



Video oyunlarındaki akış deneyimi ölçeğinin Türkçe geçerlik ve güvenilirlik çalışması

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Özet

Bu çalışmada “Video Oyunlarındaki Akış Deneyimi Ölçeği” Türk dili ve kültürüne uyarlanması amaçlanmıştır. Ölçme aracı video oyun endüstrisinde hizmet sunanlara, izleyiciye ya da katılımcı olarak bir video oyununa maruz kalan bireylere yönelik detaylı bilgiler vererek müşteri potansiyeli belirleme bireylerin ilgi alanlarını ortaya koyma gibi bir çok veriyi gün yüzüne çıkarabilecek olan “Video Oyunlarındaki Akış Deneyimi Ölçeği” video oyunu oynayan bireylerin video oyunlarından ne derece etkilendikleri ve hangi etkilere bağlı olarak oyun oynamaya devam ettikleri konusunda bölümlendirme fırsatı sunmaktadır. Türkçe video oyunları oynayan bireylerin akış düzeylerini değerlendirebilecek bir ölçme aracı olmadığı için bu çalışmanın alana katkı sağlayacağı düşünülmüştür. Araştırma evrenini Eskişehir ilinde kolayda örnekleme yöntemi ile seçilen toplam 334 kişiden oluşmaktadır. Ölçeğin yapısını test etmek için ve Doğrulayıcı Faktör Analizi (DFA) kullanılmıştır. Yapılan analiz sonucunda ortaya çıkan değerler ölçeğin alan yazında uyum için verilen değerlerin üstünde yer aldığı ve pozitif bir uyum içinde olduğu ortaya çıkarılmıştır. Aynı zamanda ölçeğin yapı geçerliliği test edilmiştir. 9 boyut 28 sorudan oluşan ölçeğin güvenilirliği için Cronbach Alpha (0.969) iç tutarlılık kat sayısı alinyasında belirtilen değerlerin üstündedir. Elde edilen bulgulara göre “Video Oyunlarındaki Akış Deneyimi Ölçeğinin” geçerli ve güvenilir bir ölçme aracı olduğu tespit edilmiştir. Dolayısıyla Türk dili ve kültürü için gerekli psikometrik özellikleri gösteren ölçme aracının Türkiye’deki etkinlik katılımcılarına yönelik kullanılabilirliği sonucuna ulaşılmıştır.

Anahtar Kelimeler: Akış, e-spor, deneyim, geçerlik ve güvenilirlik, video oyun

Turkish validity and reliability study of the flow experience scale in video games

Abstract

The purpose of the present study was to adapt the “Scale of Flow Experience in Video Games” to Turkish language and culture. The “Scale of Flow Experience in Video Games”, which can reveal a lot of data such as identifying customer potential and revealing the interests of individuals by providing detailed information about those who are exposed to a video game as service providers, viewers or participants in the video game industry, and offers the opportunity to segment the extent to which video game players are affected by video games and to which extent they continue to play games depending on which effects. Since there is no measurement tool that can evaluate the flow levels of video game players in Turkish, we believe that this study will contribute to the literature. The research population consisted of a total of 334 individuals selected by convenience sampling method in the city of Eskişehir. Confirmatory Factor Analysis (CFA) was used to test the construct of the scale. As a result of the analysis, we found that the scale was above the values given in the literature for fit and showed good fit. In addition, the construct validity of the scale was tested. The Cronbach’s Alpha (0.969) internal consistency coefficient for the reliability of the scale consisting of 9 dimensions and 28 items was above the threshold given in the literature. Based on the findings, we determined that the “Scale of Flow Experience in Video Games” is a valid and reliable measurement tool. Therefore, it was concluded that the measurement tool, which shows the necessary psychometric properties for Turkish language and culture, can be used for activity participants in Turkey.

Keywords: Validity and reliability, Video Game, E-sports, Flow, Experience

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Genişletilmiş Türkçe Özet, makalenin sonunda yer almaktadır.

