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INSTRUMENT RELIABILITY TEST FOR PROSOCIAL AND ANTISOCIAL BEHAVIOR OF SCHOOL ATHLETES IN INDONESIA

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Abstract

The purpose of this study is to examine the psychometric nature of athletes regarding prosocial and antisocial behavior in sports. The sample of this research is athletes in junior high or high school in the Special Region of Yogyakarta and the Province of Bali. For prosocial behavior, the reliability test showed a statistical data of 0.780 for the school athletes in the Special Region of Yogyakarta and 0.775 for the school athletes in the Province of Bali. For the antisocial behavior, results showed 0.817 for the school athletes in the Special Region of Yogyakarta while 0.501 for the school athletes in the Province of Bali. This study concludes that Prosocial and Antisocial Behavior in Sport Scale (PABSS) can be used to measure the prosocial and antisocial behavior of junior high school athletes and senior high school athletes in various regions of Indonesia. It was also found that PABSS can be used with different genders.

Keywords: behavioral, social, sports participation.

INTRODUCTION

Various positive and useful experiences can be obtained through participation in sports such as character building, self-esteem, self-confidence, citizenship, identity development, academic achievement improvement, developing mature individuals, establishing relationships with peers, and minimizing delinquency. Due to all these positive benefits, participation in structured sports is encouraged in creating an attractive environment and acquiring sports skills which would increase the personal growth of athletes. All of these factors will result in a variety of sports being developed in schools mainly in Indonesia as an extracurricular activity included in the compulsory curriculum.

The attention of the young generation in developing their personalities has increased. This is due to the creation of an emotional social learning approach that is integrated with the development of various organizations such as the Indonesian National Sports Committee (KONI). However, the view of sports participation is not only directed in a positive direction but also towards a negative perception because of the competitive nature and the pressure to win the excessive competition. Besides, professionalization in sports has also been a factor influencing an increased pressure on competition outcomes such as the thought that winning is compulsory so it starts to rule out justice in a competition which impacts on lowering the positive social values in sports (Fraser-Thomas & Côté, 2009; Weiss, Amorose & Allen, 2000). It is important to understand the moral behavior of athlete participation, especially those in schools.

A series of positive and negative actions, whether intentional or not, are moral behaviors that lead to the psychological and physical well-being of others. Positive or negative behavior in sports is

interrelated because it can affect other athletes (Murphy,2012). Positive behaviors in sports can be put as helping one another, working together in teams, mutual respect, accepting defeat and recognizing the superiority of opponents while the example of negative behaviors is injuring, insulting and taunting opponents. Empirical evidence has also proven that negative sports behavior can cause physical and emotional injury (Fields, Collins & Comstock, 2010).

There are two aspects of sports behavior according to social cognitive theory, namely the supporting aspect (proactive) and the inhibiting aspect (Bandura, 1999; Bandura, 2014). The proactive behavior of sport can be described as a person's strength to be able to behave humanely whereas the inhibitive behavior is described as the power to refrain from inhuman behavior (Bandura, 1999). From this explanation, an athlete who has high morality will show positive sports behavior and refrain from negative sports actions. Some of the research that has been done focusing more on dominant sports behavior that focuses on negative aspects of sports such as hitting opponents, lack of sportsmanship, and rude behavior (Kavussanu & Boardley, 2009). As time goes by, research that examined positive sports behavior began to emerge. The terms "prosocial behavior" and "antisocial behavior" were used to distinguish good and bad sports behavior (Kavussanu, Seal & Phillips, 2006; Sage, Kavussanu & Duda, 2006).

Based on social cognitive theory (Bandura, 1999), there are multidimensional rules that determine whether a sport behavior is appropriate or not appropriate such as punishment or consequences of athlete's behavior and behavior that affects other athletes. The good and bad behavior of an athlete is usually learned through observations made by the athlete and the reinforcement obtained from someone who has a big influence on the athlete such as the coach, the opponent, and even his teammates (Bandura, 1999).

Based on the understanding of prosocial and antisocial behavior which is supported by social cognitive theory, an instrument was made to measure the prosocial and antisocial behavior within the scope of sport that was developed and validated using English samples until finally, it became PABSS (the Prosocial and Antisocial Behavior in Sport Scale). This is an important idea because researchers intend to create instruments that are more directed towards the need to measure sports morality behavior through an athlete's statement (Bandura, 1999). Some researchers also suggest using PABSS to focus more on the moral development of young athletes and adolescents (Vierimaa, Erickson, Côté & Gilbert, 2012) and understanding the social behavior that occurs in sports (Rutten, Schuengel, Dirks, Stams, Biesta & Hoeksma, 2011).

