

IT WAS WORTH IT– I WOULD DO IT AGAIN!: PHENOMENOLOGICAL PERSPECTIVES ON LIFE IN THE ELITE WOMEN’S ARTISTIC GYMNASTICS

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Abstract

The Olympic Movement emphasizes the importance of protecting athletes’ health and eliminating all possible risks. Many international documents provide similar recommendations, especially the United Nations Convention on the Rights of the Child. Yet, elite sport continues to represent a risk, especially in athletes who compete as pre-adolescent children. Women’s artistic gymnastics is an Olympic sport where the age of competitors has been the lowest in the last 40 years. The purpose of our empirical research was to investigate the opinions of female gymnasts on their sports careers and top achievements in artistic gymnastics. In addition, we were interested in the opinions of coaches on the appropriate age for a child to start training and competing in women’s artistic gymnastics. The results of the qualitative research conducted on a sample of 26 active and 11 retired Slovenian female gymnasts and four of their coaches revealed that the respondents would take the same career path again, despite the specific lifestyle they had to lead, many sacrifices they had to make, adverse events they faced, and the consequences on their physical and mental health. The coaches agreed that the age of a child determines their gymnastics career, but their opinions differed over whether the age limit for entering senior competitions should be raised from 16 years to 18 years. The study also provides recommendations for gymnastics clubs on finding a more successful approach towards working with young, talented athletes.

Keywords: elite child athlete, ethics, wellbeing, human rights, qualitative thematic analysis.

INTRODUCTION

Pursuant to its mission, the Olympic Movement encourages measures which ensure that sport is practiced without harmful consequences for the athletes. Therefore, health protection of athletes must be encouraged and possible risks of injury or psychological harm avoided (Olympic Movement Medical Code, 2009). Similar guidelines are also found in international documents on the protection of human rights, especially the United Nations Convention on the Rights of the Child—the most widely and rapidly ratified international human rights treaty in history (Ensalaco, 2005; Council of the European

Union, 2009; Jager Agius, 2014; Šelih, 2014). Two basic principles are identified in the convention: ‘the best interests of the child’ and ‘considering the developmental abilities of the child’, both emphasizing that a child’s best interest should be the leading principle in all activities and treatment involving children (Convention on the Rights of the Child, 1989; Šelih, 2014).

However, Paulo (2005) points out that competitive sport often does not conform to international norms and standards regarding children’s rights. On the contrary, children’s rights in elite sport remain a taboo, both in terms of protecting basic human rights and

the rights of athletes. As a consequence, this important issue continues to remain under-researched.

A specific risky environment in elite sport has been brought to public attention— inclusion in intensive training and learning very difficult elements early on in childhood among female artistic gymnasts. Women's artistic gymnastics is one of the most attractive Olympic disciplines. In addition to fascinating acrobatics, its appeal is enhanced by the fact that it belongs to a group of sports where it is not enough to only perform the elements higher, faster and stronger, but the manner in which the elements are performed is extremely important as well. Moreover, women's artistic gymnastics is an interesting research field because athletes tend to start training at a very early age. Elite female gymnasts throughout the world start training between the ages of five and seven, and are included in professional training of the elite level of gymnastics by the time they turn 10 (Tofler, Katz Stryer, Micheli, & Herman, 1996). Intensive training subjects female gymnasts to extreme strain in the pre-adolescence period, placing them at a higher risk of both physical and psychological developmental deficits (Caine, Russell, & Lim, 2013). Data reported by British Gymnastics revealed an above-average number of child abuse cases in gymnasts compared to the general population, with the major risk factor being the age of female gymnasts (Collins, 2012). Moreover, Farstad (2006) found in her research that, despite the fact that injuries can occur in any sport, they are especially prevalent among female gymnasts due to their young age. The author wonders whether committing a child to six hours of training a day for six days a week does not constitute a full-time employment relation, from which all underage children should be protected.

Intensive training programmes from early childhood on can lead to different kinds of abuse in child athletes (Pinheiro, Pimenta, Resende, & Malcolm, 2014). Producing world and Olympic champions in women's gymnastics during the period of

pre-adolescence has several documented consequences, including negative weight control methods, eating disorders, severe physical injuries, corporal punishment, training/competing with injuries, psychological abuse, lack of time for resting and leisure activities, adverse effects on health and development, decreased school performance, absence from home, lack of social contact with non-athletes, sexual abuse, and substance abuse (Sundgot-Borgen, & Torstveit, 2004; Farstad, 2006; Lassiter, & Watt, 2007; Sahlstrom, & Jeglic, 2008; Timpka, Finch, Goulet, Noakes, & Yammine, 2008; Gannon, & Cortoni, 2010; Zurc, Rhind, & Lang, 2014; Pinheiro et al., 2014). In fact, the long-reaching consequences of physical and psychological abuse in young athletes can be detected even after the conclusion of their professional careers, but most athletes regard them as a normal, acceptable part of elite sport culture, minimizing or even denying any negative effects on their lives after the conclusion of their professional sports careers (Pinheiro et al., 2014; Papaefstathiou, Rhind, & Brackenridge, 2012; Stirling, & Kerr, 2012). Based on discursive and rhetorical resources analysis on a sample of 25 articles from the Swedish newspaper *Dagens Nyheter*, Stier and Blomberg (2015) established the authenticity of female gymnasts' statements reinforcing and giving legitimation to unhealthy behaviour, wrongdoings, and leadership culture in gymnastics. The analysis revealed a downsizing of the gymnast's voice, power asymmetry between coach and gymnast, and denial of the issue or any wrongdoings from the gymnastics clubs, National Gymnastics Federation, and the National Olympic Committee. In doing so, the current world of gymnastics violates the United Nations Convention on the Rights of the Child and highlights the need for developing new models which would challenge the traditional approach on how to manage elite-level gymnastics training.

