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VALIDATION OF AN INSTRUMENT TO MEASURE IRANIAN STUDENTS' ENJOYMENT IN PHYSICAL EDUCATION CURRICULUM

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ABSTRACT

Enjoyment and satisfaction can be described as effective and positive states which show feeling of, for instance, joy, interest, and entertainment and sport enjoyment, on the other hand, is considered as joy related to physical activity cooperation, backing sport, and increasing spirit. However, unserious attention has been paid to the factors effecting physical activity enjoyment, Social Cognitive Theory by Bandura (1989) has shown theoretical framework for understanding self-efficacy role in enjoying sports activity. Studying and exploring factors effecting sports enjoyment and decreasing sport resignation are crucial. So, regarding the importance of mentioned variables and their psychological outputs for athletes, especially juniors, the present paper was aimed to validate the Persian version of Physical Activity Enjoyment Scale (PACES) and survey athlete juniors' enjoyment gained by physical activity. 225 athlete students with the age in the range of 12-14 years from 2 primary schools and 6 football schools of Tehran participated in the present research. The results indicated that research variable had acceptable Alpha's Cronbach coefficient and confirmatory factor analysis showed proper model fit. So, according to the reviewed literatures indicating demographic variables effect on physical activity enjoyment, it is recommended to researchers to validate Physical Activity Enjoyment Scale (PACES) in various sports, ages' groups, and genders is considerable.

Keywords: *Enjoyment, Physical Activity, CFA, Athlete Juniors, Football*

INTRODUCTION

Despite some sports coaches' emphasis on confidence, commitment, and strong will which are required for success, the factor to figure participation in sport and exercise is chance of enjoying sport (Gao, 2008). Scanlan *et al.*, (1989) stated a composition of sport motivation and enjoyment as primary reason for commencing and continuing sport participation (Weiss and Champton, 1992). On the other side, youths' not fun sport programs considered as increasing sport resignation reason (Petlichkof, 1992). Theoretically, enjoyment is used in researches as positive emotional response to sport experience reflecting feeling like love and entertainment (Scanlan, 1993). So, surveying and exploring factors influencing sport enjoyment and decreasing sport resignation is crucial.

Enjoyment and satisfaction can be described as effective and positive states which show feeling of, for instance, joy, interest, and entertainment (Wankel, 1993) and sport enjoyment, on the other hand, is considered as joy related to physical activity cooperation (Motl, *et al.*, 2001; Motl *et al.*, 2000), backing sport (Johnson and Heller, 1998; Wankel, 1993), and increasing spirit (Motl *et al.*, 2000). However, unserious attention has been paid to the factors effecting physical activity enjoyment, Social Cognitive Theory by Bandura (1989) has shown theoretical framework for understanding self-efficacy role in enjoying sports activity.

Nevertheless, interpreting enjoyment concept is difficult to do, and as it stated individually, primary and continued interactions of various groups of ages, gender, cultures, and communities in sport activity should be evaluated for understanding enjoyment concept. Enjoyment defines as an optimal and proper psychological state leading to performing the action for the action and accompanying with positive emotional states (Kimiecik and Harris, 1996). Enjoyment optimal experience accompanies with effective and willing states like happiness, energy, pleasure, and calmness (Motl *et al.*, 2000), perfection, satisfaction, and happiness (Kendzierski and DeCarlo, 1991) which it can add meaning and energy to life

