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Adapting the Motivation Scale for Participation in Physical Activity

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Abstract

Objectives. This study aimed to adapt the Motivation Scale for Participation in Physical Activity (MSPPA), originally developed by Demir and Cicioğlu, (2018) in Turkish, into English. The objective was to provide a reliable and valid tool for assessing motivation for physical activity in English-speaking populations.

Materials and methods. The adaptation process involved two phases. Firstly, the MSPPA was translated from Turkish to English, back-translated, and reviewed by experts in sports science and translation. Secondly, data were collected from 224 school students in the Malappuram district, Kerala, India. The collected data were subjected to Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to validate the scale's factors. The reliability and construct validity were assessed using appropriate statistical methods.

Results. The analysis of the collected data revealed three factors in the adapted MSPPA: "Individual Causes", "Environmental Reasons", and "Causelessness", corresponding to intrinsic motivation, extrinsic motivation, and amotivation, respectively. The factors identified through EFA were confirmed via CFA. The scale demonstrated reliability and construct validity in assessing motivation for physical activity in English-speaking populations.

Conclusions. The adapted MSPPA was found to provide a reliable and valid instrument for assessing motivation for participation in physical activity among English-speaking individuals. This adaptation has facilitated cross-cultural research and interventions aimed at promoting physical activity and its associated benefits.

Keywords: motivation, physical activity, adaptation, exploratory factor analysis (EFA), confirmatory factor analysis (CFA).

Introduction

Physical activity is an important component that supports physical, emotional, social, motor, and mental development, and provides energy balance and healthy life through the activation of the human body. With participation in physical activity, human beings can increase their quality of life as well as take important steps to protect themselves from diseases (Demir & Cicioğlu, 2018). World Health Organization (WHO) defines physical activity as any body movement produced by skeletal muscle that requires energy expenditure including activities undertaken while working, playing carrying out household chores, traveling, and engaging in recreational pursuits (Physical Activity, 2019). Generally, physical activity means any movement of the body that uses energy. But in this study physical activity means those activities which are planned, structured, and repetitive, and aim to develop and maintain components of physical fitness. Example walking, running, jumping, bicycling, playing games etc.

Regular and adequate levels of physical activity strengthen the bones and muscles, maintain a healthy body weight, lose excess body weight, reduce cardiovascular disease, diabetes, and some cancers, and increase chances of living longer and wellness (Ruegsegger & Booth, 2017). Also provides a healthier state of mind such as reducing hypertension, blocking negative thoughts, improving sleep patterns, reducing the risk of depression having fun and self-confidence, forgetting daily problems, and improving the structure and function of the brain. Physical activity improves not only refreshment and health but also improve social health. Physical activity connects people of society. It makes someone a socially responsible person.

An individual engages in physical activity for several reasons. Sometimes they are very pleased and interested in participating in physical activity and they consider physical activity as a hobby. On the other hand, compelling prompts from others such as parents, teachers, coaches, and friends and getting rewards and punishment may lead to participation in physical activity. So it can be said that different types of support lead an individual to participate in physical activity. Generally, this support may be known as motivation (Kalajas-Tilga et al., 2020). Motivation has an immense effect on learning. Motivation is the power that allows someone to act in the direction of a particular goal (Asmara Indahingwati et al., 2019). The motivation is like determining results such as productivity, performance and endurance (Paais & Pattiruhu, 2020). So motivation is a force that includes or arouses a person's interest in learning the activity. This force may come from an inner urge or may be external pulls. Based on the forces motivation can be classified into Intrinsic and extrinsic motivation and sometimes motivation is absent.

