



Research Paper Adaptation of the Test of Playfulness for Iranian Children (3-6 Years): Face and Content Validity of the Persian Version

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Conflict of interest

The authors declared no conflict of interest.

ABSTRACT

Background and Objectives: The term "playfulness" is a new word in Persian and one of the intervention areas in pediatric occupational therapy/psychology. The aim of this study was to investigate the face and content validity of the Persian version of the test of playfulness (ToP) and its adaptation to the population of Iranian children aged 3 to 6 years.

Methods: First, the ToP was translated according to the standard forward-backward (IQOLA) methodology. The face validity was qualitatively evaluated by five and content validity was qualitatively-quantitatively examined by ten occupational therapy experts specialized in rehabilitation of children's play. The content validity ratio (CVR), content validity index (CVI), and modified kappa statistic were calculated.

Results: The face validity investigation of the Persian version of ToP led to changes in four items and the title of the intensity scale. The CVR for the 21 ToP items ranged from 0.8-1, indicating the necessity of all items. Also, the CVI was in the range of 0.85-1, which indicates the suitability of all items. The Scale-CVI/Ave quality and relevance were 0.93 and 0.95, respectively, and the Scale-CVI/UA quality and relevance were 0.43 and 0.95, respectively.

Conclusion: According to the findings of this study, no items were deleted or added in translation during the cultural adaptation process of the ToP. The experts confirmed that all items measure the construct of playfulness and that the items and instructions in the Persian version of ToP have good face validity and high content validity; therefore, the other dimensions of psychometrics can be examined in future studies.

Keywords: Playfulness, Psychometrics, Play and playthings, Content validity, Face validity, Cultural adaptation



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What is "already known" in this topic:

Play is the primary occupation of children and playfulness is considered as the essence of children's play. In order to promote children playfulness, occupational therapists are responsible for assessing and implementing interventions. There are limited assessment tools in this field, the most well-known of which in occupational therapy is the Test of Playfulness (ToP).

Because there was no tool to assess playfulness in Iran, with the aim of preparing a suitable tool in Persian language in this field, the ToP was translated and its face and content validity were investigated. So a fluent and understandable Persian version of score sheet and manual was prepared.

Introduction

lay is a way to learn life skills and playfulness has been defined simply as the disposition to play and shown in the form of playful behaviors, like joking, pretend-

ing, mischief, having a sense of control over the situation, unconventional use of an object, etc. [1-3]. The playful children show flexibility and spontaneity in their play and in social interactions but non-playful children are less flexible and have some difficulties with transitions or environmental changes, immature speech and nonpositive affect, and no control over situations. Therefore, one of the most important results of a child's playfulness is the enhancement of curiosity, creativity, innovation, adaptability, imagination, and coping [2, 4-8]. Due to the high correlation between playfulness and adaptability and coping, playfulness may be one of the most important aspects of play [1]. Also, because of the importance of adaptability and coping skills for children with disabilities and the potential relationship between playfulness and adaptability, Bundy et al. (2001) suggested occupational therapists focus their interventions on playfulness [3].

Various theories and models have been proposed for playfulness, including the playfulness theory (Lieberman, 1977), the contextual model of play & playfulness (Cooper, 2000), and the model of playfulness (Bundy, 1997). Currently, Bundy's model of playfulness is more accepted in occupational therapy than the other models with a model-specific assessment tool [1, 9]. In this model, the key elements of playfulness were defined as intrinsic motivation, internal control, and freedom to suspend reality. Bundy (1997) theorizes that it is the sum contribution of these three elements that make the orientation of the activity to play or non-play, playfulness or non-playfulness [1]. Figure 1 shows how the elements of playfulness affect the playfulness level of activity [10].

The purpose of occupational therapy in pediatrics is to enable clients to engage in self-directed daily occupations especially play as children's primary occupation. In order to fulfill this purpose, therapists require valid and reliable assessment tools to measure play [11, 12]. However, due to the lack of assessment tools with suitable psychometric properties even in Canada, the United States, and Australia, therapists usually evaluate playfulness based on clinical observations [13-15]. Therapists who intend to assess play developmentally, mostly use instruments that measure behavioral patterns and objective play skills (such as play history interviews and Knox's preschool play scale). The behavioral forms and play skills that are observed during the play activities are important; however, the tools used to assess forms and skills of play activities cannot consider the child's mental disposition during play. These tools ignore playfulness as an important aspect of the play [16].

