

## HOW MUCH ARTISTIC GYMNASTICS COACHES KNOW ABOUT THEIR GYMNASTS' MOTIVATION

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### **Abstract**

*Sport seems to increasingly attract children and youth participation worldwide, possibly because many of them dream of competing in the Olympics, becoming champions, and being financially rewarded. However, only a few are aware of the level of commitment and sacrifices required in order to succeed. The purpose of this study was to analyze the Brazilian coaches' perceptions of their athletes' motivation and how they deal with this issue. Results revealed that Artistic Gymnastics training seems to highly demand gymnasts' motivation to practice, and some strategies used by coaches to motivate gymnasts should be carefully reviewed. Other motivational strategies are limited due to the circumstances of the sport in Brazil, particularly regarding investment in infrastructure and support for gymnasts.*

**Keywords:** *artistic gymnastics, motivation, coaches' perception.*

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### **INTRODUCTION**

Psychological factors such as anxiety, concentration, confidence, motivation, and personality have a significant impact on performance in sports (Morrow, Jackson, Disch & Mood, 2000). In some cases, these factors can be critical to the success in sports, particularly at the highest levels.

Individuals may have an inherent initial level of motivation and interest and, if well supported, may remain in the sport long term (Lopes & Nunomura, 2007). Children and adolescents may show natural interest and motivation for sports as well, but it is important to keep them committed, regardless the sport or the level of practice. It is assumed that there is a linear relationship between motivation and

dropout in Artistic Gymnastics (AG). So, any untreated problems will sooner or later lead to dropout, and appropriate motivational strategies may help to prevent dropout.

Among a wide range of sports AG can be attractive to children and youth, keeping them committed due to its challenging nature, its variety of movements, and its potential benefits. However, many participants who start in AG may not be sufficiently motivated to progress towards the competitive level for a variety of reasons. In Brazil some coaches believe that gymnasts must start too young, at four or five years old, to specialize in AG (Nunomura, Carrara & Tsukamoto, 2010).

Nunomura, Pires & Carrara (2009) detailed the AG Brazilian elite training, which amounts four to six hours in a day, 24 to 36 hours by week, all year long with few and short breaks. This amount of training seems to be required to gain the level of performance, necessary in AG, e.g., the continuous repetition of movements until gymnasts obtain consistency in performance (Tricoli & Serrão, 2005). However, studies have shown that competition is a factor that motivates athletes to remain committed to sports (Headstrom & Gould, 2004; Lopes & Nunomura, 2007; Weinberg & Gould, 2001).

Coaches' attitudes and actions may have a significant impact on athletes' interest and participation in sports (Headstrom & Gould, 2004; Weinberg & Gould, 2001). How often and well do coaches acknowledge and perceive athletes' motivation? Which strategies could increase the athletes' interest in and commitment to sports and decrease the level of dropout?

#### *Motivation and sport practice*

Apart from the physical and technical aspects, motivation would affect sports performance as well (Morrow, Jackson, Disch & Mood, 2000). Motivation is the key factor for a lifelong and athletic career. In other hand, dropouts are defined, in this paper, as those athletes who have terminated their athletic career prematurely, i.e. before they have reached their full potential. Achievement seems to be the main reason for participation in physical activities (Gill, 1986; Weinberg & Gould, 2001; Winterstein, 2002). Some authors identify fun as one of the most prevalent reasons for children and teenagers participating in physical activity and sports (Gano-Overway, 2001; Lulla, 2004; Weinberg & Gould, 2001). Competition would be another potential reason for participation, as generally children tend to look for activities in which they are challenged and have opportunities to be successful in that sport (Chelladurai, 1993; Headstrom & Gould, 2004; Lopes & Nunomura, 2007; Weinberg & Gould, 2001).

It is essential that the motivational level remains high to avoid dropout due to the demands of training (Krane, Greenleaf & Snow, 1997). Motivation to achieve success is the ability to experience pride or self-achievement, as well as shame or humiliation as a consequence of failure (Gill, 1986), while motivation for outcomes is the desire to keep or get better results in a higher level (Cox, 1994).