According to the self-determination theory of motivation (Deci & Rayan 1985), motivation consists of three subdimensions that are, Intrinsic-motivation, Extrinsic-motivation, and Amotivation. Intrinsic motivation; is to do an activity for itself and because of the pleasure and happiness of participation (Tenenbaum & Eklund, 2007). People are motivated to participate in physical activity because of internal factors (such as enjoyment or skill development and mastery) and external factors (such as rewards, improved health, good looks) (Moradi et al., 2020). Inherent interest compels an individual to initiate and maintain the activity, it is said that he/she is intrinsically motivated. Here person participates in a physical activity for their own sake and participates for the enjoyment and satisfaction he/she drives from the activity itself. Whereas in extrinsic motivation environmental causes are the reason that enables the person to take action to realize the activity or purpose he/she will perform by being affected by environmental factors (Tekkursum Demir and Cicioglu, 2018). Here individuals initiate and endure an activity as a result of eternal pulls, attraction, forces, incentives etc. When an individual participates due to some other goals or rewards, it can be extrinsic motivation. The concept of Amotivation describes people's lack of intentionality and motivation that is, to describe the extent to which they are passive, ineffective, or without purpose concerning any given set of potential actions (Deci & Ryan, 1985).

This study, it is aimed to adapt the the Motivation Scale for Participation in Physical Activity (MSPPA) developed by Demir and Cicioğlu (2018) in Turkish into English. The English language is intentionally selected. Because, in the scientific area, English is one of the most commonly used languages. This way, other cultures can use the scale by translating from English to the original language of other researchers.

Materials and Methods

Study Participants

A total of 224 school students from Malappuram district, Kerala participated in this study. The age ranged from 13 to 17 years old, with an average age of 15.01 years old (SD = 1.17) in the valid questionnaire. There were 119 males (53.12%) and 105 females (46.88%). Data collection proceeded only subsequent to obtaining parental permission. The authors declare that they strictly adhered to the APA guidelines on ethical research practices.

Data Collection Tool

This study, it is aimed to adapt the scale developed by Demir and Cicioğlu, (2018) in Turkish to English. The scale consists of 16 items and 3 factors and explains 54.69 % of the total variance. The first factor consists of 6 items; under this factor, 6 items are related to intrinsic motivation. The second factor also has 6 items and this factor covers extrinsic motivation. The third factor contains 4 items related to Amotivation.

Procedures

The scale was translated into English. During the process of translating this scale from Turkish to English, the back translation technique was employed. Three independent translators were involved in the translation process. The first step was to translate the scale from Turkish to English. Then, by considering the similarities and differences in the translated forms, a single form was created. This form was then translated back from English to Turkish by another translator. Finally, the English and Turkish forms were reviewed and approved by three experts in the field of sports sciences, and a translator. The translated scale has 16 item and three factors. The first factor consists of 6 items and labeled as 'Individual Causes'. Under this factor, 6 items are related to intrinsic motivation. The second factor also has 6 items and is called 'Environmental Reasons'. This factor covers extrinsic motivation. The third factor containing 4 items is called Causelessness. Items under this factor are related to Amotivation. In this 5-point scale, the items are listed as "Strongly Disagree", "Disagree", "Moderately Agree", "Agree" and "Strongly Agree". It is rated as 1, 2, 3, 4, and 5. Inverse items should be coded as 5, 4, 3, 2 and 1. Since only item 6 contains negative expression in the scale, it should be reversed. Their scores from MSPPA indicate that they have the motivation to participate in physical activity, 1-16 very low, 17-32 low, 33-48 medium, 49- 64 high, and 65-80 very high. Then the translated scale was employed to school students.

Statistical Analysis

The scale is used to measure the dimension of MSPPA is validated in two steps. Firstly, an Exploratory Factor Analysis (EFA) and then Confirmatory Factor Analysis (CFA) are performed in total 224 samples. Here, the factors derived from Exploratory Factor Analysis (EFA) were confirmed by applying Confirmatory Factor Analysis (CFA) and then check its reliability and construct validity by using appropriate methods. It is applied to assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data.

Results

Exploratory Factor Analysis (EFA) – MSPPA

Exploratory Factor Analysis (EFA) requires certain assumptions to be fulfilled namely correlation and sampling

adequacy. The KMO Bartlett test include Bartlett test of sphericity that measures the multivariate normality of variables in addition to analyzing whether the correlation matrix is an identity matrix. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis (George & Paul Mallery, 1999). Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value of greater than or equal to 0.7 is considered acceptable for the factor to be reliable (Hair et. al. 2010). Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) is employed for analyzing the factor structure and correlation between 16 statements included in the scale for measuring the MSPPA.