Based on all this evidence, the voices of advocates for the importance of protecting and ensuring the wellbeing and

welfare of children in sports have been raised in recent years. Their criticism is directed at the negative competitive atmosphere in adolescent sports and the acceptability of violence in youth sports, and they have expressed their concerns about the risk of abuse in elite child athletes (Gretchen, 2010; Brackenridge, 2010). An increased concern for ensuring the safety of child athletes has also encouraged new research in this field (Papaefstathiou et al., 2012).

Keeping this evidence in mind, the aim of our empirical research was to examine the opinions of female gymnasts on their career of producing top-level achievements in elite artistic gymnastics and to determine the factors that can influence it. In addition, we were interested in coaches' opinions on the right age for female gymnasts to start training and competing in artistic gymnastics.

METHODS

An phenomenological research design was employed, with in-depth retrospective semi-structured interviews. We examined the personal experiences with elite sport of active and retired Slovenian elite female gymnasts, and perspectives on elite gymnastics of their coaches. The phenomenological approach is dedicated to studying the life experiences of the same phenomenon of reality from the views of different individuals. The different descriptions of life experiences contribute to their understanding and interpretation (Creswell, 2014). The aim is to understand the constructs of individuals, with which they experience their daily reality (Ritchie, & Lewis, 2006).

The research included 37 Slovenian elite female gymnasts, of which 26 were current cadet, junior or senior members of the Slovenian national gymnastics team, and 11 gymnasts who were members of the junior or senior national gymnastic teams of Yugoslavia or Slovenia in the late 1980s and early 1990s. Snowball sampling—a

sampling method enabling access to dispersed, small and specific population groups—was employed to obtain the sample of female gymnasts (Ritchie, & Lewis, 2006). In addition to the gymnasts, the research also included four of their coaches.

Gymnast respondents started training, on average, at the age of six. A decrease in the starting age was noted for gymnasts who started training after 1995. The mean age of active gymnast respondents at the time of the interview was 14 years (the youngest active female gymnast was 10 years old and the oldest was 22 years old), and they had been training gymnastics for a mean length of 8.0 years. Their senior peers who started training gymnastics between 1969 and 1997 trained for an average of 11.77 years. In recent years, there has been a trend towards prolonging the period of training and competing in gymnastics, which was shortest in the 1980s, when it lasted for an average of 10 years. At the time of the interview, retired gymnasts had not been training for an average of 18 years.

All the coach respondents coached both active and retired gymnast respondents. They started coaching when they were 16 to 30 years old, with an average of 21 years. At the time of the interview, they had been coaching for an average of 28 years and started coaching in 1970 or later.

A semi-structured interview was used to collect data. Following a pilot study, which helped us improve the wording of questions, the sequence of questions, and to add sub-questions to different topics, the final survey instrument was developed. This instrument was used to collect empirical research data on the entire sample of female gymnasts and their coaches (Zurc, 2015). The article presents the results for the following variables included in the interview:

- demographic data (status: active/retired, age at the time of interview, age at the beginning and end of career or coaching, total period of training or coaching),
- opinions of female gymnasts on their career of producing top-level

achievements in elite artistic gymnastics and factors that influence it,

- lifestyle of a female gymnast between the ages of 9 and 14,
- attitude towards career in gymnastics—would you do it again?,
- opinions of coaches on the right age for female gymnasts to start training and competing in artistic gymnastics in order to produce top-level achievements.

Interviews with the gymnasts were conducted from December 12, 2012, to February 18, 2013. The time and place of the interview were agreed on according to the respondent's preferences. Most interviews were conducted in the afternoon, between 5 and 9 p.m., but there were also some conducted on Saturday morning, between 8 and 12 p.m. Interviews with active gymnasts and their coaches were conducted at the Zelena Jama Gymnastics Club and the Gib Šiška Sports Club in Ljubljana, where most of the junior and senior national gymnastics team members train. Half of the interviews (n=6) with retired elite gymnasts were also conducted at gymnastics clubs: three were conducted at their homes, one in an office, and one in a café. All 37 interviews were conducted by one researcher, author of this article, and on an individual manner. The interviewer and the interviewee were in private room alone during the conversation. The average duration of an interview with a female gymnast was 38 min 55 sec, with the shortest interview lasting 14 min and the longest 2 hrs 12 min. The differences in the length of interviews were consequences of short and brief answers of the youngest participants (10-11 years old) and at the same time of long explanatory and deeply reflexive answers of the retired adult gymnasts, which sometimes as well overcome the question theme. The total duration of all interviews conducted with both active and retired female gymnasts was 24 hours. The total duration of all interviews

conducted with coaches was 8 hrs 9 min 45 sec, with an average interview lasting 54 min 25 sec.

The research was conducted according to ethical standards regarding human subjects and according to guidelines as outlined by the Helsinki-Tokyo Declaration. Personal data were collected and protected in compliance with the Personal Data Protection Act (2007). Ethical aspects of the research were discussed and approved in May 2010 by the Ethics Committee at the Department of Psychology, Faculty of Arts, University of Ljubljana. Before giving an interview, all respondents signed a *Consent form for participating in research on top-level achievements of children*. For minors, the form was also signed by their parents or legal representatives. All presented statements are coded, respecting the respondents' right to confidentiality and anonymity. Personal names, place names, specific periods and any other demographic data that could be used to identify the respondents were removed from the presented results.

To analyse the data, a phenomenological approach was adopted. This approach highlights typical respondent statements which generalize the findings and illustrate respondents' personal experiences with the researched phenomenon (Creswell, 2014). Subsequently, data were analysed using the qualitative content analysis (Adam et al., 2012). The latter method was used to analyse respondent statements for the main themes which explain how top-level achievements in women's artistic gymnastics are produced, according to both active and retired female gymnasts and their coaches.