Intrinsic motivation is the driving force that keeps youth involved in sports (Cox, 1994). The challenging nature of sport and competition is rewarding, as athletes cope with their own limits and there is no relation with extrinsic rewards (Tresca & De Rose Jr, 2000). Even though intrinsic motivation is critical, in some situations external motivation in the form of recognition and material rewards may be more influential. Another important extrinsic factor is parental influence, which has significant impact on children and youth sport participation (Headstrom & Gould, 2004). Friendship is yet another main motivational factor in youth sport (Douge, 1999).

Athletes may doubt the worth of their efforts; particularly when situations are hard and they need to identify reasons remain committed. The dropout phenomenon can only be understood as a multifaceted concept event. From the athlete's point of view both internal and external factors can be effective. There are factors associated with dropout. Some studies point to the external conditions to which athletes are submitted and the strict selective nature of the procedures used in some talent identification programs. Robertson (1987) also cites lack of interest and focus on another sport, negative influence of coaches, and other factors. Specifically, if self-motivation is low, it is more likely that an athlete will drop out of the program. Thus, it is essential that those athletes be provided with extra reinforcement and encouragement (Morrow, Jackson, Disch & Mood, 2000). Dropout in the early years may not only be disruptive to a promising career, but it can also negatively affect the commitment to lifelong physical activity.

### *Artistic Gymnastics and motivation*

It is impossible to achieve success in AG training and competition without an adequate level of motivation (Smolevskiy & Gaverdovskiy, 1996). The training demands a high volume of repetition to reach perfection, which may require a commitment of up to six hours per day (Arkaev & Suchilin, 2004). To attain the highest level requires about eight to ten years of training for girls and ten to twelve years for boys (Smolevskiy & Gaverdovskiy, 1996). Therefore, the monotony and stress of training and competition are almost inevitable. Thus, psychological preparation is essential in the training process, where the objective is to develop the morale and the willingness necessary to be truly committed to AG (Gajdos, 1983). This requires that athletes be regularly stimulated in order to optimize training and avoid potential dropouts (Lopes & Nunomura, 2007). These values reinforce the necessity of an ego-oriented motivational climate (Krane, Greenleaf & Snow, 1997).

It has been speculated that early specialization is needed to achieve the highest level in AG, as gymnasts' capacities are trainable when very young (Léglise, 1998). In general, female AG athletes achieve their best results during adolescence; the age range is a little older for boys (Arena, 1998). However, several outstanding gymnasts have begun careers later and reached their peaks beyond the age predicted by the literature. A notable exception is one of the Brazilian gymnasts in the Beijing Olympic Games who started systematic training at 11 years old.

Other factors may affect motivation in AG, like unknowing or neglecting its demands, the heterogeneity within the group, and the lack of challenging situations or demands of the tasks.

The performance aspect in sports psychology is not limited to elite athletes (Morrow, Jackson, Disch & Mood, 2000). Even though AG is not professionalized, gymnasts may be submitted to the same pressures and demands faced by adults.

Younger practitioners may find it difficult to overcome the stresses of competitive environment. Therefore, it is essential to develop strategies to foster their enthusiasm, as in extreme training circumstances dropout may occur (Watts, 2002). An ego involved motivational environment was developed and reinforced by the gymnast's coaches and parents.

### *Coaches' Perception of motivation*

In the training process, coaches must consider the psychological characteristics of each athlete and evaluate personal features such as the motivation for the activity, self-evaluation, goals, and morale (Smolevskiy & Gaverdovskiy, 1996).

The psychological aspects of coaching gymnastics are often related to the pedagogical or educational side of the activity. In fact, the psychological tasks of coaching are diverse and complex (Smolevskiy & Gaverdovskiy, 1996). An essential aspect of training process is psychological orientation. Its purpose is to guarantee that the performance achieves consistency and stability (Arkaev & Suchilin, 2004). The intrinsic motivational orientation is most likely to keep gymnasts committed to AG (Lopes & Nunomura, 2007) and coaches should look for strategies based on this finding (Readhead, 1997).

This process is necessary to motivate gymnasts, to optimize training, and to prevent dropout just before the peak of performance. Comprehensive understanding of the motivational factors that keep children and youth committed facilitates the establishment of goals and contributes to the creation of training strategies that reduce dropout (Lopes & Nunomura, 2007).

