

FIRST-PERSON EXPERIENCE OF OPTIMAL SPORT COMPETITION PERFORMANCE OF ELITE TEAM ATHLETES

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Abstract:

Researchers in many domains (i.e. personality, self-confidence, self-efficacy, anxiety, motivation) have investigated optimal performance. Unfortunately, no clear and unambiguous explanation can be given of such performance. In our study, we used a first-person phenomenological qualitative method of research (explicative interview), which can provide an insight into the complexity of human experience. We interviewed 14 elite team athletes about their experience of a recent competitive optimal sport performance. The qualitative analysis showed that achieving an optimal performance is a dynamic process during which different factors, that establish complex relations, are important. Optimal performance started with a preceding challenging situation in which no solution to the problem could be found quickly and in response to which situational anxiety developed. However, athletes decided on an active approach and took responsibility for their action. Trust seems a crucial factor for doing this; trust was initially oriented towards oneself and one's teammates, and only later it became general. Alongside, a certain level of personal unimportance emerged and goal orientation changed to process orientation. The findings suggest the relevance of certain psychological factors for optimal performance and provide practical avenues for sport psychology professionals to assist athletes in experiencing it.

Key words: phenomenological method, elite sport, optimal performance, trust

Introduction

Practically all researchers in sport psychology are devoted to resolving the question of how to increase athletes' performance through psychological factors. So far, the most heavily researched areas regarding this topic have been: motivation (i.e. Barkoukis, Lazuras, Tsoarbatzoudis, & Rodafinos, 2011); (competitive) orientation (i.e. Lochbaum & Gottardy, 2014); personality (i.e. Allen, Greenlees, & Jones, 2013); anxiety and emotions (i.e. Abrahamsen, Roberts, & Pensgaard, 2008); self-efficacy; and the influence of previous performances (Nicholls, Polman, & Lev, 2010).

The personality of elite athletes has been one of the main research topics in the field of sport psychology for decades and still is since there is no unanimous answer to the question of what kind of personality leads to an increased sport performance (i.e. Vealey, 2002; Gill & Williams, 2008). The only agreement researchers have reached is that conscientiousness coincides with success in sport (Allen & Laborde, 2014). In more successful athletes we can observe greater heterogeneity in personality characteristics than in less success-

ful ones, and personality tests simplify the array of overlapping views on trait dimensions (Silva, 1984; Cox, 1994). Therefore, it is less likely that personality questionnaires can consistently and reliably distinguish between more and less successful athletes. Among other things, our perception also varies according to the context, the position of the perceiver in relation to the object, and the mood of the perceiver (Langdridge, 2007). This was also observed in the research by Rogulj, Nazor, Srhoj, and Božin (2006) where the competitive context of the research affected the psychological status of the subjects and, therefore, their different answers to questionnaires. Even though personality questionnaires try to measure traits, they sometimes fail to do so, thus revealing an issue with ecological validity. This is also true with the observed athletes' tendency to support the image of their predominant status and general public opinion about what traits an athlete should have. While many personality questionnaires do measure this tendency, they do not allow us to establish how much of it is incorporated in the scores of personality traits. Phenomenology takes a different approach since its

epistemological focus is on experience or narrative and it aims at focusing on people's perception of the world in which they live: a focus is on the people's lived experience. The phenomenological method allows us to investigate persons and their experience in its entire complexity and context, thereby perhaps giving us different understanding.

Sport psychologists have noted two distinct competitive orientations in sport. An outcome/ego/performance orientation is a desire to win or to be ranked high relative to the other competitors. A process/mastery/task orientation indicates the goal to perform well relative to one's own ability. Process goals provide standards that can enhance sport-confidence and typically predict adaptive achievement-related patterns (Gill & Deeter, 1988; Adie, Duda, & Ntoumanis, 2008), whereas the findings regarding outcome/ego goals have been equivocal (Adie, et al., 2008) and have even suggested that outcome goals can undermine sport confidence (Gill & Deeter, 1988). However, a meta-analysis of seventeen published studies of the approach-avoidance goal defined by Elliot (2006) indicated that performance goal had the strongest (moderate to large) positive impact on sport performance. Mastery and performance goals also have an important, but small to moderate positive effect on performance (Lochbaum & Gottardy, 2014). This meta-analysis found that avoidance goals had a small negative impact on performance, which, however, was not significant. Yet, some other studies state that performance avoidance goals (centred on avoiding normative incompetence) are those which compromise intrinsic motivation, increase state anxiety, reduce task absorption processes and have a considerable influence on decreasing performance (Nien & Duda, 2008; Elliot, Cury, Fryer, & Huguet, 2006).

