



Training Rehabilitation Providers in Mental and Behavioral Health: A Pilot Study

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Pilot Study

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Abstract

Background: Mental and behavioral health issues are rising and becoming increasingly prevalent as a comorbid clinical presentation in rehabilitation.

Objective: To assess rehabilitation provider's knowledge and attitudes towards patients with mental and behavioral health issues, following a training session on behavioral health.

Design: Pre-immediate post and follow-up survey study

Methods: A convenience sample of healthcare providers signed up for an online mental and behavioral class consisting of three 90-minute sessions. Prior to, immediately following and at 3-months following, participants completed a series of survey questions pertaining to beliefs, attitudes and knowledge related to mental and behavioral health. Likert scales were used to determine comfort with treating various mental and behavioral health issues and mental health-related knowledge was measured using the Mental Health Knowledge Schedule (MAKS).

Results: Fourteen healthcare providers (92.3% female) completed the training and all measures. All levels of comfort with mental health shifted immediately following training, with only trauma being significant ($p = 0.047$), but did not remain at 3-month follow-up. Mental health-related knowledge improved significantly immediately following training ($p = 0.008$), and was still significantly improved 3-months after training ($p = 0.011$).

Conclusion: An online training session is able to shift mental health-related knowledge in rehabilitation providers but not comfort with treating depression, anxiety and trauma. Additional research is needed to extrapolate and expand on the results of this pilot study.

Keywords: Mental Health; Behavioral Health; Rehabilitation; Training; Knowledge

Introduction

According to the National Institute of Health it is estimated approximately one in five people in the United

States suffer from a mental, behavioral or emotional disorder and account for an annual spending in excess of \$80 billion [1]. Within this data, it is estimated approximately six percent of Americans suffer from major depression [1], with

the life-time prevalence of depression estimated at 21.3% in women and 12.7% in males [2]. Unfortunately, depression has been shown to also be a leading cause of suicide, thus showcasing the importance for healthcare providers to screen for depression, treat or refer accordingly [2].

Concerns over mental health, including depression is mounting, especially in light of the corona virus disease of 2019 (COVID-19) [3,4]. The sudden acute respiratory syndrome that started in 2002 showed significant long-term changes in mental health with up to 65% of survivors developing major depression [5, 6]. Data from the COVID-19 pandemic shows similar potential impacts on mental health [3, 4]. It is well-documented that there's a significant shortage of mental health providers globally, including for the treatment of depression [7,8]. Persistent pain and depression often coexist, yet treatment for pain and depression often involve different healthcare providers and disciplines. For example, physical therapy (PT) is not typically seen as an avenue for the treatment of depression, yet it's estimated that 45-50 million Americans annually seek PT for the care of low back pain, of which approximately 10-15 million suffer with chronic low back pain [9]. Recent studies have shown that approximately one in five patients attending outpatient PT present with moderate to severe depression, yet seeking care for an orthopedic condition [10,11].

Within this coexistence of pain, disability and mental health is an important clinical mandate for rehabilitation providers such as PTs, PT assistants, occupational therapists, occupational therapy assistants, etc. - the need to know more about mental and behavioral health, including screening and treatment [12-16]. It has been proposed that PTs use validated tools to screen for depression and either attempt treatments for those on the lower end of the depression scale, or refer patients on the higher end of the scale to a behavioral health provider as needed [17,18]. Therapeutic treatments may include mindfulness, meditation, exercise, pain neuroscience education, etc [16,19,20]. In 2020, amid the COVID-19 pandemic, the American Physical Therapy Association put forth a position statement supporting PT's ability to evaluate and treat behavioral and mental health disorders, including depression [21]. This mandate aligns with previous calls to PT to embrace a true biopsychosocial model, screen for depression and develop therapeutic interventions for depression [13-15]. This shift in practice of taking on mental and behavioral health issues is new for PTs and it is unknown how they will respond to this professional and clinical mandate and furthermore, how it may impact their attitudes towards patients with comorbid behavioral

health issues. This pilot study aimed to assess rehabilitation provider's knowledge and attitudes towards patients with mental and behavioral health issues, following a training session on behavioral health.

Methods

Study Design

A private practice PT group in South Dakota and Minnesota gave permission for this training program and research review board approval was obtained from Southwest Baptists University, Bolivar MO. The study was a quality improvement project with pre, immediate-post and 3-month follow-up data collection from a convenience sample of therapist attending the training sessions.

Participants

Internal communication in the PT group was sent out, recruiting clinicians interested in mental and behavioral health to sign up and participate for free in a training session on mental and behavioral health. The sessions were open to all licensed healthcare providers including PT, PT assistants, occupational therapists, occupational therapy assistants, athletic trainers, speech-language pathologists as well as graduate students in these disciplines doing clinical rotations. All participants had to be willing and able to complete three survey packets before, immediately after and at 3-month follow-up. Additionally, they had to commit to attending both training sessions. Participants had to be fluent in writing and reading the English language.

