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Accredited Exercise Physiologists and the Treatment of People with Mental Illnesses

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Abstract Accredited Exercise Physiologists are allied health professionals trained in the delivery of exercise and lifestyle interventions for people with chronic illness including mental illness. This study aimed to investigate how Accredited Exercise Physiologists engage in the treatment of people with a mental illness. Accredited Exercise Physiologists were invited to complete an online survey via communication from Exercise and Sports Science Australia. Sixty-one Accredited Exercise Physiologists completed the online survey. The majority of AEPs agree that exercise is valuable in the treatment of people with a mental illness. General Practitioners are the most common referral source. Exercise Physiologists believe more people with a mental illness should be referred for services, however more than half agree that people with a mental illness are likely to be less adherent to an exercise intervention compared to people without a mental illness. More than half of respondents report no formal training in training in the prescription of exercise for people with a mental illness however 89% believe additional professional development would be beneficial. Given the support for the efficacy of exercise in the treatment of people with mental illness, this group of health professionals appears to be an underutilised resource.

Keywords Physical Activity, Mental Health, Exercise Physiologist, Exercise Referral

1. Introduction

It is estimated that one in five Australians will experience a mental illness at some time which represents 13% of Australia's non-fatal disease burden[1]. These people are more likely to experience poor physical health compared to those without a mental illness[2-4]. The reasons include poor health behaviours such as smoking, lower levels of physical activity and the use of psychotropic medications[5]. As a result, people with mental illness experience an increased burden of chronic disease.

Scott and colleagues recently reported that people with a mental illness have at least a two-fold increased prevalence of chronic cardiometabolic conditions compared to those without a mental illness[4]. Furthermore the mortality associated with chronic health conditions such as ischemic heart disease is raised two fold in people with a mental illness[3].

Physical activity and exercise assist in the management of a plethora of chronic health conditions including obesity[6], hypertension[7] and diabetes[8]. There is also increasing evidence for exercise in the treatment of mental illnesses [9-11]. In Australia, Accredited Exercise Physiologists (AEPs) are University trained health care professionals with specialised training in the prescription of exercise and physical activity for chronic health conditions, including mental illnesses. Therefore AEPs are ideally placed to assist people with a mental illness commence and maintain exercise.

Only two papers report the role of AEPs in the provision of health care for people with a mental illness[12, 13].

Forsyth and colleagues[12] detail a lifestyle intervention conducted in New South Wales, Australia. Dually qualified Dieticians and AEPs developed and implemented a lifestyle intervention aimed at modifying behaviours to improve physical activity and nutritional status in GP referred patients with a mental illness. They report cardiovascular fitness, muscular endurance and psychological well-being improved in 80% of program completers.

Wynaden and co-workers[13] describe the patient-perceived outcomes from a AEP coordinated healthy lifestyle program implemented in a West Australian forensic mental health facility. Participants were asked to complete a questionnaire regarding their experience in the program. More than 95% of respondents report the program was helpful in improving fitness, physical well-being and mood. Taken together, these two studies suggest that AEPs can provide support and positive outcomes for people with a mental illness.

Apart from these reports, it is unclear as to the extent AEPs are involved in the multidisciplinary health care for people with a mental illness. Furthermore the attitudes and beliefs of AEPs toward their role in exercise prescription for

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people with a mental illness have not been assessed. Such data may indicate a gap in the provision of multidisciplinary health care for people with a mental illness and may identify gaps in the training of AEPs with respect to the provision of services for mental health consumers.

Therefore the aims of this study are three fold. Firstly to investigate the scope of AEPs involvement in the treatment of people with a mental illness and report on the referral pathways. Secondly to assess the attitudes and beliefs of AEPs regarding their role in exercise prescription for people with a mental illness. Lastly to investigate the need for professional development in the area of exercise prescription for mental health consumers. This is the first investigation into the scope of AEPs involvement in the treatment of people with a mental illness.