One of the important factors influencing athletes' performance is anxiety. Anxiety role is supported by the meta-analysis by Woodman and Hardy (2003), emphasising high importance of state cognitive anxiety. Otherwise, one of the most widely accepted views on the connection between anxiety and performance is Martens' multidimensional anxiety theory (Martens, Vealey, & Burton, 1990). It proposes a series of two-dimensional relationships between cognitive anxiety, somatic anxiety, self-confidence, and performance. The authors hypothesised that cognitive anxiety had a negative linear relationship with performance; somatic anxiety established a quadratic (inverted U-shaped) relationship; and self-confidence had a positive linear relationship with performance.

A growing body of evidence suggests that one's perception of own ability or self-confidence is the central mediating construct of achievement strivings. Moritz, Feltz, Fahrback, and Mack (2000) examined the relationship between self-efficacy and performance via a meta-analysis. They found

that the correlations between them ranged from high, as of .79 (e.g. Martin & Gill, 1991), to negative correlations (e.g. McCullagh, 1987). Although the majority of research has supported the hypothesised positive association, there are some notable exceptions. In their study of pistol shooters, Gould, Petlichkoff, Simons, and Vevera (1987) revealed a negative relationship between self-confidence and shooting performance. Similarly, Hardy, Woodman, and Carrington (2004) found that high self-confidence was associated with lower golf performance scores. In an analytical task, Vancouver, Thompson, and Williams (2001) found that over time high self-efficacy led participants to commit too soon to a problem-solving response, which ultimately led them to provide incorrect responses. Woodman, Akehurts, Hardy, and Beattie (2010) ascertained that some self-doubt benefited the performance of a well-learned task, e.g. skipping. A study by Kais and Raudsepp (2005) showed that the level of self-confidence of volleyball and basketball players was not related to their athletic performance.

The relationship between the mentioned psychological factors and performance in elite sport is not yet fully explored. Results indicate certain trends; however, they do not necessarily imply a causal relationship. Since no theory satisfactorily explains the relationship between optimal performance and multiple psychological factors within specific contextual conditions, a particularly insightful approach might be one based on the grounded theory (Strauss & Corbin, 1998). It allows a more holistic research of the mentioned factors along with research into the complex interactions between them. It is also proven to have a greater ecological validity. The main aim of the study was to research the experience of elite team athletes in situations of optimal competition sport performance. Besides that, we focused on a time development process of optimal performance as well as on the dynamics and modalities of experience through different possible phases.

Methods

Data collection plan

The study is a part of a more extensive research basically oriented to investigate an experience of morality in different competitive situations in elite sport. Here we shall only discuss one part of the research, showing some important aspects of an athlete's experience that emerged in the research, although finding them was not the primary aim. The article thus focuses only on the first-person experiences of optimal sport performance. This approach is well suited to this study since the relationship between psychological factors and optimal sport performance has yet to be fully examined and determined. Since this is a qualitative study,

depth of the data gathered from the participants is what provides evidence and power for the emergent theoretical findings. The grounded theory methodology involves the integration of data collection and data analysis to achieve “constant comparison” (Creswell, 1998). In this study, the data collection involved two interviews with each participant during which the interviewer also took notes about prominent nonverbal expressions. A sport psychologist with approximately fifteen years of practice, who is also a clinical psychologist with about ten years of experience in that field, conducted the interviews. The interviewer thus knew the context of the experiences asked about and was able to appreciate and understand it, while being able to create a trustful environment for the athletes. As a phenomenologist and clinical psychologist, the interviewer is accustomed to *bracketing* and being careful about possible preconceptions, so that the credibility of data can be assured. To support that, the main points of the reported experience were checked at the second interview and the possibility to change or add anything about the situations in question was left open (triangulation of sources). The method of an individual, in-person explicative interview (Petitmengin, 2006) was used, which enables gathering of first-person data, i.e. data that express the viewpoint and experience of the subject him-/herself. An interview combines two different psychotherapeutic techniques (named the *Focusing* and *Model Interview*) of conversation and observation of a person and a psycho-phenomenological approach. It is performed in a way that helps stabilise attention of the participants during it, constantly turning the participants’ attention from a ‘what’ to a ‘how’ position; it guides the subject from a general description, a definition or an explanation to the description of a singular experience and to various dimensions of that experience. On average, the interviews about one competitive situation, which in reality lasted a few minutes, took a little more than one hour. The interviewer tried to obtain a very detailed description of the athletes’ experience. This technique also helps to: (1) highlight the pre-reflective dimension of subjective experience; (2) describe inner gestures that enable the awareness and description of the experience; and (3) develop processes that can help another person to perform these gestures in the course of an interview.

