Sports Psychiatry Interventions for Improving the Mental Health of Adolescent Girls and Women in Developing Countries



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INTRODUCTION

Adolescent girls and women in developing or low-and-middle-income countries (LMICs) disproportionately experience challenging social, economic, and cultural conditions that put them at risk for emotional distress and psychiatric illness [1, 2, 3]. The incidence of major depressive disorder rises sharply after puberty, with female adolescents experiencing rates roughly double those of their male counterparts [4]. Studies from LMICs show that female adolescent (and adult) survivors of intimate partner violence are at increased risk not only for depression but also for anxiety, post-traumatic stress disorder (PTSD), substance abuse, high-risk sexual activity, and suicidality [2, 5, 6, 7].

Depression is twice as common in women than in men across diverse societies and social contexts [7]. Approximately 25% (1 in 4) of women in LMICs experience depression during pregnancy or within the first year after childbirth. In several regions categorized as LMICs, such as Tropical Latin America, anxiety disorders represent the single heaviest burden of mental illness among women of childbearing age. Anxiety affects roughly 15.6% of women before giving birth and rises to nearly 20% in the postpartum period across low- and lower-middle-income regions. [9]. PTSD is heavily prevalent among women living in fragile, conflict-affected, or humanitarian settings within LMICs. Severe trauma stems from heightened exposure to regional conflicts, displacement, and systemic domestic or localized violence. [10, 11]. The disproportionately high prevalence of psychiatric conditions among women in LMICs is heavily driven by particular structural and social determinants [10, 12, 13] which include chronic poverty, severe food insecurity, lack of education, high unemployment rates, inadequate psychiatric infrastructure, and stigma.

Sports psychiatry (SP) involves the study of how psychological factors influence and are influenced by sport and other physical activity [14,15, 16, 17]. Sports psychiatrists (SPs) are trained to help athletes and nonathlete individuals (e.g., adults, children, disabled persons, seniors, and others) understand the connection between physical activity and mental health and utilize SP interventions to achieve effective participation, personal satisfaction, and personal development [16, 17, 18]. Interventions used collectively by SPs include medication therapy, psychological skills training or PST (e.g., goal setting, mental imagery, meditation, mindfulness, progressive muscle relaxation, deep breathing, self-talk), other ”talk” or psychotherapies (e.g., cognitive-behavioral therapy or CBT; interpersonal therapy or IPT), and, usually for nonathlete individuals, the prescription of physical activity or PA (e.g., exercise, dance, yoga or sports). Adapted forms of each these interventions have been implemented in LMICs to improve the mental health of adolescent girls and women who experience psychological distress or illness.

Because SPs are particularly knowledgeable and skilled in providing such a broad range of interventions, SPs may be an important asset to mental health capacity building initiatives which strive to increase access to care and improve the mental health of at-risk girls and women in LMICs. The objective of this narrative review is to outline interventions provided by SPs that have been used to improve the mental health of adolescent girls and women in LMICs and to highlight the need for further investigation of SPs as a potential asset in improving the mental health of at-risk girls and women in LMICs.

METHOD

Inclusion/Exclusion Criteria:

Inclusion

- Publications found in academic literature and grey literature.
- Studies describing mental health issues prevalent in adolescent girls (age 10-19 which is the WHO definition of adolescent) and women (age>19) in low-and-middle-income countries. Mixed-gender studies were included if study authors provided data disaggregated by sex.
- Studies describing therapeutic interventions utilized by sports psychiatrists.
- The primary outcomes included were indicators of negative mental health, such as post-traumatic stress disorder; depression or anxiety disorder; and indicators of positive mental health and wellbeing such as self-efficacy, self-esteem or emotional wellbeing.

Exclusion

- Non-empirical studies.
- Studies from countries not classified as low and middle income (World Bank classification).
- Non-English publications.

Search Strategy

- Publications from the following databases were searched: PubMed, PsycINFO, Google Scholar, Google, and Embase from January 1, 2000, to December 31, 2025.
- Standard Boolean operators were used (AND, OR) with the search terms: physical activity, psychological skills training, mental imagery, meditation, relaxation, breathing, goal setting, self-talk, mental disorders, depression, anxiety, PTSD, adolescent girls, women, low-and-middle income countries, sports psychiatrist.
- Studies were screened and included/excluded initially by title review; then abstract review; and subsequently full-text article review.
- 41 publications were included.

RESULTS

Sports Psychiatry Interventions & Mental Health of Adolescent Girls & Women in LMICs

Physical activity (PA)

- Participation in team sports was associated with less depression in adolescent girls [20] and the lack of PA (e.g., sedentary behavior) has been associated with increased anxiety in adolescent girls and boys in LMICs [21]. In developing countries, some research in the area of self-esteem indicates that girls and women who engage in athletics exhibit higher self-esteem as well as improved self-perception, self-worth, and self-efficacy [22, 23, 24, 25, 26]. Girls and women in LMICs who participate in physical education and sport can feel empowered [27]. In LMICs, sport participation has been associated with access to safe spaces [22, 24, 28, 29] and improved aspects of social function including enhanced social cohesion, social integration and inclusion, and social interaction. Women and adolescent girls in LMICs who are active in sports also positively impact gender norms and equality, foster a positive and supportive attitude by boys towards their female counterparts, and influence the way males perceive their roles [23, 30].

