

## Adaptation of Fear of Missing Out Scale (FoMOs) to Dentistry

Feyza İnceoğlu(0000-0003-1453-0937)<sup>α</sup>, Pınar Demir(0000-0003-2030-5429)<sup>β</sup>, Hatice Aydoğdu(0000-0002-4089-3507)<sup>β</sup>*Selcuk Dent J, 2021; 8: 530-537 (Doi: 10.15311/selcukdentj.946507)*Başvuru Tarihi: 01 Haziran 2021  
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## ABSTRACT

## Adaptation of Fear of Missing Out Scale (FoMOs) to Dentistry

**Background:** The objective was to adapt the Fear of Missing Out Scale (FoMOs) Scale developed by Przybylski et al in 2013 to Turkish and to perform the validity and reliability study of this scale.

**Methods:** This study was designed as a methodological study, and the adapted questionnaire was completed by 1142 dental students educating in 59 universities in Turkey. The answers given were evaluated according to the original scale and its validity and reliability were tested. Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were performed to assess the construct validity of the form. The reliability of FoMOs was tested through the Cronbach's  $\alpha$  internal consistency coefficient, total item correlation, and test-retest analysis.

**Results:** Different from the original FOMO obtained in the study, it consisted of 2 sub-dimensions and a total of 10 items. Item 10 was excluded owing to the low factor loads. Accordingly, the "10-item scale" with two sub-dimensions was obtained. The 2 sub-dimension scale structure found as a result of EFA was supported by the result obtained in DFA. The Cronbach alpha reliability coefficient was found to be 0.840 for the FoMOs total score, 0.919 for the "trait" sub-dimension, and 0.718 for the "state" sub-dimension.

**Conclusion:** This scale was made to define and analyze the concept of FoMO in dentistry postgraduate career planning. The current scale is a valuable and reliable tool to guide the idea behind career planning and provides a great contribution to the literature.

## KEYWORDS

Reliability and validity, Dentistry, Dental student, Social behavior, Social media

## ÖZ

## Eksik Kalma Korkusu Ölçeğinin (FoMOs) Diş Hekimliğine Uyarlanması

**Amaç:** 2013 yılında Przybylski ve arkadaşları tarafından geliştirilen Kaybetme Korkusu Ölçeği'nin (FoMOs) Türkçeye uyarlanması ve bu ölçeğin geçerlilik ve güvenilirlik çalışmasının yapılması amaçlanmıştır.

**Gereç ve Yöntemler:** Bu çalışma metodolojik bir çalışma olarak tasarlandı ve uyarlanan anket Türkiye'de 59 üniversitede eğitim gören 1142 diş hekimliği öğrencisi tarafından tamamlandı. Verilen cevaplar orijinal ölçeğe göre değerlendirilerek geçerlik ve güvenilirliği test edilmiştir. Formun yapı geçerliliğini değerlendirmek için Açıklayıcı Faktör Analizi (AFA) ve Doğrulayıcı Faktör Analizi (DFA) yapılmıştır. FoMO'ların güvenilirliği Cronbach'ın  $\alpha$  iç tutarlılık katsayısı, toplam madde korelasyonu ve test-tekrar test analizi ile test edildi.

**Bulgular:** Çalışmada elde edilen FOMO ölçeği orijinalinden farklı olarak 2 alt boyut ve toplam 10 maddeden oluşmaktadır. 10. Madde düşük faktör yükü nedeniyle çıkarılmıştır. Buna göre iki alt boyutu olan "10 maddelik ölçek" elde edilmiştir. AFA sonucunda bulunan 2 alt boyutlu ölçek yapısı DFA'da elde edilen sonuçla desteklenmiştir. FoMO toplam puanı için Cronbach alfa güvenilirlik katsayısı 0,840, "özellik" alt boyutu için 0,919 ve "durum" alt boyutu için 0,718 olarak bulunmuştur.

