SOURCES OF ORGANIZATIONAL STRESS AMONG YOUTH RHYTHMIC GYMNASTS: AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

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Abstract

The aim of the study was to explore sources of organizational stress among Brazilian youth rhythmic gymnasts. Semi-structured interviews were conducted with six female athletes aged approximately 15 years (M = 14.50; SD = 1.76) with approximately seven years of experience in the sport on average (M = 6.83; SD = 3.25). Deductive categorical analysis was used to analyze the raw data. Our analysis revealed that sport entrapment, time management, and body image concerns are some of the stressors experienced by rhythmic gymnasts. Coach-pressure, peer-pressure, and parental-pressure are additional sources of stress reported by the athletes. Finally, the athletes reported experiencing competitive anxiety before, during, and after competition. Collectively, our findings suggest that rhythmic gymnasts reported a multitude of sport-related stressors. To counter these pressures, coaches, and practitioners need to equip athletes with a variety of coping skills in order to promote well-being and increase peak performance in the sport.

Keywords: *Organizational Stress, Gymnastics, Cross-Cultural Research.*

INTRODUCTION

Numerous types of stressors (i.e., sources of stress) are experienced by athletes in competitive settings, such as logistics preparation, performance expectations, and relationships with coaches and peers (Arnold, Fletcher, & Daniels, 2016). In turn, the ability of athletes to cope with different stressors is related to their mental health in general and athletic performance in particular (Rice et al., 2016). Broadly conceived, stress pertains to individuals' subjective perception of disturbing stimuli and related ability to cope with these demands

(Folkman & Lazarus, 1985). Noteworthy, stress arises from the individual, the environment, and its compound interactive effects (Gustafsson & Skoog, 2012; Hanton, Fletcher, & Coughlan, 2005).

Recently, scholars have studied stress in sports from a broader organizational standpoint. Organizational stress pertains to the stress demands associated with the organization wherein an individual is operating (Arnold & Fletcher, 2012; Arnold, Edwards, & Rees, 2018). Within the sport context, the competitive demands of a given sport are thought to generate different sources of stress (Arnold et al., 2016; Hanton et al., 2005; Mansell, 2021; Woodman & Hardy, 2001). In this context, Arnold and Fletcher (2012) analyzed 34 studies on organizational stress and identified over 600 different sources of stress, which can be clustered into four categories: (a) leadership and personal matters, (b) issues related to the team or culture, (c) environmental issues or logistics, and (d) issues related to personal performance.

Indeed, the bulk of extant research suggests that elite athletes tend to experience various sources of organizational stress, as related to environmental (e.g., financial pressures), personal (e.g., injury), leadership (e.g., coaching styles), and team issues (e.g., communication; see Woodman & Hardy, 2001). Moreover, there is evidence that elite athletes experience more stress demands associated with their sport organization than with their competitive performance (Hanton et al., 2005). There is, however, sparse research on organizational stress among youth athletes (Hayward, Knight, & Mellalieu, 2017). Historically, most research in sport psychology has been focused on a population of Caucasian and male collegiate athletes (Schinke, McGannon, Parham, & Lane, 2012). Accordingly, research targeting youth athletic populations is generally needed, especially among athletes from minority backgrounds. Research in the so-called "intersect" of social minorities, such as young female athletes from poor and developing countries/nations, remains scarce (see Watson & Scraton, 2013).

In fact, previous research suggests that the adaptation mechanism developed by athletes in developing countries tends to differ from those experienced by athletes in North America and Western Europe (Ferreira, Penna, Costa, & Moraes, 2012; Salmela & Moraes, 2003). For instance, in richer countries, parents drive kids to practice and even move around the country to allow them access to the best coaches, support staff, and training centers (see Coté, Saimela, Trudel, Baria, & Russell, 1995). In contrast, in developing countries such as in Brazil, parental support consists of allowing perceived "talented kids" to practice a sport discipline rather than requiring them to work at young ages in order to help with the household expenses. In the developing world, the organization of try-outs, practice and competition is less structured and more informal, thus contributing to higher stress demands on young athletes (Ferreira et al., 2012). This informality scenario has been modified little by little over time, with the improvement of the organization and training systems of the RG in Brazil. This is also reflected in the increase in studies on the modality (Menezes et al., 2022). Moreover, the mechanisms of sport and talent development among boys and girls differ, and more studies on the unique paths of female athletes are necessary (Curran, MacNamara, & Passmore, 2019).