Psychological Skills Training (PST)

- Randomized controlled trials in Tanzania, Bangladesh, and Ethiopia have indicated that life-skills programs can improve components of mental health in adolescent girls, may use aspects of mental skills training, and represent a potential pathway to leverage positive mental imagery or visualization of healthy scenarios to overcome challenges imposed by restrictive gender norms. The same study found no evidence that, in Tanzania, goal setting alone improves mental health, and it may, in fact, worsen it. However, when coupled with additional life skills interventions, positive mental health outcomes were observed [31]. A longitudinal study with female youth in Kampala, Uganda who practiced transcendental meditation found significant improvements in self-esteem, self-efficacy, gratitude, and tiredness [32]. Women in Gaza participating in a mind-body skills group (with activities including meditation, guided mental imagery, breathing techniques, autogenic training, biofeedback, genograms, and self-expression through words, drawings, and movement) demonstrated significant improvements in PTSD, depression, anxiety symptoms, and quality of life or QOL [33]. Positive self-talk was found to be more effective than transactional analysis in reducing self-defeating behavior in Nigerian adolescent girls and boys [34].

RESULTS CONT…

Other Therapies

- Problem Management Plus (PM+) and The Common Elements Treatment Approach System of Care (CETA) are derived from CBT and have been adapted and implemented and shown to be effective in LMICs [35, 36, 37]. Interpersonal Psychotherapy (IPT) has been frequently adapted for perinatal depression, focusing on improving interpersonal relationships and functioning to alleviate symptoms [38].

Medication

- The WHO Model Lists of Essential Medicines (EML intended to serve adults and adolescents age 13-17) and Essential Medicines for Children (EMLc) are key evidence-based guidance tools intended particularly to aid resource-limited countries to prioritize the selection, use, and procurement of essential medicines, and inform national health policies and access strategies. [39]. On the most recent list (24th list/2025), medicines for depressive disorders include amitriptyline and fluoxetine with therapeutic alternatives including citalopram, escitalopram, fluvoxamine, paroxetine, & sertraline. Medicines listed for anxiety disorders are diazepam for short-term emergency management of acute and severe anxiety symptoms only (with lorazepam as therapeutic alternative). For longer term treatment of anxiety disorders, fluoxetine is listed with therapeutic alternatives including citalopram, escitalopram, fluvoxamine, paroxetine, and sertraline.

DISCUSSION

The WHO Mental Health Action Plan 2013-2030 has as one of its objectives the aim to provide comprehensive, integrated and responsive mental health and social care services in community-based settings [40], particularly where services are limited or nonexistent. Mental health capacity building initiatives help facilitate achievement of this objective. Mental health care capacity building involves integrating mental health services into existing community-based general or primary care facilities [41] utilizing task-sharing. Task sharing involves training local, general or primary care health workers to assess for and provide basic interventions for common psychosocial issues and mental disorders. Community-based health providers receiving training may include non-specialist (i.e. non-psychiatric) health professionals (e.g. general or primary care physicians and nurses), community health workers, and lay facilitators (e.g., teachers, clergy).

SPs with teaching experience can educate individuals of varied disciplines ranging from non-specialist health professionals to community health workers, and laypeople. They are able to offer knowledge of not a few but a broad range of interventions (psychological skills training, other “talk” therapies, physical activity, and medication). In addition, interventions include treatments that are affordable and convenient. That is, they do not require expensive equipment and can be performed at home and on one’s own time (e.g. walking, jogging, isometric strength training, progressive muscle relaxation, deep breathing, mental imagery, positive self-talk, mindfulness, goal-setting).

SPs may therefore be an asset to projects and programs that strive to increase access to cost-effective, convenient, comprehensive care and improve the mental well-being of at-risk girls and women in LMICs. Further studies are indicated to understand the impact of sports psychiatry interventions in this setting.

Limitations

This is a narrative literature review.

Limitations of studies included in the review:

- Limited number of studies in specific PST techniques utilized in girls and women in LMICS.
- Limited sample sizes in some studies.
- Study design (e.g., limited number of randomized controlled trials).

CONCLUSION

- Girls and women in LMICs are at high risk for mental disorders including depression, anxiety, and PTSD.
- In addition to PST techniques, PA has been recognized as an affordable, effective intervention for girls and women in LMICs who experience psychological distress or illness.
- SPs are particularly knowledgeable about the connection between PA and mental health and are adept in prescribing PA and medication and providing PST and other psychotherapies.
- Therefore, SPs may be an efficient and effective asset to capacity building efforts that aim to improve the mental health of girls and women in LMICs.
- Further research is required to fully understand the contributions SPs can make to improving the mental health of girls and women in LMICs who experience psychological distress or illness.

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