**Sonuç:** Bu ölçek, diş hekimliği mezuniyet sonrası kariyer planlamasında FoMO kavramını tanımlamak ve analiz etmek için yapılmıştır. Mevcut ölçek, kariyer planlamasının arkasındaki fikre rehberlik edecek değerli ve güvenilir bir araçtır ve literatüre büyük katkı sağlamaktadır.

## ANAHTAR KELİMELER

Güvenilirlik ve geçerlilik, Diş hekimliği, Diş hekimliği öğrencisi, Sosyal davranış, Sosyal medya

The concept of internet addiction has emerged as a result of the increasing use of technology in our daily life.<sup>1</sup> People are communicating with their social environment through social media. Today, more than ever, people are exposed to many details about what others are doing. They are constantly faced with uncertainty about where they should be in terms of their active participation in life.<sup>2</sup> This situation creates the feeling that people are constantly missing something or falling behind.

Wortham defined "Fear of Missing Out (FoMO)" as anxiety about missing social events, interactions, or

Experiences.<sup>3</sup> This common fear covers an individual's life and that the experiences of other individuals are exacerbated by social media updates.<sup>4</sup> Studies had argued that FoMO is a real emotion that permeates various social interactions.<sup>5</sup>

Healthcare students worldwide use social media platforms for personal and educational purposes.<sup>6</sup> Social networking tools gradually gained an insight into education and had a great impact on the learning process. After the Covid-19 Pandemic, this interaction has reached the highest level with the increase of spent time on interactive resources and social

<sup>α</sup> Malatya Turgut Özal University Faculty of Medicine, Department of Biostatistics, Malatya, Turkey<sup>β</sup> Inonu University Faculty of Dentistry Department of Pediatric Dentistry, Malatya, Turkey

media.<sup>7</sup>

Planning a career, students may be influenced by the information they have acquired through social media phenomena. A study conducted on students showed that those who spend more time on Facebook tend to compare themselves with their colleagues.<sup>8</sup> Students who have experienced FoMO often feel uncomfortable missing out on positive experiences that others might have.<sup>4</sup> This discomfort can give effects on professional vision and career planning.

To date, most of the research examining the FoMO phenomenon has been reported in the social media literature and has focused on its impact on social media use and how young people are constantly angered by what their friends do.<sup>4</sup> The concept of FoMO has not been previously applied in a professional setting, particularly in dental education and career decision. This scale adaptation was carried out not only to confirm the presence of FoMO among dentistry students but also to determine its potential impact on students' graduate career choice.

## MATERIALS AND METHODS

### Design and participants

This study was designed Methodological quality was carried out by dental students studying in 59 universities in Turkey. The responses of 1142 dentistry students who accepted to participate in the study by clicking the link sent via e-mail and completed the questionnaire were included in the study. The proposed size of sample should be at least five-ten times greater than the number of items in a measurement tool during the process of adapting this measurement tool into a different culture.<sup>9,10</sup> FoMOs has 11 items so the sample size was calculated to be at least 110 students.

### Instruments

Data were collected through the "Personal Introduction Form" and Turkish version of the scale that was originally named "Fear of Missing Out Scale (FOMOs)" and that could be used in the dentistry student, as the latter was finalized after the linguistic and context validity was ensured and pilot practices were performed. Moreover, Data was collected on social media by creating a google form.

### Personal Introduction Form

This form includes items that consisted of certain demographic and obstetric characteristics (age, gender, class, university) of dentistry student.

### FOMO Scale

Developed by Przybylski, Murayama, Cody ve Valerie in 2013, this scale consisted of 11 items and only one

sub-dimension. The presentation order of items was randomized for each participant and items were paired with a five-point Likert-type scale: 1 = "Not at all true of me", 2 = "Slightly true of me", 3 = "Moderately true of me", 4 = "Very true of me", and 5 = "Extremely true of me". A good fit to the data,  $\chi^2(275) = 1778.1$ ,  $p < .01$ , RMSEA = .073, SRMR = .056. PRBZYKÍ

In Chinese version of FOMOs developed by Lia, Griffithsb, Niua and Meic in 2020 this scale consisted of 11 items and two sub-dimensions: treat (item 1,2,3,4 and 5), state (item 6,7,8,9,10 and 11). In the Trait-State study conducted with 2017 students aged between 17 and 25, the internal consistency of FoMOS-C was found to be 0.81.<sup>11</sup>

### Turkish Adaptation Process

The Turkish adaptation process consisted of three steps: linguistic validity, context validity and pilot practices.

