HEALTH AND SPORT COMMITTEE

SOCIAL PRESCRIBING OF PHYSICAL ACTIVITY AND SPORT

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1. To what extent does social prescribing for physical activity and sport increase sustained participation in physical activity and sport for health and well-being?

Published literature on the extent to which social prescribing for physical activity and sport increases participation in physical activity and sport is not very helpful. Systematic reviews focus on evaluations of available carefully designed healthcare studies (controlled trials), which are difficult to conduct in the area of social prescribing (Wilson and Booth, 2015). For example:

A first systematic review evaluated 8 trials comparing exercise referral schemes or alternative physical activity in primary care on physical activity and improving health outcomes (Pavey, Fox, Anokye et al., 2011). The reviewed trials showed an increased number of participants who achieved 90-150 minutes of physical activity of at least moderate intensity per week (pooled relative risk 1.16, 95% confidence intervals 1.03 to 1.30) and a reduced level of depression (pooled standardised mean difference −0.82, −1.28 to −0.35). The effect of the exercise referral schemes on long-term physical activity and outcomes such as measurements of well-being was inconsistent.

A second systematic review evaluated 31 publications examining the effect of prescribed physical activity/exercise on non-exercise physical activity/energy expenditure in healthy adults (Washburn, Lambourne, Szabo et al., 2013). The review found no evidence to suggest that exercise training has a significant effect on non-exercise physical activity/energy expenditure. The quality of all 31 included studies was poor.

15 further social prescribing programmes were evaluated in a recent systematic review by Bickerdyke (Bickerdyke, Wilson, Booth et al., 2016). These evaluations presented a positive view of all evaluated programmes. However most evaluations were small scale, limited by poor design and reporting standards. Common design issues included a lack of comparative controls, short follow-up durations, a lack of standardised and validated measuring tools, missing data and failure to consider potential confounding factors.

In order to increase sustained participation in physical activity and sport it is crucial to examine when and why participation begins to decline. Participation in almost all physical activities declined during adolescence (Belanger, Gray-Donald, & O’Loughlin et al., 2009). The time of discontinuation varied across activity types. It has thus been suggested that promoting activities which attract and sustain secondary school students may improve physical activity levels throughout adolescence, which might continue into adulthood.
A number of factors have been identified as important in influencing physical activity participation amongst young people. Environmental factors (i.e. proximity, cost, facilities, and safety) are very important for young people living in areas of high socio-economic deprivation to ensure participation in physical activity. Intrapersonal factors (i.e., perceived skill, competence, time) and social factors (i.e. friends, adult support) must also be considered to help improve participation rates (Humbert, Chad, Spink et al., 2006).

The engagement of adolescents from communities experiencing socio-economic deprivation can be increased by using social marketing techniques effectively. The presentation and terminology chosen when engaging with people is of high importance when talking about increasing their physical activity or exercise levels. Words associated with effort, hard work and sweat do not seem to motivate people to become active. Thus the content of public facing messages must be carefully chosen. These messages must be chosen so that the activity appears to be fun - and physical activity is more or a by product of the activity rather than the perceived focus (Bush, Laberge, and Laforest, 2009). Further research evaluating social marketing approaches of sport stress the importance of identifying the personal identification people have with the activity (Ratten, 2016). An example of how this can be achieved is by associating different cultural backgrounds, gender, age, local communities or favourite athletes with the activity.

