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The Role of Paraprofessionals in the Mental Health Structure of India

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Thesis Summary

Mental health coverage in low-middle income countries is sparse, resulting in a treatment gap between those who need care and those who receive it. In India, the gap is significant, culminating in a public health crisis for the country. This paper analyzed the use of mental health paraprofessionals, defined as individuals with no previous professional mental health training, to mitigate this problem in India. A narrative review was conducted to assess paraprofessional interventions by treatment setting context, treatment delivered, treatment model, and client outcomes. The study found that paraprofessional led interventions were suitable for treating mental health disorders in India.

Abstract

The mental health treatment gap in India is part of a growing public health crisis, with over 95% of those in need of services never receiving them. Over 197 million Indians suffer from at least one diagnosable mental health disorder, and this number continues to grow given the treatment gap. The treatment gap is a result of four major factors: lack of government support, stigma, limited treatment facilities, and dearth of professionals able to provide treatment. The current study aimed to analyze several factors of paraprofessional led mental health interventions including setting, treatments delivered, treatment models, and client outcomes. A narrative literature review was conducted synthesizing the current available research on paraprofessional mental health interventions in India. Paraprofessionals were found to be a plausible solution to mitigating the treatment gap for several reasons. They were able to conduct treatment in multiple settings, deliver proven treatments for multiple disorders, reduce stigma surrounding mental health, and add to the workforce. These findings provide support for paraprofessional led interventions and their potential for treating the Indian population.

The Role of Paraprofessionals in the Mental Health Structure of India

Mental illness accounts for nearly 10% of the global burden of disease (Murray & Jordans, 2016). Within the 20-year timespan between 1990 - 2010, the global burden of mental, neurological, and substance use disorders increased by 41% (Patel et al., 2016). For example, major depressive disorder, epilepsy, and alcohol dependence are among the most common disorders that present the greatest burden (Whiteford et al., 2015). For low-to-middle-income countries (LMICs), the impact of mental disorders is much more severe. Defined, LMICs, such as Pakistan, are countries with a gross national income per capita between $1,036 - $4,045 (Hofman et al., 2005). This contrasts with high-income countries (HIC), such as the United States, which have a gross national income per capita of $12,536 or more (Hofman et al., 2005). Evidently, LMICs such as those in Northern Africa and the Middle East have a higher prevalence of major depressive disorder compared to high-income countries (Whiteford et al., 2015).

India is a LMIC that has garnered recent interest because of its large population and emerging mental health crisis. In 2017, India had a population of about 1.34 billion, with 197.3 million people, or 14.7% of the population, suffering from at least one mental disorder (Sagar et al., 2020). Of those afflicted with mental disorders, about 45.7 million had a depressive disorder and 44.9 million had an anxiety disorder (Sagar et al., 2020). India also has a youth population of 434 million, and over 50 million have a diagnosable mental disorder (Hossain & Purohit, 2019). However, these figures likely underestimate the actual prevalence, as many people with impairment from mental health-related causes remain undiagnosed (Hossain & Purohit, 2019).

Despite the growing mental health crisis in India, there is great unmet mental health needs, or a treatment gap. The term treatment gap refers to the lack of mental health coverage or the difference between those who could benefit from mental health services and those who are

actually receiving them. Globally, the treatment gap can be up to or exceed 75% for many common mental disorders, such as depression and anxiety (Murray & Jordans, 2016). In India, these numbers are even more disheartening as up to 95% of Indians who could benefit from services do not receive them. With respect to Indian youth, the treatment gap climbs to over 99%, inferring that less than 1% of youth who are suffering from a mental disorder in India ever receive treatment for the disorder (Hossain & Purohit, 2019). This is concerning, given that unmet mental health needs in childhood have been shown to progress and persist into adulthood (Roy et al., 2019), and have been associated with a range of poor outcomes such as early death and poverty (Luitel et al., 2015).

