

Brief Screening for Depression and Anxiety in Vision and Other Rehabilitation Services

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**Abstract**

The field of physical/sensory rehabilitation is broad, covering a wide variety of health presentations and intervention processes. There is persuasive evidence that unrecognised and untreated mental health disorders, such as depression and anxiety, can have a major impact on physical health status and rehabilitation outcomes across all areas of practice. It is important to have systems in place for the efficient detection and effective treatment of psychological difficulties. This paper considers the role of brief mental health screening measures in case identification, with particular focus on brief mental health screening within vision rehabilitation services. As such screening should now be regarded as part of evidence-based best-practice we consider some of the issues which impact on tool selection and implementation.

Whiteford et al. (2013) reported that in 2010 the worldwide cost of mental health and substance use disorders was 183.9 million disability-adjusted life years, a metric which combines estimated years lost due to premature mortality (YLL, Years of Life Lost) and Years Lived with Disability (YLD). This equates to 7.4% of all years lost for any health related reason and 23% of all the years lived with disability. These authors reported that depression was the most disabling of the mental health disorders, and the fourth leading cause of overall disease burden. Alonso et al. (2011) reported data from a large international study conducted under the auspices of the World Health Organisation (WHO) showing that across the 24 countries surveyed (covering low, middle and high income nations) mental disorders accounted for 16.5% of all the Days Out Of Role, whether this be employment or other activities of daily living. These two large studies highlight the very real impact of mental health disorders on the daily lives of individuals, families and communities. For many the experience of a mental health disorder has a significant impact of both personal well-being and social engagement in its broadest sense.

Not only are mental health difficulties extremely disruptive, they are also common. Kessler, Petukhova, Sampson, Zaslavsky, and Wittchen (2012) reviewed 12-month and lifetime prevalence rates for anxiety and mood disorders in an epidemiological study of 9,200 American residents over 13 years of age. The lifetime prevalence rate for any mood disorder was 17.5% and for any anxiety disorder 32%, the most common of which were Specific Phobia (15.6%) and Social Phobia (10.7%). Twelve month rates were lower for respondents aged over 65 years. These rates are comparable to those reported from Australia (Slade, Johnston, Oakley Browne, Andrews, & Whiteford, 2009), but somewhat higher than European estimates provided by the European Study of the Epidemiology of Mental Disorders investigators (Andrade et al., 2000) who report lifetime prevalence figures for mood and anxiety disorders of 14% and 13.6% respectively. These latter rates are similar to those reported in the Adult Psychiatric Morbidity in England survey (McManus, Meltzer, Brugha, Bebbington, & Jenkins, 2009).

### **Mental health and physical well-being**

Dr Brock Chisholm, the first Director-General of WHO, is credited with coining the phrase “without mental health there can be no physical health”. It is now well established that the relationship between mental and physical well-being is bidirectional. Prince et al. (2007) and Kolappa, Henderson, and Kishore (2013) are among many who observe that this relationship holds for individuals with a range of debilitating conditions, for example, diabetes (Type II), cancer, cardiovascular disease, a wide range of communicable diseases, reproductive health, sensory impairment, and accidental injury.

Mitchell et al. (2011) completed a meta-analysis of 24 studies reporting the prevalence of depression, anxiety and adjustment disorder in cancer care settings. Although prevalence rates were lower than expected, they were higher than in the general population at approximately 40% for any mood disorder. Celano and Huffman (2011) report a 20-40% incidence of depression (major depression and elevated depressive symptoms) in cardiac patients, with depression being associated with a greater than twofold increase in mortality risk. Finally, Van der Aa et al. (2013) in their study of stepped-care as a strategy to prevent depression and anxiety in elderly visually impaired, suggest that approximately one third of adults in this group experience clinically significant symptoms of depression and/or anxiety. These studies illustrate the high level of comorbidity between physical and mental health conditions.

