Journal of Physical and Outdoor Education
Vol. 5 No. 1, April 2023, pp. 11-18

Instrument for Social Support in Physical Education

Diky Hadyansah[1], Dimyati[2], Hedi Ardiyanto Hermawan[3], Dedi Supriadi[4]
[1,2,3] *Fakultas Ilmu Keolahragaan dan Kesehatan, Universitas Negeri Yogyakarta*
[4]*Program studi Magister Penjas, STKIP Pasundan*

Abstract

The purpose of this research is to develop a social support instrument in physical education learning. This research is an R&D research and development from Borg & Gall (1983) which divides the development stages into 10 stages, namely 1) data collection for preliminary research 2) Development planning is carried out by determining the objectives and preparing a trial plan. 3) Developing initial products, which are then evaluated by 2 expert judgment and make product revisions 4) Small group trials. 5) Product revision 6) Field trial (medium group). 7) Conduct product revision 8) Field trial (large group). 9) Conducting the final stage revision 10) Making a research report. The population in this study were public high school students in Bandung City aged 15-18 years. The research sample was 241 students who were taken using random sampling technique. Data collection in this study using a questionnaire. The analysis used Exploratory factor analysis (EFA) technique and continued with Confirmatory Factor Analysis (CFA) technique. The reliability test results show a Cronbach's Alpha value of 0.926. Because the value is above 0.6, it can be concluded that the measuring instrument in this study is reliable and has good construct validity and reliability quality.

Keywords: Social support, adolescents, PE, EFA, CFA.

INTRODUCTION

Physical education or commonly known as physical education, sports and health (PJOK) is one of the subjects presented in open spaces (Septiana et al., 2021). PE as 'Education through and of physical activities' or interpreted as education through and from physical activities (Siendentop, 1990). This definition shows that physical education aims to develop students' physical and skills by using sports to achieve physical education goals (Surahni, 2017; Juditya & Sobarna, n.d.). The purpose of physical education according to the Ministry of National Education is to lay and develop the foundation of character, personality, critical thinking, attitudes, skills, self-management, safety, health and leisure (Surahni, 2017) (Harsuki, 2003). The purpose of PE and sports is not only to develop the physical realm, but also to develop all the potential of students (Herdiyana & Prakoso, 2016). Therefore, physical education is an integral part of the educational process so that it becomes a medium to achieve overall education (Husdarta, 2010).

The importance of the role of physical education to achieve a complete Indonesian human being (Sukintaka, 2004) so that student involvement in participating in physical

Correspondence author: Diky Hadyansah, Universitas Negeri Yogyakarta, Yogyarta, Indonesia
Email: dikyhadyansah.2022@student.uny.ac.id

education learning must be maximized. Physical education is a physical activity where the factors that influence a person to do physical activity are divided into three namely: macro environment, micro environment, and personal (Cavill et al., 2006). The macro environment includes socioeconomic, cultural, environmental conditions; the micro environment of living and working conditions for physical activity, and support from social norms and local communities and individual factors are personal factors (self-efficacy, attention, enjoyment of exercise, perceived level of health or fitness, motivation, social support, expectations of benefits from exercise).

Social support is one of the factors that enter the microenvironment where it causes a person's participation in various activities. Social support is defined as a form of physical and emotional assistance provided by family, friends, colleagues, and others (Taghizadeh, 2015). Social support is carried out in the form of verbal and non-verbal communication between the recipient and the giver of information (Albert & Adelman 1987 in Mattson, 2011).

Previous research shows that environmental and social support from family, friends, and peers is accompanied by increased levels of physical activity (Treiber et al., 1991; Taymoori et al., 2010; Laird et al., 2018). Social support in physical education learning in this study comes from parents, sports teachers/coaches and peers. To find out the level of social support in physical education learning, it is necessary to have an instrument dedicated to it. Therefore, the purpose of this study is to develop an instrument of social support in physical education learning.