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in return and this energy provides relish and feel happy and satisfied. Additionally, sport enjoyment, in turn, can effect individual and group variables like sport commitment (Carpenter and Coleman, 1998), motivation (Hoseini and Ramzaninezhad, 2010), collective efficacy (Hoseini and Ramzaninezhad, 2010), and group cohesion (Ramzaninezhad, *et al.*, 2009) in sport teams. Various approaches for studying physical activity enjoyment have been utilized by researchers in many papers. Malet (2006) indicated that athletes who owned better perception about their sport ability feel more enjoyment by physical activity. Yli-Piipari, *et al.*, (2009) studied relationships between physical education students' motivational profiles, enjoyment, state anxiety, and self-reported physical activity in which they found students who owned more intrinsic and extrinsic motivation, felt more enjoyment and the spent more time on physical activity. In contrast, students who owned less level of arousal and intrinsic and extrinsic motivation felt less enjoyment by physical activity. Garcia-Mas, *et al.*, (2010) surveyed commitment, enjoyment and motivation in young soccer competitive players and they realized that youth soccer players' motivation can effect enjoyment and commitment in which commitment and enjoyment would increase by developing motivation. Shaffer and Wittes (2006) by studying women's precollege sports participation, enjoyment of sports, and self-esteem reported that enjoyment influence relationship between sports participation and self-esteem as a moderate variable. Braya, *et al.*, (2005) studied the effects of leadership style and exercise program choreography on enjoyment and intentions to exercise indicating significant effect of coaches' leadership style and exercise program choreography on physical activity enjoyment in which cooperative leadership would have positive and significant effect on physical activity enjoyment. Kalaja, *et al.*, (2010) by exploring the role of gender, enjoyment, perceived physical activity competence, and fundamental movement skills as correlates of the physical activity engagement of Finnish physical education students indicated significant relationship between enjoyment and perceived physical activity competence, and students perceiving more physical activity competence felt more physical activity enjoyment. McCarthy, *et al.*, (2008) by analyzing understanding enjoyment in youth (8-15 years old) sport reported that aging process is positively related to increasing physical activity enjoyment. Motl, *et al.*, (2001) measured enjoyment of physical activity in adolescent girls and they designed a model and instrument for measuring enjoyment of physical activity in American, African-American, Indian, and European adolescent girls and they found it fit to measure physical activity enjoyment. So, regarding the importance of mentioned variables and their psychological outputs for athletes, especially juniors, the present paper was aimed to validate the Persian version of Physical Activity Enjoyment Scale (PACES) and survey athlete juniors' enjoyment gained by physical activity to help future researchers utilize it for analyzing more expanding.

MATERIALS AND METHODS

Participants

The statistical community included all male athlete students of Tehran Football schools. Referring to Morgan's Table and utilizing categorical random sampling, 225 athlete students with the age range of 12-14 (mean age=12.54 (0.76) years old were selected as the research statistical sample. The present research was conducted in 2 primary schools and 6 Football schools in Tehran. At the first, the required research process was coordinated with the department of education and school managers. The present researchers commenced to distribute the questionnaire among students after receiving permission from the head of Educational Organization and Football schools.

Measures

All measurements were translated from English to Persian (Farsi) and the statements were approved and confirmed by specialist for superficial reliabilities and validities. Additionally, all measurements were designed in way that the contents were understandable to respond for students with the 12-14 years old range.

Demographic Questionnaire: including personal information such as age, and sport activity background.

Physical Activity Enjoyment Scale (PACES): It was developed for the age of collegiate athletes' rate by Kendzierski and DeCarlo (1991). This scale was developed and validated by Motl, *et al.*, (2001) for the

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age of school students' rate and included 16 statements by five-point Likert's type scale from completely disagree to completely agree. This scale has two subscales including Physical Education Curriculum Enjoyment and its related statements 1 to 4, and Physical Activity Enjoyment and its related statements 5 to 16 which all were designed by referring to Kendzierski and DeCarlo (1991). The internal consistency coefficient was 0.85 by using Cronbach's Alpha test. Reviewing literature indicated the same results by McCarthy, *et al.*, (2008) and 0.84 by Dishman, *et al.*, (2005) for the named scale.

Statistical Methods

Descriptive statistics were used for describing and categorizing raw data (age, and sport activity background) and for measuring Mean, frequency, SD and table drawing. In order to measuring instruments consistency the Cronbach' Alpha was utilized. The Confirmatory Factor Analysis (CFA) was used for measuring the instrument validation, and for analyzing data the LISREL (19) was applied on 95% of confidence level.