2. Materials and Methods

Accredited Exercise Physiologists were invited to complete an online survey via direct email from Exercise and Sports Science Australia (ESSA). Notification of this cross-sectional online survey and the link to the online survey was made available in each ESSA eNEWS bulletin which was emailed to AEPs every month. Those AEPs wishing to participate opened the link in a web browser to complete the online survey. Participation was anonymous and data collection commenced in early October 2012 and was completed in late December 2012.

Survey design

The survey comprised four components. Firstly, demographics and the nature of AEP work were collected. Secondly the survey questioned the scope of practice in treating people with a mental illness. Thirdly the survey questioned the attitudes and beliefs of AEPs regarding treatment of people with a mental illness. Finally the survey questioned the need for and nature of professional development to improve services for people with a mental illness. The survey took approximately eight minutes to complete. Since no instrument currently exists for answering the research question in this population, a customised survey was developed with assistance from Central Queensland University's Population Research Laboratory and piloted with a with a small cohort of AEPs. Following feedback from the pilot, the final instrument was developed.

Statistical analysis

Frequency responses (N and % of respondents) were analysed using the Statistical Package for the Social Sciences Version 20 (SPSS Inc., Chicago, USA).

3. Results

The survey was made available to all AEPs via email from ESSA. The total number of responses to the online survey was 61.

Demographics

The majority of respondents were female (N=40; 66%). More than one half of respondent were aged 26-35 years (N=35). Accredited Exercise Physiologists report working across a variety of roles. This is shown in Table 1. Forty four per cent of AEPs (N=27) reported working in a full time capacity and 33% (N=20) working in a part time capacity. The remaining responses were self employed/business owner (N=10), casual employee (N=3) or unemployed/ career break (N=1).

Table 1. Location of AEP employment

Location of AEP employment	Number of respondents	Percentage of respondents
Commonwealth Government	1	2
Community health	4	7
General Practice	1	2
Government	1	2
Gym / fitness centre	4	7
Multi-disciplinary clinic	1	2
Private allied health company	1	2
Private hospital	3	5
Private practice	36	59
Public hospital	5	8
Research	1	2
University and private practice	2	3
Unemployed	1	2

Scope of practice

The patient load of AEPs is shown in Table 2. Overall, AEPs report few referrals for patients specifically for a mental illness. The majority of respondents (N=45, 74%) reported between 0-5 referrals per week. Almost 40% of these respondents report not receiving any referrals for patients specifically for mental illness. Twelve respondents (20%) reported receiving 6-10 referrals per week, two respondents (3%) reported receiving 10-15 referrals per week while two respondents (3%) reported receiving more than 15 referrals per week. The EPC referral scheme is the most frequently reported referral pathway. Referrals were predominately from General Practitioners with referrals least likely to come from Psychiatrists and mental health nurses (MHNs). Depression is the most commonly reported condition (99%).

Table 2. Patient load of AEPs

Number of patients per week	Number of respondents	Percentage of respondents
1-15	10	16
16-30	35	57
31-50	14	23
51+	2	4

With respect to patients with a chronic health condition and a diagnosed co-morbid mental illness, 46% (N=28) of respondents report seeing between 6-10 patients per week and 23% (N=13) report seeing 10-15 patients per week in this state. Most referral are from General practitioners via the EPC pathway (79%) with referrals least likely to be received

from a Psychiatrist or MHN. Depression is the most commonly reported co-existing condition (95%). Seventeen respondents (28%) report that more than 50% of patients referred for a chronic health condition self-report non-diagnosed mental health issues during a consultation.

Only 10% of AEPs reported they always consulted with other health professionals regarding their treatment of people with a mental illness. Sixty one per cent (N=37) reportedly consulted 'Some of the time' or 'Most of the time'. The majority of this consultation is with the General Practitioner (77%). Fifteen percent of AEPs (N=9) report having undergone no formal training with respect to exercise prescription for people with a mental illness. Twenty five percent (N=15) reported having undertaken continuing education courses or postgraduate training in the area with the remainder having completed undergraduate coursework or supervised practicum.

