Psychology of Sport and Exercise 13 (2012) 679–686

Contents lists available at SciVerse ScienceDirect

Psychology of Sport and Exercise

journal homepage: www.elsevier.com/locate/psychsport

'Believe in Yourself, Channel Energy, and Play Your Trumps': Olympic preparation in complex coordination sports

Natalia Stambulova [a,*], Alexander Stambulov [b], Urban Johnson [a]

[a] Department of Sport and Exercise Psychology, School of Social & Health Sciences, Halmstad University, Box 823, 301 18 Halmstad, Sweden
[b] Athletic club 'Alliance', Halmstad, Sweden

ARTICLE INFO

Article history:
Available online 19 April 2012

Keywords:
Applied sport psychology
Complex coordination sports
Contextual factors
Olympic athletes
Olympic Games
Scientist-practitioner model

ABSTRACT

Objectives: This paper is aimed at (a) analysing the psychological context of complex coordination sports (CCSs) and specific contextual factors related to Olympic Games, (b) sharing the authors' experiences in Olympic preparation of athletes in diving, figure skating, and artistic and rhythmic gymnastics with an emphasis on typical working issues and strategies; and (c) summarizing the authors' reflections on the role of the national sport system and cultural contexts in Olympic preparation and major lessons learnt in working with Olympic athletes.
Design and Method: Analysing and structuring the authors' professional experiences in working with Olympic athletes in CCSs based on the scientist-practitioner model.
Results: Major results include (a) a summary of psychological context for Olympic athletes in CCSs; (b) the temporal structure of Olympic preparation; (c) four categories of Olympic athletes; (d) consultants' strategies, reflecting major psychological aspects of Olympic preparation in CCSs; and (e) lessons learnt in working with Olympic athletes in CCSs.
Conclusion: The authors emphasize the large responsibility of sport psychology practitioners working with Olympic athletes in CCSs and share lessons learnt, with a focus on seven major sport psychology approaches validated in their practice.

Our intention in this paper is to analyse and structure our experiences[1] of working with elite athletes in several complex coordination sports (CCSs)[2] such as diving, artistic gymnastics, rhythmic gymnastics, and figure skating, and also in Russian and Swedish cultural contexts. We use the scientist-practitioner model (e.g., Jarvis, 1999; Lane & Corrie, 2006) as a framework for our joint reflections. Jarvis highlighted that, "…a professional way of knowing is a dialectic movement from action to reflection in a continuing loop" (p. 133). As a result of continuous professional reflections, practitioners create, test, and further develop their *personal theory* that is "practical knowledge which is validated by successful practice" (Jarvis, 1999, p.139). What we present in this paper can be seen as the authors' *synthesized personal theory* (Stambulova & Johnson, 2010; Stambulova et al., 2009) on working with Olympic-level athletes in CCSs.

Psychological context of complex coordination sports

CCSs are sports in which athletes compete with respect to technical complexity and quality of execution of motor acts performed, and in which results are measured by number of points awarded by referees. Although diving, figure skating, and artistic and rhythmic gymnastics have their own very specific features and challenges for athletes, they also share some psychological characteristics, which we briefly outline below, based on the literature (Cogan, 2006; Cogan & Vidmar, 2000; Garza & Feltz, 1998; Gould, Jackson, & Finch, 1993a, 1993b; Law, Cote, & Ericsson, 2007; Monsma & Feltz, 2006; Moormann, 1994; Scanlan, Ravizza, & Stein, 1989; Slobounov, Yukelson, & O'Brien, 1997; Stambulova, 1999, 2001) and our own athletic and consulting experiences.

* Corresponding author. Tel.: +46 35 167 237; fax: +46 35 167 264.
E-mail address: natalia.stambulova@hh.se (N. Stambulova).

[1] We find it useful to define our personal experiences with Olympic preparation of athletes in complex coordination sports. The first author has an international-level athletic background in figure skating and was a consultant to Olympic-level figure skaters in Russia. The second author has been involved in applied work for more than two decades with elite Soviet/Russian athletes in various sports, including Olympic preparation in diving and figure skating as well as consulting of Olympic-level athletes and coaches in artistic and rhythmic gymnastics. The third author for several years has done applied work with elite athletes in many sports in Sweden, and together with the other two authors, was involved in Olympic preparation of a Swedish gymnast (see more in Stambulova, Johnson, & Stambulov, 2009).

[2] CCS – complex coordination sport.

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doi:10.1016/j.psychsport.2012.04.009

Diving, artistic and rhythmic gymnastics, and figure skating are individual sports which also include some team activities (e.g., synchronized diving, pair skating, ice dancing). At the same time, athletes' individual results can be counted as parts of a team result (e.g., team competition in artistic gymnastics). CCSs are also called aesthetic sports, where athletic and art components are combined. In figure skating, rhythmic gymnastics, and floor exercise (females) in artistic gymnastics, competitive routines are accompanied by music, and athletes are expected to interpret the music and express its character in their performance.