A Principal Component Analysis is conducted on the 16 statements with Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) measure verifies the sample adequacy for the analysis, KMO value is 0.882 which is above the recommended limit of 0.70. Bartlett's test is another indication of the strength of the relationship among variables. Barlett's Test of Sphericity Chi-Square = 1837.254, $p<0.01$ indicates that the correlation between the items is sufficiently large for Principal Component Analysis (PCA).

An initial analysis is run to obtain Eigen Values for each component in the data. Three components have eigen values over and above Kaiser's criterion of 1 and in combination explained 65.511% of the variance. The result is presented table 2.

The result of Exploratory Factor Analysis (EFA) shows that the solution is based on 3 constructs and all items are loading on their own factors. The three-factor solution is explaining 65.511 per cent of variance of the total variance. Six items/statements are included in first factor 'Individual Causes' (IC) which explaining over 34.90 per cent of variance, six items/statements are included in the second factor 'Environmental Reasons' (ER) which explaining over 18.72 per cent of variance and four items/statements are included in the third factor 'Cause lessness' (C) which explaining over 11.88 per cent of variance. In total, three factors explaining over 65.511 per cent of variance of the total variance explained.

The scree plot displays the Eigen values in a downward curve, ordering the Eigen values from largest to smallest. According to the scree-test, the 'elbow' of the graph where the eigen values seem to level off is found and factors or components to the left to this point should be retained is significant. Here, three are three factors have Eigen value of greater than 1 and it can be shown in the scree plot. Therefore, it is a three-factor solution of variable MSPPA.

Table 1. Result of KMO and Barlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.882
Bartlett's Test of Sphericity	Approx. Chi-Square	1837.254
	df	120
	p	0.000

Source: Primary Data; df – degrees of freedom p – statistical significance

Table 2. Result of Exploratory Factor Analysis

Constructs	Statements	Code	Factor Loadings	Eigen Value	Variance Explained	Cronbach's Alpha (α)
	Participating in a Physical Activity					
Individual Causes (IC)	Makes me feel good	IC1	0.801	5.585	34.90%	0.863
	Allows me to be motivated for lessons more easily	IC2	0.804			
	Makes me uneasy	IC3	0.724			
	Entertains me very much	IC4	0.773			
	Increases self-confidence	IC5	0.713			
	Allows me to avoid negative thoughts	IC6	0.668			
Environmental Reasons (ER)	Makes me popular in school	ER1	0.800	2.996	18.72%	0.884
	Improves my relations with school administrators and teachers	ER2	0.810			
	Reduces my academic success in the classes	ER3	0.774			
	Allows me to prove my skills to my friends	ER4	0.790			
	Is an opportunity to use the sports equipment in the school	ER5	0.748			
	Allows me to eliminate my teachers' negative thoughts about me	ER6	0.701			
Cause lessness (C)	Seems like a waste of time, I'm not sure	C1	0.857	1.901	11.88%	0.879
	Might be an advantage for me, I'm not sure	C2	0.793			
	Is/isn't important, it does not make any sense	C3	0.890			
	Is necessary or not, I don't really care	C4	0.879			
Total Variance Explained – 65.511%						