The translation of FOMO Scale to Turkish was performed by expert linguists, and then the translated form was reviewed by other expert linguists and compared with the original scale. Following the comparison, items of both forms were found to have the same meanings, and the linguistic validity process was completed.

The English and Turkish forms of the scale were presented to 10 experts for context validity, and experts were asked to score the items with points ranging from 1 to 3 (1: Item is not required, 2: item is useful, but not sufficient, 3: The item is required and must remain on the scale) and to assess the items of the scale for suitability and clarity. Through the Kendall W analysis, suitability of experts' opinions was reviewed.<sup>12</sup> Significant difference was not found statistically between the scores, and experts' answers to the items were found to be consistent (Kendal W=0.107;  $p=0.299 > 0.05$ ).

Considering experts' opinions, the pilot practice was performed with 30 people, and the obtained pilot data were not taken to the main sample. Any misunderstood item was not found in the assessment performed following the pilot practice, and the Turkish form of the scale with 11 items was implemented on the participants.

### FOMO's Psychometric testing

#### Validity

The sufficiency and size of the sample was tested before the factor analysis to ensure the construct validity of the scale. For that purpose, we use Kaiser-Meyer-Olkin (KMO) test. To determine whether the scale suited the factor analysis, Barlett's Test of Sphericity analysis was used. The KMO values used

to decide whether the data were suitable for factor analysis were interpreted as “perfect” when they were between 0.90 and 1.00, “very well” when between 0.80 and 0.89, “well” when between 0.70 and 0.79, “moderate” when between 0.60 and 0.69, and “poor” when between 0.50 and 0.59. The desired KMO value for performing factor analysis was above 0.60; as the value of Bartlett’s Test of Sphericity increases, the data become more suitable for factor analysis.<sup>12</sup>

While examining the scale factor structure, the popular Principal Component Analysis was used, and results were assessed based on the idea that the factor loads regarding the items obtained at the end of the analysis should be at least 0.30.<sup>13</sup> CFA was performed to support the correctness of the sub-dimensions obtained through EFA. The threshold values regarding the goodness of fit index for the model were as follows:  $\chi^2/sd$  rate obtained at the end of CFA as  $\leq 5$ , RMSEA value as  $\leq 0.08$  and GFI, CFI and IFI values as  $> 0.90$ .<sup>14</sup>

### Reliability

Reliability values regarding the scales were found through the Cronbach’s  $\alpha$  (alpha) coefficient. This coefficient value ranges between 0 and 1. As the value gets closer to 1, the reliability regarding the internal consistency of a scale increases. Accordingly, values under 0.50 cannot be accepted, while values between 0.50 and 0.60 are weak. Moreover, values between 0.60 and 0.70 are questionable, and values between 0.70 and 0.80 are acceptable, while figures between 0.80 and 0.90 are good, and 0.90 and 1.00 are perfect in terms of reliability.<sup>15</sup> Internal consistency coefficients calculated in the scales are affected by the number of items in the scale. Therefore, as the number of items increases, the internal consistency coefficient will also increase.<sup>16</sup> If the number of items is low, a value of 0.50 is considered to be sufficient for the reliability of the scale.<sup>17</sup> Moreover, in case of a scale with a few items, Cronbach’s  $\alpha$  or correlation coefficients between the items of a scale as well as the composite reliability coefficients can be utilized to determine the internal consistency. In the event that the calculated values of correlation between the items are over 0.20, the reliability of this scale is considered to be sufficient.<sup>18</sup> For FOMOs, the total item correlation coefficients were examined to review the relationship between the scores obtained from test items and the total score from the test.

