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Running Title: Art Lift' Intervention to Improve Wellbeing

Title: 'Art Lift' Intervention to Improve Mental Wellbeing: An Observational Study from UK General Practice.

Abstract

Arts for health interventions are emerging as an alternative option to medical management of mental health problems and wellbeing. This study investigated process and outcomes of an art intervention on patients referred by primary care professionals, including associations between patient characteristics (e.g., gender), progress through the intervention (e.g., attendance) and changes in mental wellbeing. Referral criteria included people with anxiety or depression or stress; low self esteem/confidence/overall wellbeing; chronic illness or pain. The study took place in UK-based GP Practices, with a total of 202 patients referred to a 10 week intervention. Patient socio-demographic information was recorded at baseline, and patient progress assessed throughout the intervention. Significant improvement in wellbeing was revealed for the 7 item ($t = -6.049$, $df = 83$, $p < 0.001$, two tailed) and 14 item ($t = -6.961$, $df = 83$, $p < 0.001$, two tailed) scales. Of referred patients, 77.7% attended and 49.5% completed. Most patients were female, and from a range of socio-economic groups, and those who completed were significantly older ($t = -2.258$, $df = 145$, $p = 0.025$, two tailed). Findings reveal that this art intervention was effective in the promotion of wellbeing and in targeting women, older people and people from lower socioeconomic groups.

Key words: Primary Care, Mental health, Referral, Uptake, Attendance, Completion, Warwick-Edinburgh Mental Wellbeing Scale.

Introduction

Mental illness represents the single largest cause of disability, costing 11% of the national health budget, with an estimated wider economic cost of around £110 billion (Friedli and Parsonage, 2007). With 30% of general practice (GP) consultations about mental health issues, the promotion of mental wellbeing has become a key strategic priority, with an increasing range of programmes aiming to improve wellbeing, such as physical activity, arts and community activities (HM Government, 2011). Some of these interventions have an established evidence base, for example exercise referral schemes (Williams et al., 2007), but arts for health schemes are relatively new and as such have a limited supporting evidence.

Arts for health interventions are typically based in primary care services as a form of social prescribing which enables health professionals to refer patients with social, emotional or practical needs to a range of local non-clinical services (Brandling and House, 2008). Social prescribing evolved when some patients were deemed to be using primary care services excessively, normally due to poor mental health, family dysfunction and lack of social support (Bellon et al., 2008). This caused frustration for health professionals when attempts to help their patients were unsuccessful, due to their limited ability to solve social problems (Brandling and House, 2008). Social prescribing through joint working addresses these issues and can reduce a patient's usage of primary care services (Brandling and House, 2008, Edmonds, 2003).

There is now a considerable emerging evidence base for the use of art for health in primary care and community settings, although not all is rigorous and based on well designed studies (Department of Health with Arts Council England, 2007, Hacking et al., 2008, Staricoff, 2004). Furthermore research often fails to utilise formal instruments for measurement of outcomes (Angus, 2002, Staricoff, 2004). Of the evidence available the focus also varies, for example focusing on therapeutic benefits of art, intervention outcomes, physiological health benefits, mental health benefits, community group benefits or the benefit to health services (Macnaughton et al., 2005). However in terms of the evidence base for arts for health interventions as a form of social prescribing, current published research suggests that art for health projects have a number of known benefits relevant to primary care, including reduced feelings of isolation, broadening of participant's horizons, improvements in mental wellbeing, self-esteem and confidence, and in developing the social networks of participants (Daykin et al., 2008a, Heenan 2006, Secker et al., 2007, Spandler et al., 2007, Staricoff, 2004). However, much of this research either uses music as the art form, or is predominantly qualitative, and undertaken in secondary care (Staricoff, 2004). A

more recent review on art on prescription concludes that comparisons between creative art interventions are difficult to make because generalisation of the findings from most evaluations in applied practice is inappropriate (Leckey, 2011). Despite this, there are many arts for health projects in operation and these are not always evaluated rigorously (Clift et al., 2009, Leckey, 2011). Descriptive case study methods predominate, (for example Stickley and Duncan, 2007), lacking formal instruments for measurement of outcomes and, therefore, do not show the full potential of the arts for health improvement for mental health and wellbeing in primary care (Angus, 2002, Macnaughton et al., 2005, Staricoff, 2004, Leckey, 2011). In response to these criticisms, the present study, through adopting an observational design using an established measurement method for mental wellbeing, investigated the use of arts for mental health and wellbeing improvement in primary care.