INTRODUCTION

Flow experience is a quite challenging topic to explore and demonstrate (Ghani & Deshpande, 1994; Failo & Jankovic, 2013). Researchers in the literature have proposed and used a number of dimensions (Ho & Kuo, 2010) to be able to measure the flow experience despite its difficulty and complexity. Most of these dimensions have introduced certain aspects of flow and reached conclusions in line with these aspects. Studies on the dimensions of the flow experience have focused on the formation, development, and interaction of the flow experience (Csikszentmihalyi, 2000: p.1163- 1164). The method employed to identify one or more dimensions of the flow experience has been to classify the concepts that people commonly mention when they are asked about when they enjoy their work, sport, or game and when they are thoroughly entertained. For example, Hindu yogis, Japanese teenagers racing motorcycles, American surgeons and basketball players, Australian sailors, and Navajo shepherds, rollerbladers and chess masters all made similar statements about how they felt while engaged in these activities or tasks. Thus, Initially, the four dimensions of flow experience were defined as “control, attention, curiosity, and intrinsic interest” (Csikszentmihalyi, 1975: p.45-52). Thus, the results of such studies made it possible to determine the overall dimensions of the flow experience (Csikszentmihalyi, 1993: p.78-92). In the following years, studies on this subject were expanded and new dimensions have been added. In 1993, eight out of nine flow dimensions were proposed and in 1996, nine dimensions were proposed, and the number of dimensions increased and in the following years, these nine dimensions were accepted as the basic dimensions of the flow experience and their validity and reliability were tested in various studies (Jackson & Marsh, 1996). These nine dimensions include “challenge-skill balance, action-awareness merging, clear goals, unambiguous feedback, concentration on task at hand, sense of control, loss of self-consciousness, transformation of time and autotelic experience” (Csikszentmihalyi, 2000: p.1163- 1164). The purpose of the present study was to introduce a measurement tool into the Turkish language to measure the flow experience while playing video games. The scale developed with an up-to-date approach is expected to contribute to the Turkish literature and make it easier to measure the flow level that occurs while playing video games. Especially as a result of the popularization of the E-sports concept, video games and studies investigating gamers have recently been among the major topics discussed in the literature. The source of these discussions in the literature is “Is e-sports a game or a sport?” So much so that it is understood that these discussions are justified due to the fact that e-sports has so many players today. Therefore, it is stated that e-sports can take place in the lives of most of the living

generation and the next generation. (Gül et al., 2019). Beginning from here the flow experiences of individuals who play video games are among the major topics that need to be researched. In this context, thanks to the “Scale of Flow Experience in Video Games” developed by Cai et al. (2022), it has become possible to examine the flow experiences of gamers. The purpose of the present study is to contribute to the literature by adapting the scale into Turkish. Thus, we aim to provide a starting point for similar studies to be conducted in the Turkish literature.

Csikszentmihalyi’s research found that the low state experience was comprised of nine key dimensions:

Clear goals

Clear goals are another dimension considered necessary for the flow experience. According to this dimension, the activity should have clear and explicit goals in order for the person to know what to do (Csikszentmihalyi, 1988: p.31-45). Clearly defined goals for the activity give the person a strong sense of what to do (Jackson & Marsh, 1996). The existence of clear goals depends on the balance between and quality of skills and challenges (Jackson & Eklund, 2004; Sidorová, 2015: p.1-123). It can be argued that this dimension reveals the importance of the balance between challenges and skills.

Unambiguous Feedback: Immediate and clear feedback is necessary to allow the person to know how well they are performing (Celsi et al., 1993). In general, when unambiguous feedback occurs, there is immediate and clear feedback from the activity itself. The outcome allows the person to know whether they have succeeded or failed in achieving the defined goal (Jackson & Marsh, 1996). In this dimension, the activity itself specifically provides clear, immediate, and unambiguous feedback that informs the person about the progress towards the goals and explains how to successfully complete the task or how to perform it in order to do so (Finneran & Zhang, 2003). At the same time, unambiguous feedback is closely related to the clear goals dimension (Csikszentmihalyi 1997: p.67-83). Thus, it can be argued that the flow experience dimensions of action-awareness merging, clear goals and unambiguous feedback are interconnected, since these three dimensions are mutually reinforcing.

Challenge-skill balance

The balance between challenges and skills, known as the first dimension of the flow experience, refers to the alignment between the skills required to perform an activity and the challenges presented by the activity (Aubé et al., 2014), and in this dimension, personal skills should be highly appropriate to the difficulty of the task (Kelly, 2017: p. 34-41). This is because when challenges and skills are at a balance point, individuals feel confident that everything is

under control and feel able to tackle challenges (Engeser & Rheinberg, 2008). At this point, it can be argued that the balance between challenges and skills is not about whether it is difficult or easy to experience flow in an activity, it is about whether one's skills match the challenge (difficult or easy) that the activity presents. Similarly, flow is experienced when the activity matches the skill requirements of the person.

Concentration on task at hand

A construct called concentration has been identified during the development of a scale to identify personality traits that predict one's hypnotizable. Concentration represents the tendency for deep involvement or commitment to a task (Tellegen & Atkinson, 1974), and it is characterized by a high degree of focus on the limited area of interest of the flow. In this dimension, the person does not think about the past or the future but focuses only on the present moment and uses attention and energy only to accomplish the task at hand (Maeran & Cangiana, 2013). It can be argued that the dimension of concentration refers to the person's adoption of and absorption in the activity.

Action-awareness merging

The action-awareness merging dimension refers to individuals being spontaneously focused and deeply engaged in an activity that they perform almost automatically (Csikszentmihalyi, 1997: p.67-83). In this dimension, the person becomes completely immersed in the activity; that is, they start to commit themselves to the activity and become absorbed in the activity itself rather than what they are doing (Procci et al., 2012: p.2306-2312). In other words, the person focuses on the action and what the action requires. It can be argued that in this dimension, the person focuses on how they are doing rather than what they are doing.

