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GOAL ORIENTATION AND MENTAL TOUGHNESS OF YOUNG SERBIAN BASKETBALL PLAYERS

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SUMMARY

Introduction

Goal orientations depict the ways in which a player defines and experiences success and failure and evaluates his competence. Mental toughness is a quality of a player to cope with many demands in sport and stay determined, focused, confident and more in control under pressure situations. The aim of this research was to explore goal orientation and mental toughness of young athletes involved in major international competition.

Methods

Sample included members of Serbian national U16 basketball team at Euro 2015 (N=21). TEOSQ (Duda, 1989) and MTQ (Goldberg, 1998) were applied. Descriptive statistics, Cronbach's alpha and Pearson correlation coefficient were conducted in SPSS, version 22.

Results

Mean values, for task (M=4.26; SD=0.50) and ego (M=3.71; SD=0.69) goal orientation, and for all mental toughness variables: motivation (M=5.54; SD=0.66), pressure (M=5.52; SD=0.92), concentration (M=5.44; SD=0.79), confidence (M=5.23; SD=0.93), rebound (M=5.09; SD=1.03) were significant. Significant correlations were found between motivation and task ($r=0.604$) and ego ($r=0.513$) orientation.

Discussion & Conclusion

Young basketball players showed orientation toward goal of achieving higher levels of one's own competencies rather than status and normative achievement related to others. Their strongest component of mental toughness was motivation, and the weakest point was rebound ability. Motivation appeared to be the key component for promoting sports development and enhancing overall mental toughness.

Keywords: goal orientation, mental toughness, motivation, basketball

INTRODUCTION

Since sport psychology emerged as distinct scientific discipline and applied science field, many attempts have been made to help coaches and athletes in their pursuits (Weinberg & Gould, 2011; Mladenovic, 2018). Goal orientation (Duda, 1989; 1992) and mental toughness (Jones et al, 2002; Goldberg, 1998) are some of the most important psychological constructs with great impact on sports development of young athletes and their behavior in performance situation.

There are two types of goal orientation in literature, *task orientation* and *ego orientation* (Duda, 1989). It is assumed that these two orientations depict the ways in which a person defines and experiences success

and failure and evaluates competences. Task orientation exists when a person is primarily motivated to master a certain task, overcome the challenges by skills development, and promote efficiency. Success is estimated by the perception of actual level of personal competence when compared to the previous personal achievement. When goal orientation is ego orientation, the reference for the evaluation of personal competence is in others. Success and failure are estimated by direct comparison to the achievements of others. A person is primarily motivated to demonstrate normative competence (Mladenovic & Trunic, 2015).

According to experience of coaches and athletes, mental toughness might be more important in determining the final outcome of a sporting event, than any other psychological factor. It can be defined as personal state of being that allows an individual to perform with his greatest potential and to reach his ideal competitive state. It is a state of being where an individual feels most energized, most confident and most strong. Mental toughness is a quality of players to cope up better than opponents towards same goal despite pressure and adversity (Jones et al, 2002; Williams, 1998).

In this research we used Goldberg's (1998) framework of mental toughness. According to Goldberg, mental toughness can be described and measured through five aspects of mental functioning in competitive situation: rebound ability, ability to handle pressure, ability to concentrate and stay confident, and ability to stay motivated in competitive situation.

Rebound Ability refers to mental potential to rebound from adversity setbacks and obstacles encountered before and during the performance (Goldberg, 1998). It is one of the most important psychological skills successful athletes possess. Falling behind in a match, making a mistake that costs your team a score, getting an unfair call from a referee, encountering a hostile crowd and experiencing inclement weather, are just a few examples of adversity which athletes must frequently overcome if they are to be successful. The best performers in sports are able to bounce back from adversity-setbacks and obstacles they face before and during performances.

Handling Pressure is mental potential to deal with different external and internal factors that may rise a feeling of pressure (Baric, 2011). Internal factors can be represented by some dispositional factors like personality traits, ego strengths, personal beliefs, self-confidence, and previous experience. External factors are, for example, the athlete-coach relationship or the relationships between team-mates, the level of competition, the importance of the game, the presence of audience, and public pressure.

Concentration is the ability to focus effectively on the task at hand while ignoring distractions, and is a vital prerequisite of successful performance in sport (Schmidt & Lee, 2011). Other research findings stated that concentration is the ability to remain focused on the task at hand, and maintain that focus over a period of time. Being able to remain fully focused especially when faced with adversity is consistently reported as an important mental toughness attribute (Jones et al, 2007; Gucciardi, Gordon & Dimmock, 2008). Regardless of what is going on in the environment, mentally tough athletes have strong attentional control skills and are able to focus on the task at hand (Bull & Shambrook, 2005).