The intervention, Art Lift, aimed to improve the health and wellbeing of patients through referral to ten weeks of art delivered by an artist within a GP surgery. Patients referred onto the programme were identified in primary care through their general practitioner or health care professional such as a physiotherapist, practice nurse or the primary care mental health team. Patients were identified if they were experiencing; anxiety, depression or stress; low self esteem/confidence/overall wellbeing; stress from chronic illness or pain; in need of distraction from behaviour related health issues; a recent major life change or loss. The research study, using data collected between 2009 and 2011, aimed to explore both the process and outcomes of the intervention. The study investigated the impact of the art intervention on the mental wellbeing of patients (outcome) and examined patient progress through the intervention (i.e., uptake, attendance, completion and engagement) and key associated socio-demographic factors (i.e., gender, age, referral reason, place of residence, level of deprivation).

Method

Patients were referred to the scheme, using a specifically designed referral form, by their GP or other health professional, who filled in the referral form and passed it on to the artist. All data from participants was anonymised by using the participant's unique identification number from their referral form. The data set comprised all referred patients (n = 202). The majority of patients were not receiving any other form of specialised mental health related treatment for their referral reason; the art intervention was the specified service for their referral condition. However further individual level data on treatments that were being received and by whom, was not able to be extracted at the point of initial data collection.

The intervention was a 10 week art intervention delivered by an artist within a GP surgery. Eight different artists offered their services in a variety of creative arts activities including working with words (i.e., poetry), ceramics, drawing, mosaic and painting. The majority of the artists were resident within surgeries however some were based in community facilities such as nearby halls or community centres due to space constraints at some surgeries. Patients attended a course of the art for 10 weeks with the same artist, and most sessions were in small groups of between 3 and 10 people, dependent of space, number of referrals and art type. The study was approved by the National Health Service Local Research Ethics Committee.

A prospective longitudinal follow-up (observational) design was employed, where data were collected by the artists and included the following patient data at baseline: age, gender, place of residence/home (postcode), type of referral (i.e., first or re-referral), referral reason, referring health professional, artist, the art form (e.g., poetry), and the surgery. The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) (Tennant et al., 2007) was completed by all patients pre-intervention and by the sample of completing patients post-intervention period. Uptake, attendance and completion data were also collected, where attendance reflected the actual number of attendances out of a total of 10 (e.g., 1 per week over 10 weeks). Completion, for the purpose of the present study was objectively defined as attending the first and last session (e.g., week 1 and week 10); successful completion was therefore defined as attendance at the final scheduled session. In addition, subjectively the artists' rated the degree of patient engagement (non-completer, partial completer or completer) dependent on their perception of patient engagement in the programme rather than the actual objective attendances. Patients were categorised as either a non-attender (i.e., referred but did not attend), a non-completer (i.e., referred and attended one or more sessions) and a completer (i.e., referred and attending at least week 1 and week 10). These

data were collected through the patient referral form, the WEMWBS and an Artists Checklist, designed to ensure all data was collected and passed on to the research team.

The WEMWBS was adopted for the study because it uses positive, simple words, has been validated, is widely used, and is recommended for use at population level (Tennant et al., 2007). The WEMWBS also captures a wide conception of wellbeing including affective-emotional aspects, cognitive-evaluative dimensions and psychological functioning. It has been used in a number of social surveys and intervention studies including national population surveys, which have further validated its use as an appropriate practical mental wellbeing measure (Braunholtz et al., 2007, Gosling et al., 2008, Stewart-Brown and Janmohamed, 2008). Stewart-Brown et al., (2009) critiqued the WEMWBS as they found initial fit to model expectations was poor and some items that misfit with the model expectations showed considerable bias for gender and age. As a consequence they deleted items to create a mostly bias free short 7 item scale, however this 7 item scale presented a more restricted view of mental wellbeing than the 14 item scale in terms of face validity (Stewart-Brown et al., 2009). Therefore in this study both scales were used and the critiques of both were kept in mind during the interpretation of the findings.

Postcode data were used to assign an Index of Multiple Deprivation (IMD) score for patients, a method used in similar prescription to health intervention programmes (Gidlow et al., 2007, James et al., 2009, James et al., 2008). IMD data is based on the income, employment, health and disability, education, barriers to housing and services, crime and living environment domains of the relevant postcodes (Department for Communities and Local Government, 2011). Due to socio-economic status being based on employment and conditions of occupations the IMD can give an idea of the participant's socio-economic status (Office for National Statistics, 2011).