PABSS consists of four factors which include prosocial behavior to teammates, prosocial behavior to opponents, antisocial behavior to teammates and antisocial behavior to opponents. Internal reliability such as Cronbach α values is calculated at a value of $> .70$. The factorial validity, namely the first four sequence models shared validity namely subscales such as prosocial opposing behavior, antisocial opposing behavior, and antisocial team-mate behavior which are then correlated with aspects of empathy, and discriminant validity to see how big is the relationship of these factors (Kavussanu & Boardley, 2009). The validity and reliability of the PABSS are supported by the British sports team athletes who have tested with an average age of 21 years old participants. Scale-invariant measurements are adjusted to gender and branches of sports available are soccer, basketball, volleyball, and hockey (Kavussanu & Boardley, 2009). This invariant test has a function to measure the extent of similarity in items in the instrument for different groups of participants in different environments such as the school, sports and gender (Byrne, 2004; Byrne, 2006).

There are four forms of invariant measurement that is configural, metric, scalar, and invariant residue (Meredith, 1993). The sequences used to evaluate invariant measurements are a) conducting separate measurement model tests according to each group from the perspective of good, bad, and substantive significance, b) testing configural similarity or invariance, c) evaluating metric invariant or factorial invariance weak, d) assessing a strong factorial scalar or invariant, and e) rigorous factorial item testing, error or invariance (Byrne, 2006; Brown, 2006).

Error checking in invariance is usually optional because it is too strict and overrides the evaluation of invariant measurements (Brown, 2006). In the substantive invariant context which means that heterogeneity tests of populations such as the variance of factors, factor variation, and latent averages can be carried out (Brown, 2006). A more complete explanation of how to evaluate the

invariance of measurements should be refer to experts who are specific in this field (Byrne, 2006; Brown, 2006; Meredith, 1993).

PABSS is a promising instrument for measuring behavior in sports and it is morally relevant. However, the measurement invariance in various school groups has not been tested. Besides, the PABSS was developed using the athletes in the UK and certainly, it has differences in culture, context and independent samples with us. So it has to be tested to ensure that this instrument is strong, reliable, and valid (Kavussanu & Boardley, 2009). The objectives to be achieved in this study are to test multigroup invariants of PABSS in various groups such as sex, school, and athletes from various branches and to examine other psychometric properties of PABSS such as internal reliability, convergent validity and discriminant validity using school athletes in Indonesia.

METHODOLOGY

Participants

The athletes sampled in this study were obtained from the schools of the Special Region of Yogyakarta and the Province of Bali from junior high schools (SMP) to high schools (SMA). The samples volunteered were 32 school athletes (n = 16 Yogyakarta Special Region athletes and n = 16 Bali Province athletes). Participants gender consisted of 22 boys and 10 girls. The participants came from six sports namely soccer (n = 10), volleyball (n = 8), martial arts (n = 6), swimming (n = 4), athletics (n = 2) and basketball (n = 2).

Measurement

Prosocial and antisocial sports behaviors were measured using PABSS (Kavussanu & Boardley, 2009). The PABSS instrument consists of 20 items that describe four subscales: prosocial behavior towards teammates (four items; for example, "Giving positive feedback to teammates"), prosocial behavior to opponents (three items; for example, "Helping opponents by getting the ball "), antisocial behavior towards teammates (five items; for example," Fighting with teammates "), and antisocial behavior towards opponents (eight items; for example," Criticizing and taunting opponents "). The internal reliability of the four subscales ranged from 0.74 to 0.86 in the British sample. A five-point Likert scale was used for responses (1 = never; 5 = always).

Procedure

Data collection was carried out on different sessions for different teams which lasted for two months. Before data collection, ethical approval and permission were granted by the principal. A written consent form was also prepared for the participants and the consent of parents/guardians was also collected before the survey. Next, researchers assisted by sports teachers distributed the questionnaires to the athletes. The official language in Singapore is English thus the PABSS were also originally in English and needed to be translated into Indonesian without changing the meaning and then be shared with the participants. It was explained to the participants that participation in this study is voluntary and there is no element of coercion or force. The participants were asked to refer to the extracurricular sports that they participated in during this semester when reporting their sports behavior. It is emphasized to them to fill in the questionnaire honestly.

Data Analysis

Data analysis was carried out by conducting the instrument reliability testing using SPSS. The PABSS instrument which has been translated into Indonesian undergoes the reliability test conducted about the prosocial and antisocial behavior of athletes in the Special Region of Yogyakarta and athletes in the Province of Bali.

Cronbach's α is used to determine the reliability with an α value greater than 0.497 indicating adequate internal consistency (Hoyle, Harris & Judd, 2002). Convergent validity refers to the general proportion of variants divided by items in certain factors and correlations with other recognized measures of the same factor (Cohen, Swerdlik & Phillips, 1996; Hair, Black, Babin, Anderson & Tatham 1998). The average variance extracted (AVE) and the average variance extracted for items loading on factors are used to check the validity of the converging scale. An AVE value of higher than 0.50 in a factor indicates an adequate convergent validity (Hair et al., 1998). Cronbach's α is used to determine the reliability and if the value of α is greater than r table, it shows adequate internal consistency. Table 1 showed instrument used in this study.