METHOD

This study is a research and development study. The development of this instrument uses the Borg & Gall (1983) development steps which are divided into 8 stages: 1) conduct research and collect data for initial research. 2) Development planning is carried out by determining objectives, limiting the scope, and preparing a trial plan. 3) Developing the initial product, which was then evaluated by 2 expert judgment and revising the product. 4) Small group trial. 5) Revise the product according to the results of the analysis on the small group trial. 6) Field trial (medium group). 7) Revise the product according to the results of the medium group trial. 8) Field trial (large group). 9) Make final stage revisions according to the results of the analysis on the large group trial. 10) Make a research report.

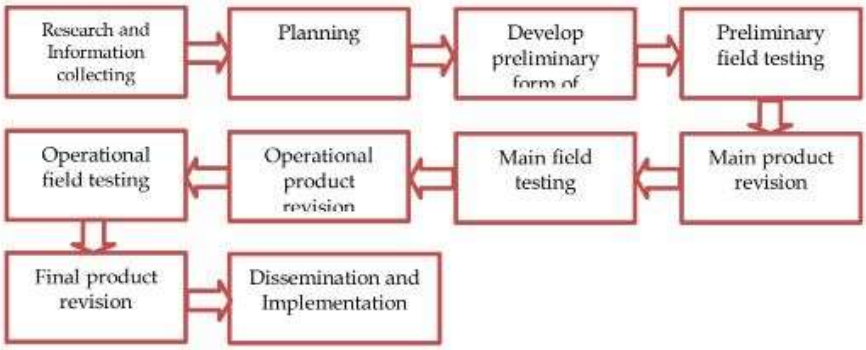

Figure 1 Steps for using the Research and Development Method (R&D) (Borg & Gall, 1985)

The validity test used by researchers is factor analysis. "Factor analysis is a procedure used to reduce data or summarize, from many variables to a few variables" (Supranto, 2004). One of the objectives of factor analysis is to reduce many variables by grouping variables. In factor analysis, variables are grouped based on their correlation. Variables that are highly correlated will be in a particular group to form a factor. Factor analysis is done to obtain a small number of factors that have the properties of being able to explain diversity, the existence of factor freedom, and each factor can be clearly explained (Imam, 2011). The analysis technique used is Exploratory factor analysis (EFA) is a factor analysis technique that a priori has been known or determined in advance which variables are related to which factors (Hariono et al., 2021). The main purpose of this analysis is to identify the factors underlying a construct or to statistically confirm the model that the researcher has built. The dimensions of social support taken from Cohen & McKay (1984 in Sarason & Sarason, 1985, p. 74) are divided into "Four categories of support functions were proposed: tangible support, appraisal support, self-esteem support and belonging support". The population in this study is high school (SMA) class XI in Bandung City in middle adolescence or between the ages of 15-18 years with a sample size of 241 students. In this study the authors used a questionnaire as a data collection instrument.

RESULT AND DISCUSSION

Result

The initial step in this development research was to conduct a needs analysis in the form of gathering information related to the urgency of the social support instrument questionnaire for PJOK teachers in the field in the form of interviews. The results of the interviews showed that the teachers agreed about the benefits of having this instrument to

help teachers evaluate the school's social environment for the implementation of physical education in schools.

The second step, development planning is carried out by determining objectives, limiting the scope, and preparing a trial plan. In this step the researcher determines the research objectives as stated in the background description, namely to develop social support instruments in physical education learning

The third step, developing the initial product, which is then evaluated by 2 expert judgments and product revisions. In this step the researcher compiled the social support construct based on a literature review in the form of a grid into four dimensions, namely appraisal support, belonging support, tangible support, and self-esteem support. Then proceed with creating and compiling question items for each dimension with a total of 96 question items.

For steps four through seven regarding product trials and revisions, researchers summarized them into one or called stage 1 product trials and revisions. At this stage, researchers gave 60 public high school students in Bandung City. The results of this questionnaire trial were validated using factor analysis is validity testing using the results of the calculation of Keiser-Meyer Olkin (KMO) Measure of Sampling Adequacy or analysis measuring sampling adequacy and the Bartlett's test of sphericity aims to test whether the variables involved are correlated or not. Next is to calculate anti-image matrices. The numbers in this matrix express the partial correlation between variables, which is the correlation that is not influenced by other variables seen in the common variance. A low anti-image value is a consideration for discarding the variable at the next stage of analysis. Then the next step is to determine the number of factors using a priori determination or the researcher has determined the number of factors and the eigenvalue results or the ability of each factor to represent the variables being analyzed. The final step is to look at the factor loading or correlation value between each factor and the analyzed variables on the rotated component matrix. From the results of this trial, some questions that do not pass the prerequisites above will be discarded or corrected which will then be tested again at the next stage.