Source: Primary Data; (α) – Cronbach's Alpha

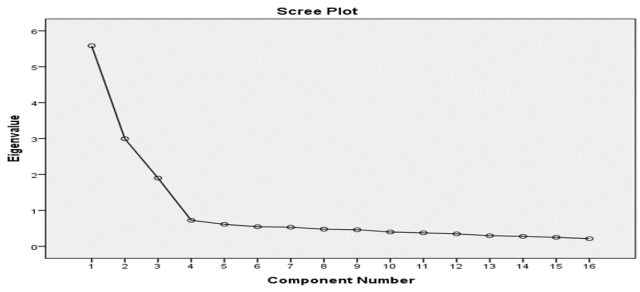

Fig. 1. Scree Plot of Exploratory Factor Analysis, Source: Primary Data

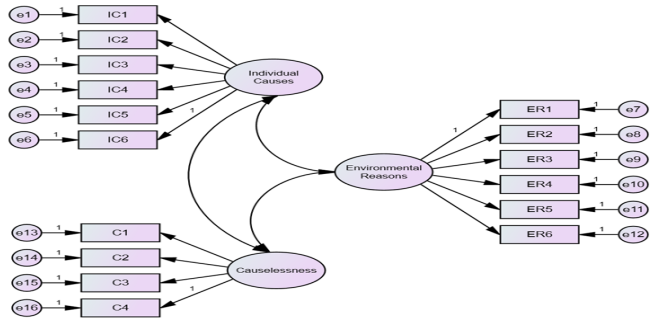

Fig. 2. The Proposed Model of First Order CFA, Source: Primary Data

Construct Validity

The above table shows all the factor loadings are above 0.40, and criteria of Construct Validity including both the Discriminant Validity (loading of at least 0.40, no cross-loadings of items above 0.40) and Convergent Validity (Eigen values of 1, loadings of at least 0.40, items that load on posited constructs) (Straub et al., 2004). The result of Exploratory Factor Analysis shows that the selected factors under the dimension 'MSPPA' have good level of validity.

Reliability

Reliability of the factors is measured using Cronbach's Alpha Co-efficient. An alpha value of 0.70 or above is considered to be a criterion for demonstrating strong internal consistency. In this context, the constructs and variables used for the study have been measured. Accordingly, the 3.1.3. Cronbach's Alpha Reliability Co-efficient values of all the variables coming under the constructs of the study namely, Individual Causes (0.863), Environmental Reasons (0.884) and Causelessness (0.879) are above 0.7, hence strong internal consistency is assured and the questionnaire is considered as highly reliable.

The next step is to conduct a Confirmatory Factor Analysis (CFA) for the 'MSPPA' variable and its constructs identified from Exploratory Factor Analysis (EFA) to assess whether the factors generated from results have the same underlying structure as the intended measurement structure (The underlying factors of each construct in the same dimensions).

Confirmatory Factor Analysis

A Confirmatory Factor Analysis (First Order CFA) is applied to validate the measurement scales used for the study. CFA is a multivariate statistical method used to check the relationship between measured variables and their constructs. It explains the quality of factor structure for measuring proposed constructs of the study. The result of CFA is explained with the help of Proposed Model, Model Fit Indices, Measurement Model, Path Estimates and Validity & Reliability Results.

The above specified proposed model is tested with the with the help of model fit indices including Normed chi-square (CMIN/df), Root Mean Square Residuals (RMR), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Tucker Fit Index (TLI), Normed Fit Index (NFI), Relative Fit Index (RFI) and Root Mean Square Error of Approximation (RMSEA). Accordingly, the result of Model Fit Indices, Measurement Model, Path estimates, and Reliability & Validity Statistics of the model are presented in table 3.

The acceptability of first order CFA (Figure 1) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI, and RFI) are within the recommended limit of good fit with values of greater than 0.90. Similarly, the values of CMIN/df is 1.356 which is less than the recommended values of good fit of less than 3. Furthermore, the value of RMR (0.038) is within the limit of less than 0.05 and the values of RMSEA (0.040) also within the limit of less than 0.08. Accordingly, the model used to measure the 'MSPPA' is acceptable to measure the validity of scale. The result of analysis shows that there is adequate fit for the measurement model, there for we can confirm the result of Confirmatory Factor Analysis (CFA).