Thirty mothers were included in the study for the test-retest analysis of the scale. The test-retest correlation was used for measuring the invariance of the scale by time.<sup>19</sup>

### Data analysis

The data set initially underwent the reliability analysis

and EFA on Statistical Program in Social Sciences (SPSS) version 26.0. To determine whether there was a relationship between the independent variables (factor sub-dimensions), variance inflation factor (VIF) analysis was performed. Finally, after performing CFA on AMOS 23 package software, goodness of fit and test values of the model whose Structural Equation Modeling was established were interpreted. The significance level was accepted VI as 0.05.

## RESULTS

### Multiple Normal Distribution

The value obtained from the formula “ $a*(a+2)$ ” (a: number of observed variables) should be greater than the Mardia’s Coefficient (the multivariate value in AMOS) 20. The skewness and kurtosis values of data indicated that the  $\pm 2$  threshold was ensured, and the data were accepted to show normal distribution.

Of the participants, 71 were excluded owing to staying under the  $p < 0.01$  value found in relation to the Mahalanobis Distance. Consequently, analysis was performed with 1071 questionnaire forms.

Mahalanobis Distance is one of the most used methods in controlling multiple normal distribution in AMOS program. In this approach, a graph is drawn for each variable and analysis is made. The sample mean and variance of the variables can be changed to find out whether there is an extreme value in the data (the distance from the data center in the graphs)The multivariate normal distribution control of the data was controlled by the “Observations farthest from the centroid (Mahalanobis Distance) Menu” in the AMOS program. The skewness value of the model was calculated to be 3,652. multivariate normal distribution was provided because of the calculated value of the skewness was less than 8.<sup>21</sup>

### Ethical issues

The document permitting the academic use of the scale by Przybylski is attached(Appendix 1). At the beginning of the adaptation process of FOMO to Dentistry, ethical approval (Decision No: 2020/1183) was obtained from XXX University Non-Invasive Clinical Research Ethics Committee.

### Findings

Table 1 presents the distribution of the socio-demographic variables of dentistry student. Mean age of the women was  $27.75 \pm 5.60$  years. Of participating dentistry student, 66.7 % female, 33.3 % were male, 29.1 % were 16-20 age range, 67.91 % were 21-25 age range, 2.5 % were 26-30 age range, 0.5 % were 31-35 age range, 15.4 % were

first grade, 17.0 % were second grade, 17.6 % were third grade, 20.1 % were fourth grade and 29.9 % were fifth grade (Table 1).

**Table 1.**

**Gender distribution of CBCT radiographic classifications for left lower third molar teeth (38)**

Sociodemographic Variables	Group	Total	
		n	%
Gender	Female	714	66.7
	Male	357	33.3
Age	16-20 Age	312	29.1
	21-25 Age	727	67.9
	26-30 Age	27	2.5
	31-35 Age	5	0.5
Class	1	165	15.4
	2	182	17.0
	3	189	17.6
	4	215	20.1
	5	320	29.9
Total		1071	100.0

N: frequency, %percent

**Validity**

Following the KMO analysis, participants' KMO coefficient was 0.893 while their  $\chi^2$  value following the Bartlett's Test of Sphericity analysis was 4868.185. Test results were significant statistically ( $p=0.001 < 0.05$ ). Based on the KMO results, sample size was sufficient and suitable for factor analysis.

As a result of the EFA performed for the validity of 11 item FOMO, factor load value ranged between 0.754-0.879 for the trait sub-dimension, 0.522-0.624 for the state sub-dimension. In addition, 37.226 % of the total variance consisted of trait sub-dimension, and 18.523 % was explained by the state sub-dimension. The rate of explaining the total variance was 55.549 % (Table 2). Item 10 was excluded owing to their low factor loads (factor load  $< 0.30$ ). Therefore, the 10-item two-dimensional "Fear of Missing Out Scale (FOMOs)" was achieved.

