In contrast to the physiological explanations of why exercise may be beneficial, cognitive theorists have suggested that exercise improves peoples' cognitions and improves the positive feelings (Mikkelsen et al 2017) and reduces negative feelings that a person has about themselves (Abrantes & Blevins, 2019). In a review of exercise studies in the addiction field, Madelosi et al (2018) found physical exercise improved memory and decision making as well as decreasing anxiety and depression and improving general wellbeing. This is perhaps linked to a sense of self accomplishment and improved self-efficacy in both maintaining sobriety and completing an exercise routine (Abrantes & Blevins, 2019).

Sleep disturbance has been recognised as a significant risk factor for relapse, particularly in the early stages of recovery (Farnia et al, 2021). Dolezal et al (2017) reviewed 34 studies that explored the impact that physical exercise has on sleep. They reported that 29 of the included studies found that exercise improved sleep, four studies found no difference in participants self reported duration and quality of sleep and one study reported a worsening of sleep. It is worth highlighting that none of their included studies involved people with a substance use issue and drawing a

direct conclusion to those with problematic alcohol and drug use may not be possible. However, as noted above the review provides some evidence that exercise improves sleep in clinical populations.

## **Review of effectiveness studies**

Research evidence on the effectiveness of exercise and other physical activity in people that misuse substances provide a mixed set of results. Findings seem to be dependent on the primary drug of use by the person, the type of exercise and the duration and intensity of the exercise. Similarly, there is little commonality between the outcomes measured in these studies.

He et al (2020) compared three types of intervention with 3 groups of 30 people in treatment for amphetamine use. Comparing the treatment that people normally get (Treatment as Usual (TAU)) with TAU plus aerobic activity and TAU plus aerobic activity and strength training, they measured the levels of drug cravings experienced by the participants as well as their positive and negative syndromes and health related quality of life. They report that both exercise groups had significantly improved scores in all three measures. The group that received the strength training as well as the aerobic activity reported significantly more improvement over the group that just received the aerobic intervention. No follow up period is reported in the study, so it is not possible to say if these results were sustained after the intervention finished.

Alessi et al (2020) compared the use of a contingency management approach with one group of 60 people aimed at initiating and maintaining exercise in comparison to another group of 60 that received contingency management approaches for non-exercise-based goals over a four-month period. Alessi et al (2020) do not report the

primary drug of use for each group. They found that the participants receiving the exercise focussed contingency management reported improvements in several psychosocial and physical health wellbeing measures including self efficacy and intrinsic motivation. Interestingly, no differences between the two groups are reported in substance use. This suggests that success of an intervention programme should adopt a wider definition than simple abstinence from substances.

Brown et al (2014) investigated the use of moderate intensity group based aerobic activity in a group of 48 people being treated for alcohol dependence. Twenty-five participants took part in the group exercise programme over a period of 12 weeks and Brown et al (2014) compared number of drinking days and heavy drinking days with 23 participants that received only advice to engage in physical exercise. They report that the group that took part in the aerobic activity had significantly fewer drinking and heavy drinking days ( $p=0.000$ ). They note however that this difference held true only in people that adhered to the exercise regime and where this was not the case no difference between the two groups was found. This led them to conclude that the group-based activity can be a useful adjunct to treatment, however providers should look to ways in which to ensure adherence to the exercise programme.

Similar findings are reported by Buchowski et al (2011) with a group of participants in treatment for their use of cannabis. They provided 10 thirty-minute treadmill workouts over a fourteen-day period and found a reduction in daily cannabis use from a mean of 5.9 joints/ day to a mean of 2.8 joints/ day. Similarly, statistically significant reductions ( $p<0.05$ ) in the cravings for cannabis were reduced for compulsivity, emotionality, expectancy, and purposefulness. However, these results need to be viewed with caution for two reasons; firstly, the small sample of ten and

secondly, the lack of a control group does not allow for the results to be generalised to the wider population.

Likewise, the findings from De La Garza et al (2016) need to be viewed with caution. This group randomised 24 people in treatment for cocaine use to either an exercise group that received 3 x 30-minute sessions of walking or running, or to a control group where they had no structured physical activity as part of their treatment plan, for a period of four weeks. As with other studies, they report a reduction in the reported cocaine use in the participant group taking part in an exercise regime. Notably, though the differences between the two groups were not statistically significant, although they do argue that their findings provide preliminary evidence for the use of exercise as a treatment add on for people with problematic cocaine use.

Hallgren et al (2014) examined the effectiveness of a yoga-based intervention when added to a person's treatment plan when they are living with a problematic alcohol use issue. They examined the effect of a weekly yoga session for ten weeks in addition to the normal care for a group of 18 people noted to be "alcohol dependent" (p441). Hallgren et al (2014) reported that yoga was found to be both tolerable and acceptable to the participants. They also found that alcohol daily consumption fell from an average of 6.32 drinks/ day to an average of 3.36. They do note however that in comparing to a group of people that received just the standard care there was no statistically significant difference apparent.

Health related quality of life was measured in a group of clients living in a residential setting for substance use disorders (Muller & Clausen, 2015). Using a group exercise approach and incorporating walking/ running, strength training and ball games, thirty-five people were followed for the ten-week period of the intervention. They

report that 24 people completed the 10-week programme and 11 did not. This allowed Muller & Clausen (2015) to compare between those that completed the programme and a de facto control group. They found a statistically significant improvement in quality of life between starting the exercise programme and ending it in the group that completed the regime. Interestingly, they report that change in quality of life in the group that completed the exercise programme was also clinically important to the participants.

Linke et al (2019) report the effectiveness of a multifaceted approach to working with United States forces veterans (n=15) in preventing relapse in people living with a substance use disorder. In addition to exercise regimes, participants also took part in psycho-education sessions in relation to substance use as well as a drop in social event on a weekly basis. The exercise component of the intervention included YMCA membership to give access to gym facilities, a FitBit charge HR was given to encourage self-monitoring of activity. This was supplemented by other psychometric measurements to measure exercising. Statistically significant differences in reduced alcohol use pre and post intervention ( $p<0.001$ ) and increased physical activity ( $p<0.05$ ) is reported. However, as with some studies reported above the small sample and the lack of a comparator group should encourage caution when interpreting the findings in a wider context.

## **The ARC Programme**

Addiction Recovery Coaching™ (ARC Fitness) is a not-for-profit social enterprise run by a multi-disciplinary team. Participants may or may not be in contact with NHS providers concerning their substance use or other health issues as it is offered independently of statutory services. The ARC Fitness programme appears to be among the first in the UK to provide structured exercise-based interventions as part

of treatment for addiction. A recovery via sport programme is offered by some providers, such as Phoenix Futures (<https://www.phoenix-futures.org.uk/recovery-through-sport>), although these are based on team sports and do not seem to provide a comparable service to ARC.