Table 3. Model Fit Indices

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	1.356	≤3	≤5
Root Mean Square Residuals (RMR)	0.038	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.980	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.930	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.906	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.980	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.976	≥0.90	≥0.80
Normed Fit Index (NFI)	0.928	≥0.90	≥0.80
Relative Fit Index (RFI)	0.914	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.040	<0.08	=0.08

Source: Primary Data

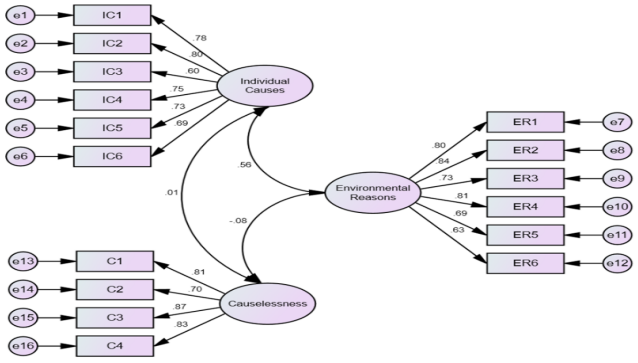

Fig. 3. Measurement Model of CFA, Source: Primary Data

Figure 3 is the measurement model used to explain the interrelationship between the constructs and items used to measure the 'MSPPA'. Here, three constructs derived from Exploratory Factor Analysis are analyzed with the help of latent variables. The above measurement model comprised three sub-factors of MSPPA namely, Individual Causes, Environmental Reasons and Causelessness. All the factor loadings are above 0.50 and the model said to be fit with the indices specified above. Further, result of path estimates and validity and reliability statistics are presented below.

The table 4 shows the regression weights of each path included in the measurement model of MSPPA. The standardized regression weights of all the statements are satisfactory and standardized loadings of all the statements are above 0.50, which indicates that all the variables are satisfactorily contributes to the variance of the construct. The p-values of all the variables included in the construct are highly significant and indicates the desirability of respective variables. An item with highest loading in a construct contributes more to the variance of the construct. The variable 'Allows me to be motivated for lessons more easily' (IC2) is the highest loading item (0.802) which contributes more to the factor 'Individual Causes. The variable 'Improves my relations with school administrators and teachers' (ER2) contributes more to the factor 'Environmental Reasons' with loading of 0.837, and the variable 'Is/isn't important, it does not make any sense' (C3) is the highest loading item (0.872) which contributes more to the factor Causelessness.

Table 5 describes the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used to measure the 'MSPPA' variable. Almost all the values of Standardized Factor Loadings are above 0.7, which indicates all the factors are satisfactorily contributes to the constructs.

In order to prove the Convergent Validity, three conditions need to fulfil namely, the values of Composite Reliability (CR) should be greater than 0.70 (Hair et al, 2010), the values of Average Variance Extracted (AVE) should be greater than 0.50 (Fornell and Larcker, 1981) and the values of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, all these criteria are fulfilled with CR of Individual Causes – 0.869, Environmental Reasons – 0.886 and Causelessness – 0.881 and AVE of Individual Causes – 0.528, Environmental Reasons – 0.567 and Causelessness – 0.650, and the values of CR are greater than AVE, hence Convergent Validity is proved.

Furthermore, the Discriminant Validity of the scale is proved with the criteria of Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). Here this condition is fulfilled with the Average Variance Extracted (AVE) of all the constructs is greater

Table 4. Regression Weights (Path Estimates)

Variables and Sub Constructs			Estimate	S.E.	C.R.	p	(λ)
IC6	<---	Individual Causes	1.000				0.686
IC5	<---	Individual Causes	1.003	0.103	9.697	<0.01	0.729
IC4	<---	Individual Causes	1.021	0.103	9.940	<0.01	0.749
IC3	<---	Individual Causes	0.936	0.115	8.113	<0.01	0.600
IC2	<---	Individual Causes	1.030	0.098	10.525	<0.01	**0.802**
IC1	<---	Individual Causes	0.987	0.096	10.236	<0.01	0.776
ER1	<---	Environmental Reasons	1.000				0.798
ER2	<---	Environmental Reasons	1.007	0.074	13.648	<0.01	**0.837**
ER3	<---	Environmental Reasons	0.791	0.068	11.576	<0.01	0.732
ER4	<---	Environmental Reasons	0.893	0.068	13.098	<0.01	0.809
ER5	<---	Environmental Reasons	0.802	0.074	10.833	<0.01	0.694
ER6	<---	Environmental Reasons	0.773	0.081	9.605	<0.01	0.627
C4	<---	Causelessness	1.000				0.829
C3	<---	Causelessness	0.986	0.067	14.716	<0.01	**0.872**
C2	<---	Causelessness	0.724	0.065	11.219	<0.01	0.700
C1	<---	Causelessness	0.941	0.069	13.660	<0.01	0.814