In the present study, we sought to explore sources of organizational stressors among Brazilian youth in Rhythmic Gymnastics (RG), an individual sport in which participants are exposed to a variety of stressors at very young ages (e.g., performance pressure, high volume of practice), and usually before 15 years of age (Law, Côté, & Ericsson, 2007). Peak performance in RG generally occurs at young ages, and thus athletes are often required to specialize at an early age (DiCagno et al., 2009). In turn, early specialization may negatively impact the bio-psycho-social health of young athletes (Malina, 2010). Moreover, participation in RG often requires a specific body type, most notably a small stature and low level of body fat, which in turn can trigger body-image and self-objectification feelings (see Kosteli, Van Raalte, Brewer, & Cornelius, 2014; Nordin, Harris, & Cumming, 2003; Sick, Sabiston, Maharaj, & Pila, 2022). Finally, evaluation of RG performance in competitions is subjective in nature, and the presence of judges is thought to generate stress and related cognitive somatic and anxiety symptoms (Tsopani, Dallas, & Skordilis, 2011).

The present study is theoretically grounded in the Organizational Stress framework (Arnold & Fletcher, 2012; Arnold, Fletcher, & Daniels, 2016). Moreover, our study is aligned with the need to explore the organizational stressors experienced by young athletes from diverse ethnic and cultural backgrounds. Congruent with the call for culturally diverse studies (Schinke et al., 2012), we explored the potential sources of stress experienced by young RG athletes in Brazil. Specifically, in Brazil, RG is considered a sport for the wealthy, and thus we were interested in exploring the experiences of young females from one of the poorest regions in Brazil. More specifically, we sought to address the following research question: What are the main sources of organizational stress experienced by young RG athletes?

METHODS

The present study consisted of an interpretative phenomenological analysis (IPA) implemented through the use of semi-structured interviews. IPA is an idiosyncratic qualitative approach, and thereby considered an ideal platform for studies with small sample sizes (Patton, 2015). IPA is concerned with the detailed examination of personal lived experience and how participants make sense of this experience (Smith, 2011). IPA represents an interpretive post-positivist ontological and epistemological stance to qualitative inquiry (see Patton, 2015). Specifically, our study is based on a realistic ontological stance and reflects an interpretivist approach (Patton, 2015). In other words, we aimed to explore and interpret gymnasts' perceived realities of organizational stress.

Six female RG athletes from two clubs participated in the study. The athletes were between 12 and 17 years old (M = 14.50; SD = 1.76) and had on average 6.83 years of experience (M = 6.83; SD = 3.25) in the sport. All participants competed at the national level, had at least three years of competitive experience in the sport, and practiced between two and four hours per day, five days per week. To maintain the anonymity of the reports, each athlete was given a pseudonym (G1 through G6). This study was approved by the leading author's University Ethics Committee of (protocol number 46561715.3.0000.0018).

A semi-structured interview script, based on the Organizational Stress

framework (Arnold and Fletcher, 2012), was developed over a series of peer-debriefing meetings involving the first and last author. The script covered six thematic areas: (1) general information and sports; (2) family support; (3) sport environment; (4) impact on social life; (5) body image; and (6) bio-psycho-social consequences. Examples of questions asked during the interview include, among others: "Tell me about the positive and negative elements of your sport?" and "Does being an RG athlete influence your social life with family and friends?"

The leading author contacted all RG clubs (N = 4) in a large city in North Brazil and explained the overarching purpose of the study to the club manager. Two clubs agreed to take part in the study. Once the club manager agreed to participate, a date and time were arranged to brief the athletes and their parents/guardians on the purposes and methods of the study. Given that the participants were under 18 years old, the researcher contacted the athletes in the presence of their parents/guardians to explain the objectives of the study and obtain permission for participation. Following this briefing meeting, a time to interview those athletes willing to take part in the study was arranged. Prior to the commencement of the interviews, the athletes and their parents/guardians signed an informed consent form. The interviews were conducted at a date and time chosen by each gymnast. The parents and coaches of the gymnasts were in the same building during the time of the interviews, however, each interview was conducted individually with each athlete alone by a female researcher, as parental and coaching pressure could influence the athletes' responses. All interviews were conducted in a quiet room, free from distracting noise. The interviews lasted approximately 30 minutes on average (M =29 min, 19 sec; SD= 3 min, 26 sec) and were recorded using a digital video recorder (Sony DCR-SX20 model).