Each participant engages in a custom workout programme from ARC that combines resistance training, cardiovascular/aerobic exercise, and one-on-one and group counselling. Counselling services were delivered by BACP/BABCP-registered counsellors and were based on both cognitive behavioural and person-centred methods. Support is also provided by professionally accredited recovery coaches, trained via the Recovery Coach Academy utilising the CCAR (Connecticut Community for Addiction Recovery) methodology. Two weekly evening group sessions as well as, one weekly group peer lead support session, weekly mindfulness classes and one-on-one support sessions make up the six-week programme. The goal of the group exercise sessions was to increase muscular endurance and cardiovascular fitness using functional training techniques, such as a combination of strength and conditioning exercises, body weight exercises, HIIT, and CrossFit-style workouts. Each hour-long group workout session is scheduled.

Each participant can attend additional weekly classes as well as regular social activities such as a walking group, bowling, yoga to encourage sober life outside of the group setting. By access to professional knowledge, experience, and pointers, ARC was able to provide each group member with personally tailored guidance and support in order to support participants in reaching their unique recovery goals.

The program's overall goal is to create a therapeutic environment for people who use substances in problematic ways, allowing them to concentrate on enhancing

their mental and physical welfare through access to physical activity, professional and peer support, and strong social ties.

## **The effectiveness of the programme**

This evaluation seeks to establish evidence of the effectiveness of the ARC Fitness programme in relation to pre-specified outcomes; anxiety, depression, sleep and overall recovery. This is the first full scale evaluation of the programme, however a recent pilot evaluation (Rutherford & McGowan, 2021) reported both statistically and clinically meaningful differences in each of the four outcomes above in a small group of participants (n=6). Rutherford & McGowan (2021) in overall recovery including all of the sub-scales of the Substance Use Recovery Evaluator (Neale et al, 2016), and in depression and anxiety symptoms in all of the participants in the original pilot evaluation. The authors recognised the limitations of the small sample sample which provided impetus for the evaluation contained herein.

## **Conclusion**

This section has outlined the background to the evaluation as well as providing a brief overview of the development of the ARC Fitness organisation. It is clear that the approach adopted by ARC in the care and treatment of those living with problematic substance use is, theoretically, susceptible to positive change through the interventions provided in the ARC Fitness programme. The literature clearly demonstrates the potential for physical activity interventions along with other psychosocial approaches to treatment in the care of the target population of ARC.

# **Methods**

## **Introduction**

This section describes the methods used to collect the data used in the evaluation. The aims and objectives are set out as is a discussion of the reliability and validity of the quantitative instruments used in the evaluation. The use of focus groups to collect qualitative data is considered and the methods of analysis for both quantitative and qualitative data are described.

## **Aims & Objectives**

The overall aim of the project is to evaluate the efficacy of, and experiences of being involved with, the ARC programme.

### **Objectives**

1.To analyse routinely collected data and compare pre and post intervention scores in a group of people that have successfully completed the ARC programme.

2.To conduct focus groups with programme participants, family members/ significant others and staff volunteers in the ARC programme to elicit their experiences of the programme.

## **Identification of Participants**

Participants self-refer to the programme. Approximately 61 people completed the ARC programme through the funding from the National Lottery. A total population approach was adopted for service users and staff/ volunteers at ARC. As such, no restriction on inclusion criteria for this study was applied. Significant others (n=8-12) were identified as outlined below.

It is noteworthy that ARC have clearly developed inclusion and exclusion criteria for participation in the programme. Inclusion criteria for significant others was as broad as possible, although significant others currently receiving care for their own substance use were excluded. Likewise, those under the age of 18 were also excluded from the focus group data collection. A youth group did take place and the analysis of quantitative data gathered during that group is included in the findings section of the report.

The project manager at ARC acted as gatekeeper to the service user and staff/ volunteer research population and initial contact with potential participants was made through him (Singh & Wassenaar, 2016). Recruitment of significant others was again through the use of the gatekeeper. Interested parties were able to contact the team undertaking the evaluation either to take part in the study or obtain further information.

## **Quantitative data collection & analysis**

Quantitative data was gathered using the Substance Use Recovery Evaluator (SURE) (Neale et al, 2016), the General Anxiety Disorder Scale (GAD-7) (Spitzer et al, 2006) and the Patient Health Questionnaire (PHQ-9) (Kroenke et al, 2001).

The SURE is a validated psychometric questionnaire that measures recovery from substance misuse (Neale et al, 2016). It consists of 21 items in five categories: Drink and drug use, Self-care, Relationships, Material Resources and Outlook on life (Neale et al, 2016). The GAD-7 is a brief seven item self-report scale that details symptoms of anxiety. Scoring ranges from 0 to 21 with the higher score indicating greater levels of anxiety (Spitzer et al, 2006). The PHQ-9 is a nine-item depression self-completion rating scale. Scores range from 0-27 and as with the GAD-7, higher scores indicate higher levels of depressive symptoms (Kroenke et al, 2001).

The minimal clinically important difference (MCID) is the threshold value of change in the outcome scores that may have an implication for treatment (Sedaghat, 2019) We calculated the MCID in this evaluation using the distribution method (Rai et al, 2015) where a difference in half the standard deviation in the scores will be deemed to be clinically important (Rai et al, 2015). The inclusion of clinically meaningful differences is becoming an important factor in assessing healthcare interventions. Whilst traditionally focussing on the statistical significance of any change in outcomes, healthcare researchers are increasingly including measures that are meaningful to clients in terms of how they feel or how changes to their quality of life are important and not just if they are statistically important.

## **Qualitative data collection & analysis**

A focus group can be viewed as a collective conversation around a specific topic (Kamberelis & Dimitriadis 2013). First introduced into the social sciences in the 1930's (Krueger and Casey, 2015) focus groups are a popular form of qualitative data collection (Freeman, 2006). This is partly because of the potential for exploring

participant experiences and opinions on a given subject, but also because they allow the person undertaking the evaluation to experience a direct interactivity with individuals (Lane et al., 2001).

## **Justification for using focus groups**

As with all research and evaluations, this study required the gathering, collation, and analysis of information. There are a variety of methods in which this information can be garnered and accordingly there was a need for careful consideration of the method employed to obtain the relevant data.

The purpose of the evaluation was to explore the experiences of several groups in relation to engagement with the ARC programme. It was appropriate therefore to use a data collection method that allows participants to fully express themselves without feeling threatened by the topic or interviewer.

Focus groups are effective in exploring the perceptions, feeling and experiences of people thinking about specific topics or products (Krueger and Casey, 2009). Furthermore, people are more likely to disclose information with each other when they perceive that the audience has something in common with them (Morgan and Scannell 2003). A number of authors (See for example, McLaughlin, 2000; McElrath & McEvoy, 2002; McLaughlin and Long, 1996) found that substance users could be viewed as a disenfranchised group of people as well as be heavily stigmatised (Divin et al, 2015). Focus groups are a way of engaging with people that feel disempowered (Kitzinger, 1994). McLaughlin (2000) further suggested that focus groups allow for a synergy that can assist the person undertaking the evaluation in understanding the full experience the participants' have.

