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### **Original Article**



# Examination of humor styles and mental health status of health services students in vocational schools

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#### **Abstract**

**Objectives:** The aim of the study is to determine the humor styles and general mental health of health services students in a vocational school in Turkey.

**Methods:** This descriptive study was conducted in Turkey in 2013. A total of 354 of health services students from vocational schools agreed to participate in the study. Data were collected from students using a descriptive form, a humor styles questionnaire and a General Health Questionnaire (GHQ 12). Data were analyzed using SPSS 17.0. Descriptive and Pearson tests were used to analyze the study data.

**Results:** Students' mean ages was 21.01±2.26, most participants were women (64.5%), of a moderate socio-economic status (61.9%) and non-smokers (63.8%). The students mean scores for the humor sub-scales are as follows: Affiliative humor 39.63±8.18, self-enhancing humor 33.64±9,44, aggressive humor 23.29±7.67 and self-defecting humor 26.51±7.87. Most of the students' GHQ scores suggested that participants were at risk of having a mental health disorder (20.6%), while 27.1%were found to be at high risk of having a mental health disorder. A low negative significant correlation between the students self-enhancing humor and general health risk was found.

**Conclusion:** The study found that students have positive humor styles. Nearly half of the student partisans were found to be at a low risk regarding the development of psychiatric disorders.

**Keywords:** Coping skills; humor; mental health; stress.

Stress is a universal experience that affects all living things. People face various physical and psychological stressors during their lives and learn to adapt and cope with such challenging living conditions in different ways. Perceptions of stress and its effects vary among different individuals according to their developmental period.<sup>[1]</sup>

University students are generally in an intermediary developmental period and experience the transition from adolescence to adulthood; while they continue their physiological transformation during this period, they also experience mental uneasiness and tension caused by efforts to find their individual identity. Coping with stress is as important during adolescence as it is for any other developmental period.<sup>[2,3]</sup> University students are of an age when individuals are more

open to change due to their development properties; they also experience psychological problems more often because they are more sensitive to personal, interpersonal and socio-cultural differences. In addition to the various problems brought about by the transitionary period between adolescence to adulthood, the fact that many students leave their families for the first time when attending university and start to live independently generates a further factor contributing to and causing additional challenges. [4] Significant adaptation issues and problems can arise when such individuals leave the environment they have grown up in and become accustomed to; the individual in question finds themselves away from their family often for the first time and required to solve their own problems without familial assistance. Issues such as



arranging relationships, managing time and money, making decisions about the future, getting to know and developing oneself—in addition to pressures to succeed academically are all factors impacting university students and may result in mental problems.<sup>[5]</sup> Consequently, university students are, therefore, included in a group that is most at risk in terms of its mental health. According to existing literature in the field students' disinterest regarding class, academic failures, nutritional and sleep pattern disorders, and depressive emotions lead them to fall into despair, making them quick to anger and potentially resulting in adaptation problems.[4] According to practice standards of psychiatric mental health nursing, psychiatric and mental health nurses employ strategies to promote healthy and safe environments; at a basic level psychiatric nursing involves health education, health promotion, improved health function and counseling regarding stress management. Of the various functions of the psychiatric mental health nursing, one of the most important strategies for improving mental health is to teach ways of coping with stress—hence it is important to improve university students' resilience and promote their mental health.[6]

University students utilize many different methods when coping with stress. [6] Coping includes all cognitive, behavioral and emotional reactions reducing, eliminating or resisting emotional stress resulting from stress inducers. [7,8]

One of these coping methods is humor, 9 a concept that has attracted the attention of many thinkers, writers and researchers from different disciplines including philosophy, literature, psychology, sociology; humor is a concept that is still being discussed today.[10] According to the Turkish Language Society, humor can be defined as a "pleasantry". Humor can also be said to be the "ability to perceive funny or entertaining" things or to express this by way of speech or a work of art".[11] As can be understood from this definition, humor is a broad concept, one potentially in corporating all actions or statements made by an individual that can be perceived as comical and that are undertaken to make others laugh. Furthermore, the definition includes those mental processes that enable individuals understand or create entertaining situations, as well as any emotional reactions that enable other individuals to understand them.[12,13]

Humor is an individual's ability but it is also a skill and a culture that can be developed. People face stressful situations throughout their lives, [9,12,14] those who can cope with such issues experience a relatively higher quality of life. [15] One study that examined the relationship between humor and stress coping styles reported that having a sense of humor was related to more optimistic and self-confident coping styles. One study that examined the relationship between humor and stress coping styles reported that having a sense of humor was related to more optimistic and self-confident coping styles". [9,16] Humor is one of the most effective coping strategies when dealing with stress. University students at their stage of life try to learn coping strategies for managing stress.