There is evidence that addressing mental health factors contributes to improved rehabilitation outcomes (DiMatteo, Haskard-Zolnierrek, & Martin, 2012; DiMatteo, Lepper, & Croghan, 2000; Horowitz & Reinhardt, 2006; McGrady, McGinnis, Badenhop, Bentle, & Rajput, 2009; Swardfager et al., 2011). The research data shows that those with physical/sensory rehabilitation needs and an unresolved mental health disorder are less likely to engage with rehabilitation services, less likely to

be offered a broad range of services, and less likely to make consistent and effective use of those services. This implies that efforts to overcome implementation and interpretation difficulties are likely to be well rewarded.

Despite the reported prevalence and impact of mental health problems there is risk of significant misidentification of these within the physical illness and rehabilitation sector. This misidentification is associated with (a) the difficulty experienced by non-mental health specialist staff in recognising and addressing a mental health issue, (b) the likelihood that relying on a psychiatric diagnosis alone will under-estimate the presence of psycho-emotional difficulties (Sanderson & Andrews, 2002), and (c) dealing with a mental health problem within the context of a physical illness or other disability is likely to be complex. For these reason it can be useful to have access to a range of simple 'case' finding and screening tools to alert a practitioner to the mental health needs of their client, and trigger appropriate referral and intervention. Indeed such practice is consistent with the drive for evidence-based best-practice. There is compelling research that even mental health practitioners are not particularly accurate in identifying mental health pathology or evaluating therapeutic change, and that performance can be enhanced by the use of simple screening instruments and standardised measures of change (Duncan, Miller, & Sparks, 2011; Grove, Zald, Lebow, Snitz, & Nelson, 2000; Lambert, 2011). It would be understandable if problem identification, appropriate referral and change monitoring of mental health difficulties were even more uncertain when conducted by practitioners who are not specifically trained in the field.

### **Mental health screening**

Screening measures need to be quick (short) and easy to administer by non-specialist staff, or staff who have received limited training. A good measure will also be easy to score and interpret, usually by the calculation of a screening score which is compared to a population threshold score. It should be psychometrically robust (valid and reliable), and standardised for use with the specific population

in question, that is, not only taking factors such as age, culture/ethnicity and language into account, but also the specific physical condition the client is presenting with. Screening measures are generally used to evaluate all members of a group, not just those suspected of have a mental health difficulty; therefore the measure needs to be freely available or available at a very low cost, for example, via a site licence. With these characteristics in mind it is worth observing that there is a growing body of literature detailing the use of brief mental health screening measures within physical and sensory rehabilitation services.

Hart, Werneke, George, and Deutscher (2012) report data from over 10,000 physical therapy outpatients which suggests that even a single mental health screening question may be valid and reliable. However, Reme, Lie, and Eriksen (2014), in research with clients who had chronic lower back pain, and Vahter, Kreegipuu, Talvik, and Gross-Paju (2007) with people with multiple sclerosis, are among many researchers who have found that while single question screening for depression may have adequate *sensitivity* (correctly identifying a person with depression, 'true positive') it is often lacking in *specificity* (correctly identifying a person who does not have depression, 'true negative'). That is, this truncated approach to screening tends to be over inclusive. These authors also found that screening accuracy was generally less impressive with respect to anxiety than it was for depression.

Härter, Woll, Reuter, Wunsch, and Bengel (2004) used the General Health Questionnaire – 12 (GHQ-12; Goldberg & Williams, 1988), an internationally recognised general psychiatric case finding tool, to screen large populations of individuals with either musculoskeletal disease or cardiovascular disease. While these authors found acceptable specificity for both conditions (80% and 87% respectively), the sensitivity was low (48% and 32% respectively). This suggests that screening may be more accurate if it is targeted at particular mental health conditions rather than searching for generic caseness. Indeed, an earlier study by the same research team (Härter, Reuter, Gross-Hardt,

& Bengel, 2001) found that the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was more consistently reliable than the GHQ-12 when screening for anxiety, depression and somatoform disorders in 206 patients with musculoskeletal disease (sensitivity 78%, specificity 71%).

Andersen et al. (2014), in their adaptation of the Pan-Canadian Practice Guidelines on Screening, Assessment, and Care of Psychosocial Distress in Adults With Cancer for use in America recommended the periodic screening of all patients with cancer for signs of depression and anxiety using validated measures. The measures they suggest for preliminary screening were the two primary depression items from the Patient Health Questionnaire – 9 (PHQ-9; Kroenke & Spitzer, 2002), and the Generalized Anxiety Disorder – 7 (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) for anxiety. These two screening measures, and variations of them, are free to use and have become standard screening measures for depression and anxiety within a wide range of health and disability service areas (Kroenke, Spitzer, Williams, & Löwe, 2010).