A few instruments assess playfulness, including the children's playfulness scale (CPS), the child playfulness behavior inventory (CBI), the Project Joy Playfulness Scale (PJPS), and the test of playfulness (ToP). Sometimes the limitations cause the use of an assessment tool encounters some problems. The CPS is completed by a parent or a teacher who has observed the child's play for at least 30 hours. It is not designed for use in children with disabilities, the clarity of its administration instructions is low, its scoring and interpreting are complex, and its age range is limited to the preschool period [9, 17-20]. The CBI is only applicable to children from preschool to fourth grade. Also, this tool was not designed based on a clinical model and a strong theoretical foundation [19, 21, 22]. The PJPS was designed to determine the child's





Figure 1. Interaction of the elements of playfulness [1]

capacity to play only in the kindergarten and evaluate the effect of acute or chronic trauma or the effect of natural crises or war on children's playfulness. A small sample size has been used in its development studies, its age range is limited to preschool children, and there is teacher bias and memory error in answering the questions [9].

Among the mentioned tools, the ToP is an instrument extracted from the Bundy's model of playfulness. It is an observational tool without the problems explained by the other tools (need for long hours of observation, limited use for children with disabilities, limited age range, and administrating in a specific environment) [10]. Also, this tool is sensitive to changes resulting from therapeutic interventions [29]. The ToP reflects the characteristics of playfulness (intrinsic motivation, internal control, and suspension of reality) [1]. In addition, it highlights the interaction between the child, the activity, and the environment and shows the strengths of the child in his/ her role as a player. at ToP is a useful tool for evaluating playfulness and is also used to measure the outcome of therapeutic interventions [1, 23, 24]. In addition, this tool is the only tool derived from a clinical model of playfulness in occupational therapy. In other words, based on the results of ToP, it is possible to use the model of playfulness in therapy with a more precise method and with more details.

Most of the studies about this tool have been conducted in English-speaking countries; thus, there was no need to translate it into another language and they used the original version. In addition, according to review the literature, the ToP has been translated and psychometrically evaluated in Germany, South Korea, and Spain [25, 26]. Considering that there was no Persian instrument to assess playfulness in Iran, the purpose of this study was to prepare the Persian version of ToP and investigate the face and content validity of its Persian version and its adaptation to the population of Iranian children aged 3 to 6 years. The fourth version of the ToP that was designed by Skard and Bundy (2008) was used in this study [1, 10].

Materials and Methods

The present study was a methodological study in the field of psychometrics and a descriptive study regarding the data collection method [27].

Participants

The participants included the typically normal children (n=10) in the face validity phase and the occupational therapists (n=15) as experts of this study in the face and content validity phases. They were selected by convenience sampling method.

The inclusion criterion for occupational therapists as examiners of the face validity (n=5) was to have at least two years of clinical experience in the field of pediatric occupational therapy and play interventions. The inclusion criteria for children in this phase were the age range of 3 to 6 years and having perfect health with no disease or disorder. If the recorded video of the child's play did not meet the ToP administration standards, the child was excluded from the study. Parents of all children signed the informed consent form.

The inclusion criteria for occupational therapists as experts in the content validity phase (n=10) were to have at least five years of clinical experience in the field of pediatric occupational therapy and play interventions



and teaching play and leisure in occupational therapy to occupational therapy students.

Test of playfulness (ToP)

The ToP was designed by Anita Bundy (an occupational therapist) to evaluate playfulness elements in people aged 6 months to 18 years [3]. The fourth version of ToP was designed by Skard and Bundy (2008). This 21-item test is an observational tool and evaluates playfulness based on observing at least 15 minutes of lived child's play in his/her familiar environment or a recorded video of the child's play regarding the administration instruction. The ToP items are rated on a fourpoint Likert scale (0, 1, 2, and 3) in the three scales: extent, intensity, and skillfulness. Each of the three mentioned scales is scored for some items; thus, the instrument contains 21 items but a total of 28 scores will be recorded in an administration in the score sheet. For example, the item "Demonstrates positive affect during play" is scored only with the intensity scale, but the item "Incorporates objects or other people into play in unconventional or variable ways" is scored with the two scales of extent and skillfulness [1]. Explanations about the scales are given below.

• The extent scale includes the proportion of time that the desired behavior is observed. It is scored as: "3=Almost always (the behavior is demonstrated more than 90% of the time)", "2=Most of the time (the behavior is demonstrated 50 - 90% of the time)", "1=Sometimes (the behavior is demonstrated 10-50% of the time)", "0=Rarely or never (the behavior is demonstrated less than 10% of the time or the opportunity existed for this behavior to occur, but the player rarely or never is engaged in it)", and "NA=Not Applicable (the situation necessary for the observation of this item rarely or never occurred)".

• The intensity scale includes the degree of presence of the desired behavior based on overall impression. It is scored as: "3=Highly intense (the behavior is present to a high degree)", "2=Moderately intense) the behavior is present to a moderate degree(", "1=Mildly intense) the behavior is present but only to a mild degree)", "0=Not intense (the behavior is present but is not intense)", and "NA=Not applicable (the situation necessary for the observation of this item rarely or never occurred)".

