

PARENTS' PERCEPTIONS OF THE IMPORTANCE OF PHYSICAL ACTIVITY AND THEIR CHILDREN'S ABILITY

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ABSTRACT

Background. It is well known that parents influence physical activity of their children. Determining the factors related to parents' perception of the importance of physical activity and physical fitness enables enhancing the promotion of physical activity among children in the future.

Methods. A total of 237 parents of children aged between 5 and 10 years participated in the study. Confirmatory factor analysis was used to estimate factor structure of the questionnaire "Parents Perceptions of the Importance of Physical Activity and Their Children's Ability Questionnaire". To investigate the differences between groups Independent-sample *t*-test was used. Cohen's *d* was used to estimate effect size.

Results. Confirmatory factor analyses showed that the eight-issue two-factorial model psychometric parameters were acceptable in order to assess parents' perception of the importance of physical activity and ability (*RMSEA* = .072; *NFI* = .97; *CFI* = .98; *NNFI* = .98). Parents who were physically active in the past and were active in the present evaluated the importance of physical activity more than inactive parents. Parents' assessments of the importance of physical activity and ability were not significantly different depending on parents' education, university or secondary/high education.

Conclusion. The questionnaire used is a valid measure of parents' assessments of the importance of physical activity and physical ability of the Estonian school students. The questionnaire enables us to identify parents' assessments of the importance of physical activity and physical ability, which may be considered as one of the factors related to children's physical activity.

Keywords: parents' evaluations, physical activity, children, confirmation factor analysis.

INTRODUCTION

Parents strongly influence physical activity of their children and are considered to be most important persons responsible for their participant in physical activity (PA) promotion (Erkelenz, Kobel, Kettner, Drenowatz, & Steinacker, 2014; Giles-Corti, Keltly, Zubrick, & Villanueva, 2009). A great amount of children's free time prior to the adolescence is spent with family and therefore family socialization is a contributor to children's PA participation. According to the parental socialization framework of Eccles, two important predictors of children's participation in PA exist: children's expectation for success

and subjective task value (Fredericks & Eccles, 2004). Subjective task value encompasses intrinsic value (enjoyment of PA), utility value, attainment value and costs of engagement. Children will appreciate PA highly if they believe that PA is important to their goals, perceive themselves as physically capable and enjoy the physical exercise. For children the behaviour of parents is also important in forming their attitude toward certain activity. Fuemmeler, Anderson, and Masse (2011) investigating the parent-child correlation in accelerometer derived measures of physical activity found that from different intensity of PA

vigorous PA was significantly related. Children, who are physically active, are likely to be active also in adult life (Kunin-Batson et al., 2015) that in turn may have positive impact on their children's physical activity.

According to Fredericks and Eccles (2004, 2005), parents who have high perception of children's physical ability and deliver messages about the value of participating in PA, that is high perception of importance of children's PA, will have physically active children. The feedback provided by the parents can positively affect the attitudes towards exercise activities, while the unrealistic expectation and pressure may bring negative consequences (Martinent, Naisseh, Ferrand, Bois, & Hautier, 2013). Increasing the awareness of the importance of physical activity in parents and reducing the overestimation of children's physical abilities are the some possibilities to increase children's participation in physical activity (Corder, Crespo, Van Sluijs, Lopez, & Elder, 2012).

Recently, Martinent et al. (2013) developed and validated a questionnaire to measure parent's perceptions of physical activity importance and their children's ability (PPAICAQ) among Caucasian French families. The final version of this questionnaire (see items in Appendix) consisted of the two scales: parent's perceived importance of their children's PA (PPICPA) and parent's perceptions of their children's ability in PA (PPCAPA). The scale of PPICPA included four items (e.g. "How important is it to you that your child participates in sport and /or PA for better health?") and scale of PPCAPA also had four items (e.g. "Do you think that it is easy for your child to participate in sport and/or PA?"). Seven-point Likert scale ranging from (1) "not at all important/not good at all to (7) "very important/ very good" was used to estimate the parents' responses.

