DEVELOPMENT OF A 'TENDENCY OF IMPRUDENT BEHAVIOR' SCALE[1]

(TEDBİRSİZ DAVRANMA EĞİLİMİ ÖLÇEĞİNİ GELİŞTİRME ÇALIŞMASI)

Ayşe AYPAY[2]

ABSTRACT

The Tendency of Imprudent Behavior Scale (TIBS) was developed to measure the tendency of adults' imprudent behavior. There are a total of fifteen items, of which four of them are short stories and eleven are based on pictures. The lowest score one might get on the TIBS is 15 and the highest is 45. The higher the score, the higher is the tendency to behave imprudently. The data was collected from a total of 504 senior and graduate students at Ankara University Faculty of Educational Sciences as well as Çanakkale Onsekiz Mart University (ÇOMÜ) in the spring and fall semesters of the 2005-2006 academic year. The KMO and Barlett's Test of Sphericity was .73. The Cronbach Alpha reliability for the whole scale was .76, and the test-retest reliability was also .76. To establish validity, an exploratory factor analysis was carried out. A five-factor structure emerged with Eigen values over 1. Factor loadings ranged from .46 to .85.& 0 % of the variance was explained. In order to establish the predictive validity of TIBS, the Maudsley Obsessive-Compulsive Question List was used. The correlation between these two scales was found to be low (r = -.15, p<.05). The correlation between TIBS and Teenager Risk Taking Scale was medium (r= .43, p<.01). The correlation between TIBS and Temperament and Character Inventory's (TCI) "Harm Avoidance" dimension was .30. The Cronbach Alpha scores for the dimensions that emerged from the Factor Analysis ranged from .55 to .65. Since the total 15-item Cronbach Alpha was higher than the individual dimensions (.76), this has been used in the analyses..

Keywords: The Tendency of Imprudent Behavior Scale (TIBS)

ÖZ

Tedbirsiz Davranma Eğilimi Ölçeği (TDEÖ), yetişkinlerin tedbirsiz davranma eğilimlerini ölçmek amacıyla geliştirilmiştir. Ölçekte 4'ü kısa öykü ve 11'i resim olmak üzere 15 madde yer almaktadır. TDEÖ'den alınabilecek en düşük puan 15, en yüksek puan 45'tir. Ölçekten alınan yüksek puan tedbirsiz davranma eğiliminin yüksek olduğu anlamına gelmektedir. Ölçek 2005-2006 öğretim yılının güz ve bahar dönemlerinde Ankara Üniversitesi Eğitim Bilimleri Fakültesi 4. sınıf öğrencilerinin, Ankara Üniversitesi Eğitim Bilimleri Enstitüsü Lisansüstü program öğrencilerinin, ÇOMÜ Eğitim Fakültesi 4. sınıf öğrencilerinin ve ÇOMÜ Sosyal Bilimler Enstitüsü Lisansüstü program öğrencilerinin oluşturduğu toplam 504 kişiye uygulanmıştır. Ölçek bütünü için hesaplanan alfa iç tutarlılık katsayısı .76 olarak; test-tekrar test güvenirliği (r= 0.763, p<.01) olarak bulunmuştur (N=104). Faktör analizi sonuçları, öz değeri 1'in üstünde olan beş faktör olduğunu göstermektedir. Faktör yükleri .46-.85 arasında değişmektedir. Tüm faktörler toplam varyansın %59'unu açıklamaktadır. TDEÖ'nün yordama geçerliği için kullanılan Maudsley Obsessif-Kompulsif Soru Listesi puanları arasındaki korelasyon, r = -.15 (p<.05); benzer ölçekler geçerliği için kullanılan Ergenlerde Risk Alma Ölçeği puanları arasındaki korelasyon, r= .427 (p<.01) ve Mizaç ve Karakter Envanteri'nin Zarardan Kaçınma boyutunun "Belirsizlik Korkusu" alt boyutundan elde edilen puanlar arasındaki korelasyon, r= -.301 (p<.05) olarak hesaplanmıştır. Faktör Analizi sonucunda ortaya çıkan beş alt boyut için hesaplanan Alfa iç tutarlılık katsayılarının .55 ile .65 arasında olduğu belirlenmiştir. 15 maddenin toplamı için elde edilen Alfa katsayısı daha yüksek (.76) olduğundan ölçek puanlarının toplam puan üzerinden analiz edilmesi uygun bulunmuştur.