• The skillfulness scale includes ease of performance based on the examiner's overall impression. It is scored as: "3=Highly skilled (the behavior looks very easy and automatic)", "2=Moderately skilled (the behavior looks relatively easy)", "1=Slightly skilled (the behavior looks/ seems slightly clumsy or awkward)", "0=Unskilled (the behavior looks/seems very clumsy or awkward)", and "NA=Not applicable (the situation necessary for the observation of this item rarely or never occurred)" [10].

Studies have shown that ToP has adequate psychometric properties, including construct validity, concurrent criterion validity, inter-rater reliability, test-retest reliability, and good clinical utility [3, 26, 28-31].

Procedure

Initially, the latest version of ToP was received from the test developer (Anita Bundy) via email, and permission to prepare the Persian version was obtained. She was also promised to be informed about the process and results of the research. The translation of ToP was done according to the international quality of life assessment (IQOLA) Project proposed by Bullinger et al. (1998) [32]. This process began with the translation of the original version of ToP into Persian by two translators, one of whom was familiar with the subject of play/playfulness with clinical practice experience in the field of children (translator 1) and the other was unfamiliar with the subject of the test and native in English (translator 2) [32].

A meeting was held with the presence of six experts (a practitioner in the field of play with an MSc in occupational therapy, an expert in the field of children's mental disorders with a PhD in cognitive neuroscience, two translators, and the third and fourth authors of the article) to finalize the translated ToP manual. The purpose of this meeting was to choose the most suitable translation among the two translations and find the most suitable equivalent for a better understanding of the meaning of the specialized words of the test, to resolve the disagreement in the translation of the words that there was a difference of opinion between the two translators and examine the adaptation to the Iranian culture. Finally, the final translation was returned to English by a translator fluent in both languages, and after aligning it with the Persian version, it was sent to the test developer. She confirmed the back-translation version, emphasizing revising the translation of several items.

In order to evaluate the face validity, five occupational therapists according to the inclusion criteria for the experts were invited to participate in the study. Out of these five people, three were PhD students in occupational therapy, one had a master's degree in occupational therapy, and one was a master's student in occupational therapy. First, these examiners were trained in a twohour meeting about how to administer and score the ToP. Then, each of them was asked to evaluate the play of two children (ten children in total) and recorded their



comments on a form designed for this purpose. The issues discussed in this phase included the fitness of items with the main construct of the test, ambiguities, clarity of content, and ease of understanding of the manual. Then, the research team examined the opinions of these people, and the final manual and the Persian score sheet resulting from the face validity examination were prepared [33].

Content validity was qualitatively-quantitatively examined by ten experts specialized in the rehabilitation of children's play (six PhD experts in occupational therapy, one PhD expert in cognitive neuroscience, one PhD expert in child psychology, and two experts with MSc in occupational therapy). In a qualitative method, the experts were asked to write their comments and corrective viewpoints about the Persian version of ToP in a questionnaire designed for this purpose. These comments were about grammar and appropriateness of the words [33]. In the quantitative phase, the Content Validity Ratio (CVR), Content Validity Index (CVI), and modified kappa statistic were examined. To determine the CVR, the experts were asked to study each of the items and comment about their necessity. Based on the Lawshe method and the number of experts (ten), the minimum acceptable CVR score for each item was considered above 0.62 [33, 34].

In reports regarding instrument development, the most widely reported approach for content validity is CVI. In this study, to determine the CVI, Pollitt and Beck's method (2006) was used. In this method, two types of CVI, including the Item Content Validity Index (I-CVI) and Scale Level Content Validity Index (S-CVI) are defined. I-CVI refers to the content validity of individual items. S-CVI refers to the content validity of the entire instrument and there are two different methods to calculate it. One of these methods refers to the general agreement and general consensus of all experts, which is referred to as the Scalelevel-CVI/Universal (S-CVI/UA) and is defined based on the ratio of items scored three and four by all experts to all items. Another method for determining S-CVI is to calculate I-CVI for each item of the tool and then consider the average of the total I-CVI in all items, which is called Scale-level-CVI/Average (S- CVI/Ave) (which is the average of I-CVIs for the entire instrument) [35].