RESULTS AND DISCUSSION

Descriptive Results:

The results showed that the participants' mean age was 12.54 years and their mean year of background in sport was 3.18 (Table 1).

Table 1: Participants' characteristics

	Age	Background in Sport (year)
Mean	12.54	3.18
SD	0.76	1.7
Min	12	0
Max	14	8

Regarding the descriptive results, the highest mean ($\bar{X} = 4.79$) and the lowest standard deviation ($SD=0.60$) belonged to the statement of "It's no fun at all", and the lowest mean ($\bar{X} = 4.36$) and the highest standard deviation ($SD=1.09$) belonged to the statement of "I feel as though I would rather be doing something else" (Table 2).

Table 2: Descriptive statistics on enjoyment statements

NO	Statement	Mean	SD
1	I enjoy it	4.77	0.68
2	I feel bored	4.56	0.86
3	I dislike it	4.76	0.69
4	I find it pleasurable	4.57	0.81
5	It's no fun at all	4.79	0.60
6	It gives me energy	4.41	0.93
7	It makes me sad	4.72	0.66
8	It's very pleasant	4.47	0.86
9	My body feels good	4.51	0.82
10	I get something out of it	4.47	0.96
11	It's very exciting	4.54	0.84
12	It frustrates me	4.76	0.61
13	It's not at all interesting	4.75	0.65
14	It gives me a strong feeling of success	4.55	0.88
15	It feels good	4.56	0.79
16	I feel as though I would rather be doing something else	4.36	1.09

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The descriptive results also showed that, regarding five-point Likert’s type range, enjoyment was in a good state since its mean was 4.6 (Table 3).

Table 3: Surveying enjoyment and its subscales

Variable	Abbreviation	SIG	T	Mean	SD	State
Physical Education Curriculum Enjoyment	ENJ1	0.00	45.71	4.66	0.54	Good
Physical Activity Enjoyment	ENJ2	0.00	40.02	4.56	0.58	Good
Enjoyment	ENJOY	0.00	44.47	4.61	0.54	Good

Deductive Results:

Since Cronbach's Alpha is generally a perfect indicator for measuring instrument reliability and internal consistency among its dimensions, the present instrument reliability was measured by Cronbach's Alpha. Cronbach's Alpha coefficient is between 0-1 which is data correlation coefficient in different times. The instrument reliability will be in highest state if the attained coefficient be close to 100 percent. As it is compiled in many text, Cronbach's Alpha coefficients will be poor, acceptable, and good if their amounts become 0.6, 0.7, and above 0.8 respectively. The Cronbach's Alpha coefficients for the variables are reported on the Table 4.

Table 4: Cronbach's alpha coefficients for enjoyment and its subscales

Variable	α	Omitted Statements	Final α
Physical Education Curriculum Enjoyment	0.83	Statement 16	0.89
Physical Activity Enjoyment	0.90	-	-
Enjoyment	0.92	-	-

Confirmatory Factor Analysis (CFA) for Enjoyment Variable:

The results from Table 5 demonstrates measuring model of Physical Activity Enjoyment in standard approximation base and it shows factor loads and significance coefficients for each statement, For instance, the first statement factor load in Physical Education Curriculum Enjoyment is 0.71. In other words, the scale first statement explains about 50% of Physical Education Curriculum Enjoyment variance and the error rate is 0.50. The construct reliability will be convergent when all factor loads are more than 0.3. The model factor loads show the extent of each variable or statement influence on explaining main variable variance marks. In other words, the correlation extent of each observer variable (the statements) with latent variable (the factors) is shown by factor load. Additionally, the coefficients which are higher than +1.96 or lower than -1.96, indicate significant relationships. So, it can be realized by the results from Table 4 that all existed relationships (unilateral flashes which are simple regression equation) are significant relationship (P<0.05). Moreover, model fit measurement indicated statistical indexes goodness. Regarding LISREL outcomes, X^2 (268.65) in proportion of DF (89) is less than 3. Other indexes, for instance, RMSEA, GFI, AGFI, and NFI were 0.077, 0.78, 0.91, and 0.95 respectively.