To maximize performance, coaches must understand the factors that can influence the learning process and perform as motivators, inspiring and encouraging their gymnasts to exceed their potential. Also, coaches should ensure the adequacy of physical and psychological preparation. Finally, coaches must ensure that gymnasts have sufficient motivation to execute a

movement without failure (Smolevskiy & Gaverdovskiy, 1996).

One of the reasons that coaches do not coach AG in Brazil is that they are not able to cope with the low levels of motivation seen in gymnasts. This is particularly true when gymnasts are entering an intensive training, according to female gymnasts' coaches in Brazil (Nonomura, Okade & Tsukamoto, 2009). Is motivation in AG an issue that coaches recognize and understand? Given that motivation in AG is an area of concern, how do coaches motivate their gymnasts?

The purpose of this field-based study was to analyze (a) how coaches perceive their gymnasts' motivation and reasons to be committed to AG, (b) describe the circumstances under which coaches think these reasons may lead to dropout, and (c) in such cases describe which strategies coaches apply to increase athletes' interest in and commitment to sports and decrease the level of dropout.

## METHODS

### *Participants*

Forty-six AG coaches, from 29 of the most important training centers in Brazil, affiliated with the Brazilian Gymnastics Confederation, were interviewed. Twelve coaches are coaching male gymnasts and 34 female gymnasts. The average coaching experience of the coaches of female and male gymnasts was respectively  $12.2 \pm 5.7$  and  $14.5 \pm 7.5$  years. The gymnasts' average age was  $11.16 \pm 2.3$  years. The female gymnasts spent an average of 12 to 24 hours training per week, and male gymnasts spent from 11 to 28 hours training per week.

### *Procedures*

The selection criteria for coaches were based on their traditional participation in States and National official events and were extended to those coaching gymnasts competing at the pre-elite levels. Coaches and their supervisors were contacted with a formal letter prior to the interviews. The purposes and procedures of the study were

detailed to the participants. All interviews were conducted, by one author, during six months in workplace according to the coaches' requests and an office out of the view of others was chosen for privacy.

### *Research Design*

A qualitative approach and deductive analysis were adopted for this study. Coaches were interviewed individually using a semi-structured interview guide. Coaches were asked about their gymnasts' motivation, their problems regarding dropout, and strategies to keep gymnasts committed to the sport. Example questions are: "Why do the gymnast stops to practice?", "How do you motivate them to keep training?"

A script was used to guide the interviews, subjects were voice recorded, and their narratives were transcribed verbatim. Each interview lasted for 42 to 88 minutes. Interviews were guided by the following issues: whether gymnasts have problems with motivation; whether they quit training; and which strategies coaches apply to keep gymnasts committed to AG.

### *Research Measure*

Content analysis, appropriate in studies related to motivation, attitudes, values, beliefs, and trends (Bardin, 2001), was used for data treatment. The first part of the method consisted in the treatment of gross data (reading the interviews) and the codification process, where data were divided into meaningful segments of information (data reduction into units of meanings). A detailed examination of the data was done to identify topics that best described particular segments of text, emerging categories (as in the results). Units were categorized according to their context and common features that characterize the text segments and the relationships among them. The main researcher and another experienced content analysis researcher identified discrepant findings. A peer categorization and content analysis were adopted in order to avoid any bias or trends

that would lead to misjudgment or misinterpretation of data (Patton, 1987).

## RESULTS AND DISCUSSION

Coaches' report were categorized and segmented into the following subthemes: Problems with Motivation, Reasons for Dropout and Strategies for motivation.

### *Problems with motivation*

Seven coaches of female gymnasts reported problems with dropout, as gymnasts neared or entered puberty: "Body changes completely during puberty, the gymnast can't do the skills she used to, start to be indifferent, than it is not important in their life anymore." "In pre teens they have questioned more if that's what they want, is the most critical phase." During puberty, gymnasts may experience emotional difficulties due to the many changes in body and mind; coaches should understand and discuss them (Readhead, 1997). Particularly during adolescence, it becomes necessary to raise gymnasts' motivational level to look for achievements (Arkaev & Suchilin, 2004; Weinberg & Gould, 2001).