However, just because screening measures exist it does not follow that they are always easy to introduce into regular practice. Kneebone, Neffgen, and Pettyfer (2012) report on the development of a protocol for physical rehabilitation therapists to utilise brief screening tools (Patient Health Questionnaire – 9 and HADS) for the detection of depression and anxiety in patients who had experienced stroke. These authors identified the need for specific training associated with the practice protocol because of staff concerns about the screening process, specifically - instrument selection, time taken to administer, knowledge deficits, who should administer the measures, and workload implications. After training, both measures were successfully deployed in a clinical setting.

Within the field of vision impairment Rees, Fenwick, Keefe, Mellor, and Lamoureux (2011) found that although staff (eye health professionals and vision rehabilitation workers) reported awareness of the symptoms and treatment options for depression many specific symptoms of depression were

attributed as much to vision loss as to a psychological disorder. These authors also found that their participants lacked confidence in communicating about depression with patients. However, Rees et al. (2012) found that staff confidence could be enhanced by the delivery of a period of training; they provided approximately five hours of education, focused on the recognition, assessment and management of depression.

### **Mental health screening in vision rehabilitation**

Brief screening for depression and anxiety is starting to be employed within the field of vision rehabilitation. There is already substantial evidence that people with significantly impaired vision, many of whom are over the age of 65 years, are more vulnerable to experiencing an affective disorder (Horowitz & Reinhardt, 2006; Nyman, Gosney, & Victor, 2010a, 2010b; Rees, Fenwick, Keeffe, Mellor, & Lamoureux, 2009; Rees et al., 2012). However, while this is well established there can be additional complications which make the identification of mental health problems difficult in this population. The most obvious of these is 'diagnostic overshadowing', a concept borrowed from the intellectual disability field, where practitioners can overlook signs and symptoms of one problem because they believe them to be fully explained by another. With a predominantly elderly population there is always a risk that difficulties with concentration, poor memory, loss of interest/pleasure, weight loss, insomnia, fatigue, and social isolation/avoidance are explained with reference to 'old age' rather than being assessed as associated with depression or anxiety. An associated complicating factor is that older individuals are more likely to present with multiple physical challenges and be taking a broad range of medications, which may also overshadow an experience of depression or anxiety.

How effective can brief screening practice be when staff not trained as mental health practitioners are comfortable using these measures? Holloway, Sturrock, Lamoureux, Keeffe, and Rees (2014) and Fitzgerald and Fitzgerald (2014) both found that the Patient Health Questionnaire (Kroenke et al.,



2010) is acceptable for the identification of depression in the older vision impaired population.

Holloway et al. (2014) screened 124 older vision impaired adults (mean age of 77 years) for depression using the PHQ-2 and found that a majority of clients believed this to be an acceptable and justified activity. They report that nearly 40% of those screened were above the threshold score for the measure, and that most of these had a preference for 'talking therapy' either with or without the addition of anti-depressant medication.

Fitzgerald and Fitzgerald (2014) used the PHQ-4, which contains two depression-focused (PHQ-2) and two anxiety-focused (GAD-2) questions, to assist the non-mental health specialist Vision Needs Assessors employed by the Blind Foundation in New Zealand to engage with, identify and refer service users to appropriate services. As a precursor to use of the screening tool these researchers provided six hours of training to the nationwide Needs Assessment team covering basic information about depression and anxiety in the general population, older adults, and the visually impaired. They also provided training on the costs and benefits of health screening and a review of screening within mental health. Finally, they covered mental health screening with the elderly vision impaired, orientation to the PHQ-4 measure, tips on its use, scoring, interpretation, and use of the screening data within the context of the needs assessment process. All training materials were made available in an accessible format and the training session was also made available as a multimedia presentation so it could be reviewed. During the 24-month period over which data were collected the PHQ-4 was completed 1,535 times with 67% of first-time service users (N=2,293). Of these 226 (14.7%, 95% Confidence Interval (CI) = 12.9-16.5) scored above the threshold score indicating 'caseness' (143, 9.3%, CI = 7.85-10.75 for depression and 176, 11.5%, CI = 9.9-13.1 for anxiety). Those who scored above the 'cut-off' threshold for depression and/or anxiety were referred to the Blind Foundation peer support programmes at a greater rate than those who scored below the threshold, although this difference was not statistically important. However, referral rates to the Blind Foundation in-house counselling service were significantly higher for those scoring above the