RESULTS

In active female gymnasts, qualitative content analysis yielded eight main themes which illustrate the course and characteristics of their careers, such as the reasons for starting to train gymnastics, parents' role, characteristics of trainings and

competitions, balancing school and gymnastics, adverse events hindering elite-level achievements, gymnastics as a way of life, and development of gymnastic talent. In retired gymnasts, qualitative analysis yielded three main themes: identification of talent, development of talent, and legacy after career conclusion (Table 1).

Among *the reasons for starting to train gymnastics* and *ways of identifying gymnastic talent*, both active and retired gymnast respondents specified different factors including internal motives, invitation from a friend who was training, and the role of parents who recognized a child's talent or enrolled her because she was lively or because the gym was near. In addition, the coach played a very important role in the

selection of gymnasts throughout the researched period (1960-2013). In the 1970s and 1980s, many Slovenian elementary school children were selected to train gymnastics based on the results of systematic physical activity tests which were conducted by coaches from gymnastics clubs.

“Actually, we had this test in elementary school, it was in 1st grade during PE. A coach came and he would select the girls he thought might be good in gymnastics. Then he gave us some papers which said when, how, and why, and my parents brought me in just to try it out...”
(G-R-7/1)

Table 1

Qualitative content analysis of the life of active and retired gymnasts.

GROUP	THEME	CATEGORY
Active gymnasts	reasons for starting to train gymnastics	child's family recognizes gymnastic talent invitation from a friend PE teacher internal motives
	parents' role	active role of parents passive role of parents gymnastics as a way of life for the whole family
	training characteristics	criteria for selecting a gymnastics club importance of age at the start of training starting by playing gradual increase in the difficulty and the intensity of training problems at the start of more intensive training amount of training frequency of participation in trainings ensuring safety
	competitions	achievements in national competitions achievements in international competitions selection at the gymnastics club motivation for competitions role of a coach
	balancing school and gymnastics	adapting school schedule to gymnastics schedule selecting school to suit gymnastics trainings lack of time for school due to gymnastics peer support
	adverse events	fear of coach injuries psychological pressure exposure to violence
	gymnastics as a way of life	putting gymnastics first development of positive personal characteristics
	development of talent	chronological stages of development into an elite athlete
	doing it again	I would do it again indecision about going down the same path again I would not do it again
	making changes to past career	starting to train gymnastics earlier

		coming to training more often and being more active different approach to gymnastics training prevention of adverse events better reward system I would have chosen a different sport
	specific lifestyle of a gymnast	specific lifestyle role of society in promoting elite achievements
	identification of talent	motives personal characteristics important for gymnastics role of coach role of parents
	the process of making an elite gymnast/development of talent	factors involved in decision to sign up for artistic gymnastics trainings competitions factors involved in decision to conclude a career
Retired gymnasts	legacy after career conclusion	influence on physical and mental health influence on schooling good memories negative emotions after career conclusion gymnastics after concluding a career in elite sports
	doing it again	would absolutely do it again without changes would probably do it again positive memories positive influence on life
	making changes to past career	I would have persevered longer I would have put more effort into it I would have been more in touch with my inner self negative memories negative behavioural patterns in adulthood

Table 2.

Opinions of coaches on the appropriate age for a child to start training and competing in women's artistic gymnastics to produce top-level achievements.

THEME	CATEGORY	CODE
Starting age	start in pre-school age	starting age for elite gymnastics is four to five years
	no competitions at the beginning	very small children are not suitable for competitions mistakes are tolerated in very small children
	late start	few talented children succeed despite starting to train late extreme talents can learn gymnastics after the age of 10
Raising the age limit for entering the senior team to 18 years	age limit for competitions	in the past, age limit did not exist for competitions the first age limit for senior competitions in women's gymnastics was 14 years later, the age limit for senior competitions in women's gymnastics was raised to 16 years
	retaining existing age limit of 16 years	proposal to raise the age limit for women's senior gymnastics competitions to 18 years research results do not support raising the age limit existing age limit of 16 years for senior competitions is appropriate
	adverse consequences of raising the age limit	distrust that the age limit can successfully be raised difficulty of retaining elite-level form in women's gymnastics until the age of 18 more injuries are expected if athletes start training later more injuries on the vault influence of raising the age limit on smaller countries
	development possible even if the age limit is raised	development is possible even after the age of 16 it is possible to have top-level achievements after the age of 20
Age determines the course of career	pre-adolescence as the best period for learning	excellent conditions for learning before puberty no injuries before puberty faster regeneration before puberty

	greater psychological stability before puberty easier to lead children before puberty all gymnastics is taught up to the age of 16 easiest to teach a child between ages six and nine
age for top-level achievements	most appropriate age for top-level achievements in women's gymnastics is 16-20 years gymnast's age is important for obtaining top-level achievements
age determines career conclusion	career in gymnastics concludes at the age of 21, when it only begins in other sports