Anahtar Kelimeler: Tedbirsiz Davranma Eğilimi Ölçeği (TDEÖ)

INTRODUCTION

Although people do not intend to harm themselves or others, they may do harm to themselves and others as a consequence of some of their behaviors. People sometimes do not take basic precautionary measures while carrying out some behaviors that may result in risky consequences to themselves and others. They sometimes do harm as a result of their negligence of a minor precautionary measure.

Although people are aware of the harmful consequences and dangers of their actions, they commit behaviors that may have harmful consequences to themselves and others without taking any precautionary measures. These behaviors are considered to be "imprudent behavior" and they may be observed in almost every situation.

The attributes of imprudent behavior may be explained better with some examples from the daily life where they may be observed frequently. For example, although there is a pedestrian crossing, some pedestrians cross a busy road among fast-moving cars. Some individuals do not wear their seatbelts while driving or sitting in the passenger seat. There are many tools and utilities left unattended, like cutters, knives, scissors, nails, and needles where children can access them easily. Many individuals have skin contact with bleaches and detergents for washing, and dishwasher liquid, while cleaning their houses. Some doctors do not use masks while examining their patients. Some cleaning persons clean high rise building windows without taking complying with security measures.

People do not use protection while having unprotected sex. There are some extreme examples in the media concerning Turkey, where some people may be willing to have sex with individuals who claim they have HIV/AIDS, thinking that nothing will happen to them. Again, one can easily come across news items from time to time of individuals who approach packages whose content is unknown without any perception of danger. Also, there are individuals who watch the work of bomb squad engineers on packages that may contain bombs without minding the danger, even approaching and touching those packages irresponsibly.

We read quite often in the press that almost every day homes and workplaces are robbed. Despite the frequency of these robberies, some people, overlooking the risk of being victimized by thieves, go to bed without locking their doors.

Imprudent behaviors sometimes result in incurring large losses such as suffering severe injuries, becoming physically disabled, death, or heavy economic losses. It is possible to come across almost daily in the media imprudent behaviors which have such serious consequences.

The tendency of behaving imprudently may be defined as: "While individuals are committing behaviors that may have harmful consequences,

although they know that they may be protected from these harmful consequences, they avoid taking precautionary measures or looking for new ways which could be defined as easier, not involving new activities, and will not cause them to change their habits (Aypay, 2007). This definition is adopted from Anderson's (2003) concept of decision avoidance. In other words, the tendency to behave imprudently is for reasons such as laziness, dilatoriness, not being able to predict real consequences of behavior, based on cognitive distortions perceiving the probable harm being far lower than it actually is, etc., not taking cautionary measures while committing risky behaviors, or looking for easier solutions that will not change the habitual behaviors (Aypay, 2007).

Studies in the literature point out that individuals behave imprudently in various contexts. For example, a study carried out with drivers found that they do not read road signs carefully and they do not take necessary measures. However, when drivers followed rules in traffic, their tendency of reckless driving was found to be lower (Yılmaz and Çelik, 2004).

Based on rapidly increasing skin cancer cases in the last two decades in Sweden, a study gathered data to develop effective preventive measures against exposure the sun, which constitutes an important high risk factor. This study's findings point out that individuals are aware that exposure to the sun is an important risk factor in developing a skin cancer. However, this awareness is not accurately and consistently reflected in their judgements of the probability of developing skin cancer (Bränström, Kristjansson and Ullén, 2005).

In a study of smokers, smokers perceive their risk of developing cancer in general and lung cancer in particular as lower than both other smokers and non-smokers risks of developing cancer. The majority of smokers and individuals who smoked in the past believe some myths such as that exercising removes all the harmful effects of smoking (Weinstein, Marcus and Moser, 2005).

A study of youth in Turkey, the majority of youngsters do not use condoms while having sex and this is not related to their level of knowledge of getting HIV/AIDS, but it is related to their perception of a lower risk of being infected with HIV/AIDS (Özakıncı and Weinman, 2006).

A study that focused on School of Nursing students' knowledge, attitude, and behaviors regarding breast cancer found that forty percent of the nurses do not conduct a breast examination for themselves. Moreovoer, ninety-five percent of the nurses never had their breasts clinically examined. Negligence was found to be high on the list and the main reason why nurses do not have themselves examined and have their breasts clinically examined (Aslan et al, 2007).

A study of consumer behaviors found that sixty percent of shoppers do not check the expiration dates on food products (Topuzoğlu, Hıdıroğlu, Ay, Önsüz and İkiışık, 2007).