Confidence in sport, according to Vealey & Chase (2008), refers to the belief that an athlete possesses about his ability to be successful in sport in general (trait sport confidence) and in specific sport competitions (state sport confidence). In sport practice it is usually assumed that if an athlete has belief in his sport abilities, he will be less likely to become anxious before big games or high pressure situations such as overtime or free throw.

Motivation is a particularly relevant issue in sport. It can be defined as direction and intensity of effort. Intensity refers to the quantity of effort, while direction refers to what a person is drawn too. Evidence suggests that enhanced motivation promotes learning, performance, enjoyment, and persistence in sport, among other benefits (Mladenovic, 2016). In basketball, motivation is a key psychological trait that is needed to excel. Players need high levels of motivation to push themselves to their limits and to be able to deal with the pressures of training and playing constantly each week.

The aim of this research was to explore goal orientation and mental toughness of young athletes involved in major international competition. We wanted to explore which goal orientation is more dominant among young basketball players and what aspects of mental toughness are more developed at 15 to 16 years of age. Also, the aim was to explore if there is correlation between goal orientations and mental toughness variables.

METHODS

Two instrument were applied.

Goal orientations was measured by TEOSQ (Duda, 1989). The questionnaire consists of 13 items, six for ego, and seven for task orientation, on 5-point Likert type scale.

Mental toughness was measured by MTQ (Goldberg, 1998). This questionnaire consists of 30 items, six for each of five mental toughness variables: rebound, pressure, concentration, confidence, motivation. Each item is scaled on 7-point Likert type scale.

Subjects

The research included 21 male participants, U16 basketball players of the Serbian national team. Four examinees were aged 15, while the others are aged 16.

Procedure

The research was conducted during summer of 2015, as a part of psychological assessment and preparations for the European Championship in Lithuania.

Statistical analysis

Cronbach's alpha was used for reliability analysis. Descriptive statistics (Mean value, SD, t-test) was applied for exploring each variable of goal orientation and mental toughness. Correlation between goal orientation and mental toughness variables was explored by conducting Pearson's correlation coefficient. All analyses were done in SPSS, version 22.

RESULTS

Reliability analysis was conducted applying Cronbach's alpha. Values of Cronbach's alpha for TEOSQ scale was over 0.7 ($\alpha=0.76$ for ego, and $\alpha=0.75$ for task subscale). For MTQ reliability analysis showed α value 0.9, but on subscales values of α were lower (rebound $\alpha=0.77$; pressure $\alpha=0.76$; concentration $\alpha=0.63$; confidence $\alpha=0.74$; motivation $\alpha=0.56$).

Descriptive statistics using one sample t-test revealed significance for all Mean values of explored variables (Table 1). Young basketball players appeared to be more orientated toward task than ego goals. Considering mental toughness variables, the highest Mean value was obtained for motivation variable, and the lowest Mean value, with standard deviation above 1, is obtained for rebound ability.

Table 1. Descriptive statistics for Goal orientations and Mental toughness, for U16 Serbian basketball team at Euro 2015 (N=21).

| | Mean | SD | Minimum | Maximum | t-test | df |
|---------------|------|-------|---------|---------|----------|----|
| Ego | 3.70 | .695 | 2.17 | 5.00 | 24.437** | 20 |
| Task | 4.25 | .504 | 3.00 | 4.86 | 38.697** | 20 |
| Rebound | 5.08 | 1.030 | 2.67 | 6.83 | 22.613** | 20 |
| Pressure | 5.51 | .929 | 3.00 | 6.67 | 27.200** | 20 |
| Concentration | 5.43 | .794 | 4.00 | 6.83 | 31.341** | 20 |
| Confidence | 5.23 | .925 | 3.50 | 6.67 | 25.892** | 20 |
| Motivation | 5.54 | .664 | 3.67 | 6.50 | 38.236** | 20 |

** $p<0.01$

Correlation analysis revealed significant inter-correlations between goal orientations, and all mental toughness variables, except motivation (Table 2). Motivation variable of mental toughness is significantly correlated with goal orientation variables.

Table 2. Correlation and inter-correlation of Goal orientations and Mental toughness, for U16 Serbian basketball team at Euro 2015 (N=21).