In this study, the experts were asked to rate instrument items in terms of quality and their relevancy to the construct. To obtain the I-CVI, a yes/no response was defined for relevancy, and a four-point Likert scale (excellent, good, fair, and poor) was defined for the quality of each item. The number of experts who rated the item as relevant or clear (rating three or four) was divided by the number of content experts and then the S-CVI (S-CVI/ Ave and S-CVI/UA) was determined. The acceptable I-CVI coefficient was considered greater than or equal to 0.79 for each item. If this coefficient was between 0.7 and 0.79, the item should be modified, and if it was less than 0.7, it was unacceptable and the item was deleted. Also, S-CVI/Ave coefficient higher than or equal to 0.9 and S-CVI/UA coefficient higher than or equal to 0.8 were considered to indicate excellent content validity for the tool [36, 37].

Although CVI is extensively used to estimate content validity by researchers, this index does not consider the possibility of inflated values because of the chance agreement. Therefore, Wynd et al. (2003) proposed both CVI and modified kappa statistic in content validity study because, unlike the CVI, it adjusts for chance agreement. The kappa values above 0.74, between 0.60 and 0.74, and between 0.40 and 0.59 were considered excellent, good, and fair, respectively [37, 38].

Results

Translation

During the translation of the manual and ToP score sheet, there were difficulties in translating some words due to the abstractness of the concepts. Some of the existing challenges include the lack of a Persian equivalent word that conveys the exact meaning of the desired word and phrase to the reader, especially for the word "playfulness", and in some cases, the ambiguity of the phrases for the translators, which made them unable to translate some words easily. Therefore, in order to be faithful and not to take over the original text, in cases where there were several translations for a phrase or there were ambiguities, these cases were explained to the test developer. After receiving her suggestions and clarifications about the meaning of the desired item or word, the appropriate Persian translation was finalized. The most important words and phrases that played a fundamental role in connection with the main structure of the test, i.e. playfulness, for which we faced a challenge in the final translation were classified into four categories as follows:

1- Regarding the words and phrases, for which several equivalents were mentioned by each of the two translators so that each of them could not decide. In the meeting of the translators with the research team, a translation that was more appropriate according to the literature and context of the play was selected. The most important phrases in this category included "playfulness", "play-



er", "transition extent", "framing", "hang out", "intrinsic motivation", and "transition".

2- Regarding the words and phrases, for which the best translation that conveys the meaning was not found, which were translated literally in the translation meetings and consultations with the experts, and in some cases, an explanation was added in parenthesis. Three of the most important of them included "scaffolding", "transaction", and "may diffuse the potentially bad situation".

3- Regarding the words and phrases, for which translators 1 and 2 provided different meanings, both translations were correct, but one translation conveyed a better meaning to the mind. Some of them were items "engages in playful mischief or teasing", "responds to others' cues", and "initiates play with another".

4- Regarding the words and phrases, for which there were several equivalents, a synthesis of translations 1 and 2 was made as the final translation. This category was mostly parts of the scoring instructions, such as "Clowning or joking are particularly clever/sophisticated; may contain subtle nuances and be overtly funny", "Object seems more like a prop", and "For example, let's play Batman" or "putting on dress-up clothes".

Face validity

In the process of face validity, the raters checked the manual and score sheet in terms of the suitability of the items with the topic, ambiguities, insufficient perceptions, clarity of the content, and ease of understanding. Then, the necessary changes were made. For example, changes were made in the wording of "intensity scale" because of the negative loud of its word, in item 5 for ease of understanding, in item 11 in order to make the content easier to understand and also considering the negative loud of the word "bossiness", in item 15 due to the low clarity and difficulty of understanding the content of "may diffuse a potentially bad situation", and in item 20 due to ambiguity and low clarity of "give and take".

Content validity

The experts provided their comments and corrective views in the qualitative content validity process regarding grammar and word fit in the Persian version, and after reviewing these comments by the researchers, the changes were made to the items. Some changes were made in items 1, 3, 9, and 15, which were applied in order to use more appropriate words and proper grammar. In item 4, to avoid misunderstanding the negative aspect of the concept of the word "persist" in Farsi, we used "trying", which reflects a positive meaning instead of persisting. Another change that was made based on experts' opinions was in item 11, where an explanation phrase was added in parenthesis to better understand the concept of social play. Also, a change was made in item 21 to avoid misunderstanding about the rapid change of play activities by the child; because here it was meant that when the activity becomes boring or does not go well, the child skillfully changes the activity and has no resistance to change it.

The CVR and CVI were used in the quantitative content validity process. The CVR score of all items was higher than 0.62; thus, the necessity of all thems was confirmed. Also, the I-CVI of the relevance of all items was higher than 0.8, which indicates the desirable relationship of all items with the playfulness construct. Only the I-CVI of quality of item 20 was less than 0.8. This result showed that this item needs to be revised based on experts' opinions, and the revision was implemented. It should be noted that S-CVI/Ave of quality and relevance were 0.93 and 0.95 respectively, and S-CVI/UA of quality and relevance were 0.43 and 0.95, respectively (Table 1).