Data analysis

The pre-post wellbeing data collected using the WEMWBS, along with progress through the intervention, was considered in relation to the gender, age and IMD score of patients. Descriptively, the numbers of completers, non-completers and those who did not attend were provided, along with a description of gender, age and IMD for each progression category. Scores obtained from the WEMWBS pre- and post-intervention were compared using a paired sample t-test. Changes in wellbeing were also considered in relation to key sociodemographic factors (i.e., age, gender and IMD) using independent sample t-tests.

Results

Of those referred, using objective measurement, 77.7% attended (i.e., attended the initial planned session) and 49.5% of those referred completed (i.e., attended the final planned session). Of those referred and attended the first session, 63.7% completed (see Figure 1). Non-attendees (i.e. referred and did not attend) were 22.3%. 17 patients were re-referred (8.4%) onto the programme for a further course of the intervention.

INSERT FIGURE 1 HERE

The subjective assessment of completion made by the artists was categorised as patients fully engaged in the scheme (completers), partially engaged (partial completers) or did not engage (non completers). Of the 157 patients who presented themselves to the artists (i.e., attenders and completers), 120 patients were designated as completers, 13 patients as partial completers and only 24 as non completers. All of the patients who had been objectively categorised as completers had also been subjectively categorised as completers, by artists. Generally, however, the artists designated a greater proportion of patients as completers or partial completers than the objective data indicates.

Table 1 illustrates that the majority of referrals are female in all progression categories, and that the non attendees and non completers tend to be younger.

INSERT TABLE 1 HERE

Postcode data allowed the IMD to be determined and the range of the IMD for all the postcodes was then ranked from the most deprived to the least deprived to produce a relative deprivation for those in the sample. Postcode was not provided on the referral form for all patients. Consequently, the dataset for further analysis was reduced since patients with missing data were removed from the sample. This range was then split into quartiles, where quartile 1 (Q1) are from the most deprived areas and quartile 4 (Q4) are from the least deprived areas (Adams et al., 2001). The percentage of people in each quartile can be seen clearly in Table 2, which describes the data that was used for the further analysis.

INSERT TABLE 2 HERE

Table 2 illustrates that most of those referred were female. Those who completed were significantly older than both non-completers and non-attendees ($t = -2.258$, $df = 145$, $p = 0.025$, two tailed) (see Table 2). Of all those referred, the highest percentage of referrals (38.8%) are from Q1, indicating that the project targeted those from the more deprived areas. Those in the completers and non-completers progression categories have a similar deprivation profile as the total sample, however non-attendees have a higher percentage of people from Q2 than the other categories, and a much lower percentage from Q4 (least deprived) than the other categories.

At baseline (i.e., pre scores) no differences were revealed between the completers and non-completers on either the 7 item scale (19 [5] versus 19 [4]; $t = -0.649$, $df = 110$, $p=0.518$, two tailed) or 14 item scale (38 [10] versus 37 [9]; $t = -0.608$, $df = 110$, $p=0.545$, two tailed). Those who completed showed a statistically significant improvement in their wellbeing over the course of the intervention for both the 7 item (19 [5] versus 22 [5]; $t = -6.049$, $df = 83$, $p<0.001$, two tailed) and 14 item scales (38 [10] versus 44 [9]; $t = -6.961$, $df = 83$, $p<0.001$, two tailed). A higher WEMWBS score indicates better mental wellbeing.

Discussion

Summary of the main findings

The present study found an improvement in wellbeing scores for those patients who completed the intervention. More women than men, and a greater proportion from lower socioeconomic groups, were referred to the intervention. Compared with all patients referred, patients who completed the intervention were more likely to be older and female. High levels of adherence to, and completion of, the intervention were observed in comparison to other health referral programmes in primary care such as exercise referral schemes. Arts for health interventions in primary care could, therefore, contribute to current policy priorities of improving the mental health and wellbeing of the general population (Department of Health, 2011).

Comparison with existing literature

The completion rate of people who attended the art intervention was 63.7%. Art interventions have tended to have good completion rates, for example 57.8% (Eades and Ager, 2008); 67.5% (Miriad, 2011). Further direct comparison of these findings with other art interventions 'on prescription' is difficult due to the issues identified previously by Leckey's (2011) review. However, the model of evaluation used in this study was derived from those used in exercise based primary care interventions, where consistency in intervention design and outcomes are more advanced. Comparisons with findings from these studies are favourable. For example this intervention had better completion and attendance rates (i.e. 77.7% of those referred attended and 49.5% completed) than other published findings from primary care based health referral programmes. For example reviews of exercise referral programmes in primary care concluded that some schemes can have up to an 80% drop out rate (Gidlow et al., 2005) and that in some studies only a 1/3rd of people referred participated and between 12-42% completed (Williams et al., 2007). Interestingly, in exercise referral interventions patients referred for mental health reasons had an even poorer level of uptake (60%) and with only 22% completing (Crone et al., 2008). This suggests that art interventions may be a more suitable in primary care for people with mental health issues, especially given the statistically significant changes in wellbeing scores demonstrated in this study.