Sense of control

The sense of control is a balanced dimension of the flow experience, similar to the challenge-skill balance (Singh & Malik, 2017). During the flow experience, the person feels in control of their environment because they have the skills to overcome the challenges (Rogatko, 2009). With no thoughts of failure, the person experiences a situation where they are infallible and empowered (Procci et. al., 2012: p.2306-2312). However, maintaining a sense of control in this dimension lasts only for a short amount of time. Afterwards, new challenges need to emerge to prevent the person from becoming distressed (Jackson & Eklund, 2002). It can be argued that the sense of control dimension occurs when the person perceives that a balance between skills and challenges has been established.

Loss of self-consciousness

In the loss of self-consciousness dimension, the person is unable to think about past events or plan future activities as their mind is completely focused on the current activity. However, this does not mean that there is a pathological depersonalization. In this dimension, one can identify every movement of the body or the circumstances of the activity, evaluate the activity as a whole, but does not invest any psychic energy in wondering who one is and stops worrying about everyday problems when engaging in a challenging activity (Sidorová, 2015). It can be argued that this dimension occurs when a person is completely absorbed in the activity which they are engaged in and does not think beyond the requirements of the activity.

Transformation of time

Transformation of time refers to a kind of perceptual transformation experienced in altered states of consciousness in which time seems to pass with great speed or extreme slowness, a feeling that time passes faster than normal when experiencing flow (Nakamura & Csikszentmihalyi, 2009: p.45-56). Flow experience can potentially cause time distortion and make time subjective. When the activity is interesting and enjoyable for the person, the person does not notice how the time has passed (Arnould & Price, 1993) and feels that time has stopped, which is the last option of time transformation (Jackson & Eklund, 2004). In this dimension, it can be argued that the perception of time becomes subjective, and the person has the feeling that time passes more quickly than it actually does.

Autotelic experience

Autotelic (auto - self, telos - goal) experience, which means having a purpose of one's own, indicates that one is more focused on the process of the activity than on its final outcome or any external reward (Csikszentmihalyi, 1988: p.31-45). Autotelic experience is the stimulated state of a positive affect that can intrinsically motivate and reward the activity (Manzano et al., 2010) and occurs during the previous eight dimensions. It encompasses each dimension and refers to a specific activity. A person engages in an activity not in anticipation of certain future benefits, but simply because it is rewarding for them to engage in the current activity (Nakamura & Csikszentmihalyi, 2009: p.56-57). It can be argued that this dimension can be observed in each of the previous eight dimensions.

METHOD

Research model

The present study, which aims to adapt the “Scale of Flow Experience in Video Games” into Turkish, is a descriptive study conducted to determine the current situation. A survey-type descriptive screening model was selected as the research method.

Population and sample

The population of the research consisted of 334 people living in Eskişehir, which was chosen in the 2022-2023 academic year because it is a cosmopolitan city rich in students and more likely to play video games regularly. Convenience sampling is based on the principle of selecting the most easily accessible participants on a voluntary basis until a sufficient sample size is reached (Gürbüz & Şahin, 2018: p.1-65). The survey created on Google Forms was distributed to the 123 participants on digital platforms, and also administered face-to-face to some 211 participants.

In order to conduct a robust factor analysis, it is recommended that the number of participants should be between 100 and 200 (Tabachnick & Fideli, 2018: p.1-89) or a sample size 10 times the number of items in the survey (Kline, 2014: p.34-41). As the sample size increases, better results can be obtained (Büyüköztürk, 2002: p.470-483; Ural, 2011: p.1-97; Gürbüz & Şahin, 2018: p.1-65). In this context, 386 participants are considered to be sufficient for the adaptation study.

Data collection tool

Scale of Flow Experience in Video Games was developed by Cai et al. (2022) to explore the flow experiences of video game players. The KMO value of the scale consisting of 9 factors and 28 items was calculated as 0.92. The rating is made on a 5-point Likert-type scale as “Strongly Disagree (1), Disagree (2), Somewhat Agree (3), Agree (5), and Strongly Agree (5)”.

Preparation of the data collection tool

Brislin’s (1970) translation and back-translation method was utilized for the adaptation of the Scale of Flow Experience in Video Games into Turkish. Firstly, we asked for permission from the researchers who developed the scale to adapt the scale into Turkish. Then, using the Brislin’s (1970) method, the scale items were translated into Turkish by 2 faculty members working in the department of English Language and Literature, who are fluent in both Turkish and English languages and familiar with both cultures and were unaware of each other. After the translation process, the differences in the translations were resolved by consensus through a study in which the 2 experts who translated the items were brought together. Then, the

translated items were converted into a scale format and presented to 7 experts for their opinions. In this assessment, the experts reviewed the comprehensibility and cultural appropriateness of the scale items. The Turkish scale prepared as a result of the assessment was translated back into English by two faculty members working in the English Language and Literature department, who are fluent in both Turkish and English languages and familiar with both cultures. The back-translated English scale was compared with the original scale and finally submitted to three experts for final assessment. After the expert assessment, the final version of the scale was formed, and it was made ready to be used in the study. Table 1 shows the final version of the scale, on which the study was based.