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Table 5: The results of measuring model (Physical Activity Enjoyment)

			Factorial load	Error	Variance	Significance Coefficient
ENJOY1	←	ENJ1	0.71	0.50	0.50	12.00
ENJOY2	←	ENJ1	0.66	0.56	0.44	10.92
ENJOY3	←	ENJ1	0.63	0.60	0.40	10.27
ENJOY4	←	ENJ1	0.80	0.36	0.64	14.15
ENJOY12	←	ENJ1	0.60	0.64	0.36	9.65
ENJOY13	←	ENJ1	0.64	0.59	0.41	10.47
ENJOY14	←	ENJ1	0.62	0.61	0.39	10.13
ENJOY15	←	ENJ1	0.76	0.42	0.58	13.31
ENJOY5	←	ENJ2	0.69	0.53	0.47	11.52
ENJOY6	←	ENJ2	0.71	0.50	0.50	11.93
ENJOY7	←	ENJ2	0.60	0.64	0.36	9.69
ENJOY8	←	ENJ2	0.75	0.44	0.56	12.89
ENJOY9	←	ENJ2	0.67	0.55	0.45	11.18
ENJOY10	←	ENJ2	0.57	0.68	0.32	9.09
ENJOY11	←	ENJ2	0.59	0.66	0.34	9.42

[ENJ1= Physical Education Curriculum Enjoyment, ENJ2= Physical Activity Enjoyment, ENJOY= Scale Statement]

Discussion

Regardless of participants' many training goals, it is obvious that physical activity enjoyment leads to increasing participation and then lots of benefits will accompany with continual participation. As it has been supported by Kimieck (2002), physical activity enjoyment is a key element to become a real athlete. McCarthy, et al., reported many scientific findings for coaches, parents, and sport psychologists who work with young athletes.

Generally, diagnosing higher ability and competitive excitement by others are important elements for experiencing sport enjoyment among older children. Obviously, one of the main challenges for experts is achieving excellence between competitive sports needs and chance of attaining social approval as personal succession. Competitive excitement as a key predictor for sport enjoyment among older children is indicated that proper competitions with peers would be enjoyable. Performance, emotions, decreasing tension, and pleasure can create enjoyment for older children.

The present paper was aimed to evaluate validity and reliability of Physical Activity Enjoyment Scale (Kendzierski and DeCarlo, 1991) in student athletes who had played soccer, and results indicated goodness of the mentioned scale for measuring physical activity enjoyment which is supported by Malet (2006), Yli-Piipari, et al., (2009) Garcia-Mas, et al., (2010), Braya, et al., (2005), Kalaja, et al., (2010), McCarthy, et al., (2008), Motl, et al., (2001) that the same result.

Conclusions

So, regarding the reviewed literature indicating demographics are considered important in predicting physical activity enjoyment, the present paper proposes the same study in various sports, gender, and age groups. Focusing on boy athletes due to lack of access to girls, as a research limitation, future researchers should pay serious attention to female athletes' communities and other sports, for instance, individual ones.

REFERENCES

Bandura A (1989). Social cognitive theory. In: *Annals of Child Development*. 6 Six theories of child development, edited by Vasta R (Greenwich, CT: JAI Press) 1-60.
Braya SR, Millena JA, Eidsnessb J and Leuzinger C (2005). The effects of leadership style and exercise program choreography on enjoyment and intentions to exercise. *Psychology of Sport and Exercise* 6 415–425.