**Table 2.**

**Factor Loadings and Item-Total Correlations of the FOMO**

Question	Trait	State	Mean $\pm$ Sd	Corrected Item-total Correlations
Q1. I fear others have more rewarding experiences than me.	0.846		2.45 $\pm$ 1.27	0.677
Q2. I fear my friends have more rewarding experiences than me.	0.879		2.44 $\pm$ 1.27	0.696
Q3. I get worried when I find out my friends are having fun without me.	0.852		2.83 $\pm$ 1.38	0.663
Q4. I get anxious when I don't know what my friends are up to.	0.823		2.57 $\pm$ 1.37	0.694
Q5. When I miss out on a planned get-together it bothers me	0.754		2.20 $\pm$ 1.26	0.711
Q6. I am continuously online in order not to miss out on anything		0.573	2.77 $\pm$ 1.29	0.509
Q7. It is important that I have a say about the latest issues in my online social networks (videos, images, posts, etc.)		0.524	3.42 $\pm$ 1.31	0.405
Q8. I fear not to be up-to-date in my social networking sites		0.522	1.72 $\pm$ 1.05	0.558
Q9. I continuously consult my smartphone, in order not to miss out on anything		0.624	2.51 $\pm$ 1.26	0.462
Q10. When I have a good time it is important for me to share the details online (e.g. updating status)	0.290*		3.28 $\pm$ 1.19	0.085*
Q11. It is important that I understand the Internet-slang my friends use		0.576	2.32 $\pm$ 1.33	0.271
% Variance Explained	37026	18523	Total = 55.549	

\* factor loads  $< 0.30$

The goodness of fit indices calculated to test the suitability of the model in the structural equation modeling are displayed in Table 3 in detail. The CFA used to form the non-observable variables through the observable variables while creating a model is a commonly-utilized method<sup>22</sup>. The CFA was implemented on the scale, and correctness of the dimensions was tested. The CFA goodness of fit indices regarding the FOMO were as follows:  $\chi^2$  360.522, df 34 ( $p < 0.05$ ),  $\chi^2/df$  10.604, RMSEA 0.095, GFI 0.934, CFI 0.931 and IFI 0.931 (Table 3). The desired results regarding the goodness of fit indices in the initially-prepared model could not be achieved in the assessment.

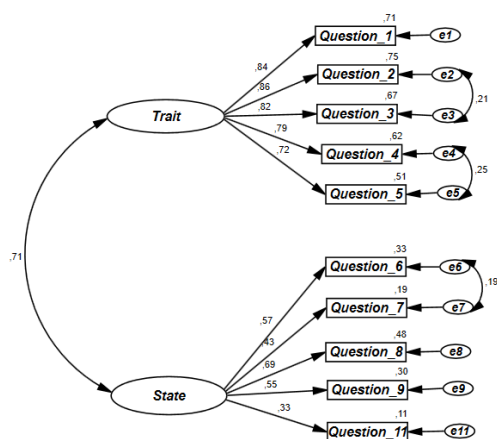
**Table 3.**

**DFA Goodness of Fit Indices for FOMOs**

Fit Indices	First Model	2. Model	Good Fit	Acceptable Compliance
CMIN	360.522	151.807	The model with the smallest value is more compatible.	
df	34	31	-	
p	0.001	0.001	p < 0.05	
$\chi^2 / df$	10.604*	4.897	≤ 3	3 - 5
GFI	0.934	0.938	≥ 0.95	0.90 – 0.95
IFI	0.931	0.955	≥ 0.95	0.90 – 0.95
CFI	0.931	0.956	≥ 0.97	0.95 – 0.97
RMSEA	0.095*	0.080	≤ 0.05	0.05 – 0.08

\* Values are not in the desired range., df: degree of freedom, p: statistical, significant, GFI: Godness of fit Index, IFI: Bollen's Incremental Fit Index, CFI: Comparative Fit Index, RMSEA: Root Mean Square Error of Aproximation, CMIN: minimum difference coefficient,  $\chi^2 / df$ : dividing the minimum difference value by the degrees of freedom