Table 1. Dimensions of the scale of flow experience in video games

Dimensions	Sub-dimensions of the scale and total number of items
Clear goals	3
Unambiguous feedback	3
Challenge-skill balance	4
Concentration on task at hand	3
Action-awareness merging	3
Sense of control	3
Loss of self-consciousness	3
Transformation of time	3
Autotelic experience	3
Total	28

As shown in Table 1, the ‘Scale of Flow Experience in Video Games Scale’ has a total of 9 dimensions. The scale includes a total of 28 items; 3 in the Clear Goals Dimension, 3 in the Unambiguous Feedback Dimension, 4 in the Challenge-Skill Balance Dimension, 3 in the Concentration Dimension, 3 in the Action-Awareness Merging Dimension, 3 in the Sense of Control Dimension, 3 in the Loss of Self-Consciousness Dimension, 3 in the Transformation of Time Dimension, and 3 in the Autotelic Experience Dimension.

Data analysis

The data collected in the study were analyzed using SPSS 26 and Amos 21 Package Programs. In the interpretation of the data percentage (%) and frequency were used for the data of the participants, the reliability analysis to calculate the Cronbach’s alpha values and the Confirmatory Factor Analysis (CFA) to reveal whether the scale was compatible with Turkish.

FINDINGS

Demographic findings

Demographic characteristics of the participants in the study are shown in Table 2.

Table 2. Demographic characteristics of the participants

Gender	N	F(%)
Female	219	65.6%
Male	115	34.4%
Total	334	100%
Marital status	N	F(%)
Married	73	21.9%
Single	261	78.1%
Total	334	100%
Age	N	F(%)
18-22	123	36.8%
23-27	87	26%
28-32	87	26%
33 and over	37	11.1%
Total	334	100%
Educational level	N	F(%)
High school and below	32	9.6%
Associate's/Bachelor's	194	58.1%
Master's	108	32.3%
Total	334	100%
Monthly average household income	N	F(%)
TRY 4000 and below	34	10.2%
TRY 4001-6000	49	14.7%
TRY 6001-8000	69	20.7%
TRY 8001-10000	78	23.4%
TRY 10000 and above	104	31.1%
Total	334	100%

Women accounted for the majority of all participants; 219 (65.6%) participants were female, whereas 115 (34.4%) participants were male.

In terms of the marital status of the participants, 261 (78.1%) participants were single and the remaining 73 (21.9%) participants were married.

Regarding the age groups of the participants of the survey, we see that 123 (36.8%) participants were between the ages of 18-22, 174 (52%) participants were in the 23-32 age group, and 37 (11.1%) participants were 33 years of age or older.

In terms of the monthly household income of the participants, we found that 104 (31.1%) participants had a monthly income of TRY 10,000 and above, followed by 78 (23.4%) participants with a monthly household income between TRY 8000-10,000, and 83 (24.9%) participants with a monthly income of less than TRY 8000.

Due to the fact that Eskişehir was selected as the survey area and the literacy level of the individuals living in these provinces is high, we found that those 194 (58.1%) participants had an Associate's/Bachelor's Degree and 108 (32.3%) participants had a Master's Degree, while 32 (9.6%) participants had a high school level education or less.

Confirmatory factor analysis (CFA)

Confirmatory Factor Analysis (CFA) is used as an indicator of whether the predetermined relationship patterns are confirmed or not. In this context, CFA is used to test and assess the construct validity in the adaptation of a measurement tool with a predetermined construct to another culture, while Exploratory Factor Analysis (EFA) is used when the results of CFA do not yield a significant value (Hair et al., 2010). Accordingly, CFA was conducted to evaluate the fit of the Scale's of Flow Experience in Video Games construct. This analysis provided evidence for whether or not the construct of the Scale of Flow Experience in Video Games was confirmed and for the evaluation of construct validity. Data were collected from 334 participants for confirmatory factor analysis in the present study. Table 2 shows the demographic characteristics of the participants. We observed that the data were normally distributed and used SPSS AMOS 21 (Analysis of Moment Structures) analysis software. Figure 1 shows the factorial model achieved by confirmatory factor analysis and the path diagram of the factor-item relationship.