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- Carpenter PJ and Coleman R (1998).** A longitudinal study of elite youth cricketers' commitment. *International Journal of Sport Psychology* **29** 195-210.
- Dishman RK, Motl RW, Saunders R, Felton G, Ward DS, Dowda M and Pate RR (2005).** Enjoyment mediates effects of a school-based physical-activity intervention. *Medicine & Science in Sports & Exercise* **37**(3) 478-87.
- GAO Z (2008).** Perceived competence and enjoyment in predicting students' physical activity and cardio respiratory fitness. *Perceptual and Motor Skills* **107** 365-372.
- Garcia-Mas A, Palou P, Gili M, Ponseti X, Borrás PA, Vidal J, Cruz J, Torregrosa M, Villamarín F and Sousa C (2010).** Commitment, Enjoyment and Motivation in Young Soccer Competitive Players. *The Spanish Journal of Psychology* **13**(2) 609-616.
- Hoseini Keshtan M and Ramzaninezhad R (2010).** The Relationship Between Collective Efficacy and Coaching Behaviors in Professional Volleyball League of Iran Clubs. *World Journal of Sport Sciences* **3**(1) 1-6.
- Johnson NA and Heller RF (1998).** Prediction of patient non-adherence with home-based exercise for cardiac rehabilitation: the role of perceived barriers and perceived benefits. *Preventive Medicine* **27** 56–64.
- Kalaja S, Jaakkola T, Liukkonen J and Watt A (2010).** The Role of Gender, Enjoyment, Perceived Physical Activity Competence, and Fundamental Movement Skills as Correlates of the Physical Activity Engagement of Finnish Physical Education Students. *Scandinavian Sport Studies Forum* **1** 69–87.
- Kendzierski D and DeCarlo K (1991).** Physical activity enjoyment scale: Two validation studies. *Journal of Sport and Exercise Psychology* **13** 50–64.
- Kimiecik JC and Harris AT (1996).** What is enjoyment? A conceptual/definitional analysis with implications for sport and exercise psychology. *Journal of Sport and Exercise Psychology* **18** 247–263.
- Malete L (2006).** Goal Orientations, Sport Ability, Perceived Parental Influences and Youths' Enjoyment of Sport and Physical Activity in Botswana. *International Journal of Applied Sports Sciences* **18**(2) 89-107.
- McCarthy PJ, Jones MV and Clark-Carter D (2008).** Understanding enjoyment in youth sport: A developmental perspective. *Psychology of Sport and Exercise* **9** 142–156.
- Motl RW, Berger BG and Leuschen PS (2000).** The role of enjoyment in the exercise-mood relationship. *International Journal of Sport Psychology* **31** 347–363.
- Motl RW, Dishman RK, Saunders R, Dowda M, Felton G and Pate RR (2001).** Measuring Enjoyment of Physical Activity in Adolescent Girls. *American Journal of Preventive Medicine* **21**(2) 110-117.
- Petlichkoff LM (1992).** Youth sport participation and withdrawal: Is it simply a matter of fun? *Pediatric Exercise Science* **4** 105-110.
- Ramezani-nezhad R, Rahmani-nia F and Taghavi A (2009).** Motives of the participants in the exercise of public in outdoor space. MA thesis, Gilan University.
- Scanlan TK, Carpenter PJ, Lobel M and Simons JP (1993a).** Sources of enjoyment of youth sport athletes. *Pediatric Exercise Science* **5** 275–285.
- Scanlan TK, Stein GL and Ravizza K (1989).** An in-depth study of former elite figure skaters: II: Sources of enjoyment. *Journal of Sport and Exercise Psychology* **11** 65–83.
- Shaffer DR and Wittes E (2006).** Women's Precollege Sports Participation, Enjoyment of Sports, and Self-esteem. *Sex Roles* **55** 225–232.
- Wankel LM (1993).** The importance of enjoyment to adherence and psychological benefits from physical activity. *International Journal of Sport Psychology* **24** 151-169.
- Weiss MR and Chaumeton N (1992).** Motivational orientations in sport. In: *Advances in sport Psychology*. edited by Horn TS (Champaign, IL: Human Kinetics) 61-99.
- Yli-Piipari S, Watt A, Jaakkola T, Liukkonen J and Nurmi JE (2009).** Relationships between physical education students' motivational profiles, enjoyment, state anxiety, and self-reported physical activity. *Journal of Sports Science and Medicine* **8** 327-336.