Patients in this study were similar with regard to age (53, SD16) when compared to other Arts on Prescription schemes (Eades and Ager, 2008, Miriad, 2011), as well as exercise referral schemes (James et al., 2008, Gidlow et al., 2005). This may be due to older people tending to have more time available to them to attend daytime sessions, or the fact that older people may be more likely to be isolated at home; increasingly their likelihood of participation in social prescription schemes (Larson et al., 1985). Older participants are also more likely to

visit their GP therefore increasing their likelihood of referral opportunity from health professionals (Taylor, 2006). It is also possible that younger women may not have attended due to requiring childcare facilities, as the interventions were scheduled during the day.

Findings from the IMD analysis revealed that people were referred from varying levels of deprivation, however the highest percentage of people referred into the intervention and in the completers category, were from the more deprived quartile. Low socio-economic status has often been associated with mental health problems, so this may explain why a greater proportion of participants are from the lower quartile of IMD, as the current intervention was targeting people with mild mental health issues. However previous studies reveal that people with mental health problems such as depression do not generally adhere well to treatment interventions (Croghan et al., 2006, DiMatteo et al., 2000). Research has found that lack of adherence is often due to lack of health professional communication, patient knowledge and social demographic characteristics such as young age, being female and low income (Croghan et al., 2006, Edlund et al., 2002, Wang et al., 2000). On the contrary, the present research demonstrated good levels of adherence from people from with low socio-economic status. High levels of support and having an interest and enjoying the activity have been shown to help adherence to interventions in previous research (Sherwood and Jeffery, 2000, Taylor, 2006). In terms of the number of people who have been re-referred, other arts for health projects have often reported that it can take a minimum of six months for participants to benefit with many programmes significantly longer in duration than ten weeks (Secker et al., 2007). It is therefore not surprising that re-referral for some was appropriate. It is also possible that these people were experiencing more long term chronic mental health conditions and social deprivation where a longer intervention time may have been more appropriate. Unfortunately further statistical analysis of re-referrals was not possible with the limited amount of data from the present study.

In terms of the wellbeing findings, both the 7 item and 14 item WEMWBS showed an improvement from attending ten weeks of art. This supports findings from other arts for health interventions which have also found improvements in wellbeing (Eades and Ager, 2008, Miriad, 2011, Sefton MBC and NHS Sefton, 2009). Improvements in wellbeing have been attributed to economic factors such as having more money, to social factors such as being engaged in something and having positive emotions. The art intervention in this study may have provided some of these social factors by allowing interaction with others, taking part in purposeful activity, causing enjoyment and providing a distraction from the stresses of everyday life (Diener, 2009).

There are some limitations to this study which are discussed in the following section, however in summary the study has showed statistically significant improvements in wellbeing scores following the intervention, which provides further evidence, based on a large sample size, that art interventions can improve wellbeing for those that attend, and that such interventions appear to be attractive to women and those from lower socioeconomic groups.

Strengths and limitations of the study

The present study was conducted in routine clinical practice ensuring high ecological validity, and used an established measure of wellbeing as an outcome. The sample size is also large in comparison to other arts for health intervention studies (Eades and Ager, 2008, Daykin et al., 2008b, Sefton MBC and NHS Sefton, 2009). Furthermore, patients from a broad range of socioeconomic backgrounds were recruited. The combination of patient progress (i.e., uptake, attendance and completion) along with patient characteristics such as age, gender and socioeconomic status, has provided information missing from most past evaluations of similar interventions. Although stronger than many previous studies, the main weakness of the present study was the total duration of data collection which, if longer, would have enabled a larger sample size and longer term follow up. Furthermore, any conclusion about an improvement in wellbeing should be treated with caution, given the absence of a control/comparator group.