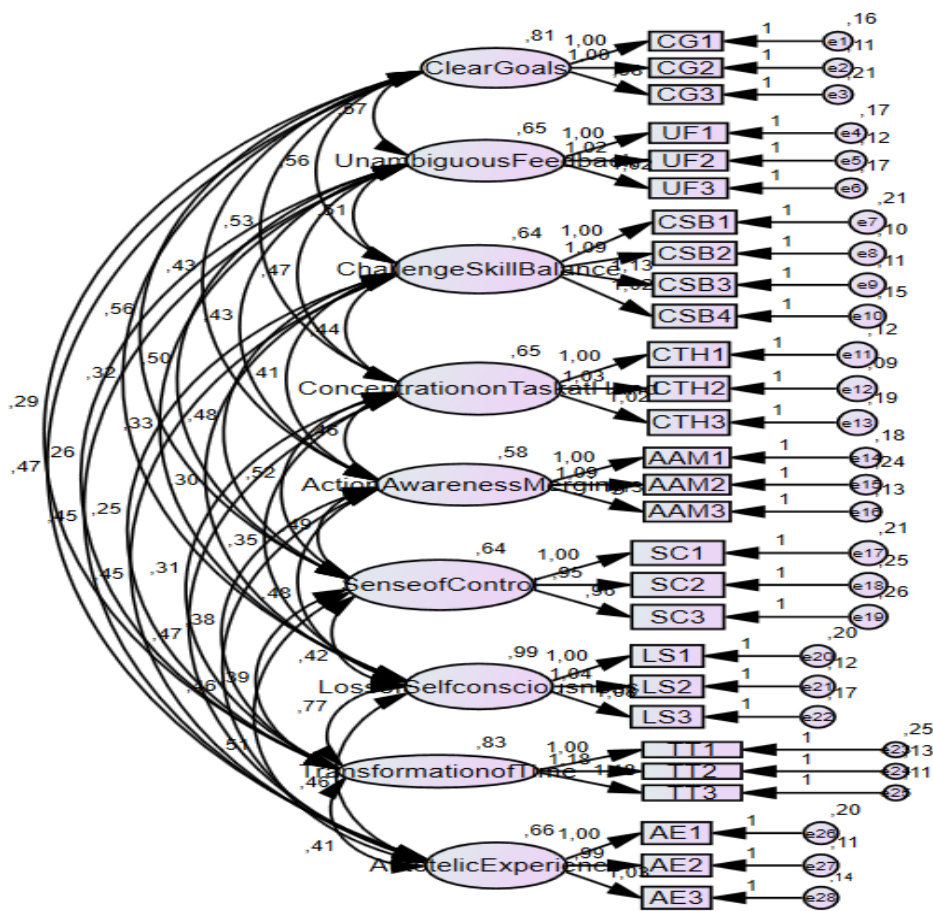


Figure 1. Path diagram of the scale of flow experience in video games

In the present study, we conducted CFA on the Scale of Flow Experience in Video Games. Table 3 shows the results of the CFA. The values considered in the CFA analysis are χ^2/sd (CMIN/DF), RMSEA, CFI, GFI and IFI (Ye at al., 2014, as cited in Hu & Bentler, 1999: p.1–55).

Table 3. Confirmatory factor analysis results of the scale of flow experience in video games

Fitness indices	CFA values of the VGDF scale
χ^2/sd	2.616
RMSEA	0.070
CFI	0.953
GFI	0.052
IFI	0.954

Table 4. Acceptable goodness of fit ranges of the structural equation model (Hu & Bantler, 1999: p.1–55)

Fitness indices	Good fit	Acceptance goodness of fit range
χ^2/sd	$\chi^2/sd \leq 3$	$\chi^2/sd \leq 5$
RMSEA	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$
CFI	$0.90 \leq CFI \leq 1.0$	$0.90 \leq CFI \leq 0.97$
GFI	$0.90 \leq GFI \leq 1.00$	$0.85 \leq GFI \leq 0.99$
IFI	$0.95 \leq IFI \leq 1$	$0.90 \leq IFI \leq 0.95$

The goodness of fit values of the model created as a result of confirmatory factor analysis (CFA) were χ^2/sd : 2.616 RMSEA: 0.070 CFI: 0.953 GFI: 0.852 IFI: 0.954. These values are very close to the limits accepted in the literature (Hu & Bantler, 1999: p.1–55). Table 4 also shows the acceptable goodness of fit ranges.

Table 3 shows the fit values achieved by the CFA results. A comparison of the values in Table 3 with the acceptance levels shown in Table 4 indicates that the χ^2/sd (CMIN/DF) values show a good fit for CFA and the other values are at an acceptable fit level. In this context, the CFA analysis is sufficient and exploratory factor analysis is not needed since the results show an acceptable significance (Hair et al., 2010). In summary, it is possible to argue that the scale is validated since it shows good fit with the CFA results. This also provides evidence for the construct validity of the adaptation of the scale to Turkish culture.