Educational Session

The sessions were designed based on current best-evidence for mental and behavioral health in rehabilitation [14, 22-28]. The content included three 90-minute educational sessions (Table 1) for a total of 4.5 hours.

The presentations were developed by an interdisciplinary expert cohort consisting of a PT, occupational therapist and clinical psychologist. The content used in this presentation, with permission, was an abbreviated version of an 8-month post-graduate certification on mental and behavioral health (www.evidenceinmotion.com). The presenter was a PT with 24 years of clinical experience, a pain specialists and pain fellow and advanced, post-graduate training in mental and behavioral health. The original plan was for in-person training, but in lieu of COVID-19, the three sessions were delivered online via Zoom™.

Session 1	Session 2	Session 3
Introduction	Depression	Creative therapies
Welcome	Anxiety	— Writing
Trauma definition	Post-traumatic stress disorder	— Art / craft
Pain neuroscience education	Adverse childhood events	— Music
Words that heal / harm	Acute versus chronic brain	— Dance
Therapeutic alliance	Psychology treatment	Nutrition
Goal setting	— Talk therapy	Mindfulness
Sleep	— Somatic experience	Meditation
	— Eye movement desensitization and reprocessing	Breathing
	— Brain spotting	Movement therapies
	— Neurofeedback	— Yoga
	— Prolonged exposure	— Pilates
		— Feldenkrais
		— Tai-chi
		Additional resources

Table 1: Content of the educational sessions.

Outcome measures

At initial intake, attendees completed a demographic survey. Internally, employee identification numbers were used to match pre, post and follow-up responses. The presenter only had access to the employee identification numbers, not names, thus blinding her to the attendee's identity. Demographic data collected included discipline (PT, PTA, OT, COTA, ATC, SLP and student), years of clinical experience, highest earned degree, level of pain science education, age and gender. Additionally, and specific to this study, attendees also had to report on:

- Have you previously taken any courses related to depression?
- Have you previously taken any courses related to behavioral health/mental health?
- Have you previously taken any courses related to anxiety?
- Percent of your daily practice in which you are treating patients with chronic pain?
- Are you currently experiencing any chronic pain?
- Have you previously experienced any chronic pain?
- Do you have a history of any mental health issue?
- Do you routinely screen for mental health conditions?

Three questions were asked prior to the initial session, immediately following the final session and at 3-month follow-up. These questions pertain to mental and behavioral health and pain science, using a Likert Scale anchored with “very comfortable” on the one end (scored at a maximum of

5) and “very uncomfortable” on the other end (scored as 0):

- How comfortable are you treating someone with a diagnosis of depression?
- How comfortable are you treating someone with a diagnosis of anxiety?
- How comfortable are you treating someone with a diagnosis of trauma?

Mental health-related knowledge was measured with the Mental Health Knowledge Schedule (MAKS) [29]. Part A comprise six items covering stigma-related mental health knowledge areas (help-seeking, recognition, support, employment, treatment and recovery) and Part B consist of six items that enquire about classification of various conditions as mental illnesses [30]. Overall test-retest reliability of the MAKS is 0.71 (Lin's concordance statistic) and the overall internal consistency among items is 0.65 (Cronbach's alpha). The total score is calculated so that higher MAKS scores indicate greater knowledge.

Questions 1-6: Instructions: For each of statements 1- 6 below, respond by ticking one box only (ranging from agree strongly to don't know)

1. Most people with mental health problems want to have paid employment.
2. If a friend had a mental health problem, I know what advice to give them to get professional help.
3. Medication can be an effective treatment for people with mental health problems.
4. Psychotherapy (e.g., talking therapy or counseling) can be an effective treatment for people with mental health

problems.

5. People with severe mental health problems can fully recover.
6. Most people with mental health problems go to a health care professional to get help.

Instructions: For items 7-12, say whether you think each condition is a type of mental illness by ticking one box only (ranging from agree strongly to don't know).

7. Depression
8. Stress
9. Schizophrenia
10. Bipolar disorder (manic depression)
11. Drug/substance addiction
12. Grief

Statistical analysis

Microsoft Excel™ was used to enter data into

spreadsheets. All observations were kept from the sample, with no modifications to the original data. Excel was used to explore descriptive statistics of the sample such as mean and standard deviation of demographics variables. RStudio Cloud version 1.4 of RStudio IDE was used to calculate the means of Personal Comfort variables, as well as the means of MAKs responses. Two-sided, paired sample t-tests in R were used to evaluate any differences between MAKs responses before, immediately after, and in follow-up.