Developing effective methods to mitigate or cope with stress at this developmental stage can positively affect an individual's mental health.<sup>[17]</sup> Therefore, it is important that psychiatric mental health nurses determine effective coping methods and strategies for the protection and promotion of their own mental health.<sup>[6,9,14]</sup>

The objective of this study was to examine the humor styles and mental health of students continuing their education in a vocational health services school at a university in Turkey.

#### **Research Questions:**

- 1. What are the humor styles of health services students in vocational schools?
- 2. What is the mental health status of health services students in vocational schools?
- 3. What is the relationship between humor styles and the mental health of health services students in vocational schools?
- 4. What are the variables affecting the humor styles and mental health of health services students in vocational schools?

#### **Materials and Method**

#### Type of the Study

This study was carried out as a descriptive study.

#### **Study Population and Sample**

This study was conducted in a vocational health services school in the university in Ankara, Turkey. The study population was comprised of 531 students enrolled at the aforementioned school for the spring semester of the 2013–2014 academic year. A sample selection was not made in the study; a sample group of 354 students was selected from among those students who agreed to participate in the study.

#### **Data Tools**

Data for the study were collated through several means. A demographical data form comprised of 13 questions was used to collect information on the study participants. The form was prepared by the researchers who made use of existing relevant literature throughout its development Additionally, the Humor Styles Questionnaire (HSQ), which is comprised of 32 items, and General Health Questionnaire (GHQ), which is comprised of 12 items The dependent variables used in this study were humor styles and general health status. Independent variables used in the study were age, gender, family structure, socio-economic status, the presence of a support system, smoking and alcohol use, and location in which the participant had spent most of their life.

#### **Demographic Data Form**

The demographic data form was prepared by the researchers

and is comprised of six questions on the gender, age, socioe-conomic level, perceived social support, and the cigarette and alcohol use of participating health services students.

#### **Humor Styles Questionnaire**

The HSQ is a self-evaluation scale developed by Martin et al. (2003).[18] The HSQ measures the four dimensions related to differences in individuals' daily use of humor;[18] the Questionnaire was adapted into Turkish by Yerlikaya.[19] The scale has four sub-scales to measure the four different humor styles, two of which are compatible and two of which are incompatible. These subscales are Affiliative Humor, Self-Enhancing Humor, Aggressive Humor and Self-Defeating Humor. A seven-point Likert-type evaluation was used with responses ranging from "I Certainly Do Not Agree" to "I Completely Agree" for each of the sub-scales with eight items included in each; there are 11 items in the scale which are scored in reverse direction. Thus, the minimum and maximum scores that can be obtained from each sub-scale are seven and 56, respectively. A high score on these sub-scales refers to the frequency at which the related humor style is used. The Cronbach alpha internal consistency coefficients obtained from each sub-scale—according to the Turkish adaptation—were calculated to be .74 for Affiliative Humor, .78 for Self-Enhancing Humor, .69 for Aggressive Humor and .67 for Self-Defeating Humor; there liability coefficients of the subscales against time were .88, .82, .85, and .85, respectively.[18] A different study on high school students was conducted by Yerlikaya in 2007, the study found the Cronbach alpha coefficients of the aforementioned sub-scales ranged from .63 to .75. The internal consistency coefficients of the data acquired within the scope of this study were recalculated and Cronbach alpha coefficients of .78, .83, .64 and .65 were obtained for each sub-scale, respectively.[20]

#### **General Health Questionnaire**

GHQ is a scale used as a first-stage screening test, it is commonly employed as an examination method for mental diseases in the social studies field. The GHQ is a measure of an individual's current mental health and was developed by Goldberg in the 1970s. [21] The GHQ is comprised of 12 questions and concerns the mental health symptoms of an individual during the weeks leading up to the date upon which the test is taken; the GHQ is preferred because it is short, has a high sensitivity and specificity in differentiating cases, and because it can be used in various different socio-cultural environments. The GHQ was translated into Turkish by Kılıç, [22] who also carried out the reliability and validity studies. The reliability, validity and sensitivity scores of the test are 0.74 and that the specificity was 0.84. The test classifies individuals as high, medium or low according to their total GHQ scores; those with medium or low scores often have a psychiatric disorder. Those who receive scores of four of more on the scale are classified as high; those who receive scores between 2-3 are classified as medium, and those who receive scores of lower than two are classified as low.