HyperResearch software was used to facilitate analysis of the three focus groups. A semi structured interview schedule was used in each of the focus groups that asked participants about their overall experience of being involved with ARC, the importance of the physical activity component of the ARC programme and how their lives would be different without ARC. Themes were identified from the focus groups and are reported below.

## **Ethical Approval**

Ethical approval was not sought for this evaluation. Guidance from the National Research Ethics Service indicated that as the project was a service evaluation no formal ethical approval was needed. However, there was a need to be mindful of the need for ethical standards to be adhered to, and applied the principles of informed consent, anonymity and preserving safety throughout. The methods used to protect participants identity are described in the Identification of Participants section.

# Findings

## Introduction

This section provides the findings of the quantitative and quantitative analysis on the provided data sets gathered. The findings of each approach are reported separately and discussed in tandem during the discussion chapter of the report.

## Evaluation Population & Sample

The population for the evaluation comprised of 61 people that completed the six-week programme. This was drawn from seven groups of adults aged over 18 years and one youth group. The six-week programme ran between January 2021 and February 2022. Data was collected on three occasions-pre the programme, three weeks into the programme and at the end of the programme.

## Missing Data

Fourteen participants did not complete two or more of the questionnaires and were excluded from the analysis. A proportion of participants had not completed data collection at one point during the programme. Last Observation Carried Forward (LOCF) was used to impute the missing variable. This assumed that there was no benefit from the ARC programme since the last data collection point. Where the participants did not complete the initial baseline data collection, the week three figures were imputed and used as baseline. Taken together, these may underestimate the efficacy of the ARC programme.

In LOCF, the last value observed before dropout is used for all subsequent outcomes assessment time points, regardless of when it occurred. This approach is primarily used when data are missing because of client dropout, and it has a number of advantages: the procedure can be easily implemented, it can avoid using multiple imputation procedures, and it can reduce bias associated with incomplete outcomes.

Despite its many advantages, however, LOCF has some limitations. It is not unbiased, and as noted above tends to underestimate the true treatment effect in some situations.

Simulation studies have shown that using LOCF as an imputation method when persistent binary outcomes are missing can lead to Type I error. This error occurs when the distribution of missing values at 1 year and the distribution of complete values at 2 years are mixed. This mixture produces a mixture of observed and imputed values at 2 years with mean and variance that is only unbiased when the distributions of missing data at 1 and 2 years are equal.

These results suggest that LOCF should be avoided when persistent outcomes are missing and that a more sophisticated approach is needed to handle missing data in clinical trials. More complex approaches such as mixed models for repeated measures (MMRM) or multiple imputation methods are now widely used and have better mathematical properties than LCOF. Given the relatively short timescale of the ARC programme and the decision to exclude participants with more than one data point missing, the limitations of the LOCF approach are minimised and LOCF was deemed to be an appropriate strategy to deal with missing data.

# Quantitative results of the six-week programme

The baseline scores for each of the four areas are summarised in table 1 and figure 1 and discussed under the relevant headings below.

## Depression

Table 1: Baseline scores

	All	Male	Female
<b>PHQ-9</b>	14.60	13.20	17.20
<b>GAD-7</b>	14.20	13.70	15.80
<b>SURE</b>	47.70	46.80	48.0
<b>SUSS</b>	10.10	9.19	11.10

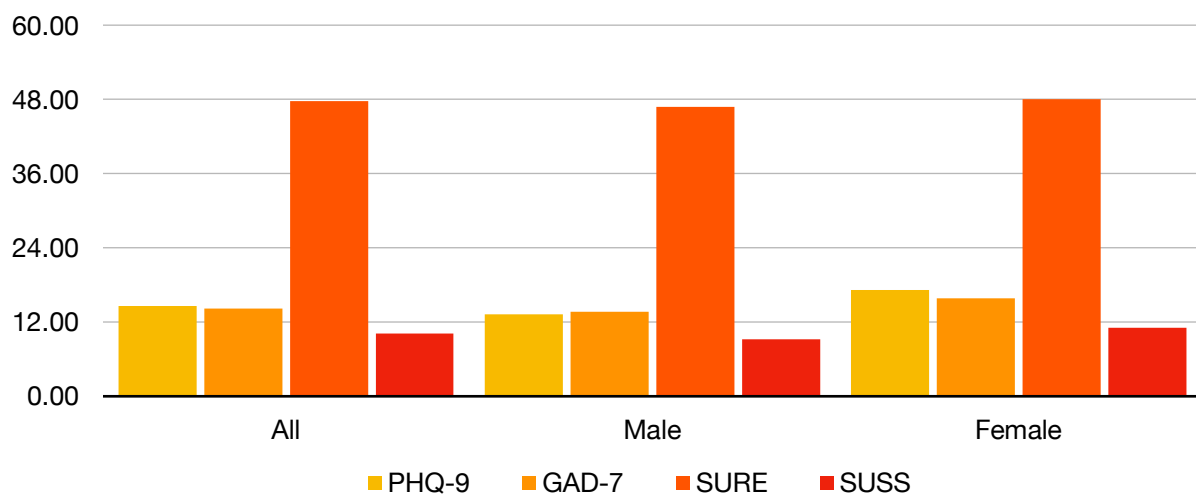


Figure 1: Baseline Scores

Prior to beginning the programme, the mean PHQ-9 score, measuring levels of depression, was 14.60. This signified a moderate/ severe level of depression. Male participants mean score was 13.2 (moderate depression) and female mean score was 17.2 (moderately severe). At the end of the programme, scores had dropped to an overall mean of 6.33 (mild depression), with males (6.57) and females (7.50).

Repeated measures T-Test found that these reductions were statistically significant ( $p,0.05$ ). In addition to the statistical significance, clinically meaningful differences were also found. This can be interpreted as the changes in levels of depression having a positive impact on their daily life <sup>1</sup>.

## **Anxiety**

Prior to beginning the programme, the mean GAD-7 score, measuring levels of anxiety, was 14.20. This signified a moderate/ severe level of depression. Male participants mean score was 13.7 (moderate anxiety,) and female mean score was 15.8 (moderately severe). At the end of the programme, scores had dropped to an overall mean of 5.85 (mild anxiety, with males (6.10) and females (6.94).

Repeated measures t-Test found that these reductions were statistically significant ( $p,0.05$ ). As with depression scores, the findings are also clinically meaningful.

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<sup>1</sup> Clinically meaningful refers to changes that whilst not necessarily statistically significant is a meaningful change to the client's well-being.

## **Recovery from Substance Use**

Prior to beginning the programme, the mean SURE score, measuring levels of life in recovery from substance use was 47.7. Male participants mean score was 46.8 and female mean score was 48.0. At the end of the programme, scores had increased to an overall mean of 53.5, with males (49.9) and females (54.3) indicating increased adjustment to life without substances during the programme.

Repeated measures t-Test found that these reductions were statistically significant ( $p,0.05$ ). The findings are also clinically meaningful.