Results

Participants

Overall, 14 participants attended all the sessions and completed the required forms before, immediately after and 3-months later (Table 2).

Measure	Subjects (n = 14)
Female	13 (92.9%)
Age group:	
• 20-25	2 (14.2%)
• 26-35	7 (50%)
• 36-45	2 (14.2%)
• 46-55	2 (14.2%)
• 56-65	1 (7.4%)
Discipline:	
• Physical therapist	6 (42.9%)
• Physical therapist assistant	5 (35.8%)
• Occupational therapist	1 (7.1%)
• Occupational therapist assistant	1 (7.1%)
• Student	1 (7.1%)
Clinical experience:	
• 0-2 years	3 (26.2%)
• 2-5 years	1 (7.1%)
• 5-10 years	3 (26.2%)
• 10-15 years	2 (14.3%)
• 15-20 years	3 (26.2%)
• > 20 years	2 (14.2%)
Highest degree:	
• Student	1 (7.1%)
• Associates	2 (14.2%)
• Bachelors	5 (35.8%)
• Masters	1 (7.1%)

• Doctorate	5 (35.8%)
Have you previously taken any courses related to depression?	Yes = 2 (14.2%)
Have you previously taken any courses related to behavioral health/mental health?	Yes = 3 (21.4%)
Have you previously taken any courses related to anxiety?	Yes = 2 (14.2%)
Percent of your daily practice in which you are treating patients with chronic pain?	
• 0-25%	7 (50%)
• 26-50%	5 (35.8%)
• 51-75%	0 (0%)
• 76-100%	2 (14.2%)
Are you currently experiencing any chronic pain?	Yes = 0 (0%)
Have you previously experienced any chronic pain?	Yes = 0 (0%)
Do you have a history of any mental health issue?	Yes = 4 (28.6%)
Do you routinely screen for mental health conditions?	Yes = 3 (21.4%)

Table 2: Demographic information for the participants.

Clinical comfort

Figure 1 show the three clinical questions pertaining to a clinician's comfort in treating various diagnoses associated with mental and behavioral health. Immediately following the educational session, all diagnoses shifted to a higher

level of comfort, but trauma was the only one reaching significance ($p = 0.047$), compared to depression ($p = 0.068$) and anxiety (0.055). At 3-month follow-up, none of the diagnoses shifted significantly from prior to the educational sessions (depression $p = 0.068$, anxiety $p = 0.151$ and trauma $p = 0.057$) (Figure 1).

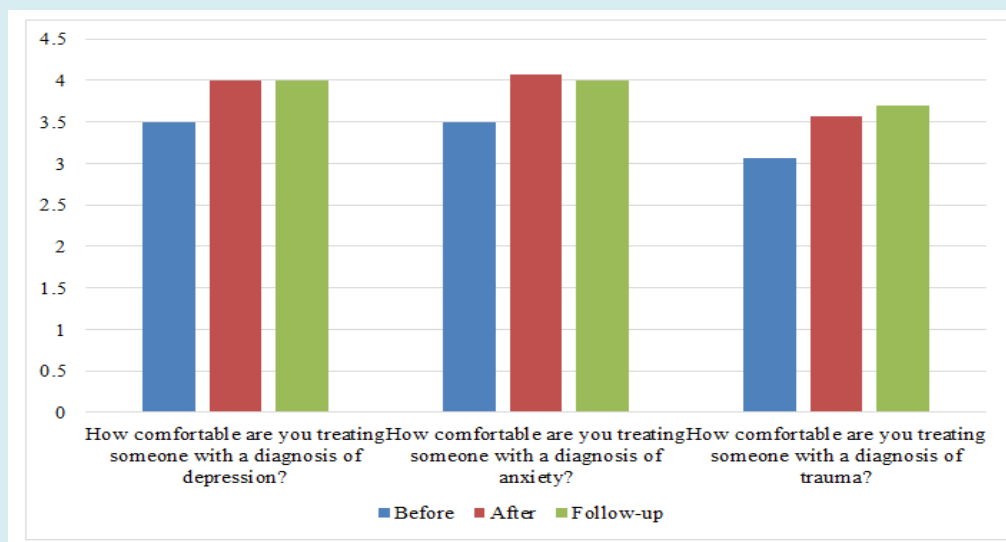
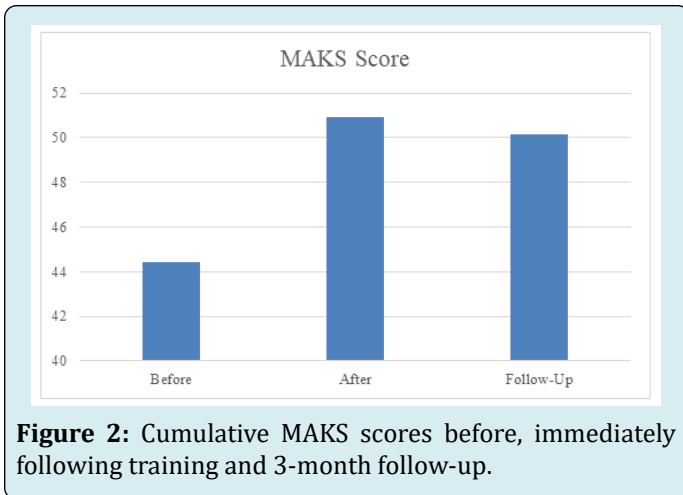