Attitudes and beliefs

AEPs generally agree that people with a mental illness are more likely to have poorer overall health (82%) and are likely to exhibit poorer health behaviours (87%) compared to people without a mental illness. Seventy-five per cent of AEPs believe that exercise is a worthwhile intervention on its own and 95% believe exercise is a worthwhile adjunct to other forms of therapy. Eighty-five percent of AEPs are confident and 77% believe they are competent in their ability to prescribe exercise for people with a mental illness.

Mental illness is believed to be a barrier to exercise participation by 87% of respondents. More than half of AEPs (54%) believe that people with a mental illness are less likely to adhere to an exercise program. Ninety-three per cent of AEPs believe more patients with a mental illness should be referred however over half believe that patients with a mental illness are less likely to be referred.

Professional development

More than half of AEPs (52%) reported having had no specific training in the prescription of exercise for people with a mental illness. The remainder report having undertaken a variety of programs including face to face workshops (31%) and CD/DVD based courses (6%). The majority (89%) of respondents believe additional training would be beneficial with 85% of respondents reporting they would 'Most likely' or 'Definitely' attend a professional development event. The principle condition of interest for professional development is depression (90%) with face to face delivery the preferred method.

4. Discussion

This is the first study investigating the scope of AEPs in treating people with a mental illness. The response rate in this survey was lower than anticipated however significantly low response rates to online surveys have previously been reported in the literature[14]. In the present study it is believed this may be due to the perception that the survey was intended only for AEPs who consult with patients with a mental illness.

Demographics

Compared to the ESSA 2011 Employee Survey[15] where 71.5% of respondents were employed on a full time basis, results from the current survey indicate that only 44% were employed in a full time role. Additional demographic data on AEPs for comparison are unavailable. It is also difficult to determine the percentage of the population of AEPs who work in clinical practice the response rate reflects. While there are approximately 2300 AEPs registered with ESSA the number working in clinical practice is currently unknown as may work exclusively in academia, research or other non-clinical positions, or transition between roles.

Scope of practice

Comparisons with previous data on AEPs is not possible, however the 20011 ESSA Employee Survey[15] reports AEPs servicing between one and nine individual clients per week. This is considerably less than that reported in the current survey where more than half the respondents report seeing between 16 and 30 consultations per week.

The finding that AEPs receive relatively few referrals specifically for people with a mental illness may reflect the lack of understanding by GPs or other health professionals of the role of exercise in the treatment of mental illnesses. A recent survey of British GPs showed that whilst the majority are in favour of exercise as an adjunct treatment strategy, they lack a strong evidence base on which to make such a recommendation[16]. It is possible that, to date, AEPs in general, and ESSA specifically have failed to target this vulnerable population as a valuable patient cohort. Alternatively, the lack of inclusion of exercise in the best practice guidelines for the treatment of people with a mental illness may contribute to the under utilisation of AEP services. Therefore AEPs seeking to work with people with a mental illness should develop professional networks fostering confidence in the expertise of AEPs.

A significant number of AEPs report people referred for chronic health conditions also present with mental illnesses, with depression being most commonly reported. This is not unexpected since the prevalence of depression in people with type II diabetes may reach twice that of people without diabetes[17]. Moreover, obesity, which is linked to many chronic conditions, is associated with a significantly increased risk of depression[18].

The data on AEPs consulting with other health professionals in the treatment of people with a mental illness is encouraging. No respondents reported 'Never' consulting with other health professionals and this perhaps reflects the widespread use of the EPC referral scheme where reporting to the referring GP is mandatory. The finding that only 25% of AEPs have undertaken additional professional development or postgraduate training in the field of exercise and mental illness may reflect the low interest in this population. Alternatively it may reflect the evolving nature of the AEP undergraduate training including specific education in this area.