Table 1. Prosocial and Antisocial Behavior in Sport Scale

	Indicators	Questions	1	2	3	4
1.	Perilaku Prososial terhadap rekan satu tim	1. Mendorong atau membangkitkan percaya diri rekan satu tim 2. Memberikan selamat kepada rekan satu tim untuk permainan bagus 3. Memberikan umpan balik positif kepada rekan satu tim 4. Memberikan umpan balik yang konstruktif (bersifat membangun dan memperbaiki) kepada rekan satu tim				
2.	Perilaku Prososial terhadap lawan	5. Membantu lawan yang cedera 6. Diminta berhenti bermain saat lawan cedera 7. Membantu lawan bangkit dari lantai karena mengalami kekalahan				
3.	Perilaku Antisosial terhadap rekan satu tim	8. Secara langsung menyalahgunakan rekan satu tim 9. Mengucapkan kata kata kasar pada rekan satu tim 10. Berdebat dengan rekan satu tim 11. Mengkritik rekan satu tim 12. Menunjukan sikap frustasi pada permainan tim yang buruk				
4.	Perilaku Antisosial terhadap lawan	13. Mencoba melukai lawan 14. Mencoba untuk mengakhiri lawan 15. Sengaja mengotori lawan 16. Sengaja mengalihkan perhatian lawan 17. Membalas lawan setelah melakukan pelanggaran buruk 18. Secara sengaja melanggar aturan permainan 19. Menunjukan fisik untuk menakut nakuti lawan 20. Mengkritik lawan				

RESULTS

Based on the results of the reliability test conducted, it shows that the Cronbach alpha value is 0.780 for prosocial behavior of school athletes in the Special Region of Yogyakarta and 0.775 for prosocial behavior of school athletes in the Province of Bali. The Cronbach alpha figures for the antisocial behavior of school athletes in the Special Region of Yogyakarta are 0.817 while the value is 0.501 for the antisocial behavior of school athletes in the Province of Bali. The number of Cronbach found is greater than the minimum value of Cronbach alpha 0.497. Thus, it can be concluded that the research instrument used to measure the prosocial behavior of school athletes in the Special Region of Yogyakarta and the Province of Bali is reliable. Statistical results can be seen in the table 2 below.

Table 2. Reliability Test Results.

N	Instrument Indicator	Cronbach Alpha		Minimum Value of Cronbach Alpha
		Special Region of Yogyakarta	Province of Bali	
16	Prosocial Behavior	0.780	0.775	0.497
16	Antisocial Behavior	0.817	0.501	

The results of this study also show that athletes sometimes portray antisocial behavior and sometimes portray prosocial behavior. Values for both indicators start at 0.501 which means that reliability is quite good and acceptable. All mean values are closer to or higher than 0.5 which shows an adequate convergent validity of the PABSS instrument.

In gender invariance, previous studies have tested and shown results that women have a higher score on antisocial behavior towards teammates with the count results of (0.06, $p < 0.05$), prosocial behavior towards teammates (0.13, $p < 0.05$), antisocial behavior towards opponents (0.05, $p < 0.05$), and prosocial behavior towards opponents (0.07, $p < .05$). Previous studies also evaluated that junior high school students and senior high school students have differences from the two indicators on average when the junior high school students are used as a reference group. The mean difference shows that $p > 0.05$ which indicats that there are no significant differences between the two indicators between groups.

DISCUSSION

Considering that PABSS was developed in the UK, there is research that examines the use of PABSS in different cultures and contexts. The study was conducted at one of Singapore's schools and shows the result that psychometric properties were sufficiently supported in Singapore. This triggers researchers to try to implement the PABSS for athletes in Indonesian schools, especially in the Special Region of Yogyakarta and in the Province of Bali.

The results found the reliability of ($\alpha = 0.501$ to 0.817) in line but lower than the previous study by Kavasussanu and Boardley which showed results of ($\alpha = 0.73$ to 0.86). The correlation factor found shows almost the same validation results of (0.4 to 0.71) with (0.4 to 0.74). Therefore, researchers believe that the use of the PABSS instrument to test the prosocial and antisocial behavior of athletes against opponents and teammates at school is of utmost importance.

This study also provides an examination of the invariant PABSS on gender and school groups with the results of configural invariants, metrics, and scales. This shows that the male and female athletes at different school levels feel the same way about the items and contracts. Thus, the PABSS instrument is suitable and can be used for research involving athletes of both gender and different levels of schooling.

There were also limitations found in this study. First, the data collection is done at different times for example during pre-competition and during the competition can ultimately influence this research. The difference between pre-competition and competition will affect how an athlete reports the moral behavior they experience.

Secondly, most of the athletes sampled were school athletes consisting of martial arts, volleyball, badminton, soccer, swimming, and roller skates. PABSS might not be suitable for some sports until testing of validity and reliability is conducted.

Finally, although researchers have instructed the participant to be honest in responding to PABSS, researchers cannot determine the level of honesty of the participant. This will influence the results of PABSS filled by athletes in reporting excessive positive sports behavior and negative sports behavior.

CONCLUSION

This study shows that PABSS can be used as novel literature by providing statistical evidence in testing prosocial and antisocial behavior in athletes of junior and senior high schools. This study concludes that PABSS can be used and is reliable to measure the prosocial and antisocial behavior of junior high school athletes or senior high school athletes in various regions of Indonesia. It was also found that PABSS can be used on different genders.

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