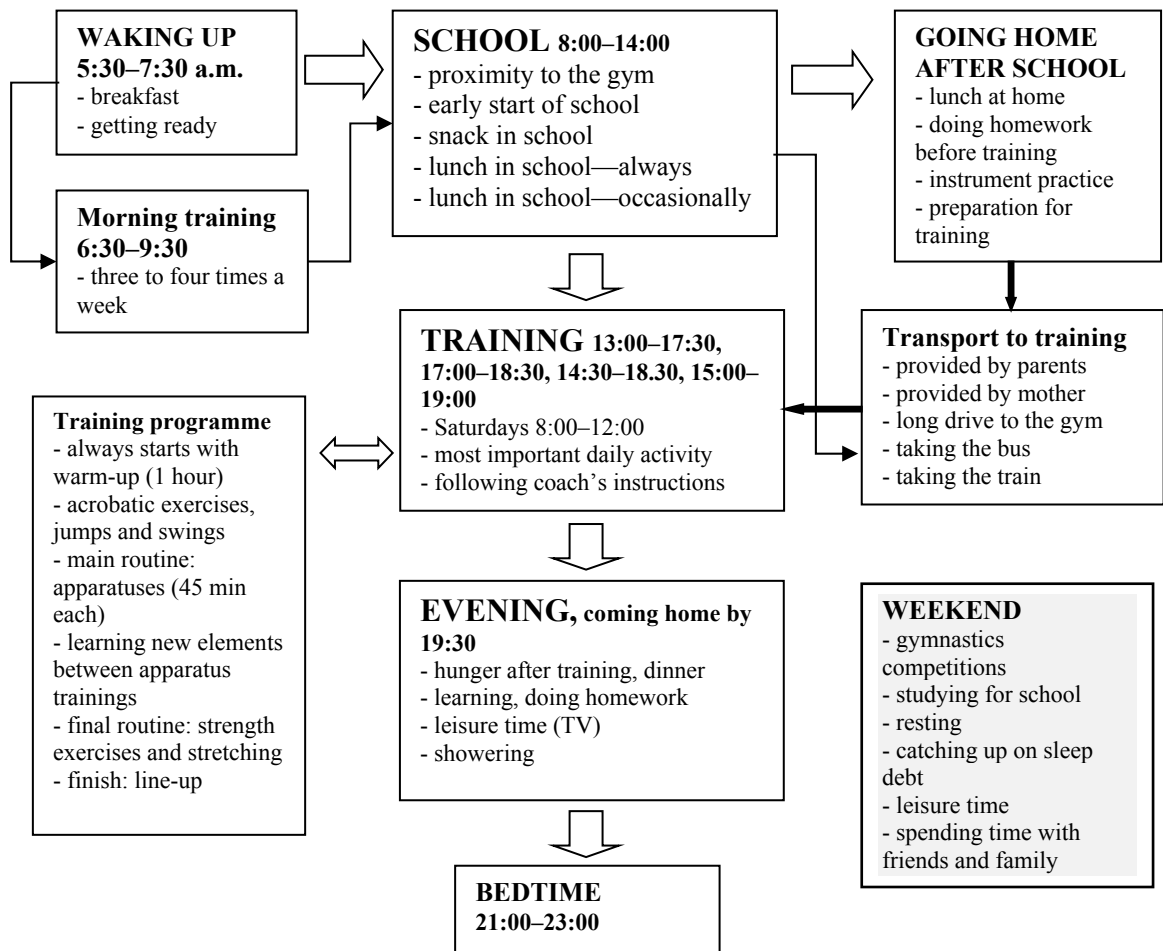


Figure 1. A typical day of an active female gymnast aged 9–14 years.

Nowadays, this kind of selection is no longer possible due to personal data protection laws. However, coaches continue to play an important role in selecting the younger female gymnasts who are still active. These are the PE teachers who work full-time at an elementary school and also coach girls part-time at a gymnastics club.

“First I was training at school, and then this coach who works here, at the time she still worked at my elementary school, she actually told me to go and check it out, because she thought I might be good in gymnastics, and that’s how it all started.”
(G-A-16/1)

The main activities in *developing the talent for gymnastics* are *trainings* and *competitions*. These were two of the strongest themes, both for active and retired female gymnasts. Active gymnasts stressed the importance of age when starting with the trainings—the younger a gymnast is, the more knowledge she can gain before starting with competitions. Being over seven years of age when starting to train was seen as a significant drawback by the gymnast respondents. Further, active gymnasts emphasized the amount and frequency of training to achieve success in competitions. The duration of training in childhood years ranges from three to six hours daily, and increases with age. When gymnasts are 9-14 years old, they have additional morning trainings and participate in annual preparation trainings in renowned gymnastics centres abroad. When it comes to taking part in competitions, the selection process at the local gymnastics club is very important, including the results of motor performance tests, advancement to a better group, and selection made by the coach.

“Then they put me in a better group, because we were doing jumps on the trampette and we were supposed to swing our arms once, but I managed to do it twice. So they put me in a higher level.” (G-A-18/1)

The statements from retired gymnasts, on the other hand, emphasized that training was above all a constantly changing process. The training programme changes together with the discipline itself, including the gymnastic apparatuses and elements—the latter kept getting more difficult, especially after 1970. In the 1970s and 1980s, the training of elite women’s artistic gymnastics would typically begin in school, where girls would practice twice a week. Then, after a month or two of easy exercises, the gymnasts were invited to a gymnastics club where the exercises quickly progressed to elite-level sports training. Respondents recounted that the system was very well thought out—they were cleverly directed from fun gymnastic games to elite sport, which, as children, they were neither

familiar with nor did they particularly desire.

“We started by having fun, and that’s how they got us. It was almost like a movie script; more and more, until we were practicing every day. We didn’t even particularly want that, I mean, we didn’t know something like training every day even existed.” (G-R-3/17)

The theme *competitions* underlined that gymnastics had always been a sport for young girls with a low age limit for entry into senior competitions. Even gymnasts who trained and competed in the first half of the 1970s obtained their highest competitive achievements from the age of 10 to the start of puberty.