The acquired data were analyzed via Statistical Package For Social Science (SPSS 17.0 for Windows). Data were then subjected to descriptive statistics and Pearson correlation analysis during the data evaluation stage within which p<0.05 was accepted to be statistically significant.

#### **Evaluation of the Data**

Statistical analysis of the data was carried out using the SPSS software program, version 17.0. Levine's Test was conducted to determine whether the data were distributed normally; the Test revealed that the data were distributed normally. Descriptive statistics and Pearson's Correlation Coefficient were used in this study's data analysis stage.

#### **Ethical Aspects of the Study**

The research was approved by the Social and Art Research Commission in university (Project no: B.30.2BŞK.0.0.05.10.00-600-09 The study was conducted only after permission was obtained from all participating students, schools, institutions and individuals, all students who did not want to participate in the research investigation were excluded from the study.

#### Results

On examination of the socio-demographic properties of the study participants it was found that the average age of students was 21.01±2.26;64.5% of participants were female; 61.9% of students were of a moderate socio-economic level; 39.3% lived with their families, and 28.0% lived in dormitories; 63.8% of the participating students smoked.

#### **Examination of Students' Humor Styles**

On examination of the scores obtained from the sub-scales of the Humor Styles questionnaire, it was found that the Affiliative Humor and Self-Enhancing Humor sub-scales scores—those measuring healthy humor styles—were higher compared to those scores obtained from the Aggressive Humor and Self-Defeating Humor sub-scales—which measure unhealthy humor styles (Table1).

On examination of participating students' demographical

Table 1. Examination of the Students' Scores Obtained from the Humor Styles Scale

Humor Styles Scale	Mean±SD	MinMax.
Affiliative (social) Humor	39.63±8.18	7–56
Self-Enhancing Humor	33.64±9.44	7–56
Aggressive Humor	23.29±7.67	7–56
Self-Defeating Humor	26.51±7.87	7–56

SD: Standard deviation; Min.: Minimum; Max.: Maximum.

Gender	n	Mean	Standard deviation	t	р
Affiliative (social) Humor					
Male	122	38.2459	7.95058	-2.335	0.020
Female	232	40.3707	8.23416		
Aggressive Humor					
Male	122	25.5656	7.70959	4.136	0.000
Female	232	22.0948	7.39191		
Self-Defeating Humor					
Male	122	28.6475	7.92727	3.757	0.000
Female	232	25.3966	7.63494		
Smoke	n	Mean	Standard deviation	F	р
Self-Defeating Humor					
Yes	106	28.3962	7.70118	4.405	0.013
No	226	25.7434	7.95183		
Occasionally	22	25.4091	6.63080		
Alcohol	n	Mean	Standard deviation	F	р
Aggressive Humor					
Yes	70	25.3286	7.24063	3.143	0.04
No	218	22.7294	7.83147		
Occasionally	66	22.9848	7.32224		
Self-Defeating Humor					
Yes	70	29.4286	8.53394	7.019	0.00
No	218	25.4679	7.59586		
Occasionally	66	26.8939	7.36547		
Having Support System	n	Mean	Standard deviation	t	р
Affiliative (social) Humor					
Yes	223	40.3991	8.12667	2.294	0.02
No	131	38.3435	8.16255		
Aggressive Humor					
Yes	223	22.4753	7.71789	-2.632	0.00
No	131	24.6794	7.41751		
Economic status	n	Mean	Standard deviation	F	р
Self-Enhancing Humor					
Over income	125	34.8240	9.14318	4.050	0.01
Equal to income	219	33.3014	9.30081		
Less than income	10	26.5000	13.12546		

characteristics it was found that gender, the existence of a perceived support system, smoking and alcohol use were related with these scores.

The data showed that, among Self-Defeating Humor and Aggressive Humor sub-scale scores male students who smoked and used alcohol had higher, statistically significant Self-Defeating Humor sub-scale scores compared to those who did not; furthermore, the data showed that male students, those who use alcohol, and those who do not have a support sys-

tem, had higher statistically significant Aggressive Humor scores then those who did not.