## **Changes in Sleep**

Prior to beginning the programme, the mean SUSS score, measuring levels of sleep disturbance from substance use was 10.1. Male participants mean score was 9.19 and female mean score was 11.10. At the end of the programme, scores had decreased to an overall mean of 5.80, with males (5.95) and females (6.61) indicating decreased sleep disturbances during the programme. Repeated measures T-Test found that these reductions were statistically significant ( $p,0.05$ ). The findings are also clinically meaningful.

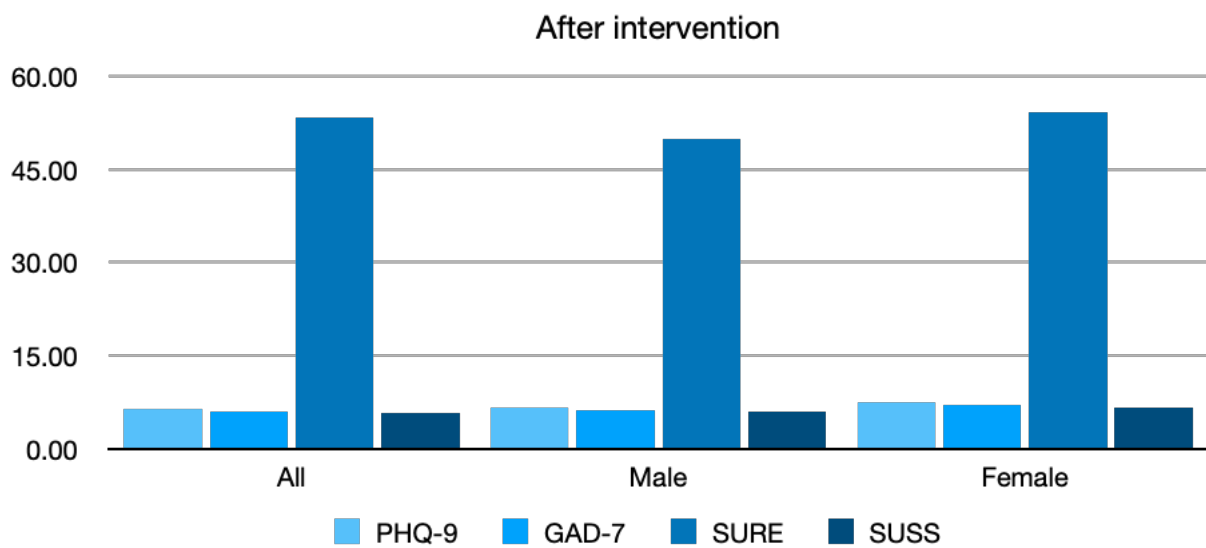


Figure 2: Post ARC programme scores

Table 2: Post ARC programme scores

	All	Male	Female
<b>PHQ-9</b>	6.33	6.57	7.50
<b>GAD-7</b>	5.85	6.10	6.94
<b>SURE</b>	53.50	49.90	54.3
<b>SUSS</b>	5.80	5.95	6.61

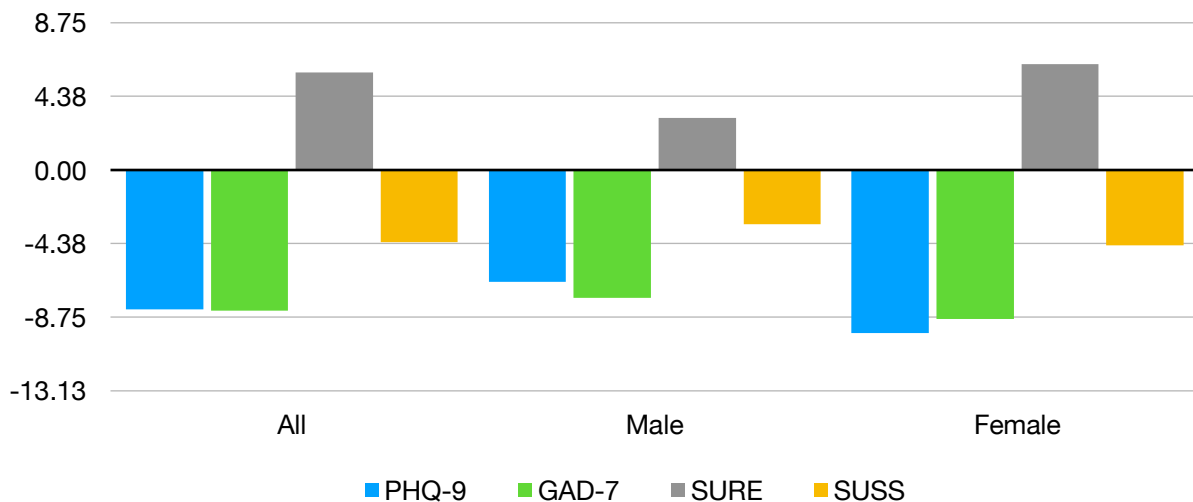


Figure 3: Changes between pre and post intervention

Table 3: Changes between pre and post intervention

	All	Male	Female
<b>PHQ-9</b>	-8.27	-6.63	-9.70
<b>GAD-7</b>	-8.35	-7.60	-8.86
<b>SURE</b>	5.80	3.10	6.30
<b>SUSS</b>	-4.30	-3.24	-4.49

Tables 1 & 2, as well as figures 1 & 2 show the baseline and post programme scores respectively. Table 3 and Figure 3 report and illustrate the changes in each variable. In relation to changes in each of the four areas; negative scores in PHQ-9, GAD-7 and SUSS and positive scores in SURE indicate improvement. No

statistically significant difference between male and female participants was found suggesting that ARC is effective regardless of gender.

## **Evaluation of Community Engagement Events**

In the period of the evaluation ARC undertook a series of community events. In general, these are positively evaluated. Participants in the **Corporate Workshop** were asked to rate the overall usefulness of the programme as well as the usefulness of the content and the delivery style and structure. All participants in the workshop rated each of the areas either Very Good or Excellent with the exception of evaluation of the hands-on activities, where one participant rated this as Good with the remainder stating either Very Good or Excellent.

Ninety-seven per cent of participants in the **ARC Social Events** report being satisfied with the event with the remainder expressing neutrality. Again, the presentation style and content were evaluated highly. Forty-three of forty-four participants agreed that more social events like that provided by ARC were needed and all participants agreed that the event was encouraging.

The majority of participants (30/45) agreed that there was a lack of addiction services in the Western Trust area. Qualitative comments suggest the issue is access to services, not service provision per se.

Two Community Workshops of four-week duration were also evaluated. The findings here are similar to those above in relation to usefulness, presentation style and increasing participants knowledge.

This was further evidenced by qualitative comments- Participants routinely commented that the educational aspect of the workshop was helpful; **"Everything because of the lack of knowledge I have"**, *Understanding Addiction Participant 4*. Similarly, the recalling of personal stories, although difficult to listen to, was valued by participants **"Personal stories are very painful"**. *Understanding Addiction Participant 4*.

In the **Empowering Families Workshop** all participants acknowledged the skill of developing boundaries and self care as important outcomes of the Workshop **"Being clearer in regard to boundaries which has been beneficial for myself and person"** *Empowering Families Participant 4* **"Be kind"** *Empowering Families Participant 2*.