Findings related to the reliability of the scale of flow experience in video games

In scale development and adaptation studies, the reliability of the scale needs to be tested after the validity analysis. The reliability of the Scale of Flow Experience in Video Games was explored by calculating the internal consistency coefficients of the scale dimensions. Internal consistency is interpreted with the help of Cronbach's Alpha coefficient (DeVellis, 2003: p.26). Whether the items of the scale are in a consistent relationship and whether they measure the same construct can be determined by Cronbach's Alpha coefficient (Yaşlıoğlu, 2017). Generally, it is noted in the literature that the Cronbach's Alpha value of a study should be 0.7

and above (Karakoç & Dönmez, 2014: p.39-49; Yaşlıoğlu, 2017). Pai and Chary (2013) state that Cronbach's Alpha coefficient should be greater than 0.6 for scale reliability. Table 5 shows the Cronbach's Alpha values of the scale of flow experience in video games.

Table 5. Cronbach's alpha values of the scale of flow experience in video games

Dimensions	Cronbach's alpha value	Total number of items
Clear goals	0.937	3
Unambiguous feedback	0.928	3
Challenge-skill balance	0.951	4
Concentration on task at hand	0.938	3
Action-awareness merging	0.914	3
Sense of control	0.883	3
Loss of self-consciousness	0.950	3
Transformation of time	0.947	3
Autotelic experience	0.931	3
Total	0.969	28

Table 5 shows the Cronbach's Alpha values of the scale dimensions and the overall scale. The Cronbach's alpha value was calculated as 0.937 for the 3-item Clear Goals dimension, 0.928 for the 3-item Unambiguous Feedback dimension, 0.951 for the 4-item Challenge-Skill Balance dimension, 0.938 for the 3-item Concentration dimension, 0.938 for the 3-item Action-Awareness Merging dimension, 0.883 for the 3-item Sense of Control dimension, 0.950 for the 3-item Loss of Self-consciousness dimension, 0.947 for the Transformation of Time dimension and 0.931 for the 3-item Autotelic Experience dimension. Additionally, the Cronbach's Alpha value of the overall scale was calculated as 0.969. These values indicate that the Video Game Dispositional Flow Scale shows internal consistency with the reliability analysis and has very high reliability.

Interpretation of the scale

The Turkish form of the Scale of Flow Experience in Video Games has a 9-factor construct consisting of 28 items as a result of the analysis, and the participants can respond to the items on a 5-point Likert-type scale as "Strongly Disagree (1), Disagree (2), Somewhat Agree (3), Agree (4) and Strongly Agree (5)". There is no reverse-scored item in the scale. The total scale score is calculated on the basis of the dimensions, and the lowest score possible from dimension 3 is 4 and the highest possible score is 20. For the remaining dimensions, the lowest possible score is 3 and the highest possible score is 15. Accordingly, the scale score should be interpreted as the higher the scores of the individuals, the higher the effects and support rates in the relevant dimension, or the lower the scores, the lower the effects and support rates.

DISCUSSION and CONCLUSION

The purpose of the present study was to adapt the “Scale of Flow Experience in Video Games” to Turkish language and culture. In the adaptation process, linguistic equivalence was first ensured, content validity was calculated, and construct validity analyses were performed. Validity-reliability and confirmatory factor analyses were used for validity, and the process was completed by employing internal consistency reliability testing for reliability. As a result of the analyses, when the limits of the factor loadings and the predicted fit indices are taken into consideration, we observed that the construct pattern and the measurement model produced an acceptable level of fit in general terms, and the Turkish and original factor construct of the scale were consistent. The Cronbach’s Alpha value of the scale was calculated as 0.969, which is higher than the original scale. This indicates that the scale has high internal consistency. The consistency of the scale items with each other indicates reliability in terms of internal consistency and the scale meets this condition. In short, it can be argued that the “Scale of Flow Experience in Video Games” is a valid and reliable measurement tool for Turkish language and culture with 28 items and a 9-factor construct that emerged as a result of the validity and reliability analyses. Especially recent studies seem more multidisciplinary and approach e-sports from a different perspective. The rapid development of technology news has affected all areas as well as sports news and has caused new arrival. Both playing and watching competitive video games and computer games have created the concept of electronic sports (Gümüşdağ et al., 2021).

To summarize, in the study conducted by Cai, et al. (2022) to reveal the flow experiences of video game players living in Spain, the scale consisting of 9 dimensions and 28 items remained as 9 dimensions and 28 items when adapted to Turkish language and culture, but it was revealed as a result of the analyzes that many dimensions fit Turkish culture better. The analysis of the collected data indicates that the “Scale of Flow Experience in Video Games” is compatible with Turkish culture.

Considering all these criteria, appropriate construct reliability values were obtained in all dimensions of the scale. The findings of the analyses revealed that the Scale of Flow Experience in Video Games has a multidimensional construct. In conclusion, the “Scale of Flow Experience in Video Games” was proven to be a valid and reliable measurement tool and the purpose of the study was achieved.