The data was analyzed through direct categorical analysis, which consists of a deductive approach of searching for predetermined categories (see Elo & Kyngäs, 2008; Hsieh and Shannon, 2005). Specifically, in the present study, the predetermined categories used for the direct categorical analysis consisted of those identified by the taxonomical study of Arnold and Fletcher (2012). More specifically, the coding process followed the steps proposed by Hsieh and Shannon (2005). Initially, the first and last author independently read and reread the verbatim transcripts of each individual interview. Next, they independently searched for meaning units consistent with the major themes in the Organizational Stress framework, namely (a) leadership and personal matters, (b) issues related to the team or culture, (c) environmental issues or logistics, and (d) issues related to personal performance. Subsequently, the first and last author met several times to discuss each other's analysis until an initial consensus was reached. Next, to increase the validity of the findings, the second author served as a "critical friend" and independently reviewed the findings reached by the first and the last author (see Smith & Sparkes, 2020). Additional peer debriefing meetings were carried out among these three independent coders in an effort to maximize the trustworthiness of the findings. A total of 223 meaning units were initially identified by the three independent coders. The authors then discussed these meaning units until consensus was reached, and

selected quotes to illustrate the data within the manuscript write-up.

RESULTS

As noted above, our direct content analysis was based on the four first order themes proposed by Arnold and Fletcher (2012), namely: *leadership and personal matters*, *issues related to the team or culture, environmental issues or logistics*, and *issues related to personal performance.* Additionally, each of these themes was defined a priori, outlined by the second order themes, which were defined a posteriori, based on the athletes' records. First and second order themes are graphically depicted in Figure 1. Representative meaning units illustrating each second order theme were selected and are presented next.