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------|-------|--------------|--------|---------------|---------------|---------------|---------------|
| 1. Ego | 1 | .448* | .144 | .257 | .050 | .153 | .513* |
| 2. Task | .448* | 1 | -.110 | .212 | .177 | .307 | .664** |
| 3. Rebound | .144 | -.110 | 1 | .684** | .692** | .815** | .089 |
| 4. Pressure | .257 | .212 | .684** | 1 | .564** | .730** | .379 |

| | | | | | | | |
|-------------------------|-------|--------|--------|--------|--------|---------------|------|
| 5. Concentration | .050 | .177 | .692** | .564** | 1 | .810** | .311 |
| 6. Confidence | .153 | .307 | .815** | .730** | .810** | 1 | .304 |
| 7. Motivation | .513* | .664** | .089 | .379 | .311 | .304 | 1 |

**p<0.01;

*p<0.05

DISCUSSION

Psychological variables are assumed to determine champions in sport when all other individual and team sports qualities are at the approximately same level (Mladenovic, 2018). That is usually the case at major international championships, such as European or World championships in basketball. For young athletes aiming to enter senior sports level, equally important are developmental dimensions of any sports quality at the particular moment, just as success at competition (Mladenovic, 2011; Mladenovic & Marjanovic, 2011; Mladenovic et al, 2016).

In this research, task orientation was more emphasized among young basketball players than ego orientation. But it seems there are more individual differences in ego orientation, with even maximum values on the scale. It means there are some young basketball players, at the age of 15 of 16 years, who gives more attention to one's own sports status and superior sports qualities. In science as well as in practice, differentiation between two goal orientations is relevant in sports context and it is connected with the perception of cause of success and failure in sport. Ego orientation is connected with the perception of sports situation as a context used to increase self-respect and status. The cause of success in sport is attributed to one's own superior sports competences when compared to other athletes. Task orientation is connected with the strategy of working hard and continually on the development and improvement of competences. The success is seen as the result of persistence and effort. The situation of sports achievement is seen prosocially, as a place when relative competences of athletes are measured in specific moment (Duda, 1992). For young athletes, it is important for success in a current competition, as well as for further sports development, to put focus on one's own persistence and effort more than on 'ego superiority' toward others at the particular moment (Mladenovic et al, 2015).

When it comes to mental toughness, nowadays this mental attribute is acknowledged as most important in sporting performance (Hodge, 1994; Goldberg, 1998; Mladenovic, 2017). In early work on the issue, Loehr (1991) emphasized that athletes and coaches felt that at least 50% of success is due to psychological factors that reflect mental toughness. Similarly, Gould et al (1987) reported that more than 80% coaches rated mental toughness as the most important psychological attribute for success in sport. Many other sport psychology researches (e.g., Burton & Raedeke, 2008; Robazza, Pellizzari, & Hanin, 2004; Vealey, 2007) over the last decades have investigated the cognitive and emotional factors associated with sports achievements in an attempt to identify the personality characteristics of skilled athletes and the mental preparation strategies that they use to perform successfully. Psychological characteristics commonly accepted as being major contributors to success within the area of sporting performance appeared to be motivational factors, self-confidence, and the ability to cope with and interpret anxiety-related symptoms as facilitative under pressure (Hanton et al, 2008; Hardy et al, 1996; Mellalieu et al, 2009). But the characteristic that is frequently used to describe why certain individuals have become "the best in the world" in their respective sports is that of "mental toughness" (Loehr, 1991; Williams, 1988). In basketball, 16 years of age might have important role in further sports affirmation up to senior level of competition (Trunic & Mladenovic, 2014). On that unique personal and sports path, goal orientations and development of mental toughness mindset are of great importance.

In this research, as we followed Goldenberg's concept of mental toughness, results indicate motivational aspect of mental toughness as most developed among young basketball players, while there are most individual differences in rebound ability. It seems that although young basketball players in our research had will to push themselves hard in the competition, they are still not enough 'tough' to overcome setbacks and rebound from obstacles before and during the game. But certainly, 'good news' is that mental toughness is trainable variable, since it is believed that it is not inherited gift (Jones et al, 2002). Significant correlation between motivation variable of mental toughness and goal orientation indicate that specific mental training program might be based on athlete's motivation and involve coaches as important figure in sports and personal development of young athletes (Mladenovic et al, 2015; Mladenovic & Trunic, 2014). This research goes in line with evidence supporting important role of motivation in sports development and success (Mladenovic, 2016). Further researches should clear potential mediation role of motivation in establishing mental toughness mindset.

CONCLUSION

Psychological variables such as goal orientations and mental toughness might play important role in sport success, and it is of great importance to pay attention to development and nourishment of such mental qualities at younger age. In this research, young basketball players of U16 Serbian national team, showed higher level of task goal orientation. Motivational aspect of mental toughness was somewhat emphasized and the rebound ability with lowest mean value and widest individual differences among players. Correlation analysis indicate connection between goal orientations and mental toughness mainly through motivation variable. Motivation appeared to be the key component for promoting sports development and enhancing overall mental toughness. It is on future research to clear the role of motivation in establishing mental toughness mindset and potential mediation role of motivation between mental toughness and goal orientations in sport.

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