“I was very successful, I was always the best or the second best, especially in my category. Because I always did that well, they’d immediately transfer me into a higher category. Even to this day, I’m still the youngest Yugoslav senior gymnastics team member. At the time, I wasn’t 11 years old yet, I turned 11 that year. That means I was just over 10 years old when I became a senior team member.” (G-R-2/1)

Active gymnasts also stressed the role of parents and full-time schooling, which is another obligation that runs parallel with gymnastics trainings. Despite enjoying the understanding of their teachers and the support of their parents and peers, gymnasts still stressed a lack of time for *full-time schooling* due to gymnastics, reflected by their sense of missing out on general education and a tougher transition to higher education. *Parents play an active role* by closely monitoring their child’s activities and progress in gymnastics, and seeking the best possibilities for the child’s gymnastic development. Often, parents would neglect their own needs or activities or even risk losing a job to adapt to the child’s schedule.

“I’m from another town ... [town name], so my mom would bring me in for practice in the morning at 6:30, I’d be there for an hour, until 7:30, then she’d take me back to school in our home town. I was in school from 8 a.m. to 1 or 2 p.m. Then I’d get right on the train, all the way to ...

[station name], and my mom would pick me up there and drive me here. We'd train from 2:30 to 7, then someone would pick me up and I'd come home by 7:30... My mom almost lost her job because she kept going out during her workday." (G-A-13/2-3)

Constant trainings and competitions mean that a gymnast's career can also be influenced by **adverse events** such as different health issues, especially injuries and the long-term rehabilitation they require. Interviews with retired elite female gymnasts revealed that athletes would get back to the gym as soon as possible, often before fully completing the rehabilitation process. In many cases, this led to a prolonged rehabilitation with permanent consequences for the gymnast's health after finishing their career.

"And then I injured my elbow, which means that I lost a year. I remember going to the trainings with a cast, we were doing strength exercises, but it wasn't the same anymore. And my elbow was ... well, it still is today, but now I can straighten it out, but then I couldn't straighten it out all the way, I couldn't bend my hand... I still feel my elbow when the weather's bad." (G-R-8/8-9)

Injuries were the most prominent adverse event in the development of an elite gymnasts also for active athletes. For example, injuries would cause them to miss out on a competition or to suspend their training and sports careers. In some athletes, injury occurred early on in their career and required long-term rehabilitation, making a comeback to elite sport very challenging.

"Overall, I was making really fast progress. When I was nine, I went for training in Russia for the first time, it was 17 days, and when I was 10, I went for my first international competition abroad [country name] and I was also first, I won the floor exercise that time... From then on, I was only making progress... until my first serious injury. The second operation was in 2011, and I've been trying to get back since then." (G-A-16/1)

When asked whether they would choose **the same career path in gymnastics again** if presented with an opportunity to start all over, knowing all the highs and lows they would have to face along the way, the answers of both active and retired gymnasts yielded two identical themes: they would take the same path again but they would also want to make some **changes**. Retired gymnasts emphasized that they would put more effort into their sports careers, listen to their inner voice more and persevere longer. They believe that all the effort invested during childhood years can only be fully capitalized on in adult gymnasts.

"I actually see that they're enjoying the competitions more, now that they're adult women. It's almost like they're reaping the reward of the hard work that they put in. Adult women experience these things totally differently than we did, we were just kids and they, well, they just somehow went by us." (G-R-11/13)

In contrast, active gymnasts substantiate their decision for making changes to their elite athlete careers with the **specific lifestyle** typical of gymnastics and marked by an absence of free time, an inability to select leisure activities, the sacrifices parents and other family members make to accommodate a child's sports career, a highly-intensive childhood, and an inability to understand the necessary lifestyle and training programme requirements for top-level achievements in childhood.

"Maybe the problem in gymnastics is that things tend to be most intensive when you're a child. You know, everything's strenuous anyway, like cycling, rowing or tennis, it's the same thing, you have to be away from home even more and stuff. But it's easier to accept that and understand it when you're 17 and you have to train a lot, than when you're 10 and someone tells you that you have to get up at six in the morning and go train, and you're like – what's wrong with you? If you're 17 and you have to do that, you have a different perspective."

That's the problem in gymnastics." (G-A-13/13)

Figure 1 shows the structure and sequence of activities in the normal day of an elite gymnast still active in competitive gymnastics. She begins by waking up between 5:30 and 7:30 a.m. and then goes to school, sometimes she has morning training before that. Morning training is usually not scheduled every day. Its duration ranges from one hour to one and a half hours, and up to two and a half hours in high school. School starts at 8 a.m. and finishes between 1 and 2 p.m. After school, younger gymnasts in lower grades of elementary school with a shorter daily schedule go home where they eat lunch, do their homework, engage in leisure activities and get ready for training. In contrast, gymnasts in higher grades of elementary school and in high school go to train immediately after school. Typically, the training would start between 2:30 and 3 p.m. Training is the main daily activity of gymnasts, conducted every day for an average of four hours with the exception of Sundays, which are meant for resting. When coming home from training, respondents report being very hungry, so dinner is the next activity on the list. In the evenings, gymnasts get ready for school, do their homework, and study. If there is any time left, particularly younger gymnasts in lower grades of elementary school like to spend it watching television. They go to bed between 9 and 11 p.m. As the amount of school work and the need for studying increase, they tend to go to bed later. Saturday mornings are reserved for training and possible competitions, and the rest of the weekend is spent resting, spending time with friends and family, and getting ready for school.

Because entering the world of women's artistic gymnastics is always closely related to a child's age, we were interested in the coaches' opinions on the right age for a child to start training gymnastics and to start performing in senior competitions if they are to produce top-level achievements. The results yielded three main themes (Table 2). As the first theme, coaches indicated *the*

starting age for training, with the best athletes starting to train in the pre-school period, usually between the ages of four and five. According to the coaches, very talented children who can have a successful career despite starting to train later are rare. However, even the most talented children should start gradually even though they get an early start—play is very important at first, there should be no competitions and no striving for perfection.