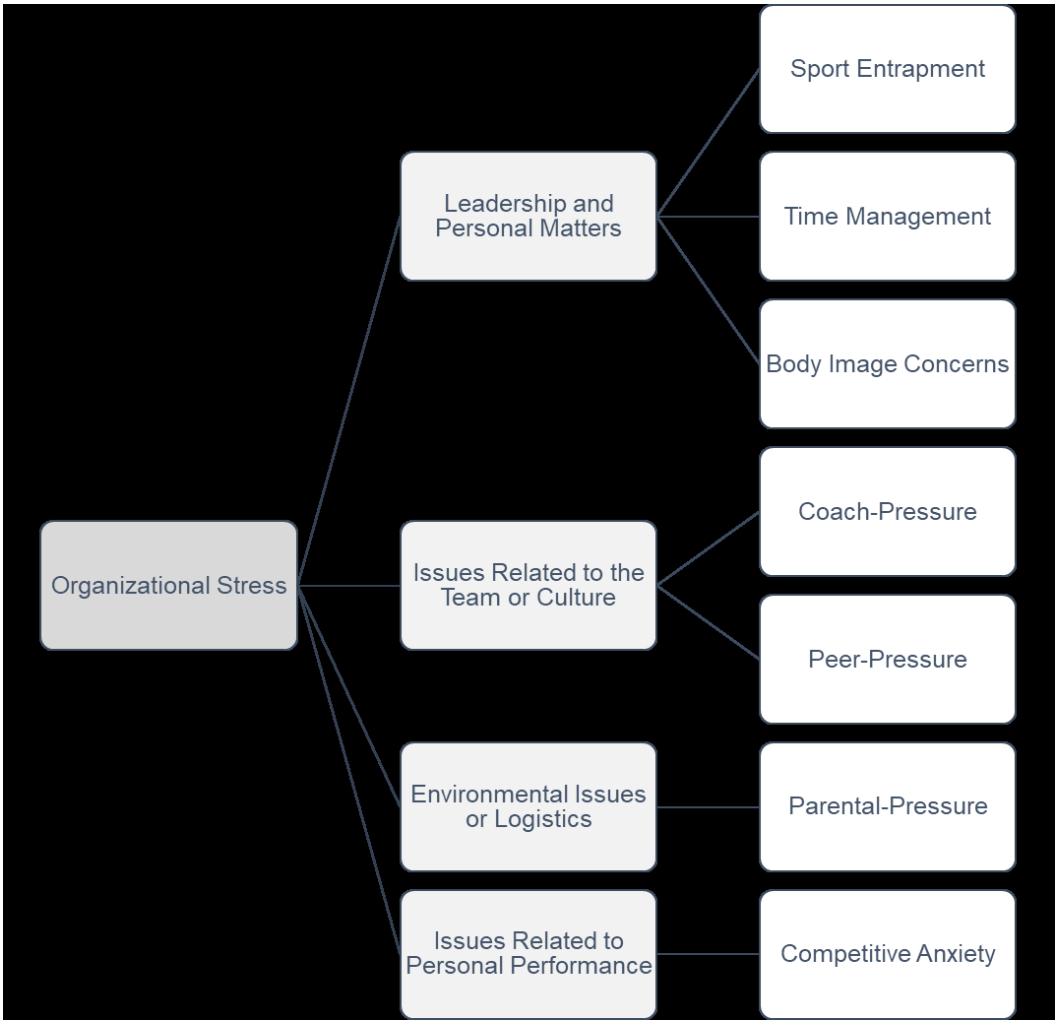

Figure 1. Sources of organizational stress in rhythmic gymnastics.

Leadership and Personal Matters

Sport entrapment. The athletes struggled to balance leisure time with the rigorous training demands of RG. The gymnasts reported feeling entrapped into the sport milieu, as they were unable to

attend social gatherings (e.g., parties, sightseeings, and meetings) with their friends because of their sport-related commitments:

Oh let's go shopping on Friday! But I have to say: I cannot. I'm training. (Interview Excerpt – G5)

There was one time I really wanted to go to my friend's 15 years birthday party…but I couldn't because I had to travel... it's life, right?! (Interview Excerpt – G1)

These things of going to the mall, to the movie theater... these things won't work sometimes because of training. (Interview Excerpt – G3)

Time management. The gymnasts reported having great difficulty balancing their training regime with schoolwork. Daily commitments, such as completing homework on time, were a challenge for the athletes. Missing classes was also a concern for the gymnasts:

I miss classes, content...It is always a concern. It is hard because you have to study and go to training. (Interview Excerpt – G1)

It is difficult because you have to travel to compete and when you come back all of your assignments are late… It is twice as much work! (Interview Excerpt – G2)

It messes with schoolwork because I miss classes and content… so I am always worried because I have to study and go to practice (Interview Excerpt – G4)

Body image concerns. Self-imposed as well as external pressures for the ideal body weight appear to be another source of stress experienced by the athletes. Our analysis suggests that the gymnasts can perceive their body to be inadequate for the practice of RG, which in turn might lead to eating disorders. Puberty changes were also a source of stress, as the physical changes that came with it interfered with the gymnasts' ideal body image.

My body is not good for gymnastics [...] I put my finger down my throat to vomit [...] There is a time the person turns desperate because everyone is talking about it, talking, talking, and talking… then you feel the pressure! (Interview Excerpt – G1)

When the time comes, we become more like teenagers, and the hormones flourish… and your body is more "women-like" ... than it is a bit more difficult to be a gymnast. (Interview Excerpt – G2)

Issues Related to the Team or Culture

Coach-pressure. The gymnasts perceived that relating to their coaches was stressful at times because their coaches' showed favoritism to some athletes, as exemplified below.

Every coach has an athlete he likes more, and then he (coach) spends more time training that athlete, and then the other gymnasts get upset… I mean, generally the coach trains everyone and treats everyone the same, but there are times when you can see that he is giving more time to one athlete. (Interview Excerpt – G5)

Peer-pressure. Intra-group conflict generated additional stress during training and competition. Intra-group conflict seemed to arise from gossip and communication problems between the athletes as illustrated below.

There are athletes that when they are with the group they will say one thing… But when they are not in the group they will talk crap about their teammates… and this complicates things! (Interview Excerpt – G6)

You know… its gossip. People talking behind each other's back…I would much rather have us all standing together. (Interview Excerpt – G3)

Environmental Issues or Logistics

Parental-pressure. The athletes also identified parental pressure as a source of stress. Specifically, the gymnasts reported that their parents often expected them to perform at peak level all the time in both training and competition.