Participants

From each selected sport (basketball, football, handball and hockey) two female and two male athletes were interviewed, with the exception of hockey where only two male athletes participated. Therefore, altogether fourteen elite team athletes were interviewed. All of the interviewed athletes were professionals, members of the national Slo-

venian teams and were selected for the research by the national team coaches. Five of the eight interviewed male athletes and three of the six female athletes currently work abroad. The average age of the male athletes in the research was 25.55 years and on average they had professional playing careers of 10.25 years. The average age of the interviewed female athletes was 25.30 years and on average they had been professional players for nine years.

An important consideration with this study was anonymity and confidentiality. Therefore, a special care was taken to ensure that identities of the participants were kept anonymous. Any potentially identifying information was excluded from this report. For that reason, all the athletes, men and women alike, are addressed as ‘he’ and their reports are adjusted to conceal their particular sport whenever some more personal or identifying data could be revealed.

Data analysis

The interviews were tape recorded and later transcribed by the researcher. The grounded theory approach was employed throughout the data collection and analysis. The interview transcripts were analysed, using manual open, axial and selective coding and using the Nvivo software. In the open coding, the analyst was concerned with generating categories and their properties and then sought to determine how the categories varied dimensionally. Purpose of the axial coding was to allow a precise and complete explanation of personal experience of optimal performance since axial coding (Strauss & Corbin, 1998) was a process of relating categories to their subcategories. After several steps of top to bottom analysis (vertical coding) of individual reports, horizontal coding was performed. It checked all the interviews in order to discover recurrent words or phrases. In line with it, a time axis was created in order to find out time course of experiential dynamics of optimal performance. All the categories of the context were chronologically structured. Once the themes and sub-themes had become clear through the axial coding, selective coding was conducted for the purpose of selecting the central category as a means of the integration of other major categories to develop, integrate and refine the theory (Strauss & Corbin, 1998).

After each step of the coding, a peer debriefing was conducted during which the codes and audit trail were discussed and reflexivity supported. Additional inter-rater agreement of coding, across three randomly selected manuscripts, was assessed, resulting in 82% of coding agreement (which is acceptable according to LeCompte & Goetz, 1982). Beside already described steps for assuring validity, credibility and confirmability, an additional step to increase those three methodological characteristics was taken, so that analytic categories, interpreta-

tions and conclusions were presented and confirmed by three athletes.

Results

As mentioned, the athletes were asked about their experience of competitive optimal sport performance and about the moments preceding it. In accordance with the methodological guidance of qualitative research, new categories were formed by the natural flow of raw data gathered in the interviews (Flick, 2009). Different types of experience were revealed: overall experience, social experience, mental experience and body experience. The analysis revealed four different events that continuously occur during a competitive sport situation that leads to peak performance. It also uncovered how the athletes' experience changed during each one. In the continuation, these events and different experiences inside each one will be presented.

Demanding competitive situation

A difficult situation in a competition occurs when a prepared, relevant action cannot be performed and when there is no easy nor immediately found solution for it while a very high risk is present that one's team cannot score or that the opposing team has got an advantage to do so. The overall experience in these moments is a feeling that something is not right and insecurity in oneself appears. In this kind of situation, all athletes described a feeling of high anxiety, restlessness, tension, even panic that they felt also somatically. Mostly they described it as a stomach pain, but also as a pressure in a throat and/or in the chest (category: unpleasant physical sensation). Analysis of the cognitive component of anxiety indicated that with all the interviewed athletes fear had social origins, mainly oriented to responsibilities to the club, but also to the coach, fans, family and other supporters. Anxiety can also be represented in a mental picture of their disappointed faces and thoughts like: *"If I do not score, it will be bad for the team and everybody will think I don't have a clue"* (category: negative social appraisal). However, they all emphasised that anxiety was of a short duration. The athletes also felt less control over ball/puck and their perception of it was less real: the ball seemed bigger, heavier, the stick longer, the puck faster (category: disconnection with a requisite).