Step Eight and Nine or Phase 2 field trials conducted on 241 public high school students in Bandung City (large group) is to rearrange the question items that passed the previous prerequisite test. After testing and revising stage 1 products on 96 items previously tested, 24 items were used for this stage 2 trial. The results of the test with factor analysis obtained data from the calculation of KMO and Bartlett's Test for social support in Table 1.

Tabel 1
Data from the KMO and Bartlett's Test Calculation of Social Support Questionnaire

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.513
Bartlett's Test of Sphericity	Approx. Chi-Square	5635.562
	Df	3081
	Sig.	.000

Based on the results of the validity test calculation using the Keiser-Meyer Olkin (KMO) calculation as shown in Table 1 above, it shows that the KMO value is 0.513> 0.05 at a significance value of 5%. Therefore, it can be concluded that the sample in this trial is sufficient for further analysis or 51.3% of the variance can be explained by this factor. As for the anti-image and eigenvalue results for social support variables above 0.05 for anti-image and above 1 for the eigenvalue. The summary of the factor loading values based on indicators for each dimension is as shown in Table 2

Table 2
Summary of Matrix Rotation Results of Social Support Questionnaire

Variabel	Dimension	Indicator	Factor Loading
Social Support	*Appraisal Support*	Getting advice	0.672
			0.5
		Conduct a discussion	0.508
			0.684
			0.594
	Belonging Support	Doing sports together	0.646
			0.663
			0.706
		Solving problems together	0.445
			0.601
			0.59
	Tangible Support	Sports equipment	0.427
			0.595
			0.593
		Transportation facilities	0.628
			0.373
			0.315
	Self-esteem Support	Comparison with others	0.486
			0.495
			0.598
		Self esteem	0.447
			0.561
			0.601
			0.426

Based on the output results in Table 2, researchers took several social support items to be used as research items based on the factor loading value obtained by each item. The criteria for taking items based on the highest factor loading value in each indicator or value above 0.5. However, some items are below 0.5 and are still taken for further analysis. This is for the sake of representation in each indicator or called surrogate variables. The following is Table 3 regarding the results of the social support reliability test.

Tabel 3

Reliability Test Results of Social Support Questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.926	0.927	24

The reliability test results in Table 3. show the Cronbach's Alpha value of 0.926. Because the value is above 0.6, it can be concluded that the measuring instrument in this study is reliable.

Discussion

Social support is instrumental and expressive assistance provided by a community, social network, and trust partners (Lin, Dean, & Ensel, 1986, p.18). Social support is the support provided by parents, friends, and teachers/sports coaches in doing physical activities in the form of instrumental support and expressive support, measured based on items from the dimensions of support in the form of appraisal support, belonging support, tangible support, and self-esteem support.

The form of social support is given through three forms, namely: instrumental support, informational support and appraisal support (Sarason & Sarason, 1985). Social support in physical education learning in the form of instrumental support (tangible assistance), this form of support is support for the provision of logistics. When what students need in doing PE learning is sufficient, it is not difficult for them to follow it. The second form of support is in the form of providing information, advice or feedback on individual situations and conditions. This support takes the form of orienting, counseling and talking about the importance and appropriate way to engage in PE learning including providing and explaining the benefits of PE. The third social support is relevant feedback for self-evaluation through a process such as self-comparison or as emotional support or a communication aimed at fulfilling emotional or affective needs. The final step is to make a research report in the form of publication of this article.

CONCLUSION

The research instrument shows that the social support instrument in physical education learning has good construct validity and reliability quality. Thus this instrument can be used as an alternative to improve or measure the level of social support provided in physical education learning.

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