When the Self-Enhancing Humor and Affiliative Humor scores were examined in regard to participants' demographic characteristics, it was observed that students who come from families of a higher economic status had higher Self-Enhancing Humor scores; furthermore it was found that the Affiliative Humor scores of female students and students with support systems were also higher (p≤0.05) (Table 2).

Table 3. Examination of the General Health Status of Students			
General Health Status	n	%	
Low Risk	185	52.3	
Moderate Risk	73	20.6	
High Risk	96	27.1	

#### **Examination of the General Health Status of Students**

When the general health status of students was examined, it was observed that 27.1% had high risks and 20.6% had moderate risks.

On examination of students' scores obtained from the general health status questionnaire, it was observed that the general health scores of those students who smoked and used alcohol were higher at a statistically significant level.

When the mental health was examined in regard to demographic properties; it was observed that GHQ means are significantly higher in the students who spent their most of life's in a city who were using alcohol regularly and smoking occasionally ( $p \le 0.05$ ) (Table 4).

When the relationship between students'GHQ and HSQ scores was examined a low and negative correlation was seen to exist between Self-Enhancing Humor and GHQ scores. In other words, it was determined that the general health risk decreased with increasing Self-Enhancing Humor scores (Table 5).

#### Discussion

When students' HSQ sub-scale scores were examined it was observed that the score averages of the Affiliative Humor

Table 5. Correlations of General Health Questionnaire and Humor Styles Questionnaire

	GH	GHQ	
Humor Styles Questionnaire	r	р	
Affiliative Humor	-0.102	0.054	
Self-Enhancing Humor	-0.237**	0.000	
Aggressive Humor	0.014	0.799	
Self-defeating Humor	-0.19	0.722	

GHO: General Health Ouestionnaire.

and Self-Enhancing Humor scales—those scales that measure healthy humor styles—were higher when compared to the average scores obtained from the Aggressive Humor and Self-Defeating Humor sub-scales—scales that measure the unhealthy humor styles. Similar humor styles were determined by another study, which was conducted using students from another Turkish university in a different city.<sup>[23]</sup> Furthermore, similar studies carried out on university students in UK, Hong Kong and India determined that positive humor scores were higher when compared to negative humor scores.<sup>[24]</sup> In yet another study, one carried out on university students in Hong Kong, found that, while participants' social humor scores

No studies directly related to mental health and humor status could be found, nevertheless, various studies suggesting that positive humor styles were related to psychological strength, and that coping with stress was related with mental health

were similar, their Aggressive Humor and Self-Defeating Hu-

mor scores—which measure the negative humor style—were

higher in comparison with those of Turkish students.

Place of Spent Most of Life's	n	Mean	Standard deviation	t	р
Total General Health Questionnaire					
City	26	2.0385	.95836	3.627	0.028
County	103	1.8641	.89715		
Village	225	1.6622	.81375		
Alcohol	n	Mean	Standard deviation	F	р
Total General Health Questionnaire					
Yes	70	1.9286	.90604	3.775	0.024
No	218	1.6514	.83557		
Occasionally	66	1.8788	.83233		
Smoke	n	Mean	Standard deviation	F	р
Total General Health Questionnaire					
Yes	106	1.7358	.84292	3.765	0.024
No	226	1.7080	.84518		
Occasionally	22	2.2273	.92231		

were identified in the available literature. <sup>[25–27]</sup> Thus, high humor behavior scores suggest that students are mentally healthy. The current study determined that 27.1% of students had high-risk levels, and that 20.6% had medium-risk levels regarding their GHQ scores. These results are in accordance with the students' Humor Scale scores.

When the relationship between students' GHQ scores and the students' humor styles scale scores were examined low, negative relationship was found; this result suggests that risks related to general health decrease as Self-Enhancing Humor scores increase.