If I make a mistake, she (mother) will spend the whole day like this… "you should have trained better… you should have done better" and I am training hard but there are times that you cannot be that good. (Interview Excerpt – G4)

It is because sometimes it feels hard… like she (mother) is pushing me… I need to get that, and that must be done right… (Interview Excerpt – G2)

Issues Related to Personal Performance

Competitive anxiety. The athletes reported feeling anxious before, during, and after training and competition. Overall, they noted that they were afraid of failure, and particularly of making execution mistakes in (overlearned) movement routines.

You want to succeed but then you get stressed with the training or you get mad at yourself because you are not doing it [the routine] right… (Interview Excerpt – G3)

Before [competition] I feel nervous… we think about all the training. As they say, we practice every day, four hours a day, and then we go to a competition, and we get one minute and half to do everything. (Interview Excerpt – G5)

If I am making mistakes, I get nervous, I get sad, I want to cry… I cry. There were times when I would go get water, and then I sat down and started to cry. (Interview Excerpt – G1)

I feel sad when I compete well but get a low score or when I do not compete well and think I could have done better. (Interview Excerpt – G3)

DISCUSSION

We explored sources of organizational stress among young Brazilian rhythmic gymnasts. We adopted a realistic ontological stance and interpretivist epistemological approach; that is, we aimed to understand and theoretically interpret the perceived realities of competitive young Brazilian gymnasts. Our direct categorical analysis was theoretically informed by previous research in organizational stress (Arnold & Fletcher, 2012), and revealed sources related to *leadership and personal matters*, *issues related to the team or culture*, *environmental issues or logistics*, and *issues related to personal performance*.

Leadership and Personal Matters

Sport entrapment was reported by the athletes as a source of personal stress. These findings add to the literature by suggesting that young gymnasts perceive that their social well-being is at odds with the development of a successful athletic career. As such, young athletes, coaches and parents need to be educated that the opposite is true, as athletes under high competitive pressure need to develop relationships outside the sport environment in order to perform well athletically and stay healthy (Kroshus & DeFreese, 2017). Sport entrapment has been related to overtraining and burnout, and thus must be minimized by encouraging young athletes to partake in different social milieus while

engaging in purposeful and meaningful recovery activities (Côté, Lidor, & Hackfort, 2009; Raedeke, 1997).

Time management was also found to influence the athletes' personal lives. In addition to committing significant time to training and competition in RG, managing school responsibilities was deemed to be stressful by the young athletes. Noteworthy, adolescent athletes have been found to possess fewer coping (i.e., less adaptive coping strategies and more maladaptive coping strategies) and life skills than adults (Hampel & Petermann, 2006). Accordingly, teaching young athletes the coping skills (e.g., problem and emotion focused) might alleviate their feelings of stress (Hayward et al., 2017; Nicholls & Polman, 2007).

Body image concerns were another source of stress experienced by the athletes. Body image issues are predominant in sports like RG, wherein an ideal body type is oftentimes considered a necessary condition for excellence (Nordin et al., 2003). Moreover, pressures for the perfect body can trigger problems related to eating disorders (Oliveira, Bosi, Vigário, & Vieira, 2003). As such, we reiterate the importance of educating young athletes about healthy dietary behaviors and mindful body acceptance (Kosteli et al., 2014). In addition, coaches must be aware of the cultural aspects associated with the striving for perfect bodies as well as the possible negative consequences of this (Sherman, DeHass, Thompson, & Wilfert, 2005).

Issues Related to the Team or Culture

Coach-pressure was a source of stress for the RG athletes. Specifically, the athletes reported that at times their coaches criticized their performance in public and showed preference for some athletes rather than exhibiting fair treatment to all gymnasts. Given that healthy relationships with coaches are an important factor in expertise development in youth sports (Côté et al., 2009), it is essential to educate coaches on communication skills, such as active listening and types of feedback (e.g., motivational and instructional; see Law et al., 2007). In addition to communication skills, social, educational, and psychological skills are needed to create a positive effect on the quality of the coach-athlete relationship in the context of individual youth sports (Lisinkiene, 2018).