One athlete described that moment: *"I see that action as we planned it cannot be performed, my co-player to whom I would have to pass the ball is nowhere and all the others are covered. I stay bewildered. Something is very wrong. I am insecure, lost in the situation and I feel fear... like vibration through my body, a stomach pain like someone had hit me and I have a lump in my throat... There is a thought in my head: what will the coach say if*

I don't pass this one or if I make a bad pass? And in a flash I see a picture of disappointment on the coach's face and on the faces of my closer supporters sitting in the audience. Everyone will say I screwed it up and that I'm a lousy player".

Looking for solutions – the tipping point

Before a new action is performed, there is a moment of searching for possibilities, scanning the environment and, according to reports, two modalities can resolve this kind of situation. With the first one something changes in the situation or something is detected that has not been like that before, i.e. an opposing defensive player does not cover one appropriately, so a certain action becomes possible; or one realises that a defensive player is less aggressive thereby offering more space for one's own positive resolution of the problematic playing situation. With the second option, an athlete does not have a solution to the situation in hand, but decides to perform an action on the basis of trust and intuition. In neither cases does the athlete know what will be the resolution of the action and he is unaware of his next move. Only when he has decided to be active and, moreover, to take the main responsibility for the current action (regardless of his emotional state), some of the interviewed athletes seem to find a loophole in the opponents' action. However, this is mostly done prereflectively and some athletes became aware of it only during the interview and not during the action; i.e. *"Now that I think about ... the defence player wasn't that aggressive, he was in the pose, not jumping around me and waving or touching me"*. And some were aware of it on the spot: *"I knew that the goalkeeper is too aggressive and that he would follow my every move excessively and would go in my direction. But still I didn't know what I would do, but I was aware of his weakness"*.

At the emotional level, this phase has been described as a mixture of tension and oncoming relief, of fear and restlessness, but also of trust (which is still objectified; one trusts in oneself and his team), a feeling and a thought that everything will be all right and of certain awareness that the action will be successful (category: turning point). Even with that, their decision to act was absolutely without any thoughts of backing off or withdrawing, even though none of them had an idea of how to solve the situation they were in.

Practically all the athletes emphasised relevance and feelings of connection with a co-player or co-players that were relevant for the action, but also with the audience in general (category: connection with the social environment). During that, some mental presentations of different memories can occur, i.e. having a good time with a co-player or memories of a former coach yelling, which is accompanied with an emotion of irrelevance. In addition, opposing players seem to become less important.

For some, the connection with teammate(s), with whom they were in closer interaction during the reported action, was a kind of special communication that provided an unspoken simultaneous understanding of the situation, the athletes' intent and joint action, for which they did not need any visual contact (i.e. eye contact). *"It is like I was connected with invisible white energetic strings with my teammate, going out from my chest. At the same time, I have him in my head and in my body. And what I think, he does. It is like I'm sending energy forward. And I pass the ball to him without seeing him [it is an unexpected move] and I know he is there and he really is. It is not solidarity between us, it is deeper."*

For some it was also more personal, related to increased trust and support: *"I feel satisfaction and trust going from me to him and in the opposite direction from him to me. It is positive energy, warmth that meets and increases, like two energy fields glowing and interacting. It is exchange, we give strength, support to each other. His strength is coming into me and I feel it mostly in the chest, like strength from within. I also give from my chest; it is trust, strength, joy and determination that I can do this"*. During this phase, the body is relaxed, comfortable yet energetic and prepared for action, the posture is more upright, and the chest is open. All athletes described how their seeing became clearer. The perception of the ball/puck and the stick is realistic and one feels good control over it (category: relaxed state).