Therefore, modification indexes regarding the model were assessed and e2-e3, e4-e5 and e6-e7 were the dual residual terms with the highest value. Covariance was drawn between these terms, and model was reformed and calculations were performed accordingly. As covariance cannot be drawn for the residual terms between the dimensions, attention was paid to the detail that drawings had the same dimensions.<sup>23</sup> The covariances drawn between these dual error terms indicated that there was a common structure explaining an abstract concept between these error terms. This explanation was related to the common structure formed by these dual terms, rather than the factors. These two error terms collectively explained a case that was statistically significant. Following the second CFA model, the FOMOs diagram is displayed in Figure 1.



**Figure 1**

Fear of missing out scale's (FOMOs) Diagram

Error covariances regarding these items were related, and a second CFA model was achieved. Following the changes, CFA goodness of fit indices were as follows:  $\chi^2$  151.807, df 31 (p<0.05),  $\chi^2/df$  4,897, RMSEA 0.080, GFI 0.938, CFI 0.956 and IFI 0.955 (Table 3). The

goodness of fit index values for the CFA models are given in the table below.

Since the calculated  $\chi^2 / df$  value is below 3 the model was found to be statistically significant. If looking Looking at the NFI, CFI and GFI values, it is seen that the goodness of model fit is provided (NFI>0,90, CFI>0,90, GFI>0,90). Sample can be represented by the data obtained. If we look at the value of RMESA, it is said that the sample size is sufficient (RMSEA <0.05)<sup>14</sup>.

**RELIABILITY**

According to Cronbach's  $\alpha$  reliability analysis, the total internal consistency coefficient of the scale was 0.840, while the internal consistency coefficient value was 0.919 for trait sub-dimension and 0.718 for state sub-dimension (Table 4).

The lowest and highest scores obtained by 1071 dentsitry students from the entire scale was 10 and 50, respectively, and dentsitry students' mean score was  $25.24 \pm 8.5$ . The lowest and highest scores obtained from "Trait" were 5 and 25, while the mean score was  $12.49 \pm 5.6$ . In addition, the lowest and highest scores obtained from "state" were 5 and 25, while the mean score was  $12.74 \pm 4.06$  (Table 4).

**Table 4.**

**FOMOs and Sub-dimensions Cronbach's alpha Values**

Scale	Mean $\pm$ sd	Min-Max Scores to Receive From the Scale	Cronbach $\alpha$
trait	12.49 $\pm$ 5.6	(5-25)	0.919
state	12.74 $\pm$ 4.06	(5-25)	0.718
FoMO	25.24 $\pm$ 8.5	(10-50)	0.840

df; degree of freedom

**Test-retest Reliability**

The correlation values between the mean score of first practice and secondary practice regarding the FOMOs the latter of which was performed three weeks later, ranged (Table 5) between 0.986 and 1.00.

Statistically significant and positive relationship was found within all dimensions and sub-dimensions in relation to the FOMOs (p<0.05). In addition, the t test within the dependent groups did not significantly differ in the pre and post-test stages (p>0.05).

**Table 5.****FOMOs Test-retest Reliability**

Groups		Mean ± df	t value	p* value (sig.)	r value	p** Value
Trait	Test	11.14 ± 6.22	0.586	0.564	0.986	0.001*
	Control	10.19 ± 5.03				
State	Test	12.76 ± 4.91	-0.269	0.791	0.987	0.001*
	Control	13.14 ± 3.04				
FOMOs	Test	23.9 ± 9.25	0.243	0.811	1000	0.001*
	Control	23.33 ± 6.31				

sd; standart deviation, t; paired t test value, r; pearson korelasyon coefficient  
*p*\*>0.05; here is no difference between pretest and posttest. *p*\*\*<0.05; There is a very strong significant relationship between the two values.

**Cut Off of FOMOs**

ROC analysis was used to determine the cut-off point for the total scores of the scale and its sub-dimensions. The ROC curve gives the appropriate cut-off point for the scale. Sensitivity and specificity rates are obtained in decisions made according to the cut-off point24.