Discussion

Occupational therapists rarely use formal assessment tools and mostly use clinical observations to assess play. One reason might be the lack of access to culturally adapted tools [11]. The purpose of this study was preparation and culturally adaptation of the Persian version of ToP as one of the valid tools for measuring playfulness [3]. Since the original version of this tool was developed in America [3], cultural adaptation was needed in the process of translation. Due to the abstract nature of some concepts related to playfulness, the possibility of various and sometimes completely opposite interpretations for a single phrase could come to mind in the translation process; therefore, it was necessary to use an expression that can create the correct understanding in Iranian culture. For example, the correct equivalent of "playfulness" was to be oriented toward play, but the usual literal translation for it in Farsi seemed "bazigooshi", which in Iranian general culture is perceived as a negative trait, meaning a lack of focus on the task or situation. Also, the first meaning that cames to mind for the scale of "intensity" in Farsi was "Sheddát" (severe), which in Iranian general culture, "severe" means excess and imbalance, while the concept "intensity" in the ToP is the strength of the playfulness feature.

Table 1. Content validity index and ratio for items of test of playfulness (n=10)

	Item	CVR	I-CVI Quality	K Quality	I-CVI Relevance	K Relevance
1	Is actively engaged?	1	1	1	1	1
2	Decides what to do?	1	0.9	0.9	1	1
3	Feels sufficiently safe to keep playing	1	0.9	0.9	1	1
4	Tries to overcome barriers or obstacles to persist with an activity	1	0.9	0.9	1	1
5	Modifies activity to maintain challenge or make it more fun	1	1	1	1	1
6	Engages in playful mischief or teasing	1	0.9	0.9	1	1
7	Engages in activity for the <u>process</u> rather than primarily for the end product	1	1	1	1	1
8	Pretends to be someone else, to do something else, that an object is something else, that something else is happen- ing	1	0.8	0.8	1	1
9	Incorporates objects or other people into play in an uncon- ventional or variable way	1	1	1	1	1
10	Negotiates with others to have needs/desires met	1	1	1	1	1
11	Engages in social play	1	0.9	0.9	1	1
12	Supports the play of others	1	0.9	0.9	1	1
13	Enters a group already engaged in an activity	0.8	1	1	1	1
14	Initiates play that others take up	1	0.9	0.9	1	1
15	Clowns or jokes	1	0.9	0.9	1	1
16	Shares toys, equipment, friends, and ideas	1	1	1	1	1
17	Gives readily understandable cues (facial, verbal, and body) that say, "This is how you should act toward me."	0.8	0.9	0.9	0.9	0.9
18	Responds to others' cues	1	1	1	1	1
19	Demonstrates positive affect during play	1	1	1	1	1
20	Interacts with objects	0.8	0.7	0.7	1	1
21	Transitions from one play activity to another	1	0.9	0.9	1	1

CVR: Content Validity Ratio; I-CVI: Item-Content Validity Index

In the face validity phase, the rater's opinion was about the terms that an assessor might perceive as the extreme understanding of the sentences. The terms, such as maintain challenge, use of bossiness behavior, teasing, and defusing a potentially difficult situation, were a few examples. Although these phrases were considered to be the characteristics of playfulness and traits of the player's internal control and freedom to suspend reality [1, 10], they were revised to reduce the degree of negativity of the concept to express these features as elements of playfulness. Because the face validity was done for all sections of the manual and score sheet, it can be concluded that a fluent and comprehensible Persian manual is appropriate for Persian language users.

All items of the Persian version of ToP were confirmed in the CVR examination so that the CVR for all items was in the range of 0.8-1, which indicated the necessity of all items. This means that none of the ToP items were redundant or random according to the experts' point of view, and it was necessary to keep all of them in the Persian version to comprehensively measure playfulness



[34]. A strong point at this stage was that the content review experts were from several disciplines. Hence, it can be said that the content of the Persian version of ToP will probably be approved by various experts related to the topic of play and playfulness [39].

The most common method to calculate content validity is measuring it at the level of items or I-CVI. From the "relevancy" dimension of each item to the main construct, the I-CVI values (0.85-1) indicated the appropriateness of all items. This result indicates that all items of this instrument are important and fully relevant for measuring playfulness and there is no need to delete, revise, or replace any item. But regarding another dimension of I-CVI, i.e. "quality", only one of the items (item 20) was below the appropriate range, and according to its value (0.7), this item needed to be revised, and the necessary changes were made. It can be argued that in the Persian version of ToP obtained from the psychometric examination in this study, each item has the quality approved by experts in playfulness in children, and in each of the expressions, the words are used correctly; thus, this version reflects the intended content well [35].