Optimal performance

Optimal performance is characterised by flow and sometimes by peak experience during which athletes performed a move that was unexpected, even innovative, in that situation and context. All of them were also surprised at their move and still were when they looked back at it (category: creativity). The athletes felt inner peace that everything was all right just as it was, overall trust. It seems important to emphasise that trust was no longer objectified but was general. One experiences trust absolutely, regarding the whole situation, in a certain moment as it is unfolding before one. Social momentum becomes unimportant, the coach, players and audience disappear and so does the importance of oneself. The athletes experience that, in part, they are important since they are at that certain point and time, despite that this whole situation is not about them. Some even described an experience of liberation and freedom of oneself and an out-of-body experience (category: selflessness). They all described how they were not thinking about themselves (also not about anything else) and they felt they were only a part of something

"bigger". For all of them, the specificity of this situation lies in the uniqueness of the entire setting, comprising special performance, lightness and spontaneity of it and the sensation that it all exceeded one as an individual, such as in these two examples:

"I lose every thought about myself and accept myself in the moment. It is like I am liberated of myself and I feel freedom because of that. I am there as an individual and yet I am a part of a bigger whole, this team, the hall, this time. I don't exist, yet I am there. In a way I am important since I am there, alive, but it is nothing for me."

"In a way it is personal but also I am just there, the whole situation, the action is more for the club, for something beyond me. I don't think about myself at that point but also not about others or the club ... in a way the aim is this connection between us all at that specific point, that also speaks through the action, the score."

Two interesting mental changes can happen at this point. The first one is that attention is doubled. Athletes described a very narrow concentration (i.e. a focus on a certain point in a goal) and also a wider concentration (i.e. a view over an important part of the field/hall). With that, the athletes also described a change in their competitive orientation – from the result orientation to the process orientation. What was most important for them at that point was simply to perform that certain move, just to pass the ball/puck: *"It is just: a part of my stick, puck and that point in a goal. There is no me, no goaltender, nothing. It is very sharp and narrow concentration and at the same time there is this wide overview of the field"*.

The other change is that awareness of space, time and oneself merge together; one becomes undividable from everything else. However, only five athletes described this kind of experience. Congruent with that, the minority of athletes did not have any sensation of body and the majority felt more energy, felt their bodies were stronger, bigger and more explosive. They described an experience of the body moving automatically, like it knew what to do on its own.

After a successful performance

When the action had successfully been performed, the athletes experienced satisfaction, happiness and they opened to the social environment again: hearing clapping, cheering, support from the audience, which heightened their energy even more. Their self-awareness changed again so that they perceived themselves as a whole, but with some small details as well, i.e. fingertips or just nails, eyes.

The main categories of the athletes' reports are presented in the following table.

Table 1. Coding congruent with the situation-time development of the optimal performance and different experience in four major parts of the situation

Context timeline			
DIFFICULT SITUATION	A MOMENT BEFORE A NEW ACTION	OPTIMAL PERFORMANCE	SUCCESSFUL ACTION
Overall experience			
STUCK	TIPPING POINT	- FLOW - TRUST - SELFLESSNESS - DOUBLE FOCUS - CREATIVITY	SATISFACTION
Mental experience			
- ANXIETY, PANIC - RESTLESSNESS	- TRUST AND RESTLESSNESS - DETERMINATION	INNER PEACE	- INTEGRATIVE SELF AWARENESS - HIGH MOTIVATION
Social experience			
NEGATIVE SOCIAL APPRAISAL	CONNECTION WITH SOCIAL ENVIRONMENT	- ABSENCE OF SOCIAL ENVIRONMENT - PROCESS ORIENTATION	CONNECTION WITH AUDIENCE
Physical experience			
- UNPLEASANT PHYSICAL SENSATION - DISCONNECTION WITH A REQUISITE	RELAXED STATE	BODY STRENGTH	- RELAXATION - HIGH ENERGY

Discussion and conclusions

Already a quick look at the results shows that optimal performance is a dynamic process and is not a single state; therefore, in various phases of this process different factors are influencing it and different factors are relevant. They interact on multilevel relations and show some important differences across subjects.

Based on the results and with the map of the studied event drawn, we can clearly see some of its characteristics.

The onset of the flow seems to be connected with anxiety, which is experienced when an important prepared action cannot be performed; however, an athlete does not indulge in it, but decides on an active approach and takes on the responsibility himself. From the cognitive behavioural therapy we already know that avoidance behaviour increases anxiety (Wells, 2002). Therefore, if we want to improve performance, the orientation should not be to eliminate anxiety nor to try to avoid it, but to regulate interpretations of it and to stay active in the situation. This also confirms Fletcher and Sarkar's (2012) qualitative research in which most of the 12 interviewed Olympic champions argued that if they had not experienced certain types of stressors that elevated the feeling of anxiety, which they had been taught to deal with, they would not have won their gold medals.