The second theme is *raising the age limit for entry into the senior team to 18 years*. Here, the coaches gave their opinions on changing the competition rules and, consequently, on changing the sport itself. Respondents expressed different opinions on the proposed changes. Some believe that there has to be a minimum age limit to compete in the biggest events and that gymnasts can advance even if the age limit gets raised.

"In the past, you could compete in senior competitions when you were 14, now the limit is 16 years. They're even thinking of raising it to 18 years because there's an increasing number of competitors aged 20, 25, even 30 years. But we're not at a point where only adult women would be competing, they still compete together with girls... When I was active, from 1972 to 1988, athletes would stop training when they turned 13 or 14. Today, there are seven girls in our club who are older than 16, and they're all seriously training gymnastics... It would definitely be good for gymnastics as a sport to have the age limit moved up to 18 years because it would give people a chance to work more gradually towards achieving something, no one would be in such a rush and coaches would take care of their athletes, they'd know that they have to be 18 before they can start competing." (G-U-2/1-2)

Conversely, others believe that the age limit should stay as it is. Coaches substantiate this opinion with research results and a disbelief that top-level achievements can be obtained if the age limit is raised. Coaches feel that it is difficult to retain elite-level form in

women's gymnastics until the age of 18. In addition, they predict more injuries due to a later starting age and issues on athletes' body recovery in post-adolescence. As a result, they believe that raising the age limit would place especially smaller countries in a disadvantaged position, wherein the main reason is smaller pool of elite athletes in the senior women's artistic gymnastics among countries with less population.

"This year, there was talk of raising the age limit to 18 years... In the end, that didn't happen because simply too many people complained... Until puberty, everything is great—there are no injuries and regeneration is much faster, kids that age almost never have sore muscles. Second of all, they're stable psychologically, they recognize authority and so on. As soon as they hit puberty, it's a disaster. Psychologically, they're totally unstable, they're searching for themselves, they want to prove themselves by going against the coach's authority, they fight... Also, they have issues with themselves, the way they look, they start to develop physically and so the centre of balance is off... The amount of fat tissue in girls increases greatly and so on... It's the end of the story." (G-U-1/4-5)

The third theme was **age determines a gymnast's career**. Here, we confirmed the opinion of coaches that the best developmental stage in women's artistic gymnastics for gaining new knowledge and skills, and for developing motor abilities, is pre-adolescence (six to nine years of age). Further, the best period for competing and producing top-level achievements according to the coaches is the period between 16 and 20 years of age. Coach respondents emphasized that a competitor's age is crucial for the ability to achieve top-level results and also represents one of the main reasons for concluding a career. They pointed out that a competitive career of female gymnasts concludes at 21 years, whereas in many other sports, that is the time when athletes start competing in major competitions.

"Actually, when they stop growing, that sadly also signals the end of their career."

It's not like men's gymnastics where the best results can be achieved also up to 30 or even 35 years. In women's gymnastics, the average age for getting the best results is 18 and 19 years, which means they have to start really early, like when they're four or five. That way, they get ten years for doing the complete gymnastics programme, and three to four years are spent only preparing for the biggest competitions." (G-U-3/1)

DISCUSSION

The empirical qualitative research conducted to determine the opinions of active and retired elite female gymnasts on their careers and top achievements in women's artistic gymnastics revealed that the respondents would do it again, regardless of the specific lifestyle they had to lead, the sacrifices they had to make, the adverse events they faced, and the consequences for their physical and mental health. Our findings identify the main factors connected with women's elite artistic gymnastics in terms of the role of a gymnast's age, the reasons for starting to train, the characteristics of trainings and competitions, a specific lifestyle reflected by a typical gymnast's day, balancing trainings and school, the role of parents, and possible adverse effects during and after a career.

Our research results showed that systematic physical activity tests for children, selection of a coach or a gymnastics club, and the role of parents who recognize their child's talent are the key factors for starting a career in gymnastics. According to Camporesi (2013), the decision on which sport to engage in should be left solely up to a child, without possible interests or life plans of their parents and other authority figures. However, strong competition interest between countries for medals and glory encourages development of procedures and tests for a sport talent identification. Pion et al. (2016) found that predictive models, which based upon non-linear objective statistics, improved the correctness of talent identification in

women's artistic gymnastics and reduce the risk of missing high-potential gymnast. Irrespectively of that findings, underlined the authors, no talent identification model is 100 % prognostic due psychological and environmental factors, which affecting the interaction between training and genetics. Therefore the developing a talent should not be justified with the benefits for society (Camporesi, 2013). As is clearly evident from the statements of retired gymnast respondents, they did not decide on elite gymnastics themselves. In fact, they were critical about the system being very well thought out, of how they were cleverly directed from children's gymnastics games to elite sport, which they were not familiar with as children. The United Nations Convention on the Rights of the Child emphasizes that the safety of children must also be ensured during their leisure activities: "States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child" (Convention on the Rights of the Child, 1989). With this article, the Convention ensures each child the right to engage in recreational activities appropriate for their age and preferences, which should primarily serve as play. Here, the issue of elite sports activities for children which start as leisure activities arises. In this case, recreational activities no longer serve their main purpose—for children to spend their free time resting, playing, and having fun—but quite the opposite: they become the central activity to which everything else must be sacrificed, starting with free time, schooling, and family activities. The children are isolated from their parents and the world outside of sport. Everything in children's life and in life of their families revolves around gymnastics (Smits et al., 2016).

