A Systematic Review of Psychological Outcomes of Artistic Gymnastics Participation

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Recent scandalous incidents have been directed on the psychological and verbal outcomes from participants within the sport of gymnastics and their personal experiences. While acknowledging the positive psychological outcomes in which sports has to offer in general such as enhanced self-efficacy, self-esteem, and confidence (Kim et al., 2020), the revealed toxic atmosphere imply the potential negative psychological outcomes that can occur for the participants involved specifically within the sport of artistic gymnastics. While many studies have been conducted to examine the motivations and barriers of artistic gymnastics participation (Iwaki et al., 2020), relatively fewer studies have examined the outcomes for artistic gymnasts. Furthermore, compared to the physical health outcomes (Webster et al., 2014), psychological outcomes of artistic gymnastics participants have been rarely examined and findings are still fragmented (Smits et al., 2016). In sum, to identify the gap and reflect the current status of academic literature for artistic gymnastics participation, the aim of the present systematic review is to explore the positive and negative psychological outcomes of artistic gymnastics participation among both genders and at all ages.

Artistic gymnastics is only one of three total specialties within gymnastics that consists of athletes who engage in routines on each of the apparatus, and following their performances, judges engage in the evaluation of the athletes’ performance focusing on the difficulty and precision demonstrated. Women’s artistic gymnastics consists of the beam, floor, vault, and uneven parallel bars whereas men’s artistic gymnastics consists of the floor, pommel horse, rings, vault, parallel bars, and horizontal bar (Artistic Gymnastics, 2020).

Seven major databases were searched (i.e., CINAHL PLUS, MEDLINE, SPORTDiscus, Cochrane Library, PUBMED, APA PsycInfo, APA PsycArticles) using a combination of the keyword “gymnastics”, a group indicating outcome (i.e., benefits, impact, effect, outcome, value, improve), and a group indicating psychological (i.e., psychology, anxiety, mood, happiness, depression, mental health, stress, quality of life, subjective well-being, life satisfaction, psychological well-being”. A total of 1,153 articles were initially extracted and 15 articles were included for the final review based on the PRISMA guideline (Moher et al., 2009).

All 15 studies were empirical and used quantitative methods. Four studies were cross-sectional studies, whereas the other eleven articles were longitudinal studies. In terms of ages of the samples, three articles included elderly individuals (older than 75 years old) as a sample, four articles included children and adolescents (4-18 years old), and seven articles included adults (19 - 57 years old). Among the included articles, 14 articles found positive psychological outcomes from the involvement of the artistic gymnastics including cognitive enhancement, personal growth, improved psychological well-being, and reduction of state anxiety. Only one article found negative psychological outcomes such as negative mood states and high perfectionism that were significantly associated with body dissatisfaction. Overall, female participants were predominantly studied with only three articles including subjects of men.

In sum, more future studies on elite gymnasts and male gymnasts are recommended. Further theoretical and practical implications about strategies for promoting healthy gymnastics programs for the public will be discussed during the presentation.