The primary purpose of the present study was to test the validity of the factor structure of the final version of PPAICAQ in the Estonian sample. The secondary aim was to investigate whether the parents' perceptions of the importance of their children's PA and their children's ability were related to their educational level and their own physical activity.

METHODS

Research Design. A total of 237 parents of children aged between 5 and 10 years (13.1% – 5 years old, 13.6% – 6 years old, 18.2% – 7 years old,

18.2% – 8 years old, 27.1% – 9 years old, 9.7% – 10 years old) voluntarily participated in the study. The participants of the study were from one city with a population of 30.000 inhabitants. Standardized back-translation techniques (Brislin, 1986) were used to translate the English version questionnaire into Estonian.

The factorial validity of the questionnaire "Parents Perceptions of the Importance of Physical Activity and Their Children's Ability Questionnaire" (PPAICAQ) developed by Martinent et al. (2013) was tested by confirmatory factor analysis (CFA). The validity of the CFA model was evaluated by using multiple goodness-of-fit indexes: comparative fit index (CFI), the non-normed fit index (NNFI), normed fit index (NFI), and the root mean square error of approximation (RMSEA). A cut-off value greater than .95 for the CFI, NFI, and NNFI, and a cut-off value less than or equal to .08 for the RMSEA indicated adequate model fit (Hu & Bentler, 1999).

The item values were summarized and divided by four to estimate the mean value of the scale and then Independent-sample *t*-test was used to investigate the differences between groups. Cohen's *d* was used to estimate effect size.

Parent's characteristics. Parents reported their level of education (basic, secondary or university) and PA. In a single item parents were asked whether they were currently physically active or not and whether they were physically active during their adolescence period or not.

RESULTS

The CFA model of the (PPAICAQ) is presented in Figure. The results of the CFA showed that goodness-of-fit indices were on acceptable level: $\chi^2 = 42.12$, $df = 19$, $CFI = .98$, $NNFI = .98$, $NFI = .97$, and $RMSEA = .072$. The reliability coefficient for the scale PCAPA was .853 and for PPICPA it was .789.

Mean values of perceived importance of children's physical activity and physical ability in respect to parental physical activity and educational level are presented in Table.

Physically active parents better perceived the importance of their children's PA than not physically active parents. Similarly, parents who experienced physical activity in the past perceived also the importance of their children's PA better than those who were not physically active during the adolescence period. In respect to perceived

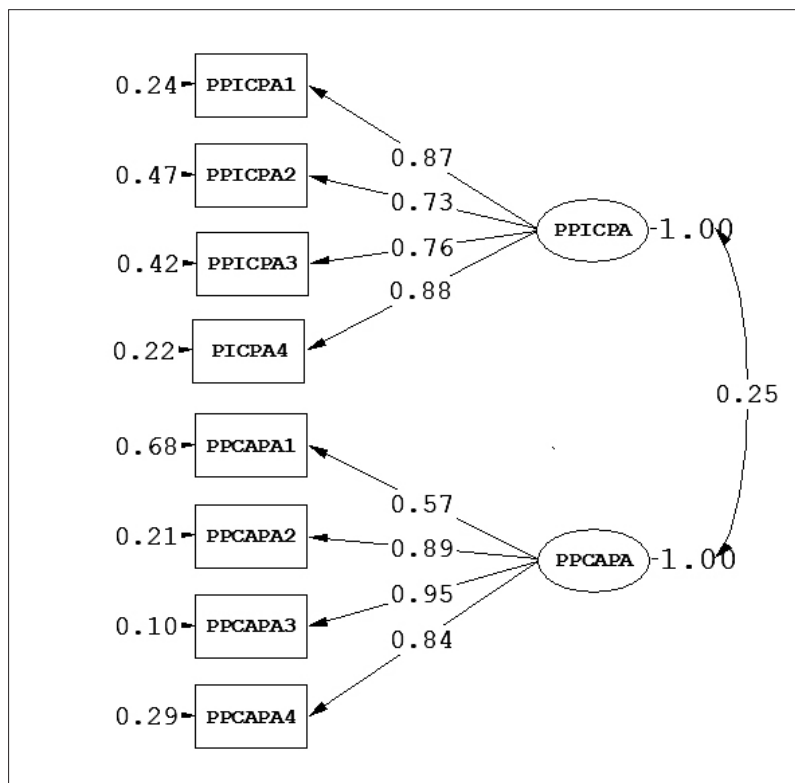


Figure. The factor structure of the questionnaire “Parents Perceptions of the Importance of Physical Activity and Their Children’s Ability Questionnaire” (PPAICAQ)