Attitudes and beliefs

The belief of AEPs that people with a mental illness are more likely to have poorer overall health compared to people without a mental illness is consistent with the literature[2-4]. Robson and colleagues (2007) reported that rates of cardiovascular disease in people with a mental illness are two to three times that of people without a mental illness. The prevalence of metabolic syndrome in people with mental illness is reportedly twice that of the general Australian population and people with schizophrenia have a prevalence among the highest in the world[3]. Most recently, Scott and colleagues[4] demonstrated significantly higher prevalence of obesity in people with a mental illness, compared to those without. Moreover, the adjusted odds ratios for chronic conditions including coronary heart disease, emphysema and diabetes were 1.5 to 3.2 times that of people without a mental illness. AEPs belief that people with a mental illness are more likely to exhibit poorer health behaviours is also consistent with findings from both Australia[19] and internationally[20].

The vast majority of AEPs believe exercise is worthwhile intervention for people with a mental illness. This is consistent with most systematic reviews on exercise for depression[9, 10], schizophrenia[21], Post Traumatic Stress Disorder (PTSD)[22], and anxiety and depression in young people[23]. More than half of AEPs believe people with a mental illness are less likely to comply with an exercise intervention. To date, no published systematic review has analysed compliance to exercise interventions in people with mental illness, however an analysis of the depression literature indicates compliance rates ranging from 50%[24] to 100%[25]. This is consistent with exercise studies in people without depression[26, 27] and greater than that reported in cross sectional observations of adherence to physical activity[28, 29]. This suggests the difference in participation in research studies may influence participation over self directed programs or those with minimal support.

Professional development

The vast majority of AEPs agree that additional professional development is beneficial, particularly in the area of depression, and that this should take the form of face to face delivery. It is unclear from this survey if the professional development already undertaken by AEPs is exercise prescription specific, or pertaining to the pathophysiology or psychopathology of mental illness. Courses on the latter may not describe the exercise prescription variables unique to this population. While there is a substantial body of research on the field of exercise and mental health there are few systematic reviews or published papers elucidating the appropriate program variables, and these pertain to depression. The consensus from these publications is that group or individual programs of low to moderate intensity aerobic exercise, undertaken three to four times weekly for 30-45 minutes and supervised by appropriately trained professionals is likely to be beneficial[30, 31].

People with a mental illness are likely to exhibit poorer health behaviours compared to those without a mental illness[19] and may lack motivation to commence or maintain an exercise program[32]. Therefore the development of skills in exercise counselling and motivational interviewing are likely to be of benefit to AEPs working with people with a mental illness.[19]. Interestingly, more than half the respondents believe people with a mental illness are less likely to be referred to an AEP. This may be due to the perception by GPs and others that adherence to exercise interventions will be poor and result in no benefit. Given the knowledge and understanding of AEPs regarding exercise for people with a mental illness, it is unsurprising that they believe more people with a mental illness should be referred for consultations. Promotion of the research demonstrating the benefits of exercise for people with a mental illness to GPs and other health professionals is paramount in addressing this situation.

There would appear to be scope for continuing education providers to fill a need for additional professional development for AEPs in the field of exercise and mental illness. A multidisciplinary team comprising researchers, Psychiatrists, GPs, Psychologists and MHNs would provide considerable expertise for AEPs to draw upon to enhance their ability to encourage people with a mental illness to commence and maintain an exercise program. Offering this format in face-to-face delivery mode which is subsequently recorded for online or CD/DVD delivery may increase accessibility all AEPs.

5. Conclusions

It appears AEPs are a vastly underutilised resource in the multidisciplinary care for those with mental illness. Given the plethora of evidence, ESSA and AEPs should work together for the promotion of exercise for people with mental illness and collaborate with other health professionals including Psychiatrists, Psychologists and MHN. Finally, there is scope to develop professional development opportunities for AEPs to remain abreast of developments in the field.

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