Individuals from all SES levels commit imprudent behaviors as defined earlier. In other words, individuals from almost all professions/occupations, and all ages and educational levels, neglect to take precautionary measures before committing behaviors that may have dangerous consequences. Moreover, for some individuals, imprudent behavior becomes very common, like a habit.

This study focuses on the tendency of imprudent behavior and aims at developing an attitude scale to measure the tendency of imprudent behavior.

METHOD

Sample

This study was carried out on a sample of 539 individuals based on a convenience sampling. The sample included senior students in both Ankara University, Faculty of Educational Sciences and ÇOMÜ, Faculty of Education students; Ankara University Institute of Educational Sciences and ÇOMÜ Graduate School students; and teachers and principals who attended an in-service training seminar by the Ministry of National Education.

Data Collection Instruments

Maudsley Obsessive-Compulsive Questions List (MOCQL): The Maudsley Obsessive-Compulsive Question List was developed by Hodgson and Rachman (1977) to investigate the types of obsessive-compulsive indications and the goal was to be able to distinguish obsessive-compulsive patients from other neurotic patients.

MOCQL is composed of 30 items and there are two response categories "right" and "wrong" (Erol and Savaşır, 1988). The adoption of MOCQL into Turkish was carried out by Erol ve Savaşır (1988). The validity and reliability studies of MOCQL were carried out with a total of 1246 individuals whose ages range was from 17 to 70.

The principal components analysis (PCA) of MOCQL indicated that there is a three-factor structure (Erol and Savaşır, 1988). The test and retest reliability of MOCQL for the total obsession was .88, and for sub-dimensions it ranged from .59 to .84. The Cronbach Alpha internal consistency coefficient for the total obsession score was found to be .86 and for sub-dimensions it ranged from .31 to .70 (Erol and Savaşır, 1988).

Adolescent Risk-Taking Scale (ARTS): The ARTS was developed by Esen (2002) to measure the risk-taking behaviors of adolescents. The scale uses a five-point Likert type scaling (from "I never do" to "I always do"). The highest score one can get from the scale is 130, the lowest is 26. The higher the scores received from the scale, the more likely students agree with statements regarding risk-taking behavior.

The validity and reliability studies of ARTS were conducted on 208 sophomore high school students. The results of factor analysis using PCA with varimax rotation revealed that a three-factor structure emerged. The correlation coefficient between the ARTS and Risk Taking Scale (RTS) was .87 when parallel forms validity was checked (Esen, 2002).

The Cronbach Alpha internal consistency coefficient for all items was .88 and the test-retest reliability coefficient was found to be .85. The item-total correlations ranged from .30 to .63.

Temperament and Character Inventory (TCI): TCI was based on Cloninger's model which explains personality with its main components such as temperament and character. This model explains personality as normal and abnormal variations of temperament and character. TCI was developed based on this model (Köse, 2003). TCI is composed of two dimensions such as temperament and character. Each dimension includes seven sub-scales.

The TCI includes 240 items and the response categories are "True" or "False", and it was administered to individuals over 15 years. In the evaluation of TCI, some items were reverse scored and the incorrect responses coded as "1." (Köse et al, 2004).

The adoption of TC in Turkish was carried out by Köse and his colleagues (2004). The validity and reliability studies were carried out on a sample which included 683 individuals whose ages ranged from 18 to 55.

The internal consistency scores of TCI ranged from .60 to .85. A six factor solution emerged as a result of PCA with Oblimin rotation with Kaiser-normalization.

The "harm avoidance" question form with 35 items on a temperament scale was used in this study.

Step: The Tendency of Imprudent Behavior Scale (TIBS) development studies were undertaken in the fall and spring semesters of the 2005-2006 academic year. The TIB scale's item pool includes 16 stories and 26 pictures. The pool included a total of 42 items and the items represented various examples of risky behavior.

For face validity, the opinions of four faculty members (one associate professor and four doctoral candidates in the field of measurement and evaluation) were taken on the 42 items. The stories and pictures were revised

as to whether they were appropriate or not, based on expert opinions, and a trial version of the scale was prepared.

The TIBS trial version of 16 stories and 26 pictures was handed to a group of graduate students at Ankara University Institute of Educational Sciences (N=35) and their responses were requested. The definition of imprudent behavior was provided to them and they were requested to classify which items on the TIBS trial version of the stories and pictures on the scale may be classified as "imprudent behavior."

Following analysis of this trial, a seventy-percent consistency (agreement) criteria among the participants was required to classify whether a behavior can be categorized as "imprudent behavior."