We detected two types of mechanism that can lead to optimal performance (or flow). In the tip-

ping-point phase, at least two different modalities seem to be important: one is the reaction to specific changes or characteristics of the situation. The other is a trustful performance, which is connected with one's intuition regardless of the persistence of anxiety. The important, intermediate factor seems to be the interpretation of anxiety. Hanton and Connaughton (2002) indicate that perceived control is the moderating factor in the directional interpretation of anxiety and not the experience of anxiety symptoms alone. The symptoms perceived to be under control were interpreted as having facilitative consequences on performance, whereas the symptoms not being under control were viewed as debilitating.

Trust and selflessness seem to be one of the most important factors in developing optimal performance. At the beginning, the experience of trust is objectified and is therefore oriented towards an athlete himself and sometimes his team player(s) in interaction. Therefore, it can also be perceived as self-confidence and self-competence. However, with the course of the action, trust is becoming ever more general and wholesome, from: "*trusting in myself, in the co-player and that everything will be all right*" to trusting that: "*Everything is O.K., just as it is, regardless if we score or not. Somehow all emerged at one point, all the past, everything as my life was until then, was just O.K. Being in that moment and doing sport in that situation was just how it should be and was perfectly O.K. And I knew whatever happened it would be just O.K.*"

Even though just a few of the interviewed athletes had a similarly deep and integrated experience as in the last example, all of them described general trust in the whole situation as it was occurring at that point. Kordeš (2005; 2012) also emphasises trust as an active life principle that is a creative force, not oriented to anything concrete, but it is a decision that one can make in every moment. It is also reasonable to point out that this trust contradicts self-centeredness (which can go in the direction of self-worry, fear and other similar emotions, but also in the direction of self-importance). One cannot exist with the other; general trust can only prevail when a certain unimportance of oneself is present.

Some new research studies suggest that narcissism is a desirable characteristic of athletes since such athletes will generally thrive off stressful situations. Further, athletes who are self-obsessed and confident in their own abilities are supposedly more likely to succeed under pressure (Woodman, Roberts, Hardy, Callow, & Rogers, 2011) since competition provides them with the opportunity for the glory they crave for (Roberts, Woodman, Hardy, Davis, & Wallace, 2013). However, this contradicts Csikszentmihalyis' (1990) autotelic personality, which is congruent with more frequent optimal performances and state of flow. This kind of personality structure denotes an individual who generally does things for their own sake rather than to achieve some later external goals. No one is fully autotelic, but there is a gradation whereby some people have more and others less of this kind of life approach. An autotelic person needs few material possessions and little entertainment, comfort, power or fame because so much of what they do is already rewarding. They are less concerned with themselves, and therefore have more psychic energy to experience life. The finding that most elite athletes have a lower self-identity also supports this (Masten, Tušak, & Faganel, 2006).

Another important part of optimal experience in competitive team sport situations is creativity. All the athletes emphasised it and it was a factor making them consider the experience even more special and joyful. Kohn (1992) stresses that all competition (based on the goal-oriented motivation) is inherently bad and that, contrary to popular belief, competition does not lead to improved performance or increased productivity. He cites numerous studies which all prove that competition undermines performance and makes one's decisions, actions and products less creative, less spontaneous, and less complex and varied. All of the athletes were competitively oriented; all were highly motivated to play as best as they could, and to win. However, what is obvious from their experience is the shift of their focus from the goal to the process (mastery) orientation. Even though research studies

show that elite athletes are more competitive, and that this is connected with increased development of ego orientation and higher ego motivation (Kajtina, Tušak, & Tušak, 2002), it is becoming more and more obvious that this is oversimplified. Orlick (1986) showed that the desire to win can have negative consequences. In particular, low self-confidence, high anxiety and, ultimately, poor performances are often noted in athletes who hold unrealistic outcome goals. In contrast, athletes who are more concerned with performing well (process orientation) in their sport appear more self-confident and less anxious and may perform closer to their potential (Martens, 1987).