Although there is a growing prevalence of mental disorders, the treatment gap in India continues to expand due to many systemic barriers to treatment. Firstly, mental health issues in India are rarely acknowledged by the government as a public health issue, as reflected by the lack of a comprehensive mental health care system (Roy et al., 2019). Secondly, the stigma surrounding mental health is pervasive within Indian society. Those with a mental disorder are publicly shamed by inner and outer social networks and are subject to isolation and discrimination which further exacerbate mental health symptoms (Shidhaye & Kermode, 2013). Moreover, in certain Indian cultures, mental disorders are superstitiously believed to be a punishment as a result of sinning (Shidhaye & Kermode, 2013). Thirdly, mental health care is often limited to government-funded primary care centers, especially for the economically disadvantaged (Murray & Jordans, 2016). These primary care centers have been found to show poor detection rates of mental disorders, with only one in three clinically significant cases being identified and thus being served (Patel et al., 2010). The physical distance to these clinics and the waitlist time to receive services further contribute to access barriers of these primary care centers

(Hossain & Purohit, 2019). Finally, there is a significant shortage of trained mental health professionals to address the total mental health needs in India. Currently, there are only 1.93 trained mental health workers for every 100,000 people in India, in comparison to the 71.7 professionals per 100,000 people found in high-income countries (Michelson et al., 2020).

Of the barriers mentioned above, there has been deliberate attention to the dearth of trained mental health professionals in India. To address this issue, one possible solution is the use of paraprofessionals, also referred to as lay-health counselors, lay professionals, or community health workers. Mental health paraprofessionals are defined as individuals with no previous professional mental health training or background (e.g., licensed practitioner after receiving accredited graduate education) who are employed to help treat and manage common mental health disorders (Patel et al., 2011). In addition, these paraprofessionals are oftentimes direct members of the communities they serve. The use of paraprofessionals may be particularly advantageous to LMICs such as India because of their ability to address many different treatment barriers unique to low-resource contexts. For example, they would add to the presently limited workforce size capable of addressing mental health concerns (Patel et al., 2011). Paraprofessionals would also be able to operate within their own communities, eliminating any barriers related to travel or physical distance (Patel et al., 2011). Moreover, because paraprofessionals are typically a part of the communities they serve and have largely been accepted by the communities, they may reduce stigma surrounding mental disorders and seeking mental health treatment in said communities (Michelson et al., 2020).

Studies involving mental health paraprofessionals have already been conducted in many other LMICs with similar contexts to India. For instance, the Thinking Health Project (THP) exemplifies how paraprofessionals can be leveraged to address mental health needs in Pakistan

(Rahman et al., 2008). This study harnessed the use of paraprofessionals to treat perinatal depression in pregnant women aged 16 - 45 in rural Pakistan. The study found that paraprofessionals, who were trained to deliver a cognitive behavior therapy-based intervention, were effective in reducing rates of depression (Rahman et al., 2008). In Uganda, another study examined the efficacy and effectiveness of paraprofessionals delivering interpersonal psychotherapy in order to treat depression in adult populations (Bolton et al., 2003). Results indicated the trained paraprofessionals were able to effectively deliver interpersonal psychotherapy and improve clinical depression outcomes in their target population over time (Bolton et al., 2003). These studies demonstrate that paraprofessionals are not only capable of delivering evidence-based mental health treatments after receiving training, but they are also effective at treating clinically-impaired populations and improving clinical outcomes in LMICs.

Preliminary studies have shown great potential for the effectiveness of paraprofessionals on mental health outcomes within India (Rajaraman et al., 2012). However, a synthesis of the existing literature on paraprofessionals in India has not yet been conducted. As the treatment gap in India continues to widen, it is imperative to explore effective and sustainable methods, such as the use of paraprofessionals, in which mental health needs in youth can be addressed.

The current study aims to synthesize the literature on mental health paraprofessionals in India into a narrative review. Specifically, this narrative review that focuses exclusively on India has four primary goals: (1) describe the settings in which paraprofessionals deliver mental health services, (2) describe the mental disorders addressed and treatments used by paraprofessionals, (3) describe the mental health treatment models paraprofessionals operate within, and (4) describe the efficacy of paraprofessionals in treating mental disorders.