GENİŞLETİLMİŞ ÖZET

GİRİŞ

Akış deneyimini araştırılması ve ortaya konulması açısından oldukça zor bir konudur (Ghani & Deshpande, 1994; Failo ve ark., 2013). Bu zorluk ve karmaşada ölçüm yapabilmek için alandaki araştırmacılar çeşitli sayılarda boyutlar öne sürmüş ve kullanmışlardır (Ho & Kuo, 2010). Kullanılan boyutlara bakıldığında çoğu belirli boyutları ortaya koymuş ve bu boyutlar doğrultusunda sonuçlara varmıştır. Akış deneyiminin boyutlarıyla ilgili çalışmalar; akış deneyiminin oluşumunu, gelişimini ve etkileşimini net olarak ortaya koyabilmeye odaklanmıştır (Csikszentmihalyi, 2000: s.1163- 1164). Akış deneyiminin, bir ya da daha fazla boyutunun ortaya çıkmasında izlenen yöntem ise; insanlara yaptıkları iş, spor ya da oynadıkları oyuna devam ederken tekrar ne zaman keyif aldıkları ve iyice eğlendikleri sorulduğunda genel olarak bahsettikleri konuları sınıflandırmak olmuştur. Örneğin; Hindu yogacılar, motosiklet yarışı yapan Japon gençler, Amerikalı cerrahlar ve basketbolcular, Avustralyalı denizciler ve Navajo çobanları, paten kayanlar ve satranç ustaları bu aktivitelerde ya da görevlerde bulunurken hissettikleri şeylerle ilgili benzer ifadeler kullanmışlardır. Böylece bu tür araştırmaların sonucu, akış deneyiminin genel boyutlarının belirlenmesine olanak sağlamıştır (Csikszentmihaly, 1993: s.78-92). İlk olarak akış deneyimi için “kontrol, dikkat, merak ve içsel ilgi” olarak dört boyut belirlenmiştir (Csikszentmihalyi 1975: s.45-52). İlerleyen yıllarda bu konudaki çalışmalar genişletilerek yeni boyutlar eklenmiştir. 1993 yılında sekiz, 1996 yılında dokuz boyut öne sürülerek boyut sayısı artırılmış ve ilerleyen yıllarda dokuz boyut, akış deneyiminin temel boyutları olarak kabul görmüş, geçerlilik güvenilirliği farklı çalışmalarda test edilmiştir (Jackson & Marsh, 1996). Bahsi geçen dokuz boyut “zorluk ve beceri arasındaki denge, faaliyet ve farkındalığın birleşimi, açık hedefler, derhal geribildirim, toplam yoğunlaşma, kontrol hissi, öz bilinç kaybı, zaman dönüşümü ve ototelik deneyimdir” (Csikszentmihalyi, 2000: s.1163-1164). Yapılan çalışmada ise video oyununda eğitimsel akış deneyiminin ölçülmesi amacıyla Türk diline bir ölçme aracı kazandırmak amaçlanmıştır. Alan yazında güncel bir yaklaşımla geliştirilen bu ölçek ülkemiz alan yazınına pozitif katkı sağlayacak ve video oyunlarındaki akış düzeylerinin ölçülmesini daha kolay bir hale getirecektir.

YÖNTEM

“Video Oyunlarındaki Akış Deneyimi Ölçeğinin” Türkçeye uyarlanması amaçlanan bu araştırma, mevcut durumu saptamaya yönelik betimsel bir çalışmadır. Araştırma yöntemi olarak, anket (survey) türünde bir betimsel tarama modeli seçilmiştir. Video oyunu oynayan bireylerin akış deneyimlerini belirlemek amacıyla Cai ve arkadaşları (2022) tarafından geliştirilmiştir. 9 boyut ve 28 sorudan oluşan ölçeğin KMO değeri 0,92 olarak belirlenmiştir. Araştırma kapsamında video oyununu oynamaya yatkın bir evren elde etmek amacıyla öğrenci bakımından nüfusu fazla olan Eskişehir ilinde yaşayan 334 bireyden oluşmaktadır. Kolayda örnekleme, yeterli örneklem sayısına ulaşılan kadar, gönüllülük esasına dayalı, en kolay ulaşılabilen katılımcıları seçme esasına dayanmaktadır (Gürbüz & Şahin, 2018: s.1-65). Google Forms üzerinden oluşturulan anketler dijital platformlarda katılımcılara dağıtılmış aynı

zamanda yüz yüze bir şekilde elden uygulanan anketler ile uygulanma sağlanmıştır. Yapılan çeviriler sonucunda ise ‘Video Oyunlarındaki Akış Deneyimi Ölçeği’ toplam 9 boyutu kapsamaktadır. Bunlar: Net Hedefler Boyutu 3 madde, Anlamı Açık Geri Besleme Boyutu 3 madde, Zorluk-Beceri Dengesi Boyutu 4 madde, Konsantrasyon Boyutu 3 madde, Eylem- Farkındalık Birleştirme Boyutu 3 madde, Kontrol Duygusu Boyutu 3 madde, Özbilinç Kaybı Boyutu 3 madde, Zamanın Dönüşümü Boyutu 3 madde ve Ototelik Deneyim Boyutu 3 madde, olmak üzere toplam 28 ölçek sorusunu kapsamaktadır.