## **Conclusion**

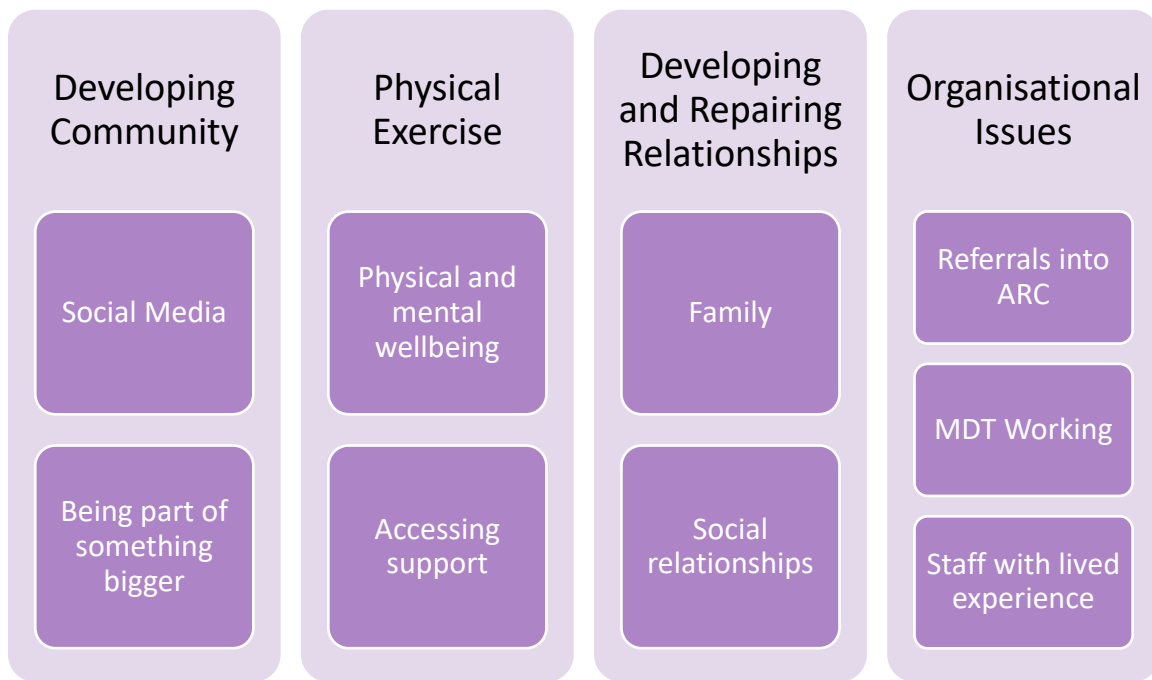
The six-week ARC programme has a significant effect on the outcomes measured. Positive changes in all four outcomes measured were found. This is complimented by the extremely positive evaluations from the Community Engagement Events.

# Experiences of ARC Fitness

This section outlines the findings from the three focus groups that were conducted as part of the evaluation. It is apparent, from the findings across the three groups, that engagement with ARC is a positive experience for those that took part in the focus groups. A number of common themes were identified for each participant group, and these are presented below. Common themes across all three groups such as the value of the 'community' and the development of peer and social relationships were noted.

## Service Users

The experiences of ARC service users were overwhelmingly positive. Four overarching themes were identified from the data: the development of community, the importance of physical exercise as part of the care journey, the organisation of ARC and the development of social and family relationships. Figure 1 shows the main themes with identified sub themes.



*Figure 4: Themes and sub-themes from service users focus group.*

The community aspect of the ARC programme was highlighted strongly in the service user focus group. Participants reported great value in knowing others in a similar circumstance were on the journey with them and that they could be a source of encouragement and support. The use of the private social media platform groups was specifically identified as a major factor in the development of the community as a support network. One participant noted.

*"...the wee Facebook page as well. Some days there's a quote or a wee thing that jumps up and I'm like, did they just send that to me? you know, it just as if it is meant to hit you that day. Yeah. And I think that's just so powerful."* (SU1)

The social aspect of community development was highlighted by participants in the focus group as an important factor. This is closely related to the development of

social relationships away from service user's traditional socialisation places, which is presented further below. As one participant said

*"And the connection as well of, you know, whoever's on the group, the craic we had last night in the group. It was just amazing. See, I think that's something fun to you though. You're sharing **and** (emphasis in original) there was a bit of fun."* (SU2)

The physical activity aspect of the ARC programme was universally recognised as being positive, if not always a welcome intervention. Participants report improvements in both mental and physical well being from engaging with the physical training. Improvements in mood as well as weight loss were reported as were general feelings of well-being. One participant reported significant improvement in a previously diagnosed medical condition as a result of the programme.

*"I suffered from /illness/ as well and I couldn't have got outta here. You know what ... now the flexibility that I have in my back and, you know, at my whole body, like it's through their training and tell me what to do and you know, what exercises I need to do"* (SU4)

Some of the participants viewed the physical exercise component as a necessary evil. They recognised the value in it- the improvements in physical and mental well-being and the development of relationships, however,

*"Oh, alright. We train. But no, we don't love training. But you need to, you need to get down and you need to get talking with everybody."* (SU3)

The development and restoration of relationships was positively highlighted by all participants. The value of meeting people at similar stages of recovery was highlighted earlier, however the development of new friendships was highlighted by some as a significant benefit to the programme *"I was meeting new people."* (SU3).

Equally important was the repair of broken or fractured relationships with family members. One participant reflected on their previous relationship with their son when they were using drugs and alcohol and how it had change since engaging in the ARC programme. Whereas previously going to a sporting event also meant drugs or alcohol, now it was *"Just...., about the football."* (SU5). One participant compared their relationship now with a family member to previously when they were using drugs and alcohol, describing their current relationship as *'brilliant'* (SU1).

The final theme to arise from the focus group of service users related to the organisation of ARC Fitness and how ARC interacts with the local health and social care community. The links between ARC and the local health community was welcomed by participants. This related to both the referral systems into ARC and several participants reported that they had been made aware of the existence of ARC from statutory sector addiction service providers, as well as ARC sourcing and referring clients onto other appropriate services *"they sent me to the podiatrist as well."* Other participants found out about ARC through word of mouth, although, again, this was from a relative that had heard of ARC during her work in the statutory health sector.