A lack of time for school obligations due to gymnastics has also been reported in our research results. With a typical daily schedule of a gymnast between the ages of 9 and 14, we confirmed the lifestyle of elite female gymnasts which places sport in first place, without leaving time for leisure

activities or giving children the choice to select free-time activities themselves. When it comes to balancing a child's obligations and activities, parents play a key role. Salecl (2010) warns that, in the past 20 years, an opinion has formed regarding the upbringing of children that parents can influence their child's development by acting deliberately, and that the level of their engagement will influence the course of a child's life. Based on this, parents could encourage potentially dangerous endeavours in their children with the aim of obtaining fame or financial rewards. In its extreme form, achievement by proxy can even be a kind of child abuse (Tofler et al., 1996). The importance of parents in the elite youth sport brought to the surface in our empirical study confirmed as well other comparable studies. Smits et al. (2017) emphasized that female gymnasts' parents are crucial to make sense of a normalization of abusive coaching practices and ongoing "code of silence" in the elite artistic gymnastics. In their qualitative study, the parents uncritically and faithfully trusted in a coach's knowledge, behaviour and belief that makes the best for the gymnast. Authors argued therefore that a critical approach is needed. The parents need to learn how to ensure their voice is heard and taken seriously in the contextual gymnastics micro-frame between child athlete, coach and parents. Similarly, Burgess et al. (2016) in phenomenological study found out that normalising experiences and detaching from gymnastics are among main coping strategies of parents of elite female gymnasts aged 11-14 years. Nunomura and Oliveira (2013) based on 163 semi-structured interviews with Brazilian artistic gymnasts found out that parental support enabled and greatly influenced the child's entering into sports, their level of participation and achievements, and their physical and mental wellbeing. However, when parental support turns into negative way it can result in stress, conflicts, and child's burnout or even to dropout from gymnastics. Our phenomenological study equally confirmed the crucial role of parents

who recognized a daughter's talent and enrolled her into gymnastics training. Further, the parents play an essential role by supporting their child's activities and progress in gymnastics. Through this process, the parents face numerous organisational, competitive, and developmental stressors, such as already reported by Burgess et al. (2016) strongest stressors are coming from time and travel demands, schooling, finances, competitive pressure and injuries.

The main finding of our research, reflected by the interview statements of both active and retired gymnasts and their coaches, is the importance of age, which determines the sports career of a gymnast. Active gymnasts stressed the importance of the starting age, which significantly influences the range of gymnastic knowledge and skills, and can represent an important deficit perceived throughout the career if it is too high. As was confirmed in an interview with a retired member of the Yugoslav elite gymnastics national team who actively competed in the first half of 1970s, the age limit for entry into the highest level competitions was primarily determined by the sport achievements even before the so-called era of little girls. Regardless of age, coaches would sign up a high-achieving athlete for senior competitions. A contradictory attitude towards pre-adolescent performances at competitions at the highest level was identified in female gymnasts. While describing these performances as their highest achievements, which they reflect on with a certain pride and joy, they also believe that they started their gymnastic careers too early, and that they could not understand and enjoy the results of their work as children to the same extent as adult athletes. What is more, they admit not understanding the point of subordinating their entire lives to elite sport. Duarte et al. (2015) noted that early age of elite gymnast is great risk factor for experiencing the fear, especially fear of injury, fear of errors and failure, fear of apparatus, and fear of coach. To avoid the consequences of negative

emotions and behavioural patterns in adulthood is important to implement educational programmes for coaches geared towards child development, physical and mental well-being, and improved pedagogical training methods.

Similarly, the coaches of interviewed gymnasts agreed that a child's age determines a career in gymnastics, both its start and its conclusion. However, their opinions were divided on the topic of raising the age limit for entry into senior women's gymnastics competitions from the existing age of 16 years to 18 years. They are aware of the issues brought on by a lower age limit, and examples of top performances from elite gymnasts over 20 years of age also prove that it is possible to develop and achieve the highest results in competitive artistic gymnastics in adulthood. Yet, coaches strongly believe that the best period for gymnastic development in girls is between the ages of six and nine, followed by a competitive period between the ages of 16 and 20, which substantiates the existing age limit. According to Caine et al. (2013), the judges' rules of competition also play a crucial role when it comes to the age of elite artistic gymnast competitors. Namely, these rules define the strategies and work methods employed by coaches at gymnastics clubs. A reduction in the number of pre-adolescent girls in senior gymnastics competitions would thus be possible by changing the rules and raising the age limit in competitions. According to Donti et al. (2012), changing the judging criteria will diminish psychological pressures for absolute performance and body thinness at young age. Children who engage in elite sport in early childhood have to undergo early selection and specialization processes, they have serious obligations, participate in highly demanding training and competitions, and feel the weight of pressure and expectations. As such, they represent an extremely high-risk athlete group. Therefore, it is essential to set a minimum age limit for training and competitions of elite sport, which will

ensure children's fundamental rights and their sports safety in accordance with the United Nations Convention on the Rights of the Child (Farstad, 2006). On the other side, the need for implementation of more transparent and precise judging system it comes into spotlight. According to Bučar Pajek et al. (2011), the 'Real Time Judging System' as a new computer assisted system to record and display deductions from individual judges in real time, promises an efficient tool to increase the transparency and reliability of judging in artistic gymnastics.

The pressure for achieving the highest results at the earliest age is one of the biggest risk factors for the abuse of elite child athletes. The International Gymnastics Federation (FIG) investigated the age of Chinese female gymnasts competing at the Beijing Olympic Games in 2008. Their investigation was concluded with an allegation that the two-time Olympic gold medal winner He Kexin was only 14 years old during the Olympics, thus failing to meet the minimum age limit of 16 years set for women's senior gymnastics competitions (Ghaye, Lee, Shaw, & Chesterfield, 2009). The participation of pre-adolescent children in elite sport is connected with several adverse events also established in our research, such as physical and mental health issues, particularly injuries and the resulting long-term rehabilitation. Ivković et al. (2007) believe that the reason for injuries in women's sports is overtraining, the result of an imbalance between the intensity of training and insufficient recovery time due to deficient mechanisms of tissue repair. Similarly, a report on Swedish elite women's artistic gymnastics found cases of severe physical injury and mental trauma similar to those of abused women and workplace mobbing victims (Stier, & Blomberg, 2015). Burnout due to the pressures of elite sport was present early on, even with 16-year-old gymnasts. Similarly, semi-structured interviews with former Portuguese female gymnasts showed various kinds of abuses during their sporting

careers. Weight control, training/competing with injuries and corporal punishment emerged as key forms of exploitation, which athletes addressing as a normal practice in the elite women's artistic gymnastics (Pinheiro et al., 2014). Moreover, Gervis and Dunn (2004) claim that the consequences can even be perceived after a sports career. In their qualitative research on a sample of 12 retired elite athletes, including gymnasts, the authors established emotional and psychological issues which former elite child athletes associated with the coach's inappropriate attitude and behaviour.