Another factor to consider when designing a social prescribing pathway to increase sustained physical activity is the individuals' physical activity motivation. Self Determination Theory proposes a dynamic framework which provides a continuum from amotivation, nonself-determined extrinsic motivation, self-determined extrinsic motivation, and intrinsic motivation which can be applied to understanding physical activity motivation (Ryan & Deci, 2002). Amotivation is a lack of any kind of motivation, as in the case of an individual who is not inclined to engage in any form of exercise. Nonself-determined extrinsic motivation is characterized by controlled behaviour that is performed to avoid immediate negative consequences (eg, one walks nightly to avoid a spouse’s nagging) or to obtain ego enhancements (eg, an older man desires to show his younger colleague that he can still do push-ups). Self-determined extrinsic motivation is present when an individual performs a behaviour for an extrinsic reason, but for personally valued and endorsed outcomes; e.g., an elderly woman does flexibility exercises to sustain activities of daily living. Intrinsic motivation is represented in behaviours that are performed for their inherent interest and enjoyment of the activity itself. To the extent that self-determined extrinsic motivation and optimally intrinsic motivation are present in regard to a particular activity, the more an individual will be likely to engage and persist in that behaviour. Self Determination Theory has been studied on physical activity in younger and older adults. Results showed that those who are active regularly display more self-determined extrinsic and intrinsic forms of motivation, compared to individuals who are less active or sedentary (Mullan & Markland, 1997; Ingledew, Markland, and Medeley, 1998). Intrinsic motivation correlates to an active lifestyle, as well as enjoyment of the activity for both younger and older adults. Unfortunately both intrinsic and extrinsic motivation may decline with age, as does the enjoyment of physical activity (Frederick-Recascino, 2002). Further research showed that
especially in older adults, enjoyment of the physical activity becomes a more important factor in adherence to physical activity (Dacey, Blatzell, and Zaichkhowsky, 2008). It is therefore recommended to consider both motivation and enjoyment with respect to sustained participation in physical activity and sport across the lifespan.

The “Sources of Support” social prescribing link worker service in Dundee was funded through the Scottish Government’s Community Link Worker Programme and is now situated in the context of the new GMS contract and Primary Care Improvement Plan. The referral pathways developed under this service address socio-economic and psychosocial issues, with the top three presenting complaints being mental health, housing and finances/benefits. Once fundamental issues such as food, shelter, clothes and warmth are addressed, the link workers can help patients with their concerns about lifestyle issues, social and family relationships through referral to a range of activities on offer such as “Active 4 Life”, “Park Lives”, “Steps to Health”, “Macmillan”, community health team walking groups and “The Green Health Partnership”. Data summarising Active4Life participation can be seen in Figure 1. Link workers offer a maximum of four face-to-face consultations with patients, as well as supported visits to encourage participation in the service appointment of activity. There is some initial evidence that people sustain their involvement in the prescribed activities once the interaction with the link worker is completed.

Figure 1: Bar graphs showing Active4Life participation in comparison for 2018 (May-April) and 2019 (May-August)
Total referrals, arranged initial consultation, initial consultation attendance and total Active4Life programme usages (which were averaged per month for the year) are displayed for both financial years. For 2018 52% of referrals attended the first consultation. For 2019 57% of referrals attended the first consultation.

Exercise referrals to the Hub (coordinating service) have increased and this has resulted in sustained involvement of those referred. This is evidenced by the rise in attendances and also the rise in “follow on” memberships. Two of the referral schemes are presented as examples:

**Active for Life (general scheme) 2 year comparison**

<table>
<thead>
<tr>
<th></th>
<th>Consultation arranged after referral</th>
<th>Attendance at 1st session</th>
<th>Total annual attendances</th>
<th>Membership number</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/18</td>
<td>62%</td>
<td>79%</td>
<td>17,192</td>
<td>77</td>
</tr>
<tr>
<td>18/19</td>
<td>73%</td>
<td>78%</td>
<td>18,138</td>
<td>155</td>
</tr>
</tbody>
</table>

**Move More (cancer patient scheme) 3 year overview**

<table>
<thead>
<tr>
<th></th>
<th>Attendance growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/18</td>
<td>1275</td>
</tr>
<tr>
<td>18/19</td>
<td>1861</td>
</tr>
<tr>
<td>19/20 (April – July)</td>
<td>710 (project 2,130)</td>
</tr>
</tbody>
</table>

These data show that 67% of referrals are triaged and 85% of referrals attend the first session. Our data indicates that 62% complete of referrals attend at least 6 sessions. Current data suggests that more than 45% of referrals sustain involvement in physical activity through ongoing engagement with the service (Active for Life membership / pay to play / other activity).