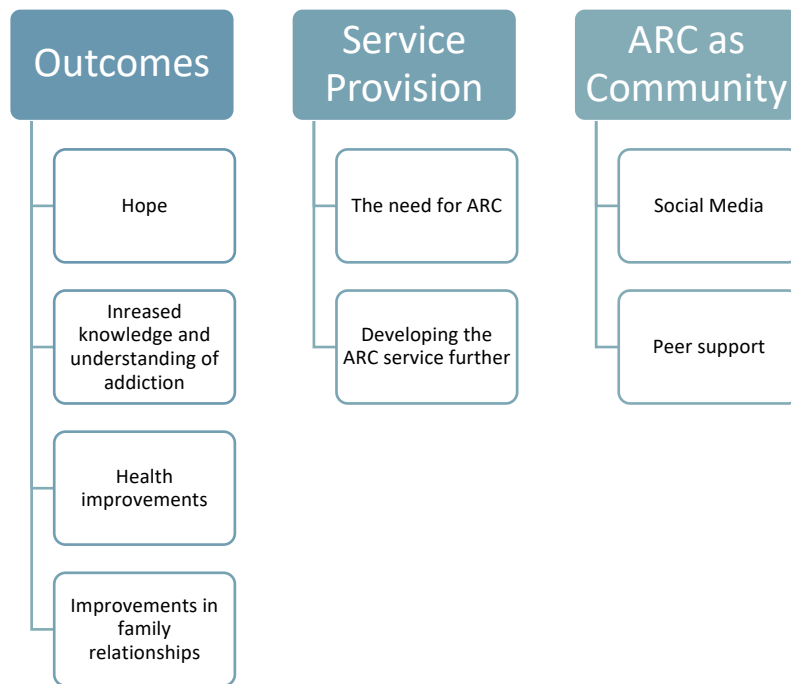
*"Um, mine's was my cousin, uh, she's a midwife. Mm-hmm. . And she had heard about ARC through hospital and, you know, yeah. Just word of mouth."*

The importance of having staff and volunteers with a lived experience of addiction could not be overstated. All of the participants had had previous contact with other **services**; however, they report that having a person to talk to that could relate first hand to their experiences was invaluable.

*"They know what they were talking about in reality. Do you know what I mean? And when, when you're getting advice and, and asking questions for people who have been there, have done it, and, and that, then that's when you can see the difference in that when they're speaking to you. Do you know what I mean?" (SU2)*

## **Families & Significant Others**

Family members and significant others (FSO) that took part in the focus group, again, were overwhelmingly positive in their evaluation of ARC. Three overarching themes were identified from the focus group discussion: Outcomes for themselves and their family members, the development of a community around ARC and the need for ARC and wider addiction service provision. Figure 5 shows the themes with relevant sub themes.



*Figure 5: Themes and sub-themes of family and significant others focus group.*

Four specific outcomes were identified from the FSO focus group. ‘Hope’ as a sub theme came across very strongly. Participants reported that prior to coming into contact with ARC, life was a struggle and that they were judged and stigmatised by others in the local community. They also reported a lack of support for themselves prior to engaging with ARC. The FSO participants stated that ARC had changed this and that they had hope that there was now somewhere that was a safe space and that they could come for support.

*“Felt like I was grinding every day. And I was able just to come here with no judgment and I was able to talk with anybody, gave me an option”. (FS01).*

The development of knowledge and understanding around addiction featured strongly in the FSO focus group. Participants reported a transformative impact of

learning about the causes of addiction and how to live with family members experiencing and addiction.

Linked to this, participants reported improvements in family relationships as well as in their own mental well-being as a direct result of their contact with ARC.

*"I think your relationship with them (improves), because you understand their addiction better." (FSO2)*

*"You cannot control. It's their addiction. You can't control it. No matter what you do, you stop it or move back, and I think you end up killing yourself trying. Don't. So, for your own mental health, I think this group is brilliant" (FSO4)*

*"our household is a happier household." (FSO3)*

Additionally, the understanding that the family members were not alone and that others could be experiencing similar things was helpful to some participants, as was the knowledge to not blame themselves for their love one's addiction.

*"I think I just learned that through here. Mm-hmm., being a, being a mommy, you think you should have it all together. Mm-hmm. and I know that.. Well, I think I did everything I should have done as a mommy, and you still think, why me? Mm-hmm., why? Why is my wee girl here going through that? Yeah. You know, but being here that, like I say, you're not internalizing it anymore.*

*"Because you know, there's so many other people, all are good people and good families that are going through the same thing." (FSO1).*

One participant also reported that they began to understand how it was not just them in the family that was affected, but also other siblings and family members.

*"I think it definitely opens up your thinking about how it affected everybody else in the family."* (FSO4)

As with the service users focus group, the development of a community of peers was described as extremely helpful. The illustrative quotes above highlight the value placed on not feeling isolated. Coming together for education classes and peer support is highlighted as being extremely valuable. Additionally, the use of social media to foster community was recognised as being helpful by FSO participants.

*"... but even the Facebook page. I know not many people posted my post quotes on it all the time, but then that's an hour, it's another source, Well, they're lucky we're here today. And that's, that's said what it does is amazing. It just doesn't change life. It saves lives and it saves family members as well as people suffering addiction."* (FSO3)

*"It's, it's great that you can express yourself and we all have similar stories but different stories and no one will judge you"*. (FSO2)

Participants in the focus group also commented upon the outreach work undertaken by ARC. In particular the work with schools, health and social care services and the Police Service of Northern Ireland were highlighted as essential in developing healthier communities and society understanding of addiction. One participant reflected on the need for school engagement in particular following her family members experiences there.

*"I think it's amazing that /staff member/ has kind of done all that. And educate police and all our services and the trust and, and education, because /name/ was let go of school and there was teachers that made comment that she was a scumbag and they didn't want her on, on their school". (FSO1)*

A general consensus emerged that services for family members of those living with an addiction were lacking in the local community, and that given their positive experiences with ARC, there was some disappointment that ARC could not provide more services to families. This was particularly important the participants were talking about children and teenagers in the family unit. FSO participants expressed a strong desire for the development of some services aimed at children and young people.

*"So I, I think that anybody who's got, like teenagers at home, ..., but I think that should be, like we've seen children's perception and how it effects them are totally different than an adult." (FSO2)*

*"That would be an amazing service too, separate from us... they're individual and it's impacted them individually. So, what's /name/ experienced from his /relative/ is not gonna be the same thing at /'name/'s experience. And it's definitely not the same thing I experience" (FSO1)*

*"I think they did definitely should do a children's one". (FSO3)*

## Staff & Volunteers

As with the other two participant groups, staff and volunteers at ARC report a positive experience of their engagement with the programme. Three themes arose from the focus group (see figure 3); the usefulness of the ARC programme for the clients and their families, the personal benefits for the focus group participants, and the future of ARC.

### Benefits to clients

- Easy access to support
- Developing community

### Benefits to self

- Feeling good about oneself
- Professional development
- Self confidence and growth

### Issues and aspirations

- Increased service provision
- Uncertain funding

*Figure 6: Themes and sub-themes from the staff and volunteers focus group.*

The benefits to clients had two sub-themes: easy access to support and, as with the other focus groups, the development of a community. Focus group participants commented upon the ease with which ARC clients could access support when needed. The availability of staff and others to help if someone were to drop in was valued by the participants. The value of having physical space to facilitate the drop in was highly valued by staff and volunteers. This is exemplified in the exchange between two focus group members below. SV1 reflecting on their own journey as firstly a client with ARC and now as a staff member.