Another method that is sometimes used to check the content validity of an instrument, is the CVI at the level of the scale or the S-CVI, which shows whether the whole scale reflects the desired construct instead of individual items. In the present study, this method was also used to ensure the correctness of the results. As mentioned in the methods section, the S-CVI was examined at two levels of average scale (S-CVI/Ave) and total scale (S-CVI/UA). The S-CVI/Ave was ranked higher than 0.9 from both the perspective of relevancy and quality. The S-CVI/UA index was calculated as 0.95 from the point of view of relevancy, which indicates the collective agreement of experts on the content validity of the Persian version of ToP; however, the S-CVI/UA of quality was equal to 0.43. This value is less than the optimal level. Considering the high number of experts, it seems obvious that in terms of the overall quality of the items, the expert's opinions are diverse and it is difficult to reach a consensus. In general, by examining the S-CVI methods used to check the CVI of the Persian version of ToP, it can be stated that this tool evaluates the concepts and content that are the target of the tool and measures the characteristics related to playfulness [35].

In summary, Polit and Beck (2006) suggest that to have an instrument with excellent content validity with the consensus of ten experts, the minimum I-CVI should be around 0.78, and S-CVI/Ave should be 0.9 and above [9]. Thus, it can be concluded that the Persian version of ToP is approved in terms of content validity. This shows that in the prepared Persian version, there was a strong conceptualization of the playfulness construct, the items were well translated, the experts as subject matter experts were correctly selected, and clear instructions were given to experts regarding the construct and how to rate the scales [35, 40].

Conclusion

The results of the present study indicate that the items of the Persian version of ToP reflect the playfulness construct. ToP has good face and content validity and can be a suitable instrument to assess Iranian children's playfulness by Persian-speaking therapists. Obtaining good scores in the reliability stage in future studies can indicate its application in clinical and research studies.

Because this study was conducted during the COV-ID-19 pandemic, and the meetings with the examiners for face validity and also the expert group for content validity were held virtually expectedly, face-to-face meetings were less challenging. Investigating other types of validity and reliability of the tool is suggested for other psychometric properties of the tool for future research.

Ethical Considerations

Compliance with ethical guidelines

The study was approved by the Research Ethics Committee of the Iran University of Medical Sciences (Code: IR.IUMS.REC.1399.1151).

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Authors' contributions

Conceptualization and supervision: Samaneh Karamali Esmaili; Methodology: Saeed Akbari-Zardkhaneh; Validity: Ali Tavoosi; Translation: Ali Ostadzadeh.

Conflict of interest

The authors declared no conflict of interest.

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References

- Skard G, Bundy AC. Test of playfulness. In: Parham LD, Fazio LS, editors. Play in occupational therapy for children: Amsterdam: Elsevier; 2008. [DOI:10.1016/B978-032302954-4.10004-2]
- [2] O'Brien JC, Kuhaneck H. Case-Smith's occupational therapy for children and adolescents. Amsterdam: Elsevier Health Sciences; 2019. [Link]
- [3] Bundy AC, Nelson L, Metzger M, Bingaman K. Validity and reliability of a test of playfulness. The Occupational Therapy Journal of Research. 2001; 21(4):276-92. [DOI:10.1177/15394492010210 0405]
- [4] Saunders I, Sayer M, Goodale A. The relationship between playfulness and coping in preschool children: A pilot study. The American Journal of Occupational Therapy. 1999; 53(2):221-6. [DOI:10.5014/ ajot.53.2.221] [PMID]
- [5] Rentzou K. Preschool children's social and nonsocial play behaviours. Measurement and correlations with children's playfulness, behaviour problems and demographic characteristics. Early Child Development and Care. 2014; 184(4):633-47. [DOI:10.1080/0300 4430.2013.806496]
- [6] Knox S. Play and playfulness in preschool children. In: Zemke R, Clark F, editors. Occupational science: The evolving discipline. Philadelphia: F.A Davis; 1996.
- [7] Taylor SI, Rogers CS. The relationship between playfulness and creativity of Japanese preschool children. International Journal of Early Childhood. 2001; 33(1):43-9. [Link]
- [8] Hess LM, Bundy AC. The association between playfulness and coping in adolescents. Physical & Occupational Therapy in Pediatrics. 2003; 23(2):5-17. [DOI:10.1080/J006v23n02_02]
- [9] Sanderson RC. Towards a new measure of playfulness: The capacity to fully and freely engage in play [PhD thesis]. Chicago: Loyola University Chicago; 2010. [Link]
- [10] Bundy AC. Test of Playfulness (ToP), Version 4.2, Manual Revised 11/102008.
- Stagnitti K. Understanding play: The implications for play assessment. Australian Occupational Therapy Journal. 2004; 51(1):3-12.
 [DOI:10.1046/j.1440-1630.2003.00387.x]
- [12] Rodger SA, Ziviani JM. Play-based occupational therapy. International Journal of Disability, Development & Education. 1999; 46(3):337-65. [Link]
- [13] Reid D. Occupational therapists' assessment practices with handicapped children in Ontario. Canadian Journal of Occupational Therapy. 1987; 54(4):181-8. [DOI:10.1177/000841748705400408]
- [14] Couch KJ, Deitz JC, Kanny EM. The role of play in pediatric occupational therapy. The American Journal of Occupational Therapy. 1998; 52(2):111-7. [DOI:10.5014/ajot.52.2.111] [PMID]
- [15] Rodger S. A survey of assessments used by paediatric occupational therapists. Australian Occupational Therapy Journal. 1994; 41(3):137-42. [DOI:10.1111/j.1440-1630.1994.tb01300.x]
- [16] O'Brien J, Coker P, Lynn R, Suppinger R, Pearigen T, Rabon S, et al. The impact of occupational therapy on a child's playfulness. Occupational Therapy in Health Care. 2000; 12(2-3):39-51. [DOI:10.1080/J003v12n02_03] [PMID]