Dreyfus and Dreyfus (2004) state that an expert and especially master stage of skill acquisition can be reached when there is enough mental energy and openness to a holistic view of the current situation and for intuitive decision-making and acting. Without that, one can be very competent or even proficient with his skills, which are at a high level; however, the top two levels cannot be reached. Mastery (or flow) performance can only take place when the expert, who no longer needs principles, can cease to pay conscious attention to his performance and let all the mental energy, previously used in monitoring his performance, go into producing, almost instantaneously, an appropriate perspective and (often) creative action. The findings of this study suggest that elite athletes can have both an ego and a process orientation (which is congruent with Lochbaum and Gottardy's meta-analysis) that can be exchanged during one competitive situation. However, during their mastery level performance they should switch to and perform according to their process orientation.

From these conclusions we can draw a grounded theory explaining the experiential side of getting into the flow.

The presented study has some shortcomings. Since it is a qualitative research, the sample is relatively small. However, with regard to the complexity of qualitative studies and amount of time they require from participants, as well as the elite sport level of the athletes who participated, a much bigger sample would be hard to obtain. For better external validity, the number of interviews with a single athlete could be increased, as well as the amount of other, similarly optimal, sport performances. In addition, procedural validity and credibility, for example with better triangulation, could be achieved. Even though some aspects of the study could be improved, beside all the other measures of validity described, the high ecological validity gives a substantial basis for the conclusions drawn. An important scientific contribution of the study is its in-depth and complex insight into specific sport experiences. It indicates that important situations in sport consist of many smaller events that are all

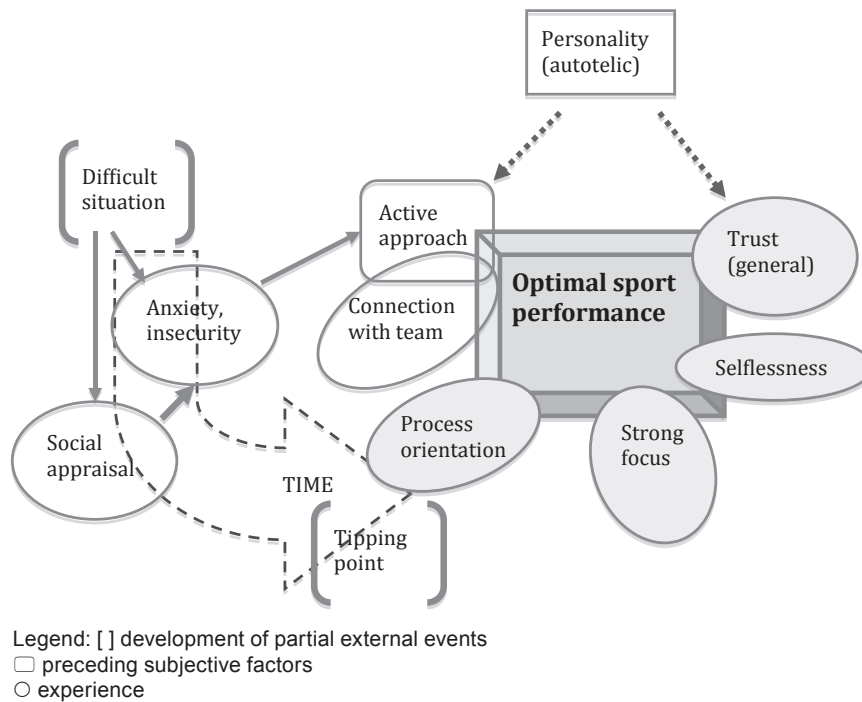


Figure 1. Grounded theory model of the experiential path towards an optimal sport performance.

significant for athletes' experience and their reactions and functioning. It also shows that in just tens of seconds of a certain situation the experience can change drastically. This could be an answer to why studies of certain psychological factors have not come to a unanimous conclusion. One factor cannot be measured alone without taking other factors into consideration since they are strongly intertwined and also specific to the given situation. Some important experience elements and characteristics for optimal performance which have rarely (if ever) been researched have been identified, i.e. the importance of general trust and selflessness. Moreover, the results raise interesting questions about deci-

sion-making and consciousness. Another important issue of the study is the relationship between the researcher and the participants since the athletes became co-researchers and received important information about their functioning already during the interviews. This made their motivation higher and the practical importance of sport psychology visible in the spot. For practitioners, like sport psychologists, it is very important to dynamically understand the development of athletes' experience during their performance and, along with that, where and why the performance did not meet the athletes' potential. Hopefully, this study has shed some light on that complex process.

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