Methods

This study used a comprehensive literature search method to identify relevant articles on mental health professionals in India.

Inclusion and Exclusion Criteria

In order for an article to be included in this study, it had to meet several identified criteria. (1) The article had to be published in a peer-reviewed scholarly journal. Pieces such as dissertations, theses, and book chapters were excluded. (2) The article had to have conducted a study that took place in India. Articles were excluded if they were conducted exclusively in any other country or were otherwise inapplicable to the present context of India. (3) The article had to focus on mental health policy, treatment, or implementation of services. An article was excluded if it did not focus on mental health, such as if it focused on paraprofessionals treating medical ailments. (4) The articles also had to study the use of paraprofessionals. Articles were excluded if they focused solely on treatment conducted by professionals.

Search Process

The literature search began October 2019 and concluded in October 2020. The sources were found using online databases available through the University of South Carolina's Thomas Cooper Library. The particular databases used include GoogleScholar, PubMed, and PsycINFO. These databases were chosen because of their relevance to the research topic. A Boolean search term method was used for all three databases to identify articles. Namely, various combinations of the following search terms were used: 'India AND mental health', 'India and mental health AND children', 'PRIDE AND mental health', 'lay health counselors', 'lay health counselors AND India', 'collaborative stepped care', 'collaborative stepped care AND India', 'LMIC AND

mental health', 'mental health AND India AND scalability'. More targeted searches on specific authors (e.g., Bruce Chorpita, Vikram Patel, Sudipto Chatterjee) were also utilized.

Results

Using the search strategy described, 12 studies were identified and included in this narrative review. In six studies (50%), the participants in the population treated by paraprofessionals were youth aged 11 to 17 (Malla et al., 2019; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Rajaraman et al., 2012; Shinde et al., 2017). In the remaining six studies (50%), the population treated were adults over the age of 17 (Balaji et al., 2012; Chowdhary et al., 2016; Mendenhall et al., 2014; Patel et al., 2010, 2011; Weobong et al., 2017).

Aim 1: Describe the Settings Paraprofessionals Deliver Treatments in

The studies were conducted in several Indian states and territories including Goa (Balaji et al., 2012; Chowdhary et al., 2016; Patel et al., 2010, 2011; Rajaraman et al., 2012; Weobong et al., 2017), Maharashtra (Balaji et al., 2012), Tamil Nadu (Balaji et al., 2012), Kashmir (Malla et al., 2019), Madya Pradesh (Mendenhall et al., 2014), Bihar (Shinde et al., 2017), and Delhi (Michelson et al., 2020a, 2020b; Parikh et al., 2019). Most studies (n = 10, 83%) were conducted in both peri-urban and rural settings (Balaji et al., 2012; Chowdhary et al., 2016; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Patel et al., 2010, 2011; Rajaraman et al., 2012; Shinde et al., 2017; Weobong et al., 2017). The remaining two studies (17%) described paraprofessionals delivering treatments in exclusively rural settings (Malla et al., 2019; Mendenhall et al., 2014).

Treatments were administered by paraprofessionals to clients in a variety of different clinical settings. Four studies (31%) detailed paraprofessionals delivering services in healthcare facilities (Chowdhary et al., 2016; Patel et al., 2010, 2011; Weobong et al., 2017). Of those studies, two (50%) took place in public government or private primary care centers (Patel et al.,

2010, 2011). Another setting in which paraprofessionals treated Indian youth were government-run secondary schools (*n* = 5, 42%) (Michelson et al., 2020a, 2020b; Parikh et al., 2019; Rajaraman et al., 2012; Shinde et al., 2017). Three (60%) of these studies took place in schools that were located in New Delhi (Michelson et al., 2020a, 2020b; Parikh et al., 2019), while one study (20%) took place at a secondary school located in Bihar (Shinde et al., 2017), and another (*n* = 1, 20%) in secondary schools of Goa (Rajaraman et al., 2012). Paraprofessionals also operated within community settings (*n* = 3, 25%), such as local religious centers (Balaji et al., 2012; Malla et al., 2019; Mendenhall et al., 2014).