A significant number of theoretical assertions regarding the contribution of humor to psychological health are based on the opinion that a sense of humor is an effective coping strategy regarding stress. The role that a sense of humor plays when coping with stress enables the individual in guestion to distance themselves from the problem and thus attain a different perspective of that problem in relation to their situation or themselves. This humorous understanding enables individuals greater attitudinal flexibility and tolerance when faced with their own faults and the general irrational behavior of other people.[10,19] Additionally, some studies have found that exposing individuals to humorous stimuli to be been associated with enhanced moods elevated levels of secretory immunoglobulin-A, and vasodilation. [28] Laughter, the most common reaction to humor, may explain some of these physiological benefits, including those associated with respiration. Deep breathing has also been found to be an important coping method when dealing with stress.[8] When people engage in humor and laughter, they tend to feel more cheerful and energetic, as well as less depressed, anxious, irritable, and tense. In the short term, at least, humor seems to boost positive moods and counteract negative emotions. Thus, one way a sense of humor may be beneficial to mental health is by contributing to an individual's ability to regulate or manage their emotions—an essential aspect of mental health.[12-14] On examination of the literature it can be seen that the existing experimental research studies on the effects of humor upon mental health are generally geared toward or concerned with the elderly. Ganz and Jacobs<sup>[28]</sup> have carried out experimental studies on elderly people, and have examined the effects of humor on both mental and general health. Based on the results of these studies the authors have argued for the positive effects of humor in regard to depression, anxiety and general health in elderly individuals. A further, semi-experimental study on the effects of humor on elderly people living in a care center found that, after undergoing humor therapy over an eight-week period, participants'life satisfaction levels were considerably higher and participants were happier as a result.[29]

It was determined in our study that Self-Defeating Humor scores were higher for male students who smoked and used alcohol, and that Aggressive Humor scores were higher at a statistically significant level for students who used alcohol, male students, and students who had no support system.

Martin et. al. (2003)<sup>[18]</sup> conducted a study based on the Multi-Dimensional Humor Emotion Model wherein the Humor Styles Scale was used; the study found that Affiliative and Self-Enhancing Humor Styles had a positive relationship with healthy and Effective Coping Styles. The study also found that Aggressive and Self-Defeating Humor Styles had a negative relation with positive coping styles, as well as a positive relationship with negative coping styles. These findings corroborate and support those of the present study.

The current study also found that GHQ scores were higher at a statistically significant level for students who spent most of their lives in cities, and for students who regularly used alcohol and who occasionally smoked. City life is complicated and stressful; therefore it is believed that the GHQ scores of students who have difficulty coping with the stresses of urban life are high. Students' high GHQ scores may be attributable to their use of cigarettes or alcohol as coping methods when dealing with experienced stresses.

This study provides information about university students' humor styles and the general health status of psychiatric nurses. Concern for psychiatric and mental health nurses include the promotion of optimal mental and physical health and the prevention of mental illness. Determining students' coping methods and teaching new, effective means by which such individuals can cope with stress is important for psychiatric mental health nurses regarding both practice standards and basic professional functions.

Humor is one of the most important way of coping. The findings of the current study suggest that certain activities—such as mindfulness of humor styles and encouraging the use of humor strategies—may be effective when organized and implemented for university students so that these individuals are able to recognize the importance of humor styles in their lives. Thus, university students can be supported in developing their positive senses of humor as a means of maintaining their psychological and physical health.

Despite the significant findings yielded herein, several limitations are present in this study. Of these, the most obvious limitation is that all study participants came from the same vocational school; this is a limitation that reduces the generalizability of the study findings. Furthermore, a relatively high educational level of participants in the study sample may influence their perception of humor; consequently, a larger and more diverse sample size may provide a better understanding of positive humor styles among the target population.

Experimental, longitudinal, and qualitative research designs are recommended for future research in the field enable better understanding on how contextual factors interact with humor styles and psychological health.