In CCSs, athletes typically have an early start at pre-school age, a career culmination in adolescence, and often an athletic career end in young adulthood. (Scanlan et al., 1989; Stambulova, Alfermann, Statler, & Côté, 2009). Early specialization and a great amount of deliberate practice almost from the very first steps in these sports (e.g., Law et al., 2007) are justified by the desirability of synchronizing training with the most sensitive periods in the athletes' motor development, and also by forming the 'right movement culture' and physical conditions to prepare both the body and mind to master complex coordination motor acts.

Practice in these sports consists primarily of technical, physical, tactical, choreographic, and psychological preparation. High-level athletes in CCSs are under continued pressure to increase the complexity of the elements and routines performed in practice and competitions. In addition, in gymnastics and figure skating, elements are normally first learnt separately and then practised and performed in combinations with each other, which makes the level of the technical complexity even higher. Often elements are performed at a very high speed and include multiple body rotations, requiring good spatial orientation to ensure safe and correct landing. Many elements in CCSs are risky, and therefore the risk of injury is high in these sports. Overuse (e.g., stress fracture and tendinitis) and chronic injuries (e.g., ACL and a sprain) are widespread among CCS athletes (e.g., Majorie & Dietrich, 1997).

CCSs are characterized by a disproportion between competition and practice time with a large amount of practice and a relatively small number of competitions during a season. Therefore, competitions are perceived as highly important events, and athletes usually go through multi-stage selections to take part in the most prestigious ones. Competitions consist of several rounds with one attempt to perform in each. Athletes perform their competitive routines and programmes as they learnt and mastered them in practice, with foci on final exactness, speed, and style of the movement. Athletes usually perform at competitions one after another (excluding artistic gymnastics, where 2–3 athletes might perform in parallel on the different apparatus), and therefore, cannot directly influence opponents (or be influenced by them) during own performances. Many athletes prefer not to watch how their opponents perform, and therefore, competitive tactics in these sports are relatively simple, such as 'do your job the best you can'.

Athletes' performance in competitions is evaluated by referees in terms of technical complexity and artistic aspect and quality of the performance. Rules of competition and judging systems have been continually improved to make the judgements more 'objective'. Referees usually attend pre-competition practices to make preliminary evaluations of the athletes' technical level and performance reliability. Therefore, for CCS athletes, any big competition unofficially begins when they start to practice at the competition venue.

Specific context of Olympic Games and Olympic tournaments in CCSs

Although the psychological context of the CCSs described above is relevant to all tournaments in these sports, the Olympic Games create a very special context for athletes' performance, which we briefly outline below based on the literature (e.g., Gould, 2001, 2003; Gould & Maynard, 2009; Gould, Guinan, Greenleaf, Medberry, & Peterson, 1999; Gordin & Henschen, 1989; Kristiansen, Vidar Hanstad, & Roberts, 2011; Orlick, 2002; Serpa, 2009) and our own observations.

Olympic Games are multisport competitions involving thousands of athletes, coaches, authorities, experts, and service people living together in the Olympic Village, but separated from the public and also from families, relatives, and friends. National Olympic teams include representatives of different sports, and all athletes typically share other team members' successes and failures. Such a context is exciting but energy consuming, unusual, and requiring adaptation, especially for relatively young CCS athletes and athletes experiencing their Olympic debut.

Modern Olympic Games are big social events, with millions of spectators present at the Games or watching them on TV. The media role in Olympic Games is extremely prominent, which makes athletes and both their successes and their failures very visible in their home countries and internationally. Recent research with a specific focus on media and Olympic Games participants (Kristiansen et al., 2011) confirmed that media pressure is an important source of stress for Olympic athletes, and they should be prepared to deal with the media influences. Unofficial team competition between the countries on total numbers of medals makes the Olympic Games also a political event. National sport-governing bodies and sponsors provide financial support to candidates for the Olympic team but also place high expectations on them adding to sources of their stress.

During the Games athletes are embedded into a truly international, multicultural context. Therefore, athletes should have time and energy for cross-cultural adaptation in the Olympic Village and in the host city and country. Athletes typically arrive before the Olympic Games to become acclimatized and gain practice at the Olympic venues. This pre-competition period is very important, because athletes can observe their opponents' practice sessions and evaluate in advance their level of readiness and own chances in competitions. Olympic tournaments in CCSs usually consist of preliminary or qualifying competitions and finals. The total duration of the Olympic tournament is often longer than, for example, those of world championships in the same sports because of a serious impact of media companies on the Olympic Programme. Athletes should have good endurance and be able to recover well, both physically and psychologically, before each competition day.

During the Olympic preparation period, athletes are served by a team of professionals, including coaches, choreographers, masseurs, physicians, physiotherapists, and sport psychology practitioners. Below we will focus on how sport psychology practitioners might find their place in Olympic preparation of CCS athletes, cooperating with coaches and other experts.

Olympic preparation in CCSs: psychological issues and related strategies

Temporal structure of Olympic preparation

We define Olympic preparation as a four-year period between two consecutive Olympic Games, which is also called an Olympic cycle. This period is not homogeneous, and can be further divided into several stages, such as (a) preliminary or basic preparation (typically first 1–2 years), (b) selection for the Olympic team (usually in the third year), (c) Olympic season (year before the Games), (d) the Games, (e) post Games. Below we will refer to this temporal structure of Olympic preparation in our description of typical psychological issues experienced by CCS athletes.