Aim 2: Describe Mental Disorders Addressed and Treatments Used by Paraprofessionals

Two studies (17%) investigated paraprofessional's treatment of depressive disorders, including major depressive disorder (Chowdhary et al., 2016; Weobong et al., 2017). One study (8%) solely described the treatment of schizophrenia in adults (Balaji et al., 2012). Most of the studies (*n* = 9; 75%) described paraprofessionals treating common mental disorders broadly, without specification of clinical diagnoses (e.g., general wellbeing or level of disability) (Malla et al., 2019; Mendenhall et al., 2014; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Patel et al., 2010, 2011; Rajaraman et al., 2012; Shinde et al., 2017).

Paraprofessionals employed a variety of different mental health interventions to treat their clients. As recommended by the World Health Organization (Weobong et al., 2017), all studies utilized an evidence-based treatment to address youth mental health concerns: psychotherapy or pharmaceutical treatment (Balaji et al., 2012; Chowdhary et al., 2016; Malla et al., 2019; Mendenhall et al., 2014; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Patel et al., 2010, 2011; Rajaraman et al., 2012; Shinde et al., 2017; Weobong et al., 2017). Within the realm of psychotherapy, several studies described a transdiagnostic approach (*n* = 3; 25%),

which address a range of mental disorders or comorbid disorders (e.g. depression and anxiety) (Michelson et al., 2020a, 2020b; Parikh et al., 2019). Two studies (17%) trained paraprofessionals on behavioral activation as a strategy to treat depression by encouraging clients to engage in positive behaviors and thus increase self-efficacy in addressing their concerns (Chowdhary et al., 2016; Weobong et al., 2017). Interpersonal therapy was also implemented by paraprofessionals in seven studies (58%) to manage interpersonal and relationship problems (Balaji et al., 2012; Malla et al., 2019; Mendenhall et al., 2014; Patel et al., 2010, 2011; Rajaraman et al., 2012; Shinde et al., 2017). Pharmaceutical treatments as a supplement to psychotherapy were also used by paraprofessionals to treat mental disorders. Antidepressants, such as fluoxetine, were prescribed by physicians and medication use was monitored by the paraprofessionals (n = 2; 17%) (Patel et al., 2010, 2011).

Aim 3: Describe the Mental Health Treatment Models Paraprofessionals Operate Within

Paraprofessionals provided services under a collaborative stepped care model in many studies (n = 9, 75%) (Balaji et al., 2012; Malla et al., 2019; Mendenhall et al., 2014; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Patel et al., 2010, 2011; Rajaraman et al., 2012). Under this model, paraprofessionals work directly with clients and are supervised by a primary care physician. Paraprofessionals and physicians are also supported by specialists or psychiatrists who intervene in severe cases or provide consultation. One study (8%) used a community collaborative stepped care approach in which family members of clients were actively involved in treatment decisions and activities, such as the monitoring of client progress (Balaji et al., 2012). Another study (n = 1, 8%) used a variation of the stepped care model where the paraprofessional was supported by a psychiatrist, psychologist, and social worker (Malla et al., 2019).

Other studies (*n* = 3, 25%) described a traditional individual treatment model in which paraprofessionals provided one-on-one care to a client (Chowdhary et al., 2016; Shinde et al., 2017; Weobong et al., 2017). One study (8%) involved a group life-skills class along with individual treatment by a paraprofessional, which was supervised by an advisory board and a psychologist by request (Shinde et al., 2017).