threshold for depression ( $\chi^2=82.0, p<.001$ ) and anxiety ( $\chi^2=133.1, p<.001$ ) than for the sub-threshold participants. This suggests that the PHQ-4 scores did impact on the referral decisions made through the vision needs assessment process.

Fitzgerald and Fitzgerald (2014) also sought feedback from the Needs Assessors who were administering the screening measure in their study. These practitioners indicated that while they had experienced some difficulty employing the PHQ-4 with certain clients because of the anticipated distress it may provoke in the service users, ethnicity/cultural diversity, and the presence of third-parties during the interview, the benefits of formally addressing mental health concerns were seen as advantageous.

### **Costs of screening**

It is important to consider whether there may be any negative consequences as a result of implementing a routine mental health screening protocol within a physical/sensory rehabilitation service. One potential impediment is concern about 'labelling', with any benefits associated with the identification of a mental health difficulty being outweighed by the stigma and distress this can cause. There is also a concern that the management of an upset or distressed client may be stressful for staff if they are not trained in mental health care. This concern reflects a misunderstanding of the screening process as such activity is non-diagnostic and exclusively focused on case identification so that more targeted and efficient use can be made of limited specialist mental health resources by those who have been assessed as needing further assessment and intervention.

Coyne, Thompson, Palmer, Kagee, and Maunsell (2000) and Thombs et al. (2012) are representative of those who present persuasive arguments against routine screening in primary care settings. These researchers found little evidence to suggest enhanced or more effective services being made

available to screened individuals, many of whom will be physically well. They do concede that this does not apply to individuals who are already engaged in specialist services.

Concerns have been raised regarding the cost and the utility of screening in environments where follow-up services are not readily accessible. Certainly these concerns are valid from a short-term perspective. However, in the longer term savings associated with the referral of a patient accurately identified as being in need of further assessment to the appropriate service at the earliest opportunity is likely to generate cost savings for the service, and enhanced rehabilitation outcomes for the client.

### **Summary**

This brief paper has provided evidence drawn from large international studies regarding the very high costs of poor mental health, and the association between poor mental and physical health. We have also alluded to some of the difficulties in detecting mental health problems, especially when dealing with people who are already facing complex physical/sensory challenges, who may be taking a range of medications, and who may be elderly. These difficulties are further compounded when care is being provided primarily by health care or other practitioners who do not have specific training in psychological disorders. There is clear evidence that problem identification and assessment, and monitoring of therapeutic change can be enhanced through the use of standardised measures. Indeed, this evidence is such that the use of these measures to assist case identification must now surely constitute evidence-based best-practice. That is, such evaluations should not be seen as adjunctive to 'treatment as usual' but as usual practice, akin to a general medical practitioner checking a patient's blood pressure as routine clinical practice. Despite this, routine screening for mental health problems within many areas of physical/sensory rehabilitation has been slow to take root. While more research into the suitability of psychological screening measures to specific care populations is required, it would also be useful to read more reports of successful

applications and the real benefits that can accrue to service users from the timely identification and amelioration of their psychological concerns.

### **Conflict of Interests**

None

### **Key Points**

- The negative impact of mental health problems on functioning and well-being (personal and social) is high.
- There is a clear and inextricable association between physical and mental health.
- Early identification and treatment of mental health problems in those who also have physical health needs aids engagement with physical/sensory rehabilitation services and positively impacts on outcomes.
- Accurate identification of mental health status is supported by the routine use of brief screening measures.
- Implementation of screening for psychological difficulties within rehabilitation services represents evidence-based best-practice.

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