Measures	M	SD	M	SD	P	Effect size Cohen’s D
	Currently physically active		Not physically active			
PPICPA	6.40	0.61	6.17	0.80	.02	.32
PPCAPA	5.56	0.87	5.58	0.85	ns	
	Physically active during adolescence period		Not physically active during adolescence period			
PPICPA	6.36	0.66	6.08	0.82	.003	.37
PPCAPA	5.65	0.83	5.46	0.87	ns	
	Education – secondary /high level		Education – university level			
PPICPA	6.24	0.66	6.33	0.79	ns	
PPCAPA	5.60	0.80	5.49	0.97	ns	

Table. Mean values of perceived importance of children’s physical activity and physical ability in respect to parents’ physical activity and education

Note. PPICPA – parent’s perceived importance of their children’s PA, PPCAPA – and parent’s perceptions of their children’s ability in PA.

physical ability no statistically significant difference was observed between groups.

Parents with different educational level did not perceive the importance of their children’s PA and physical ability differently.

DISCUSSION

The aims of this study were to test the validity of the factor structure of the PPAICAQ and to find out whether the parents’ perceptions of the importance of their children’s PA and their

children’s ability were related to their educational level and their own physical activity.

The results of the CFA confirmed the appropriateness of the PPAICAQ to investigate the Estonian parents’ perceptions of physical activity importance and their children’s ability. All psychometrical parameters were on acceptable level. It is worth to note that covariance (.25) between the two subscales (PPCAPA and PPICPA) was very similar with values (.23) reported by Martinent et al. (2013). Thus, the results of CFA supported the use of this as a valid instrument

in other cultural context, too. The existence of the invariance of parameter estimates of this instrument across the mother and father samples as well as girls' and boys' samples was formerly established by Martinent et al. (2013) and therefore the variation of the parameters were not under the interest of this study. However, further validity evidence in the sample of parents of children aged between 12 and 17 years is highly warranted.

The results of the present study showed that physically active parents highlighted the importance of PA significantly more than physically non-active parents. Obviously, it allows suggesting that parents' positive values toward physical activity will have effect on children's attitudes toward physical activity behaviour, which in turn may lead the physical activity behaviour. However, both active and non-active parents evaluated their children's physical ability similarly. It was interesting that the mean score of the PPCAPA scale was lower than that of the PPICPA

scale in spite of parents' physical activity and educational level. The findings of the present study indicated that physically active parents valued the importance of children's physical activity more than non-physically active parents are consistent to some extent with the previous results of several researchers who highlighted the modelling role of parents' behaviour among children (Fuemmeler et al., 2011; Moore et al., 1991).

CONCLUSIONS

PPPAICAQ will be a useful and valid instrument to examine the issues regarding the topic of parental influence on their children's physical activity and to compare research findings across studies. Physically active parents evaluated the importance of physical activity of their children more than physically non-active parents.

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Appendix.

Parents Perceptions of Physical Activity Importance and their Children's Ability Questionnaire

PPICPA 1 How important is it to you that your child participates in a sport and /or PA after school?

PPICPA 2 Compared to other activities (music, art, etc.), how important is it to you that your child participates in a sport and /or PA?

PPICPA 3 How important is it to you that your child participates in a sport and /or PA for better health?

PPICPA 4 Do you think that doing a sport and PA is useful to your child?

PPCAPA 1 Do you think that it is easy for your child to participate in sport and/or PA?

PPCAPA 2 In general, do you know your child's level of ability in sport and/or PA?

PPCAPA 3 Compared to other children of his/her age, how good is your child in sport and/or PA?

PPCAPA 4 Compared to other children of his/her age, do you think that your child is one of the best in sport and /or PA?