According to some coaches, participation in competition may be two-folded. If gymnasts participate, it's motivating to practice: "two competitions in a year are not enough. It's hard to motivate children this way"; if there is pressure and too much competitions, it's a problem because: "Have to train everyday, Saturday, sometimes holidays if there's a competition, and some don't understand this." "They are tired with the competition". A potential problem regarding motivation occurs when gymnasts enter intensive training, where the level of commitment increases, along with the demands and pressures of competition (Nonomura, Okade & Tsukamoto, 2009). Therefore, the need to increase motivation to achieve positive results is evident (Arkaev & Suchilin, 2004). Two coaches of female and one coach of male gymnasts reported no current problems with dropout.

### *Reasons for Dropout - Intrinsic Factors*

The category was separated into intrinsic and extrinsic factors. According to the female gymnasts' coaches, intrinsic motivational factors exceed the extrinsic ones. The main intrinsic reason reported by the coaches was lack of interest, followed by gymnasts' perceived lack of potential for AG: "They preferred to try another sport." "You even need to say, she knows that isn't going forward, so she gives up." Regarding this issue, lack of interest was less significant to the coaches of male gymnasts than it was to female gymnasts' coaches. The main reasons reported was (i) perceived lack of talent for AG, (ii) not knowing the demands of AG, and (iii) lack of social activities. The extrinsic factors were the same for females' coaches, but also included lack of infrastructure, incentive, and rewards. Those reasons very closely resemble the data in the literature and also appear as factor in others sports (Gano-Overway, 2001; Lopes & Nunomura, 2007).

(i) In respect to perceived potential athletes may quit when they notice no development, no chance of improvement, or they have no expectations or goals in their respective sports. Authors believe that children look for activities in which their chances to achieve success are higher (Chelladurai, 1993; Gaya & Cardoso, 1998; Weinberg & Gould, 2001). The selective process in competitive sports and the comparison among gymnasts may frustrate those who have not achieved the same level of development and results. These factors, combined with the demands and the competitive level of AG may lead to dropout. This could be mitigated by splitting the group according to competitive categories and having different objectives for every group or gymnast. The objective should be as realistic as possible or frequent failures could cause gymnasts to drop out (Readhead, 1997).

(ii) The demands of training and competition and their results may work on two levels. In one way, the pressure might motivate the gymnasts to improve even more after each successful event. On the

other hand, gymnasts may quit due to subsequent failures or because they did not meet their own expectations (Miranda & Ribeiro, 1997; Lopes & Nunomura, 2007). According to the literature, the strictness of training during the transition from beginner to advanced level may be partly responsible for dropout in some sports (Silva, Raposo & Frias, 2005). This should not happen in AG, as the technical development should occur in a progressive and continuous process (Arkaev & Suchilin, 2004; Smolevskiy & Gaverdovskiy, 1996). Therefore, coaches have to offer support and make sure that each athlete is mentally ready to deal with the requirements and demands of the sport (Readhead, 1997). In other words, coaches should be mindful of any signs of dropout within athletes and adjust the training level and pressures upon them.

Some coaches reported that children start AG believing that they can easily learn the complex acrobatics: "When they realize that the process takes much longer than expected, they get disappointed." Coaches should consider the differences among athletes' personalities and attitudes and use different strategies to keep them committed (Smolevskiy & Gaverdovskiy, 1996).

(iii) One critical fact that finds support in the literature is the lack of social opportunities in competitive sports. Contrarily, the competition itself can be an opportunity for social promotion in Brazil (De Rose Jr, 2002). Relationships seem more demanding and complex among adolescents, as they are developing self-confidence and ensuring social roles (Bee, 1997; Gano-Overway, 2001). Then, sports participation should provide athletes with many opportunities to develop socially, learn responsibility and cooperation, and manage their personal daily schedule and goals in sport.

Some coaches reported the social relationship as a reason to stay committed to AG. The social circle will be limited to sport mates as commitment to a sport increases (Chelladurai, 1993). Therefore, relationships among athletes become even more important reasons to remain in or drop

out of a sport (Fraser-Thomas, Côté & Deakin, 2005). Some other factors reported by the female gymnasts' coaches were: difficulties to return to the training after long holidays; psychological changes associated to the beginning of the puberty; lack of knowledge of AG and its requirements, and difficulties in dealing with school activities and parental influence.