Aim 4: Describe the Efficacy of Paraprofessionals in Treating Mental Disorders

Client outcomes were also measured using a variety of methods. Most of the studies however used either strictly quantitative (*n* = 6; 50%) (Chowdhary et al., 2016; Malla et al., 2019; Michelson et al., 2020b; Patel et al., 2010, 2011; Weobong et al., 2017) or strictly qualitative (*n* = 2; 17%) methods (Balaji et al., 2012; Shinde et al., 2017) to evaluate client outcomes. Four studies (33%) used a mix of quantitative and qualitative client outcome measures (Mendenhall et al., 2014; Michelson et al., 2020a; Parikh et al., 2019; Rajaraman et al., 2012). The most commonly used quantitative measures were the Clinical Interview Schedule-Revised (Patel et al., 2010, 2011) which is a measure used to diagnose common mental disorders (CIS-R; Lewis et al., 1992) and Hopkin's Symptom Checklist (Chowdhary et al., 2016; Weobong et al., 2017) which measures symptoms of anxiety and depression (Parloff et al., 1954). Of the studies that used quantitative methods to evaluate changes in client outcomes, all ten (100%) found that paraprofessionals significantly reduced the severity of symptoms of mental disorders and improved functioning (Chowdhary et al., 2016; Malla et al., 2019; Mendenhall et al., 2014; Michelson et al., 2020a, 2020b; Parikh et al., 2019; Patel et al., 2010, 2011; Rajaraman et al., 2012; Weobong et al., 2017). Of the studies that described qualitative outcomes, all six (100%) structured interviews found that clients were generally satisfied with treatment from paraprofessionals and reported positive progress in reference to their experience of mental

disorders (Balaji et al., 2012; Mendenhall et al., 2014; Michelson et al., 2020a; Parikh et al., 2019; Rajaraman et al., 2012; Shinde et al., 2017).

Discussion

The purpose of the study was to assess the use of paraprofessionals in terms of the settings they operated within, the treatments they delivered, the treatment models they operated within, and finally if they were effective in mental health treatment.

Many paraprofessionals worked within healthcare facilities, namely primary care centers. This is unsurprising given that most individuals living in LMICs receive mental health treatment from primary care centers (WHO, 2001). Treatment conducted by paraprofessionals in these primary care centers proved to be effective in treating mental disorders. Furthermore, paraprofessionals were able to positively identify more mental disorders in clients when compared to usual care. A possible explanation for this is that paraprofessionals were trained specifically in mental disorder identification and treatment, in comparison to primary care physicians who may have knowledge in other non-mental health related topics. This finding is significant in that it means that a greater number of paraprofessionals may translate to greater detection and thus reducing treatment gaps.

Public primary care centers found much more success in utilizing paraprofessionals than private primary care centers. While public centers must normally accommodate a much larger caseload, resulting in less time and less privacy between the physician and the client, paraprofessionals were able to meet with clients for extended periods of time to address multiple concerns in a much more private manner, similarly to the normal care from private primary care centers (Patel et al., 2010). Privacy was a major concern for clients, who feared the judgement and shame that may come from the community if their disorder was revealed. Treatment in

community settings was the most accessible to clients. The proximity to the clients eliminated many of the economic barriers associated with treatment such as transportation costs and time away from work. Paraprofessionals were also viewed as a part of the community by operating within their space, allowing for the community to view mental disorders and their treatment as more normal. Clients were also more willing to open up to paraprofessionals in the more informal setting of a community rather than a medical facility, likely because the setting was more familiar and thus relaxing. Schools were also explored as a setting where paraprofessionals could treat youth. This setting was particularly effective for youth as they spend most of their time during the day in schools, making treatment from paraprofessional most accessible to them when delivered there. Moreover, paraprofessionals were able to build rapport within the school community more easily due to support from other school staff and the familiarity of their presence as the study proceeded (Rajaraman et al., 2012).