Figure 1: Clinical comfort with treating diagnoses of depression, anxiety and trauma before, immediately following and at follow-up.

Mental Health Knowledge Schedule

Figure 2 shows the overall, combined scores of the MAKs before, immediately after and at follow-up. Immediately

following the training, the MAKs score improved significantly ($p = 0.008$), whereas a comparison of pre- and follow-up scores at 3-months showed a significant shift ($p = 0.011$) (Figure 2).



Discussion

This exploratory study is the first known study to deliberately try and alter rehabilitation provider's comfort with treating and knowledge about behavioral and mental health. An online, abbreviated training session on behavioral and mental health for rehabilitation providers is able to increase knowledge of mental health, but not clinical comfort with various behavioral and mental health issues.

Mental and behavioral health issues are ever-increasing and not confined to only mental and behavioral health providers [1,2]. Traditionally, psychiatrists, psychologists, licensed counsellors, etc., typically evaluate and treat mental and behavioral health issues. With increased prevalence of mental and behavioral issues such as depression, anxiety, adverse childhood events, trauma, etc., providers such as family physicians, emergency room physicians, surgeons and now rehabilitation providers find themselves with an increased need to understand mental and behavioral health [10,24]. This implies that healthcare providers, including rehabilitation providers have a fundamental knowledge of these disorders. The results from this study show that knowledge can be positively impacted immediately following the training session and still be intact 3 months following training. Increased knowledge is a good first step, as it often leads to a variety of potential positive shifts over time as research and education in this area expands. For example, in lieu of the pain and opioid epidemic, it was established that PTs have a fundamental lack of knowledge related to modern pain science [31,32]. Original studies, in line with the current paper's design, showed that pain neuroscience education delivered to rehabilitation providers similarly increased knowledge of pain [32,33], which has since been tied to positive shifts in attitudes and beliefs regarding persistent pain, self-reported clinical practice patterns and even superior clinical outcomes (Louw, et. al 2022 – submitted for publication) [34,35]. The results from this study, albeit

a small heterogeneous sample, is an important first step in helping rehabilitation providers fulfill their place in the screening and management of a subgroup of patients with mental and behavioral health issues. Additionally, it should be recognized that this training was done via online delivery of the education, which may be meaningful as its positive effects could be replicated at scale versus in-person training alone [36].

The study failed to show any long-term meaningful shifts in self-reported comfort with treating patients presenting with depression, anxiety or trauma. This result is contrary to what has been seen in pain science where increased knowledge has been shown to change beliefs and attitudes regarding patients experiencing chronic pain [33,34]. It can be argued that the shift in pain was positive given the fact that pain is such a prevalent issue in rehabilitation. Even without formal training in modern pain science, all therapists are trained in fundamentals of pain, including evaluation, screening and management, and that updating their current beliefs and attitudes were easier since they already had a baseline knowledge [37]. In contrast, entry-level occupational therapy curriculum provides significant exposure to behavioral medicine, but not PT. In fact, the current International Association of the Study of Pain's new PT school guidelines, which is to take effect for entry-level PT programs in 2022, only now calls for inclusion of behavioral and mental health issues. This argument is underscored by the fact that only three of the participants (21%) prior to this presentation have taken a continuing education course on behavioral and mental health and even fewer have taken courses on depression (14%) or anxiety (14%). It is thus argued that increased knowledge, exposure clinically and changes to entry-level education may over time allow for increased clinical comfort in assessing and treating patients with mental or behavioral health issues.

The study contains numerous limitations. First, there is no control group to compare the participants who were trained or not trained. This pre- and post-study design, however, is often used in exploratory studies to test viability of larger scaled projects. Second, the sample size is very small and confined to a regional clinical group. Larger, more elaborate studies should be undertaken to extrapolate these findings, including a larger geographical, socioeconomic and cultural footprint.

Conclusion

An online training session is able to shift mental health-related knowledge in rehabilitation providers but not comfort with treating depression, anxiety and trauma. Additional research is needed to extrapolate and expand on the results of this pilot study.

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