The role of volunteers to support and buddy participants in undertaking activities identified by social prescribers appears to be crucial in encouraging engagement and persistence. In Tayside, a volunteer presence has been established in every GP practice, as part of the Listening Service. It seems likely that this approach could be extended to support a scaled up social prescribing service.

2. **Who should decide whether a social prescription for physical activity is the most appropriate intervention, based on what criteria? (e.g. GP, other health professional, direct referral from Community Link Worker, self-referral)**

Based on the original descriptions of social prescribing, a social prescribing scheme can have three key components – i) a referral from a healthcare professional, ii) a consultation with a link worker and iii) an agreed referral to a local voluntary, community and social enterprise organisation (Friedli and Watson, 2004). The purpose of engagement in social prescribing activities was to improve factors associated with lifestyle and well-being.
Engagement with social prescribing did not preclude and was not instead of appropriate clinical interventions.

The systematic review referenced above noted that most referrals were made by general practitioners (Pavey, Fox, Anokye et al., 2011). However, the range of referrers for social prescribing schemes has broadened and can include a range of other health service workers (Polley, Fleming, and Anfilogoff, 2017). In Wales, a person's social prescribing referral to a link worker may be initiated by a health professional, a social services professional or from a community service (Wallace, Stone, and Rees, 2017).

The “Sources of Support” social prescribing link worker service in Dundee enables a range of routes to access link worker support, including self-referral. These routes enable engagement with a range of services that promote increased physical activity, including exercise on referral, Move More and The Green Health Prescription. The service ethos is that every face-to-face interaction with a patient or person should be seen as a potential opportunity to engage them in activities that promote well-being.

An electronic mapping survey carried out in 2018, recorded 375 responses from mostly frontline workers employed by Dundee City Council, NHS Tayside and Dundee HSCP. The survey recorded that sign-posting and provision of information was the most common interaction. The most common outcome that respondents were trying to achieve was improved physical and mental wellbeing. The conversations undertaken by frontline workers identified a range of issues including housing and financial issues and not just issues about physical exercise and sport.

Through the Green Health Partnership Dundee is currently piloting a new pathway of social prescribing, focusing on individuals who suffer from chronic illness such as cancer, pain, obesity, type 2 diabetes, cardiovascular disease, mental health, but also social isolation and healthy aging, considering health inequalities. The Green Health Prescription is a physical prescription which signposts patients to a service hotline, which can also be contacted via text, answer phone or email, where a Green Health operator holds a consultation with the patient to find a suitable nature-based intervention within their community. Green Health Prescriptions can be issued by primary care, AHPs, Locality Pharmacists, and the Job Centre Plus. Using a telephone based consultation service allows for an immediate consultation and referral into a nature-based intervention of choice, thus reducing waiting times to see a link worker and referring the individual into the service much quicker. The Green Health Prescription’s nature-based intervention service directory can also be accessed through self-referral and by health care professionals to receive information on nature-based interventions for their patients directly.

3. **What are the barriers to effective social prescribing to sport and physical activity and how are they being overcome?**

It seems likely that not all people referred to social prescribing activities will engage or persist with the prescribed activities and that real and perceived barriers prevent them from
benefitting from the activities. However, objective data on the scale of attrition are lacking. The evaluation of the Bristol project does not report this, although it records that around 1,000 people were referred (Kimberlee, 2013). The evaluation of the Rotherham project reports that 1607 people were referred to link workers and that over 2,500 onward referrals were made, but the numbers of people engaging in interventions were not reported (Dayson and Bashir, 2014).