Implications for future research and clinical practice

The findings confirm the value and benefits of arts interventions in primary care. As such, it adds to the current developing evidence base on the use of arts and creativity in the promotion and maintenance of public health in the community. Further research could usefully include a similar longitudinal observational design, but with sufficient follow-up duration to investigate whether the improvement in wellbeing change is sustained following the intervention completion. A focus of further research should also be on identifying which aspects of arts interventions are the key 'mechanisms of action' for mental wellbeing improvement. Candidates may include; the opportunity to engage in a creative activity, the opportunity for social contact, the distraction from persistent concerns, although it is likely that a number of factors within arts intervention all contribute to the improvements observed. Additionally, there remains a need to investigate the cost effectiveness of interventions;

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uptake and levels of adherence for participants with differing referral reasons; and the impact of art type on outcomes.

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FIGURES AND TABLES

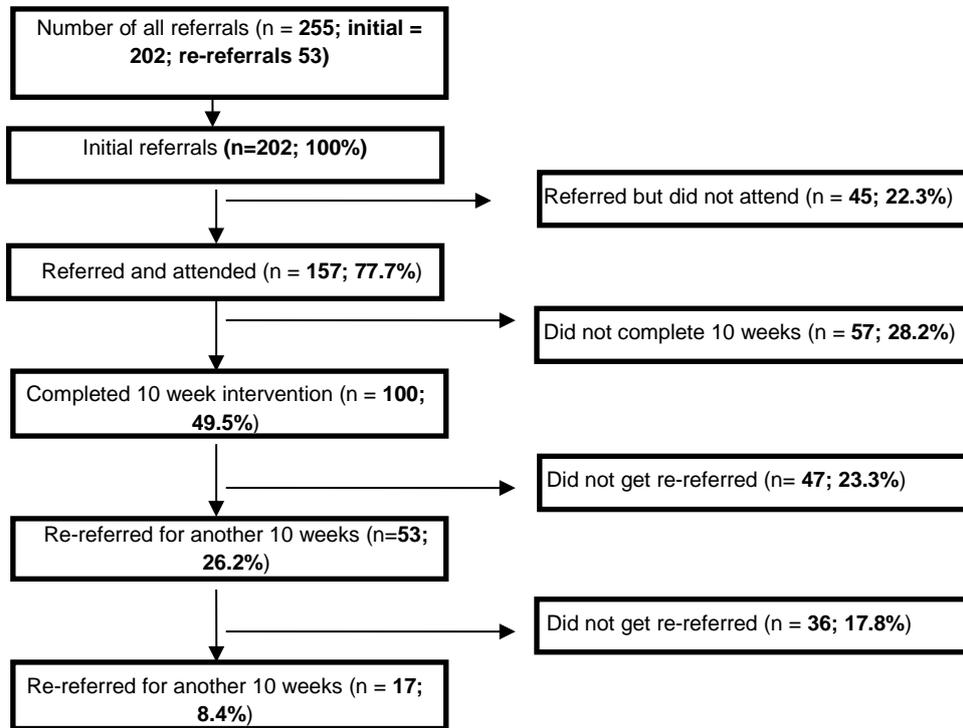


Figure 1: Patient progress through the intervention

Table 1: Age and sex of participants according to progression through the intervention

	Number	Mean Age (SD)	Gender
All Referrals-including re-referrals	255		F= 76% M= 22%
Initial Referrals	202	53 (16)	F= 75% M = 23%
Completers	100	56 (15)	F= 77%; M = 23%
Non Completers	57	49 (17)	F= 72%; M = 26%
Non Attendees	45	51 (16)	F= 76%; M = 20%
Re-referrals	53	58 (15)	F= 81%; M = 19%

Note: F = Female, M = Male; Gender percentages do not always total 100% due to gender not always being disclosed on the referral forms.

Table 2: Age, Gender and Deprivation for the progression categories of the sample

	Age Years	Gender	Index of Multiple Deprivation Number (%)
<i>Completers</i>	57 (15)	F=74%; M=26%	Q1=34 (40.5) Q2=14 (16.7) Q3=14 (16.7) Q4=22 (26.1)
<i>Non Completer</i>	50 (18)	F=79%; M=21%	Q1=11 (39.3) Q2=4 (14.3) Q3=6 (21.4) Q4=7 (25)
<i>Non Attendees</i>	52 (16)	F=83%; M=17%	Q1=12 (34.3) Q2=11 (31.5) Q3=6 (17.1) Q4=6 (17.1)
Total	54 (16)	F= 77% M=23%	Q1=57 (38.8) Q2=29 (19.7) Q3=26 (17.7) Q4=35 (23.8)

Note: Age is presented as mean (SD); F = Female; M = Male

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