- [17] Bundy AC, Clifton JL. Diversions and divergences in fields of play. In: Reifel S, editor. Play & Culture Studies. Westport: Greenwood Publishing Group; 1998. [Link]
- [18] Barnett LA. The playful child: Measurement of a disposition to play. Play and Culture. 1991; 4(1):51-74. [Link]
- [19] Law MC, Baum CM, Dunn W. Measuring occupational performance: Supporting best practice in occupational therapy. New Jersey: Slack Incorporated; 2001. [Link]
- [20] Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics. 1977; 33(1):159-74. [DOI:10.2307/2529310]
- [21] Rogers CS, Impara JC, Frary RB, Harris T, Meeks A, Semanic-Lauth S, et al. Measuring playfulness: Development of the child behaviors inventory of playfulness. Play Cult Stud. 1998; 1:151-68.
- [22] Christian KM. The construct of playfulness: Relationships with adaptive behaviors, humor, and early play ability [PhD thesis]. Ohio: Case Western Reserve University; 2011. [Link]
- [23] Cameron D, Leslie M, Teplicky R, Pollock N, Stewart D, Toal C, et al. The clinical utility of the test of playfulness. Canadian Journal of Occupational Therapy. Revue Canadienne D'ergotherapie. 2001; 68(2):104-11. [DOI:10.1177/000841740106800206] [PMID]
- [24] Mortenson PA, Harris SR. Playfulness in children with traumatic brain injury: A preliminary study. Physical & Occupational Therapy in Pediatrics. 2006; 26(1-2):181-98. [PMID]
- [25] Lee Nh, Kim KM. A reliability study of the test of playfulness in attention deficit hyperactivity disorder (ADHD). Korean Journal of Sensory Integration Therapy. 2016; 14(1):1-8. [DOI:10.18064/ JKASI.2016.14.1.001]
- [26] Serrada-Tejeda S, Santos-del-Riego S, Bundy A, Pérez-de-Heredia-Torres M. Spanish cultural adaptation and inter-rater reliability of the test of playfulness. Physical & Occupational Therapy in Pediatrics. 2021; 41(5):555-65. [DOI:10.1080/01942638.2021.1881199] [PMID]
- [27] Sarmad Z, Bazargan A, Hejazi E, Research methods in behavioral sciences (Persian)]. Tehran: Agah Publication; 1998. [Link]
- [28] Reid D. Correlation of the Pediatric Volitional Questionnaire with the Test of Playfulness in a virtual environment: The power of engagement. Early Child Development and Care. 2005; 175(2):153-64. [DOI:10.1080/0300443042000230366]
- [29] Hamm EM. Playfulness and the environmental support of play in children with and without developmental disabilities. Occupational Therapy Journal of Research. 2006; 26(3):88-96. [DOI:10.1177/15 3944920602600302]
- [30] Muys V, Rodger S, Bundy AC. Assessment of playfulness in children with autistic disorder: A comparison of the children's playfulness scale and the test of playfulness. Occupational Therapy Journal of Research. 2006; 26(4):159-70. [DOI:10.1177/153944920602600406]
- [31] Brentnall J, Bundy AC, Catherine F, Kay S. The effect of the length of observation on test of playfulness scores. Occupational Therapy Journal of Research. 2008; 28(3):133-40. [DOI:10.3928/15394492-20080601-02]
- [32] Bullinger M, Alonso J, Apolone G, Leplège A, Sullivan M, Wood-Dauphinee S, et al. Translating health status questionnaires and evaluating their quality: The IQOLA project approach. International quality of life assessment. Journal of Clinical Epidemiology. 1998; 51(11):913-23. [DOI:10.1016/S0895-4356(98)00082-1] [PMID]