Our research findings are very important also in light of the Youth Olympic Games, an international sport event for elite child and youth athletes. Guidelines of the Olympic Agenda 2020 emphasize the protection of human and child rights in sports, pointing out the need for an in-depth revision of previous Youth Olympic Games in Recommendation 25, and a revision of the Code of Ethics for more transparency, and responsibility for rights implementation and the wellbeing of athletes in Recommendation 32 (*Olympic Agenda 2020*, 2014).

An insight into the daily routines of elite female athletes revealed both best practices and adverse factors. The latter should be eliminated to ensure safe participation in sports and the development of a child's dispositions in women's artistic gymnastics. Based on our findings, we provide the following recommendations for working with talented female gymnasts:

- only children with an innate disposition should be directed towards elite sport;
- coaches should develop individual approaches for female athletes, based on a child's talent, character, and developmental and personal characteristics, and also encourage internal motivation;
- in elite women's gymnastics, a sense of self-control and responsibility for one's own decisions should be encouraged in a child to promote their physical and mental health. A child's opinions and feelings

expressed during training should be considered, and a partnership should develop in planning and implementing trainings;

- gymnastics training and school obligations should be systematically harmonized, both in terms of schedules and content;

- more attention should be paid to strategies for prolonging a career in gymnastics over the age of 18. In this respect, being familiar with and managing the factors connected with the reasons for concluding a gymnastics career in women is crucial. Appropriate models for training women's artistic gymnastics should be developed, enabling athletes to learn and master new elements also after the onset of puberty;

- an interdisciplinary team of experts should be included in the training process;

- coaches should be educated on the possible adverse effects of the coach-athlete relationship, such as verbal and physical violence, while at the same time, positive forms of interpersonal interaction such as support, understanding, and trust should be encouraged;

- gymnastics clubs should develop injury prevention strategies, including innovative didactic approaches to training, physical fitness of athletes, and approaches employed in the rehabilitation period. When athletes start training too soon after an injury without any adaptation to their routine, they tend to strain other body parts more, generally leading to further injury;

- establish a closer cooperation between health care and sports organizations in prevention activities and recognizing health issues in children and youth involved in elite sport;

- placing the interests of a child before all other interests in society. Establishing control over the interests of parents, coaches, gymnastics clubs, and the country. Actively fighting any political or otherwise biased preference in national team selection and the work of judges, and fighting any manipulation and abuse of children for the purpose of achieving better sports results;

- gymnastics clubs must designate an athlete's rights advocate to whom children can freely confide all the issues they are facing at the place where these issues arise;

- developing models of gymnastic professionalization, providing athletes with a monthly income and opening up possibilities for the career of a professional athlete upon completion of schooling.

A qualitative methodological approach was selected in our research, which is, according to Goldstein (2007), more suitable for researching human rights and well-being themes in different fields compared to a quantitative approach. The sample included 37 elite female artistic gymnasts. While our results definitely provide a priceless insight into the world of elite artistic gymnastics, the sample also has some limitations for the research, resulting in longer periods of data collection, and extensive, complete, and time-demanding processing of transcripts and qualitative data analysis. A selection of the respondents was made with the snowball sampling method, enabling a unique access and inclusion into a closed social community of elite gymnasts and their coaches. Ritchie and Lewis (2006) point out that sampling with the snowball method can also have specific limitations from the aspect of sample dispersion. This is a consequence of the approach where new sample members are suggested by the existing ones, with the latter usually suggesting friends or acquaintances who have similar experiences and characteristics to themselves.

In this research, we focused on the view of athletes and their coaches. The third observation aspect—parents of elite athletes—is also indispensable and equally important. According to Jacobs et al. (2017), directors of clubs and national sports federations as well play a large role in creating the specific sport culture. However, these actors have received relatively little attention from scholars in gymnastics science. Triangulation with an integration of quantitative and qualitative methods in future research can provide an insight into understanding the studied phenomenon from

the perspectives of all key stakeholders in producing elite child gymnastics achievements.

Finally, the time distance between active and retired gymnast active sports career should be taken in consideration. The retired gymnast trained and competed in the period between 1969 and 1997, which already represents 30 years of gymnastics development and changes. The interviews with active gymnasts took place in 2012/2013 school year. Consequently, our study captured more than four decades of women's artistic gymnastics history. Schiavon and Paes (2011) studied the formation process of the female gymnastics in Brazil from 1980 to 2004. Their findings showed that women's gymnastics made significant development in training changes over the years, in terms of financial, material, and human resources support. The code of points of the International Federations of Gymnastics (FIG) played a crucial role in creation of gymnastics training and competitions over the decades. In our studied period the major changes of competition rules were occurred, such as extinction of the highest score – perfect 10, withdrawn the compulsory routines, vaulting horse was transformed to vaulting table, the age limit for entry into senior competitions was changed from no limit to 14th and later to 16th years of age. In the future studies will be interesting to look more deeply on life experiences of active and retired gymnasts according to different history and cultural context of the period, in which they have active sports career.

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