Among the items such as short stories and pictures included in the trial version of TIBS, out of 42 items, 20 items which were categorized as "imprudent behavior" by the participants were chosen to create the "Tendency of Imprudent Behavior Trial Version II."

This second version of the TIBS trial version was used with a group of undergraduate and graduate students (N=104) twice with a four-week interval in the 2005-2006 academic year at Ankara University. The participants were students from the Guidance and Counseling and Pre-school Teaching department, and graduate students of the Institute of Educational Sciences (non-thesis).

Using the data collected from this second group, item-total correlations were calculated. Five items' item-total correlations were found to be lower than .25 and these items were dropped from the scale. Thus a fifteen-item TIBS was constructed. The item-total correlations of these fifteen items ranged from the lowest of .25 to the highest .48.

An Exploratory Factor Analysis with varimax rotation was used (N=104) for validity of the instrument. The reliability of the TIBS scale was established using internal consistency and test-retest methods.

In order to check the criterion-related validity of the TIBS, TIBS was administered to a group of 193 individuals along with the Maudsley Obsessive-Compulsive Question List (MOCQL) in the 2005-2006 academic year. The correlation coefficient was calculated between the two scales.

In order to check parallel form validity, the TIBS was administered to a group of 207 individuals along with the Adolescents Risk Taking Scale (ARTS) and the "harm-avoidance" sub-dimension of Temperament and Character Inventory (TCI) in the spring of the 2005-2006 academic year. The correlation coefficient was calculated among the scale scores.

FINDINGS AND DISCUSSION

The Cronbach Alpha score for the 15-item TIBS was found to be .76 for a sample of 104 individuals. The test-retest reliability of TIBS for the total scale was ($r= 0.763$, $p<.01$) with the same sample. The results of factor analysis to establish validity is presented in Table 1 and 2.

Table 1. Results of factor analysis of Tendency of Imprudent Behavior Scale (TIBS)

Item No	Factor-1 Loading	Factor-2 Loading	Factor-3 Loading	Factor-4 Loading	Factor-5 Loading
1		.623			
2	.453				
3				.673	
4		.476			
8	.562				
9	.604				
10		.627			
11	.516				
13	.447				
15			.694		
16					.757
17	.618				
18	.524				
19	.569				
20	.522				

Explained variance
Total: 58.6%
Factor 1: 24.1%
Factor 2: 10.2%
Factor 3: 8.9%
Factor 4: 7.7%
Factor 5: 7.5%

Table 2. Results of factor analysis of Tendency of Imprudent Behavior Scale (TIBS) with varimax rotation.

Item No	Factor 1 Loadings	Factor 2 Loadings	Factor 3 Loadings	Factor 4 Loadings	Factor 5 Loadings
1		.757			
2					.601
3					.771
4		.593			
8	.775				
9				.655	
10		.791			
11	.475				
13	.568				
15			.747		
16				.848	
17			.558		
18			.557		
19	.462				
20	.645				

Total Explained Variance: 58.6%
Factor 1: 14.6%
Factor 2: 12.9%
Factor 3: 11.4%
Factor 4: 10%
Factor 5: 9.4%

The results of analyses indicate that there were five factors with Eigen values greater than 1. The scree test results support these findings.

Following the varimax rotation, the first factor explained 15 % of the total variation, the second factor explained 13 % of the total variation, the third, fourth and fifth factors explained 11 %, 10 % and 9 % of the total variance, respectively.

Factor 1 is composed of the first five items of the scale. The loadings ranged from .46 to .78. The second factor includes three items and their factor loadings ranged from .59 to .79. The third factor was composed of three items and the factor loadings ranged between .56 and .75. The fourth and fifth factors were composed of two items. The fourth factor loadings were .65 and .85; and the factor loadings for the fifth factor were .65 and .85.

Descriptive names were given to the factors, based on their content. The first factor was "looking down on risk". The second factor was "not being unconscious of or not thinking of consequences." The third factor was named as "over involvement and preoccupation with work". The fourth factor

was named as "stress and strain in working conditions." Finally, the fifth factor was named as "being a know-it-all and over-confidence."

Cronbach Alpha coefficients were calculated for each one of the five dimensions. The coefficients ranged from .55 to .65. When Cronbach Alpha was calculated for the whole scale, it was found to be .76. Therefore, it was preferred to analyze the scale scores as a total score for the scale.

The correlation coefficients between TIBS and two other scales to establish the validity of TIBS are presented in Table 3.

Table 3. Correlations between TIBS and MOCQL, ARTS and TCI (Harm Avoidance).