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#### References

- Halter MJ. Varcarolis' Foundations of Psychiatric Mental Health Nursing: A Clinical Approach. 7th ed. St. Louis: Elsevier Saunders: 2014.
- Baloğlu M, Bardakçı S. Güncellenmiş öğrenci yaşamı stres envanteri'nin Türkçeye uyarlanması, dil geçerliği ve ön psikometrik incelemesi. Türk Psikolojik Danışma ve Rehberlik Dergisi 2010;4:57–70.
- Eryılmaz A. Investigating The Effectiveness of Subjective Well-Being Increasing Program For University Students. Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi 2014;31:111–28.
- 4. Lovell GP, Nash K, Sharman R, Lane BR. A cross-sectional investigation of depressive, anxiety, and stress symptoms and health-behavior participation in Australian university students. Nurs Health Sci 2015;17:134–42.
- 5. Erkan S, Özbay Y, Cihangir Çankaya Z, Terzi Ş. Üniversite Öğrencilerinin Psikolojik Yardım Aramaya Gönüllülük Düzeylerinin Yordanması. Eğitim ve Bilim Dergisi 2012;164:95–106.
- 6. Stuart GW. Principles and practice of psychiatric nursing. 10th ed. Missouri: Elsevier Mosby; 2013.
- Janowski K, Kurpas D, Kusz J, Mroczek B, et al. Emotional control, styles of coping with stress and acceptance of illness among patients suffering from chronic somatic diseases. Stress Health 2014;30:34–42.
- 8. Książek P, Grabska K, Trojanowska D, Słowińska A, et al. Stress and methods of coping with it among students of the Medical University of Lublin. Pol J Public Health 2015;125:94–8.
- 9. Cherkil S, Gardens SJ, Soman DK. Coping styles and its association with sources of stress in undergraduate medical students. Indian J Psychol Med 2013;35:389–93.
- Martin RA. Approachesto the sense of humor: a historical view. 1998. Available at: http://www.humoursummerschool. org/01/articlesNhandouts/PosPsych.pdf. Accessed Mar 21, 2016.
- 11. Türk Dil Kurumu. Güncel Türkçe Sözlük. Available at: http://www.tdk.org.tr/. Accesed Mar 21, 2016.
- 12. Gremigni P. Humor and health promotion series: perspectives on cognitive psychology. Hauppauge, NY: Nova Science Publishers; 2012. p. 2–4.
- 13. Martin RA. The Psychology of humor: an integrative approach.

- Available at: http://www.google.com.tr/books. Accessed Mar 21, 2016.
- 14. Kuiper NA. Humor and Resiliency: Towards a Process Model of Coping and Growth. Eur J Psychol 2012;8:475–91.
- 15. Bennett PN, Parsons T, Ben-Moshe R, Weinberg M, et al. Laughter and humor therapy in dialysis. Semin Dial 2014;27:488–93.
- 16. Öz F, Hiçdurmaz D. Stresle Baş Etmede Önemli Bir Yol: Mizahın Kullanımı. Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi 2010;13:83–8.
- 17. Yerlikaya EE. Üniversite öğrencilerinin mizah tarzları ile algılanan stres, kaygı ve depresyon düzeyleri arasındaki ilişkinin incelenmesi. [Yayınlanmamış Doktora Tezi] Adana: Çukurova Üniversitesi; 2009.
- 18. Martin RA, Puhlik-Doris P, Larsen G, Gray J, et al. Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. Journal of Research in Personality 2003;37:48–75.
- 19. Yerlikaya EE. Mizah Tarzları Ölçeği (Humor Styles Questionnaire) Uyarlama Çalışması. [Yayınlanmamış Yüksek Lisan Tezi] Adana: Çukurova Üniversitesi; 2003.
- 20. Yerlikaya EE. İnanç B Algılanan stres ölçeğinin türkçe çevirisinin psikometrik özellikleri. IX. Ulusal Psikolojik Danışma ve Rehberlik Kongre Kitabı, İzmir: 2007.
- 21. Goldberg DP, Blackwell B. Psychiatric illness in general practice. A detailed study using a new method of case identification. Br Med J 1970;1:439–43.
- 22. Kılıç C. Genel Sağlık Anketi: Geçerlik ve güvenirlik çalışması. Türk Psikiyatri Dergisi 1996;7:3–11.
- 23. Hiranandani NA, Yue XD. Humour styles, gelotophobia and self-esteem among Chinese and Indian university students. Asian J Soc Psychol 2014;17:319–24.
- 24. Aydın KB. Strategies for coping with stress as predictors of mental health. International Journal of Human Sciences 2010;7:534–48.
- 25. Cheung CK, Yue XD. Sojourn students' humor styles as buffers to achieve resilience. International Journal of Intercultural Relations 2012;36:353–64.
- 26. Erickson SJ, Feldstein SW. Adolescent humor and its relationship to coping, defense strategies, psychological distress, and well-being. Child Psychiatry Hum Dev 2007;37:255–71.
- 27. Lebowitz KR, Suh S, Diaz PT, Emery CF. Effects of humor and laughter on psychological functioning, quality of life, health status, and pulmonary functioning among patients with chronic obstructive pulmonary disease: a preliminary investigation. Heart Lung 2011;40:310–9.
- 28. Ganz FD, Jacobs JM. The effect of humor on elder mental and physical health. Geriatr Nurs 2014;35:205–11.
- 29. Tse MM, Lo AP, Cheng TL, Chan EK, et al. Humor therapy: relieving chronic pain and enhancing happiness for older adults. J Aging Res 2010;2010:343574.