Source: Primary Data, S.E. – standard error; C.R. – Composite Reliability, p – statistical significance, λ – Standardized Factor Loadings

Table 5. Validity and Reliability Statistics

Constructs	Statements	Factor Loadings	CR $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$	AVE $AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$	MSV = sqaure of highest correlation b/w latent constructs
Individual Causes (IC)	IC1	0.776	0.869	0.528	0.313
	IC2	0.802			
	IC3	0.600			
	IC4	0.749			
	IC5	0.729			
	IC6	0.686			
Environmental Reasons (ER)	ER1	0.798	0.886	0.567	0.313
	ER2	0.837			
	ER3	0.732			
	ER4	0.809			
	ER5	0.694			
	ER6	0.627			
Causelessness (C)	C1	0.814	0.881	0.650	0.006
	C2	0.700			
	C3	0.872			
	C4	0.829			

Source: Primary Data

than the values of Maximum Shared Variance (MSV). The criteria of Individual Causes (0.528>0.313), Environmental Reasons (0.567>0.313) and Causelessness (0.650>0.006) are fulfilled. Hence, the criteria for Discriminant Validity is also proved. The model said to be good fit for measuring the MSPPA variable.

Discussion

This study, is aimed at adapting the MSPPA scale, originally in Turkish, into English. The study employed a various methodological framework. Firstly, the original scale was translated into English. English version of the scale was applied to 228 high school students. The data are examined by high Kaiser Meyer Olkin (KMO) coefficient and Barlett's Test of Sphericity. KMO value is 0.882 and Sphericity chi-square = 1837.254, $p<0.01$, it shows that the data are suitable for further analysis. Exploratory factor analysis (EFA) and Confirmatory Factor Analysis (CFA) were performed to prove the construct validity of the data.

The result of Exploratory Factor Analysis (EFA) shows that the solution is based on 3 constructs and all items are loading on their own factors same as the original form of the scale (MSPPA) developed by Tekkurşun Demir and Cicioğlu (2018). Items and sub-dimensions were confirmed in accordance with the structure of the original scale. As a result of the analysis of the data, a 16-item scale consisting of 3 sub-dimensions was obtained. Here the factor loadings in MSPPA vary between .668 and .890. As stated by Tekkurşun Demir and Cicioğlu (2018), the first sub-dimension is Individual Causes (IC), the second dimension is Environmental Reasons (ER) and third dimension is Causelessness (C). Individual Causes (IC) which explaining over 34.90 per cent of variance, six items/statements are included in the second factor Environmental Reasons (ER) which explaining over 18.72 per cent of variance and four items/statements are included in the third factor Causelessness (C) which explaining over 11.88 per cent of variance. The total variance of the scale is 65.511.

The result of Exploratory Factor Analysis also shows that the selected factors under the dimension MSPPA have good level of validity. That means, it satisfies the criteria of construct validity. Then analysis of the reliability of the scale is made. In this context, Cronbach Alpha coefficient was applied. According to this, Cronbach Alpha coefficient of Individual Causes sub-dimension is 0.863, Environmental Reasons sub-dimension is 0.884 and Cause lessness sub-dimension 0.879 these values are above 0.70 and it is considered to be a criterion for demonstrating strong internal consistency, it is assured and the questionnaire is considered as highly reliable.

After Exploratory factor analysis, Confirmatory factor analysis is performed. Here fit indices obtained as a result of the CFA performed were RMSEA, CFI, GFI, AGFI, IFI, TLI, NFI, and RFI are obtained well-assumed range (Kline, 2011; Marsh et al., 2006; Meyers et al., 2006), acceptable range (Çelik & Yılmaz, 2013; Doğan, 2015; Schermelleh-Engel et al., 2003). In the model confirmed by CFA, the significance of the correlations between the sub dimensions was also examined (Tabachnick & Fidell, 2001; Tezcan, 2008; Thompson, 2004). All the factor loadings are above 0.50 and the model said to be fit with the indices specified.