Scales	N	TIBS
MOCQL	193	-.15*
ARTS	207	.43**
MKE (TCI)	207	-.30*
Harm avoidance		

*p<.05 **p<.001

As in presented in Table 3, a significant negative relationship between TIBS and MOCQL (r=-.15, p<.05) was found. A medium level significant positive correlation was found (r= .427, p<.01) between TIBS and ARTS scores. When we focus on the relationship between TIBS scores and TCI-harm avoidance scales, a low significance relationship was found in the "fear of uncertainty" (r= -.301, p<.05).

The Cronbach Alpha correlation coefficient for the fifteen-item TIBS was (.76), test-retest reliability was also (.76). The results of factor analysis indicate that this is a valid scale. The reliability analyses point out that the TIBS is a reliable scale. Thus, it may be claimed that the TIBS is both a valid and reliable scale.

Based on the analyses, it can be claimed that the TIBS measures a different psychological structure than MOCQL and TCI-harm avoidance. The TIBS is different from the ARTS and TCI, both of which were developed to measure similar psychological structures.

CONCLUSION

The TIBS is a valid and reliable instrument to measure adults' "Tendency of Imprudent Behaviors". The TIBS includes 15-items. Four of the items are based on short stories and 11 of them are composed of pictures. The respondents were asked to respond how often they did each of the behaviors in the items on a three-point Likert-type scale. ["I never do such a behavior (1)", "Sometimes I do things like that (2)", "I do this type of

behavior very often (3)]. The lowest score one can get from the TIBS is 15 and the highest is 45. The higher the score from TIBS, the higher the tendency for that person to behave imprudently.

REFERENCES

Anderson, C.J. (2003). The psychology of doing nothing: forms of decision avoidance result from reason and emotion. *Psychological Bulletin, 129* (1), 139-167.

Aslan, A., Temiz, M., Yiğit, Y., Can, R., Canbolant, E. & Yiğit, F. (2007). Hemşirelik yüksek okulu öğrencilerinin meme kanseri hakkında bilgi, tutum ve davranışları. *Türk Silahlı Kuvvetleri Koruyucu Hekimlik Bülteni, 6* (3), 193-198.

Aypay, A. (2007). *Yetişkinlerin tedbirsiz davranmasını belirleyen etkenlerin incelenmesi.* Yayınlanmamış Doktora Tezi, Ankara Üniversitesi, Ankara.

Bränström, R., Kristjansson, S. & Ullén, H. (2005). Health-related behaviours: risk perception, optimistic bias, and readiness to change sun related behaviour. *European Journal of Public Health, 16* (5), 492–497.

Erol, N. & Savaşır, I. (1988). Maudsley obsessif-kompulsif soru listesi**.** XXIV. Ulusal Psikiyatri ve Nörolojik Bilimler Kongresi GATA, Ankara.

Esen, B.K. (2002). *Ergenlerde risk alma ölçeği'nin geliştirilmesi: geçerlik ve güvenirlik çalışması.* Yayınlanmamış Doktora Tezi, Ankara Üniversitesi, Ankara.

Köse, S. (2003). A psychobiological model of temperament and character: TCI. Yeni Symposium, 41**.** 86-97.

Köse, S., Sayar, K., Ak, İ., Aydın, N., Kalelioğlu, Ü., Kırkpınar, İ., Reeves, R.A., Przybeck, T.R. & Cloninger, C.R. (2004). Mizaç ve karakter envanteri (türkçe TCI): geçerlik, güvenirliği ve faktör yapısı. *Klinik Psikofarmakoloji Bülteni, 14* (3), 107-131.

Ozakinci, G. & Weinman, J.A. (2006). Determinants of condom use intentions and behavior among Turkish youth: a theoretically based investigation. *HIV/AIDS Prevention in Children & Youth, 7* (1), 73-95.

Topuzoğlu, A., Hıdıroğlu, S., Ay, P., Önsüz, F. & İkiışık, H. (2007). Tüketicilerin gıda ürünleri ile ilgili bilgi düzeyleri ve sağlık risklerine karşı tutumları. *Türk Silahlı Kuvvetleri Koruyucu Hekimlik Bülteni, 6* (4), 253-258.

Weinstein, N.D., Marcus, S.E. & Moser, R.P. (2005). Smokers' Unrealistic optimism about their risk. *Tobacco Control, 14* (1), 55-59.

Yılmaz, V. & Çelik, H.E. (2004). A model for risky driving attitudes in Turkey. *Social Behavior and Personality, 32* (8), 791-795.