#### *Reasons for Dropout - Extrinsic Factors*

The extrinsic factors were interest in other activities, demands of training and competition, and lack of family support: "They aren't able to conciliate with school." "Problems with parents, who think that's too much and will ruin in school." Regarding parental influence, some coaches have reported that many parents believe sports may affect a child's performance at school. Parents may influence values and interests among athletes, particularly during the beginning of adolescence (Gano-Overway, 2001; Headstrom & Gould, 2004). Particularly for girls, adolescence involves many physical and psychological changes that may influence the decision to abandon the sport. Difficulties coping with weight gain and the acceptance of a "new body" may generate a lack of self-confidence that if not well managed, may lead to drop out.

Other less cited reasons for drop out were lack of competition, appropriate infrastructure, and financial support. The first reason is questionable, as there is a high volume of competition and including different skill levels. Coaches should remember that competition is an important motivational factor for sports participation (De Rose Jr, 2002), and they have to balance the volume of events throughout an athlete's career (Weinberg & Gould, 2001).

The lack of support reported by male gymnasts' coaches is related to the perspectives of those selected for the national team and the lack of financial support to train and compete. The association of sport with financial support was more frequent among coaches of male

gymnasts. The fact that the average age, probably of the age of dropout, of a significant number of male gymnasts coincides with the age at which many young men start work in Brazil may be a key factor.

#### *Strategies for motivation*

The categories were separated into the following two themes: (i) goal-setting and (ii) extrinsic motivational strategy. The goals most frequently cited by female gymnasts' coaches were to create means of communication, to change some pedagogical issues of training, and to nurture self-assessment skills: "I try to talk with them and when they start to give up, I talk to the parents too, if parents don't help me, children will get out." The extrinsic strategies recognized by coaches were to increase the number of events, to provide more financial support, and to offer rewards and reinforcement: "to reward new elements the prize is money."

Those strategies were also cited by male gymnasts' coaches, who added the need for careful selective procedures for incoming competitive groups: "We try to select those who are auto motivated, who like AG." To some degree, those strategies are related to athlete dropout, and reveal where coaches should focus to avoid further problems.

(i) The majority of coaches reported good communication and relationship as motivational strategies: "We do a very clear work in technical preparation, explaining the AG requirements to them." This practice is healthy and productive, therefore it approaches coach and athlete, new ideas and necessities appear and disclose the importance of reflection and eventual changes of attitudes in training and competition (Readhead, 1997).

However, those strategies are ways for coaches to express themselves rather than listen to athletes and offer an opportunity for gymnasts to express themselves and share decisions. Improved communication and relationships among athletes are always welcome, as this creates a pleasant and

comfortable environment for open communication.

Strategies relating to feedback of performance in training and competition, rewards and positive reinforcement, and more participation in events, all find support in the literature (Graham, 2001; Lopes & Nunomura, 2007; Weinberg & Gould, 2001).

Making athletes conscious of their goals, achievements, and potential, teaching them to set goals and giving them praise help to improve their self-esteem and increase their motivation (Selk, 2004). The objectives must be sufficiently demanding and challenging to gymnasts, allowing them to feel satisfied and motivated to accomplish higher objectives (Readhead, 1997).

An interesting strategy reported by one coach involves offering challenges regularly, which acts in favor of self-achievement, and thus has a positive effect on motivation (Gano-Overway, 2001). Beyond physical and technical aspects, motivation and desire could affect sport performance (Morrow, Jackson, Disch & Mood, 2000).

Another noteworthy strategy involves selecting those athletes who show the desirable profile for AG: passion for AG and intrinsic motivation. Coaches did not mention how to identify these aspects. Many children start with a high level of intrinsic motivation, but it can be suppressed by negative experiences in the sport (Lopes & Nunomura, 2007). Coaches should be sure that gymnasts have adequate physical and psychological preparation (Arkaev & Suchilin, 2004), sufficient motivation to perform a movement, and limited failures (Readhead, 1997).

(ii) Competition can also increase the level of motivation if it's meaning and reasons for participation are clear to the athletes, and it aims at self-assessment and not mere comparison.

Some attention is needed with respect to the material and financial rewards cited by some female gymnasts' coaches, as these should not become athletes' goals. One coach reported that, occasionally, he would

offer money when a gymnast performs well a new skill. Another coach told his gymnasts that they were better compensated than working civilians. Both cases raise a red flag: when a sport is considered a job, the pressures associated with it become the focus (Robbins, 2002).