Paraprofessionals took advantage of evidence-based treatments, which according to the American Psychological Association are treatments that "integrate the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (APA, 2008). Using evidence-based treatments enables paraprofessionals to manage their clients using proven methods that lead to the best results. It is still unclear which evidence-based treatments are the most applicable to LMICs such as India, creating a need for additional research on the potential success of specific evidence-based treatments. An interesting method of treatment that most paraprofessionals utilized was a transdiagnostic approach. The transdiagnostic approach combined multiple overlapping elements of disorder-specific treatment, such as addressing intrusive thoughts in managing anxiety disorders and depression (Parikh et al., 2019). Delivering treatments in this way was extremely feasible for paraprofessionals. Many common mental

disorders are comorbid, and the transdiagnostic approach equipped paraprofessionals to treat several disorders efficiently and effectively. Treatment manuals were also developed to supplement paraprofessional delivered treatment. Paraprofessionals were given their own treatment manuals to provide guidance on delivering treatments and methods to supplement face-to-face counselling. These manuals were adapted for the skill level of the paraprofessionals, using plain language, illustrations, and example exercises. The integration of treatment manuals into transdiagnostic care will be key to future paraprofessional interventions.

The collaborative stepped care model was a treatment management model that paraprofessionals operated within to provide services. In multiple studies, paraprofessionals attributed the success of their treatment to the support provided by this model. The paraprofessionals were supervised by primary care physicians, who met with them on a regular basis to discuss cases and challenges that come up in treatment. The physicians are then further supported by mental health specialists or psychiatrists, who advise physicians on severe cases and treatment trajectories. The supervision protocols kept paraprofessionals from feeling lost when treating clients and made expert advice accessible. Some studies also integrated the community into their models, which empowered them and increased community trust in the paraprofessional led treatment. This further reduced community stigma surrounding mental disorders and treatment, making paraprofessional-led interventions even more effective. Further research needs to be done to examine how collaborative stepped care models can be optimized in different settings in India (e.g., rehabilitation centers).

Paraprofessional led treatment interventions were effective at improving client mental health outcomes according to several different measures. Clients reported improvements in the severity of their symptoms and some even had complete remission. Common mental disorders

specifically saw vast improvements and referrals to treatment by other community members also increased. Clients also had positive remarks on how treatment from paraprofessionals impacted their life, for example "[The paraprofessional] taught me study skills and gave me a time table in writing so I followed the time table and I passed and now I am in 10th standard." (Rajaraman et al., 2012). Stigma was also reduced considerably by paraprofessional treatment deliveries. In comparison to mental health professionals and physicians, paraprofessionals were much more likely to come from the same or similar communities as the clients. As a result, more clients sought treatment for their mental disorders and saw quality of life improvements. Future research still needs to examine how much improvement clients see compared to other forms of treatment, especially when considering specific disorders such as depressive or anxiety disorders.

Limitations

There were several notable limitations to the present study that limited the conclusions that could be drawn. First, this study included a small sample size of articles. However, this small number reflects the current state of the literature. Second, the articles included in the study did not use consistent methodologies, especially in regard to evaluating client outcomes. Despite the inconsistencies, accurate conclusions were drawn using the supplementary discussions from the articles as well as qualitative reports collected. Finally, the data for most of the articles were self-reported from the clients, collected using surveys, questionnaires, and interviews. This introduces bias as self-reported data can be influenced by the client's mood at time of data collection, memories, personal relationship with the paraprofessional, and more. To combat this the articles used large sample sizes and reported on general trends, minimizing the effect of this bias.

Future Directions

Future research should focus on scaling up paraprofessional interventions to reach larger populations by collaborating with the community and its leaders. Key community stakeholder involvement in paraprofessional led treatment also needs to be further explored for its feasibility and impact on client outcome. Research should also be conducted on current government policy effectiveness and suggestions for government led change in mental health treatment and health care structure. Paraprofessional involvement in the mental health structure as dictated by set government standards also could be explored as a method to standardizing paraprofessional led treatment. Finally, research needs to focus on paraprofessional interventions on youth mental health outcomes. Little to no research has been done on this population, and as youth have different needs and capabilities in comparison to adults, interventions that are successful in treating adults may not be applicable to youth.

Conclusion

There is sufficient evidence proving that the use of paraprofessionals to treat mental health disorders is a plausible and effective solution to the mental health treatment gap. It is imperative that India take steps to implement feasible interventions such as these to prevent a public health crisis in the future, and to aid those that are currently suffering. Paraprofessionals are a simple, accessible way to address this issue while still providing quality care.

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