Peer-pressure was also found to generate stress in RG. The gymnasts reported that intra-team conflict, generated by communication issues, was a very stressful component of their sporting experience. These findings add to the literature by suggesting that team processes are important even in individually performed sports. Specifically, our findings suggest that coaches and practitioners should emphasize a task-oriented climate in practice and competition, where success is self-referenced, and the emphasis is on learning and effort, rather than an ego-oriented climate where the emphasis is on competition and comparison to peers (Bortoli, Bertollo, Filho & Robazza, 2014).

Environmental Issues or Logistics

Parental-pressure was highlighted by the athletes as a major stressor in their athletic experience. Athletes feel pressured by their parents in many ways, including pressure to perform at peak level all the time. It has long been known that healthy parental involvement in sports and other domains of human performance is crucial for talent development (Salmela & Moraes, 2003). Thus, parents need to be educated about applied psychological principles, particularly the notion that unrealistic

performance expectations can lead to overtraining, burnout, and other clinical psychological conditions (Malina, 2010). Similar to the process of coaches' education, parents need to be educated to form a healthy relationship with their youth athletes, especially since most of them do not have adequate knowledge about the context of competitive sport (Dorsch, King, Tulane, Osai, Dunn, & Carlsen, 2019)

Issues Related to Personal Performance

Competitive anxiety was another source of stress reported by the athletes', as their performances were subjectively evaluated by judges. The subjective assessment of performance before a judge in a competition can indeed trigger competitive anxiety, as the scores received for performance routines are often lower than expected (Tsopani et al., 2011). Our results also revealed that the athletes experienced pre-, during and post-performance pressures. In fact, previous research (Ruiz, Raglin, & Hanin, 2017) purports that both dysfunctional (e.g., stress) and functional (e.g., confidence) affective patterns tend to be experienced differently over distinct time windows. Therefore, our findings suggest that specific psychological routines should be developed to address the stressors that come into play before, during and after gymnastics competitions.

Another important approach regarding not only competitive anxiety, but all RG context and its stressors sources, relies on the notion that athletes should be encouraged to develop coping strategies, but, equally important, all those involved (athletes, parents, coaches, referees) should be instructed to promote a better environment, focusing on reducing the stress sources and creating a healthier and safe environment (Camiré et al., 2012).

LIMITATIONS

This study is not without limitations. Trustworthiness of the findings could have been increased by triangulation of methods (e.g., observations and document analysis) and participants (e.g., interviewing coaches and parents). Accordingly, specific avenues for future research include exploring the sources of organizational stress experienced by coaches and parents with respect to themselves and RG athletes. Although naturalistic generalizability of the findings is possible (see Smith & Sparkes, 2020), multi-site and multi-cultural studies are important to unpack potential country-level idiosyncrasies pertaining to sources of organizational stress in sports (Schinke et al., 2012).

Despite the limitations, this study identified and clarified the key factors behind different stressors in the rhythmic gymnastics' environment. Young female Brazilian RG athletes reported worrying about their bodies, their (in)ability to manage relations, sport and schoolwork, and feelings of sport entrapment. They also reported experiencing competitive anxiety and performance pressure from coaches, parents, and their peers. Considering these findings, we suggest that sport and context specific mental toughness training programs might be more effective than trainings developed for different organizational contexts. Specifically, practitioners need to equip coaches and athletes with a myriad of skills so that they can cope with stressors arising from personal and leadership factors, team issues

and culture, environmental factors and logistics, and personal performance. In particular, teaching athletes' pre-performance routines and a task-oriented focus may help with personal performance and environmental stressors, respectively. As an example, visualization techniques can help gymnasts assimilate the actions to be performed during the presentation. Addressing communication issues between athletes and coaches, ensuring that athletes have a social life beyond sports, mindful acceptance of their bodies, and time-management skills can also help to ameliorate stress in RG. These interventions might not only be focused on coping strategies, but on diminishing the stress factors as well.

CONCLUSIONS

In conclusion, the findings of this case study add to the literature by highlighting the complex and multi-dimensional nature of organizational stress in sports, thus revealing that multiple theoretical frameworks and intervention techniques are needed to support and develop healthy athletes in RG.

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