- [33] Mohammadbeigi A, Mohammadsalehi N, Aligol M. [Validity and reliability of the instruments and types of measurments in health applied researches (Persian)]. Journal of Rafsanjan University of Medical Sciences. 2015; 13(12):1153-70. [Link]
- [34] Lawshe CH. A quantitative approach to content validity. Personnel Psychology. 1975; 28(4):563-75. [DOI:10.1111/j.1744-6570.1975. tb01393.x]
- [35] Polit DF, Beck CT. The content validity index: Are you sure you know what's being reported? Critique and recommendations. Research in Nursing & Health. 2006; 29(5):489-97. [DOI:10.1002/ nur.20147] [PMID]
- [36] Shi J, Mo X, Sun Z. [Content validity index in scale development (Chinese)]. Journal of Central South University. Medical sciences. 2012; 37(2):152-5. [PMID]
- [37] Zamanzadeh V, Ghahramanian A, Rassouli M, Abbaszadeh A, Alavi-Majd H, Nikanfar AR. Design and implementation content validity study: Development of an instrument for measuring Patient-Centered Communication. Journal of Caring Sciences. 2015; 4(2):165–78. [DOI:10.15171/jcs.2015.017] [PMID] [PMCID]
- [38] Wynd CA, Schmidt B, Schaefer MA. Two quantitative approaches for estimating content validity. Western Journal of Nursing Research. 2003; 25(5):508-18. [DOI:10.1177/0193945903252998] [PMID]
- [39] Vakili MM, Jahangiri N. Content validity and reliability of the measurement tools in educational, behavioral, and health sciences research. Journal of Medical Education Development. 2018; 10(28):106-18. [DOI:10.29252/edcj.10.28.106]
- [40] Davis LL. Instrument review: Getting the most from a panel of experts. Applied Nursing Research. 1992; 5(4):194-7. [DOI:10.1016/ S0897-1897(05)80008-4]



مقاله پژوهشی

انطباق آزمون بازی گرایی برای کودکان ۳ تا ۲ ساله ایرانی: روایی صوری و محتوایی نسخه فارسی

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حكيد

مقدمه اصطلاح «بازی گرایی» واژهای جدید در زبان فارسی و یکی از حیطههای مداخله در روانشناسی و توانبخشی کودکان است. هدف این مطالعه بررسی روایی صوری و محتوایی نسخه فارسی آزمون بازی گرایی(Test of Playfulness; ToP) و انطباق آن برای جامعه کودکان ۳ تا ۶ ساله ایرانی بود.

مواد و روشها ابتدا ترجمه این آزمون بر اساس روش استاندارد ترجمه روبه جلو روبه عقب انجام شد. سپس روایی صوری به صورت کیفی توسط ۵ متخصص و روایی محتوایی به صورت کیفی کمّی توسط ۱۰ متخصص مرتبط با توان بخشی بازی کودکان صورت گرفت. برای این منظور از نسبت روایی محتوا (CVR) و شاخص روایی محتوا (CVI) و آماره کَاپای اصلاحشده استفاده شد.

الفته ها در بررسی روایی صوری نسخه فارسی ToP، چهار آیتم و عنوان مقیاس «شدت» تغییر پیدا کرد. CVR در مطالعه حاضر برای ۲۱ آیتم ToP در محدوده ۰/۸ تا ۱ قرار گرفت که نشان دهنده ضروری بودن همه آیتمهاست. همچنین، CVI در محدوده ۰/۵۵ تا ۱ قرار گرفت که نشان دهنده مناسب بودن همه آیتمهاست. Scale-CVI/Ave کیفیت و ارتباط به ترتیب ۰/۹۳ و ۰/۵۵ و Scale-CVI/UA کیفیت و ارتباط نیز به ترتیب ۰/۴۳ و ۰/۹۵ به دست آمد.

تشیجه گیری بر اساس یافتههای این مطالعه، در ترجمه و تطابق فرهنگی ToP، هیچ آیتمی حذف یا اضافه نشد. خبرگان شرکت کننده تأیید کردند که همه آیتمها سازه بازی گرایی را می سنجند و آیتمها و دستورالعمل نسخه فارسی ToP از روایی صوری مناسب و روایی محتوایی بالا بر خوردار است؛ بنابراین نسخه به دست آمده مورد قبول است و می توان در مطالعات بعدی به بررسی سایر ابعاد روان سنجی آن پرداخت. كليدواژهها:

بازیگرایی، روانسنجی، روایی محتوایی، روایی صوری، تطابق فرهنگی

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