*"The ability, one of the best things I find is the ability for people to come under this space when there's no classes on and there's nothing happening because there's always somebody here to chat me. And I think that it can be really difficult for people struggling and not knowing where they turn. And often that can lead their relapse because they sit and isolate and they, they don't know where they go". (SV1)*

*"/mentions staff names/ Always here. Always here. Well, /name/ probably about doing stuff as well, but, but he, he is here. We're always here. Always. Yeah. So it's nice to have that space," (SV2).*

As noted above, the development and importance of community featured strongly in the focus group discussion. Recognising the need for social contact to help individuals in their recovery was highlighted as an important factor in the ARC programme. The availability of physical space was noted to be beneficial in the area of community building.

*"The fact that there's someone always here, it's just helped build the community. Yeah. A little bit better. And people, cause people are just comfortable coming in and going, I'm having a bad day. And they know someone's gonna be there for them." (SV3)*

*"It helps form a bond for the group as well coming in. Mm-hmm. , it's almost, they do become like a small family. Each group that comes through see it every time and they all, they become a team rather than just, and they battle on...." (SV4)*

The use of social media was, again, highlighted as a useful part of the community building ethos at ARC. The ability to access support and have conversations with others in the ARC family was highlighted in the focus group.

*“people go on the Facebook to make somebody says, I'm struggling, you know what? The comments are coming on. The offers are coming on. Do you need a walk? Do you need to talk?” (SV3)*

Staff and volunteers at ARC also reported benefits to themselves by being engaged with ARC. Developing self confidence and growth was related strongly to feeling good about themselves as a person, as well as helping others.

*“I enjoy being here because I like helping people.” (SV1)* was a typical comment when asked why people were involved. Others explored a more altruistic motivation to their involvement- *“I get the sense that I'm helping people when I'm here” (SV2).*

One participant in the focus group admitted to a more selfish motivation to their involvement. Having come through the programme, they found it helpful to be reminded of where they came from.

*“It's, it's almost selfish in a way too because. Can work with my recovery while I'm working for work. Mm-hmm. . So it keeps recovery in my mind all the time. And as long as that's on my mind, I, I don't become complacent and I don't forget where it came from. And so it is vocation in a sense, but there is a selfish element to it because I feel that it benefits my recovery.” (SV1)*

Regardless of the motivation for getting involved, participants report their experiences to be positive and inspiring.

*“I feel very, um, what's the word? Privileged to be training some of these people, uh, who have gone through some very hard times and some of them are still in the middle*

*of it, but they're still, um, they're still trying sort the lives out and that's quite inspiring for me" (SV4).*

Professional and personal growth are also apparent from the analysed data. The commitment of ARC to the continuing professional development of staff and volunteers was an important factor in their overall experiences of being involved with ARC,

*"We're both doing a course of, we're both in the /names course/ now, which has been, and /staff/ have, have put us forward for, so they're always trying to develop the staff internally as well. Mm-hmm. , so they're more of a benefit to everybody. Yeah. But you can't fault that there's a lot of training put on, isn't there?" (SV3)*

*"I mean, for the whole team, they'll just pop up and say, look, here's a training opportunity now., like that's put on free of charge. We're not charged in. I think for that there, obviously we did motivational interviewing. We did a lot of things. So they're just forever trying to develop everybody. Whether you're on the program, work for arc, everyone's getting developed. " (SV2)*

Other participants reported returning to education as a result of what had been gained in ARC in order to gain understanding of addiction and mental health issues with a view to giving back to the community.

At a personal level, participants reported improvements in self confidence. For example,

*"...even though I was /gives professional background/ I never felt confident. You know, when I'm back now I'm doing qualification with //names trainer to be a coach here. Um, and for me it's just developed me so much more given confidence...." SV5*

Focus group participants also discussed areas in which ARC could improve the service they provide. This discussion focussed on service development rather than anything lacking in the ARC programme. Participants adopted a realistic approach when considering the future of ARC and appeared acutely aware of the nature of uncertain funding when planning services.

Waiting lists to start on the ARC were highlighted as an issue for ARC, however, as noted, this was tempered by the acknowledgement that funding and capacity are finite.

*"The waiting list will be a big thing. Yes. If there was an ability to take more people. Yeah. Yeah. In a shorter space of time. Mm-hmm. . And I think, yeah, at this point there a few things that they'd love to do, something like that, .... you know, it's gonna take funding and take time." (SV3)*

Staff and volunteers also expressed a desire to develop the psychological therapies available to clients, both within the scope of therapies offered and with the number of therapists available.

*"Do you know what I mean? Mm-hmm. , they might need, they need that support in the, even during the six weeks that things is gonna come up. Like the traumas, if they*

*have trauma behind their addictions, you know, you're treating the addiction, but what about the mm-hmm. the person and behind all that. Do you know what I mean? (space)*

*"So, and that's another funding issue as opposed being able to afford, they can have more counsellors. that kinda funding, be able to support people during their six weeks as well." (SV4)*

*"It definitely needs more staff in all their areas" (SV2)*

## **Conclusion**

It is clear from the focus groups that ARC provide a valuable service to the community that they serve. Several recurring themes were apparent across all three participant groups. The development of community through both regular meetings and social media was found to be valuable component of the programme.

# Discussion

This section of the report provides a discussion of the findings from the collected data and the focus groups. We recognise that no evaluation of a service can be perfect and that there will be some limitations to the evaluation in both its scope and conduct. The limitations of this evaluation are discussed as well as their impact on the overall findings towards the end of this section.

The aims of this evaluation were to quantify the efficacy of the ARC programme as well as describe the experiences of those involved with the programme. To this end routine collected data was analysed and three focus groups were conducted to provide evidence on the efficacy and acceptability of the ARC programme.

In general, the findings show that ARC is an effective and acceptable intervention for people living with issues related to substance use. ARC provide a wide range of services aimed at improving the well being of individuals, families, staff and volunteers and the community at large. In each of these groups the findings show that ARC is a valuable asset in meeting the stated aims of the programme.

Exercise and physical activity has been shown to improve mental and physical health in people living with an addiction (Hu et al, 2020), and the findings from the evaluation support this. Improvements in anxiety and depression levels reported by service users of the ARC are similar to that reported elsewhere. For example, in a systematic review and meta-analysis of studies examining the effectiveness of tai chi and Qigong in people that have a substance use disorder Liu et al (2020) found that exercise in line with their stated interventions was more effective than both doing nothing but, also medication in reducing anxiety symptoms. Although not

specifically in the area of substance use, Kim (2022) reported physical exercise being beneficial in reducing depressive symptoms in the general population.

The development of community and support services is noted to be an important part of any treatment plan for those living with an addiction and their families. The ARC community is recognised, by focus group participants, as a major advantage to the success of the programme. The qualitative findings across all three groups clearly demonstrate that the community developed throughout the six week 'intervention' and beyond is a valuable tool in helping people towards their recovery. The ability to draw on peers for support, or simply a friendly ear was highly valued by all participants. The use of formal peer support was evaluated by Parkes et al (2022), who report that the lived experience of those in recovery was helpful in developing trust and empathy as well as authenticity and meaningful peer relationships. The value of having staff and volunteers with lived experiences of their own addiction featured strongly in the service user focus group and this should be seen as a strength of the ARC programme.