TARTIŞMA VE SONUÇ

Bu çalışmada video oyunlarındaki akış deneyimi ölçeğine DFA analizi yapılmıştır. Yapılan DFA analizine ait değerler aşağıda Tablo 3’de verilmişti. DFA analizinde ele alınan değerler ise; χ^2/sd (CMIN/DF), RMSEA, CFI, GFI ve IFI değerleridir (Hu & Bentler, 1999: s.1–55). Doğrulamalı faktör analizi (DFA) sonucunda, oluşturulan modelde uyum iyiliği değerleri incelendiğinde χ^2/sd : 2,616 RMSEA: 0,070 CFI: 0,953 GFI: 0,852 IFI: 0,954 olarak bulunmuştur. Bu değerlerin literatürde kabul edilen sınırlara çok yakın olduğu görülmektedir. (Hu & Bentler, 1999: s.1–55). Bunun dışında kabul edilebilir uyum iyiliği aralıklarındadır. Ölçeğin bütünsel olarak hesaplanan Cronbach Alfa değeri de 0,969’dur. Bu değerler doğrultusunda video oyunlarındaki akış deneyimi ölçeğinin güvenilirlik analizi ile iç tutarlılık gösterdiği ve güvenilirliğinin oldukça yüksek olduğu anlaşılmaktadır. Tüm bu kriterler dikkate alındığında, ölçeği oluşturan tüm boyutlarda uygun yapı güvenirliliği değerleri elde edilmiştir. Analizler sonucunda elde edilen bulgular, video oyunlarındaki akış deneyiminin çok boyutlu bir yapı olduğunu ortaya koymuştur. Sonuç olarak, “Video Oyunlarındaki Akış Deneyimi Ölçeğinin” geçerli ve güvenilir bir ölçme aracı olduğu kanıtlanmış ve araştırmanın amacına ulaşılmıştır.

Araştırma bulgularına göre video oyunları sadece bireyler üzerinde bağımlılık, stres bozukluğu ve benzeri negatif sonuçların dışında, dikkat edilebilir düzeyde ele alındığı ve ilgi duyulduğu zaman bireyler üzerindeki olumlu etkileri oldukça önemli ve dikkat çekici hususlardır. Ölçeği oluşturan tüm boyutlarda uygun yapı güvenirliliği değerleri elde edilmiştir. Analizler sonucunda elde edilen bulgular, video oyunlarındaki akış deneyiminin çok boyutlu bir yapı olduğunu ortaya koymuştur. Sonuç olarak, “Video Oyunlarındaki Akış Deneyimi Ölçeğinin” geçerli ve güvenilir bir ölçme aracı olduğu kanıtlanmış ve araştırmanın amacına ulaşılmıştır. Bununla birlikte, video oyunları bireyler üzerinde pozitif yönde etkisinin olduğu görülmektedir. Bu etkiler sadece video oyunlarında değil bireylerin gerçek yaşantılarında da olumlu etkileri olduğu karşımıza çıkmaktadır. Tüm bu sonuçlar doğrultusunda yapılacak yeni araştırmaların son yıllarda dikkat çekilmemiş video oyunlarının psikososyal alanlara ve video oyunları ile ilgilenen bireylerin kendileri ve çevresiyle gerçekleştirmiş oldukları iletişimin sürekliliği konusunda önemli bir unsur olduğu düşünülmektedir.

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KATKI ORANI CONTRIBUTION RATE	AÇIKLAMA EXPLANATION	KATKIDA BULUNANLAR CONTRIBUTORS
Fikir ve Kavramsal Örgü <i>Idea or Notion</i>	Araştırma hipotezini veya fikrini oluşturmak <i>Form the research hypothesis or idea</i>	Mert ERKAN Osman Göktuğ KOÇAK Özdemir Ahmet NAR Erdem TURAN
Tasarım <i>Design</i>	Yöntem ve araştırma desenini tasarlamak <i>To design the method and research design.</i>	Mert ERKAN Osman Göktuğ KOÇAK Özdemir Ahmet NAR Erdem TURAN
Literatür Tarama <i>Literature Review</i>	Çalışma için gerekli literatürü taramak <i>Review the literature required for the study</i>	Mert ERKAN Osman Göktuğ KOÇAK Özdemir Ahmet NAR Erdem TURAN
Veri Toplama ve İşleme <i>Data Collecting and Processing</i>	Verileri toplamak, düzenlemek ve raporlaştırmak <i>Collecting, organizing and reporting data</i>	Mert ERKAN Osman Göktuğ KOÇAK Özdemir Ahmet NAR Erdem TURAN
Tartışma ve Yorum <i>Discussion and Commentary</i>	Elde edilen bulguların Değerlendirilmesi <i>Evaluation of the obtained finding</i>	Mert ERKAN Osman Göktuğ KOÇAK Özdemir Ahmet NAR Erdem TURAN
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