The result of path estimates disclosed that the values of standardized regression weights explain the strength and direction of the relationship between variables and their constructs. The significant values of all the variables indicate the desirability of the respective variable on the construct. Critical Ratio (CR) assesses the significance of the estimated coefficient. A higher C.R. value suggests the greater significance of the path estimates. Here, second variable of the construct Individual Causes,

second variable of the construct Environmental Reasons and third variable of the construct Causelessness have highest factor loadings of 0.802, 0.837 and 0.872 respectively in this order.

Furthermore, result of validity and reliability statistics reveals the criteria for ensuring construct validity, precisely Convergent Validity and Discriminant Validity. Here, the values of Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of different variables used to establish the statistics with specified threshold limits. All the values are specifically confirmed the criteria of convergent and discriminant validity of the measurement scale. Hence, the validity and reliability requirements of the MSPPA is proved.

Conclusions

In summary, the study successfully adapted and validated the Motivation Scale for Participation in Physical Activity (MSPPA) through a careful process involving EFA and CFA. The results provide convincing evidence for the reliability and validity of the scale in assessing motivation to participate in physical activity across various contexts. The vigorous psychometric properties of the MSPPA emphasize its utility as a valuable tool for researchers and practitioners to understand and measure individual motivation to participate in physical activity. It provides an accurate assessment across multiple dimensions, including Individual causes, Environmental causes and Causelessness. The results of the study contribute to the existing literature by providing a validated instrument for assessing motivation to participate in physical activity, thereby facilitating further research in this area. In addition, the rigorous methodological approach used in the development and validation of the scale increases the credibility and applicability of the MSPPA in both academic and practical settings.

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Conflict of interest

The author declares that there is no conflict of interest.

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Адаптування шкали мотивації до участі у заходах з фізичної активності

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 8 с., 5 табл., 3 рис., 22 джерела.

Мета дослідження. Дослідження спрямовано на адаптацію шкали мотивації до участі у заходах з фізичної активності (Motivation Scale for Participation in Physical Activity, MSPPA), вперше розробленої у 2018 році турецькою мовою науковцями Деміром та Чічіоглу (Demir and Cicioğlu), для її застосування англійською мовою. Мета полягала в забезпеченні надійного та валідного інструменту для оцінки мотивації до фізичної активності в англомовних категоріях населення.

Матеріали та методи. Процес адаптації включав два етапи. На першому етапі MSPPA було перекладено з турецької на англійську мову, здійснено зворотний переклад та рецензовано експертами в галузі спортивної науки та перекладу. На другому етапі проведено збір даних серед 224 учнів шкіл у окрузі Малаппурам, штат Керала, Індія. Зібрані матеріали підлягали проведенню розвідувального факторного аналізу (РФА) та підтверджувального факторного аналізу (ПФА) з метою валідизації факторних складових шкали. Для оцінки показників надійності та конструктної валідності застосовано відповідні статистичні методи.

Результати. Аналіз зібраних даних показав наявність трьох факторів в адаптованій моделі шкали мотивації до участі у заходах з фізичної активності: «Індивідуальні чинники», «Екологічні чинники» та «Безпричинність», що відповідають внутрішній мотивації, зовнішній мотивації та амотивації, відповідно. Фактори, визначені за допомогою РФА, були підтверджені шляхом проведення ПФА. Розробка шкали продемонструвала надійність і конструктну валідність в оцінці мотивації до фізичної активності в англомовних категоріях населення.

Висновки. Встановлено, що адаптована модель MSPPA є надійним і валідним інструментом для оцінки мотивації до участі у заходах з фізичної активності серед англомовних осіб. Застосування даної адаптації сприяє проведенню кроскультурних досліджень та інтервенцій, спрямованих на популяризацію фізичної активності та пов'язаних із нею переваг.

Ключові слова: мотивація, фізична активність, адаптація, розвідувальний факторний аналіз (РФА), підтверджувальний факторний аналіз (ПФА).

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