The focus on recovery and in particular different aspects underpinning an individual's recovery is a relatively novel approach to treatment for those living with substance use issues. It has been suggested that the term 'recovery' itself may be off putting to some potential participants in addiction treatment. This does not seem to be the case in the current evaluation. Participants in both the collected data and the focus groups demonstrate a 'forward looking' worldview that whilst grounded in the present show hope for their future regardless of the group in which they came from.

Relatively few studies have made use of The Substance Use Recovery Evaluator as an evaluation tool. The reason for this is unclear, however, as the SURE is promoted as a 'patient reported outcomes measure'- that is outcomes that have been

identified from the client population rather than clinical or policy led- it seems strange that it does not appear to be more widely adopted. 'Recovery' in the context of this evaluation can be seen in the significant results from the efficacy data but as noted above the forward-looking outlook of participants during the focus groups that recovery, however the individual defines it, is a realistic goal for the programme. The progression of people from service user through to volunteer also lends support to this claim.

The importance of sleep is well established in health care literature. Quality and quantity of sleep are noted to impact on mental and physical well-being and alcohol and other drug use is recognised in the academic literature. These studies however focus on the reporting of the scope of the problem and the impact that poor quality and lack of sleep due to alcohol and drug use can have. There appears to be a paucity of studies that examine sleep as an outcome for interventions in the field. It is appropriate therefore to highlight the benefits to sleep found above.

## **Accessibility and Service development**

There is an argument to be made that ARC has become a victim of its own success. The rapid expansion of ARC has, as evidenced by the focus groups, left the populations 'wanting more'. There is an increasing demand for addiction services in the community that ARC serves which is placing pressure on the ability of the organisation to keep up with demand. The lack of physical space and staff are noted as major factors that could hinder ARCs development.

Treatment accessibility was highlighted by family members and staff/ volunteers of the ARC programme. This is not unique to ARC with accessibility issues reported in the international literature on addiction. Braden et al (2011) and McGowan (2016)

both reported the difficulties that people who use heroin had in accessing support and treatment for their heroin use across Northern Ireland. They found a variety of reasons for this including the experiences of stigma experienced from health and social care staff as well as physical barriers such as the location and standard of the buildings in which they were treated also factors that made access to services more difficult. McGowan (2016) also identified restricted opening hours of services and some organisational policies that acted as a barrier to accessing services.

Moran et al (2018) examined clients experiences of navigating methadone maintenance services in Ireland. Using semi structured interviews with 17 people they found that loneliness, poor understanding of the illness and lack of purpose were among the barriers to care identified. It is apparent from the findings that the approach to recovery taken by ARC addresses each of these barriers which may provide some rationale for the apparent success of the programme.

Limited resources and capacity to access services was also identified by Fingleton et al (2019) in a group of people that had issues with non-prescription medicines in Scotland. Again, the lack of understanding is apparent in their study. Interestingly little appears to have been written in relation to barriers and service access in people with problematic alcohol use. One study that took place in the Western Health & Social Care Trust (WHSCT) (Divin et al, 2015) reported a lack of resources in the WHSCT area for people living with an alcohol related brain disease. Although their study relates to a narrower population than the ARC Fitness target population, it does highlight the barriers to alcohol services specifically in the locale of the ARC Fitness programme.

## **Holistic approach**

The holistic nature of the ARC programme appears to be unique in the academic literature. Although there are some studies that offered exercise plus other interventions the range and scope of interventions afforded to participants and their families arguably makes ARC unique in the addiction field. It was not possible from the design of the evaluation to be able to state to which interventions had more effect than others, if any, or if the improvements in well-being are a cumulative result of the interventions. However, it is noted that all the interventions offered have a supporting evidence base to warrant their inclusion in a holistic package of interventions for those living with substance use issues.

## **Staff development**

The finding that ARC has a proactive approach to developing the skills and knowledge of staff and volunteers is rare in the addiction sector. McGowan (2023) reviewed nine projects that report the Social Return on Investment of interventions aimed at people addicted to substances. Whilst training courses and other vocational support were available to service users and others involved in the project, none of the included studies reported any professional development for the staff and volunteers engaged with the projects.

Professional development is linked closely with personal development, and this was reflected in the focus group with staff and volunteers. It does, however, also have a positive impact on the overall outcomes of the organisation. For example, Rasool et al (2019) examined the role of staff development in a human resources management context and reported a statistically significant relationship between staff

development and sustainable organisational performance. In other words, investing in staff improves the overall effectiveness of the organisation. This transformational leadership style, demonstrated within the ARC organisation, has previously been identified as a major facilitator of service development and barrier minimisation in the addiction field (Guerrero et al, 2015). A high level of satisfaction was evident from the focus group with staff and volunteers, and this can be attributed at least in part to the professional development ethos and opportunities within ARC (Bhargava 2019).

## **Limitations of the evaluation**

The evaluation has some limitations, and the reader should take these into account when considering the findings. We highlight two main limitations.

Firstly, the evaluation lacks a control or comparison group. Subsequently, whilst the findings clearly demonstrate the efficacy and acceptability of the ARC programme, we cannot state with any certainty that ARC is any more or less effective than services offered elsewhere. In order to be able to do this, a formal clinical trial is required in which ARC would be compared to another intervention. These can be time consuming and expensive however and the expense and time needed to develop this needs to be balanced against any perceived benefits.

The second main limitation relates to the relatively small sample size in both completers of the programme and the three focus groups. It is not possible therefore to make generalisable claims about the framework used by ARC to advocate widespread adoption of the model across addiction services. This is not a criticism related solely to ARC. A significant proportion of intervention studies, where exercise is the main intervention, report small sample sizes. This may be

indicative of the current developing field of using physical activity as an intervention for those with problematic substance use.

Related to the sample size is recognition that focus group participants have, at some level, benefited from engagement with ARC. It is possible therefore that, although truthfully honest in the focus groups, participants may be predisposed to portraying a positive picture of the programme. Again, this is a limitation of the methods used in the evaluation and not a criticism of ARC.

## **Conclusion of the Evaluation**

This report outlines the findings of an analysis of the outcome measures routinely collected by ARC Fitness for those using the service as well as focus groups with service users, their families or significant others and ARC staff and volunteers.

It is clear that the service provided by ARC is valuable in its scope. The holistic approach shown by ARC is a welcome addition to the service provision available to the community in the North West of Northern Ireland. Increasing awareness of addiction as well as providing education to families were seen to be of equal importance to those groups directly benefitting from them in the same way that those living with issues with substances viewed the help and support, they received.

The findings also highlighted areas for the development of ARC including increasing the types of therapies available, the development of services focussed specifically on children and longer opening hours. These aspirations, however, were placed in the context of an awareness of the space, time and financial pressures faced by ARC.

Overall, this evaluation has shown ARC to be an effective and acceptable treatment option for those living with an addiction as well as providing support to their families and the wider community.

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# Appendices