As athletes grow, financial support seems to be even more important to male gymnasts, given their need to be employed. Some coaches offer financial incentives such as reduced school fees in an attempt to keep their gymnasts. Unfortunately, there are few rewards in public institutions. Even though literature cites the importance of knowing the reasons that bring and keep athletes committed to sport (Gano-Overway, 2001; Martens, 1987), not all coaches show concern about this issue. Some coaches plan their programs according to their beliefs and interests, rather than consider too the needs and interests of athletes.

An important aspect, but not cited by any coach, is enjoyment of sport, especially for children; unlike coaches, much literature cites fun as the main reason for sports participation among children (Gano-Overway, 2001; Lulla, 2004; Watts, 2002; Weinberg & Gould, 2001). The promotion of autonomy and responsibility were not cited by any coach as a motivational strategy either, even though this is considered an effective one (Gano-Overway, 2001; Martens, 1987; Posner, 1992).

The reasons for dropout cited by both female and male gymnasts' coaches find more support in general sports literature than in literature focused on gymnastics. Thus, AG has similar problems regarding motivation of athletes.

Some considerations are the early average age that gymnasts start training and competing, in comparison with some other sports. Therefore, some strategies may not be widely applicable; children do not value the financial rewards that adolescents and adults may. Older athletes are more conscious of their potential and career perspectives and are more task-oriented (Duda & Gano-Overway, 1996).

Meanwhile, children need more emphasis on fun, recognition, approval aspects and variability of practice; and a program designed to ensure that their youth have positive experiences (Fraser-Thomas, Côté & Deakin, 2005).

## CONCLUSIONS

Motivation is influenced by gender, age, and technical level of gymnasts. Girls and boys may change interests, particularly when entering puberty, and different approaches should be used to behave in the face of AG adversities (Krane, Greenleaf & Snow, 1997).

Therefore, coaches should use a wide range of motivational strategies to encourage gymnasts, as their needs and reactions vary much. The literature can support coaches in this regard. It would be interesting to make individual annotations out of the emotional characteristics of each athlete. This could help coaches to understand and monitor each athlete's behavior and eventual changes.

Coaches should use those approaches: have regular communication with athletes' parents, as they can be very informative; evaluate athletes' levels of satisfaction as a source of information regarding athletes' interests and needs, their reasons to participate, and objectives in the sport. Coaches and parental support are essential to maintain high levels of motivation and to avoid further emotional disturbances due to possible negative experiences as a result of a gap in interests (Cumming & Ewing, 2002; Gano-Overway, 2001; Headstrom & Gould, 2004).

Coaches must adjust their beliefs and practices according to each athlete's psychological characteristics. Thus, coaches should always monitor their own attitudes and behavior in front of athletes, both in competition and training. Coaches are important adult modeling for athletes, as they spend much time with each other. Therefore, they are mentors who can significantly influence an athlete's decision to continue participating in sport.

An especially critical period for athletes and coaches is puberty, when physical and emotional changes may affect athletes' interest in the sport. It is important to understand this stage of life; if changes in strategies are necessary, they must be made.

If more attention is paid to the developmental process of preparation and psychological characteristics of athletes, both the commitment and performance of the athletes will improve. However, studies reveal a high level of dropout among children and youth worldwide (Gonçalves, 1999; Fraser-Thomas, Côté & Deakin, 2005). In Brazil, the AG scenario is not different, particularly when gymnasts are starting intensive training (Lopes & Nunomura, 2007).

Once they recognize the reasons that athletes remain committed to a sport, coaches soon realize that all participants, particularly children and youth, are not only interested in medals and victories. Some athletes seek merely the pleasure that the sport can offer. Sharing responsibilities and decisions, making friends, and developing a sense of self-achievement are also important considerations for athletes. At a competitive level, this is even more critical. Athletes may spend most of their time in function of training, and motivation becomes a key factor.

Finally, coaches deal with human beings who experience and express a lot of feelings and emotions. This fact should be considered in order to guarantee a certain level of success and self-satisfaction for all involved in the sport. This means having positive experiences, regardless of an athletes' potential and their outcomes in sports participation.

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