Promoting engagement in activities identified for patients seems to be a critical issue. Environmental and interpersonal and social barriers have been identified as important in influencing physical activity participation amongst young people. These include proximity of the activity, cost, facilities, and safety, for young people living in areas of high socio-economic deprivation. Intrapersonal factors may include perceived skill, competence and time. Social factors may include participation of friends and adult support (Humbert, Chad, Spink et al., 2006). Most important it seems that the activity appears to be fun - so that the physical activity is more or a by product of the activity rather than the perceived focus (Bush, Laberge, and Laforest, 2009). Social marketing techniques can be used to manage public perception of the activities.

In Dundee, a range of barriers to engagement have been identified by staff. These include time to carry out this role, confidence, skills and knowledge of suitable social prescribing activities on offer. Further barriers identified by Green Health Prescription prescribers have been lack of engagement from patients. Many patients are comfortable in receiving medication for treatment, e.g. pain patients are used to receiving pain medication and involvement in gentle physical activity to manage their pain is a new concept. Thus in order for social prescribing of physical activity to work effectively in such groups of patients, it is important to change the public’s perception of the effectiveness of medicines in managing long-term conditions and to provide better information about non-clinical methods to improve health and wellbeing, as set out by Realistic Medicine. Without greater public knowledge, even with the best referral pathways in place, participation in physical activity will not become more normal. This is one of the underlying barriers to physical activity and sport which needs to be addressed through nationwide public facing messages, marketing, events, active workplaces and through programmes of social proof. Dundee launched a ‘Dundee Walks. Because we know it’s good for us’ poster marketing campaign, messages were paired with 18 health messages related to why walking is good for everyone, targeting a range of socio-economic backgrounds. The follow up survey of 116 responses revealed that 91% of participants reported walking more after seeing the campaign.

A range of support and training opportunities have been developed to encourage social prescribing and these developments have been incorporated into a range of strategic and commissioning plans. Supported access arrangements are in place to provide a bridge between people and activities. Concession schemes exist for mainstream leisure facilities and a number of low cost or free exercise opportunities have been created.

4. How should social prescribing for physical activity and sport initiatives be monitored and evaluated?
Systematic reviews note the lack of high quality evaluations of social prescribing services that use strong experimental designs. The opportunity to undertake such evaluations should be supported. For example, in Dundee, proposals to utilise the LINKWELL intervention with social prescribing have been developed. Better quality evaluations are likely to provide guidance about what works well and what does not.

Evaluations investigating the effectiveness of social prescribing do not measure the full range of outcomes identified by qualitative evaluations. Such outcomes should include general health, weight (obesity/ malnutrition), lung function, sexual health, hearing, sight, frailty, memory, mobility, activation levels, trust, GP waiting times, number of referrals, fuel poverty, relocation, housing conditions, home safety. However 40% of identified outcomes are either not or only rarely reported on, most commonly in determinants of health (55%). Thus current evaluation methodologies do not capture the breadth of positive outcomes that social prescribing has on relevant variables such as aches and pains, stamina, quality of sleep, supported and listened to, enjoyment, concentration, sense of control, personal resilience, pride in appearance, increased self-awareness, sense of purpose, personal fulfilment, enlightenment, inspiration and others. Evaluation data is often captured by qualitative methods and often disregarded. These data include measurements of general wellbeing, quality of life, fatigue, energy levels, alcohol and substance intake, healthier diet, anger, relaxation, hope, positive decision making, feeling well informed, ability to carry out every day activities, motivation, and confidence. Quantitative evaluation of these outcome variables are crucial for measuring improvements in health and wellbeing effectively (Polley, 2019).

In terms of managing and monitoring service activity, there is a need to develop frameworks and infrastructure that provide information about activity and success. Developing performance data for interventions such as exercise referral and participation in the Green Health Prescription initiative is a relatively straightforward exercise. Such information will be useful for HSCPs to guide investment and disinvestment from specific activities.

The Scottish Government is testing a minimum dataset for the Community Link Worker Programme to record the wider range of referral pathways available through the social prescribing approach. This will be a core tool to support services in reporting activity.
References