The cut-off point, sensitivity and specificity values determined for all sub-dimensions and FOMOs scale total score are shown in **Table 6**.

**Table 6.****FOMOs ROC Analysis**

Scale and Sub-dimensions	Cut Off	Sensitivity	Specificity	p value	AUC (Area Under the Curve)	%95 Confidence Interval	
						Lower Bound	Upper Bound
Trait	14	0,985	0,182	0,001*	0,980**	0,823	0,894
State	12	0,873	0,156	0,001*	0,843**	0,891	0,952
Total Score	23	0,917	0,105	0,001*	0,955**	0,874	0,917

\**p*<0.05; \*\*, AUC < 1

The cut-off point of the FOMOs scale was determined as 23 points. According to the results obtained, it is seen that the area under the curve of the FOMOs scale is between 0.874-0.917 and has an acceptable level of separation. It was determined that the participants who scored 23 points and above were influenced by the fear of being incomplete in the specialty training decision.

**DISCUSSION**

The present study examined the factorial structure and reliability of the T-SFoMOS-C to psychometrically test a tool that assesses fear of missing out among Turkish university dentistry students.

To test the construct validity of FOMOs adapted into Turkish, EFA and CFA were performed. Before conducting the factor analysis, KMO analysis was performed to test the sufficient and suitability of the sample size. KMO value of FOMOs was 0.893. The  $\chi^2$  value of 4868.185 and tested sample size analysis value of  $p=0.001<0.05$  indicated that the sample size was

sufficient and suitable for performing factor analysis (Table 2).

Varimax Rotation was used in the EFA stage of the factor analysis. Factor load values ranged between 0.522 and 0.879. The rate of explanation regarding the total variance was 55.549 % (Table 2). The original form of FOMOs consists of 11 items. The factor loads which are related to the items found at the end of EFA used to examine the scale factor structure should be at least 0.3013,25. The item 10 (e.g. updating status) whose factor load was under 0.30 were excluded from the analysis (Table 2). Results were largely consistent with the results of EFA factor analysis regarding the original scale (Przybylski, 2013); and Chinese version, items were collected under two factor in the Turkish version, which was also the case for the original form of the scale, and construct validity was ensured (Figure 1).

Correctness of items was tested by applying CFA on the two-dimensional scale with 11 items that were obtained through EFA. As desired results regarding the goodness of fit indices obtained from the first model were not achieved, error covariances regarding e2-e3, e4-e5 ve e6-e7 items were correlated and a second CFA model was applied (Figure 1). The CFA goodness of fit indices calculated for the newly-established model with the error covariances drawn between the dual residual terms were as follows:  $\chi^2$  151.807, df 31 ( $p<0.05$ ),  $\chi^2/df$  4,897, RMSEA 0.080, GFI 0.938, CFI 0.956 and IFI 0.955 (Table 3). The model was found to show acceptable goodness of fit. Since the calculated  $\chi^2 / df$  value is below 3 the model was found to be statistically significant. If looking Looking at the NFI, CFI and GFI values, it is seen that the goodness of model fit is provided (NFI>0,90, CFI>0,90, GFI>0,90). Sample can be represented by the data obtained. If we look at the value of RMESA, it is said that the sample size is sufficient (RMSEA <0.05)14. In Chinese version CFA results were  $\chi^2 = 198.507$ ,  $sd = 50$ ,  $p <.01$ ; CFI = 0.965 RMSEA = 0.05411. The CFA analysis results supported the two-factor scale structure that arose from the EFA.

Reliability of FOMOs was assessed through Cronbach's  $\alpha$  internal consistency coefficient, total item correlation, and test-retest analysis. Following the Cronbach's  $\alpha$  reliability analysis performed to measure the internal consistency of 10-item FOMOs that could be used dentistry student, the internal consistency coefficient of "trait" sub-dimension was 0.919, while it was 0.718 for "state" and the total internal consistency coefficient was 0.840 (Table 4). In the Chinese form of the scale developed by Lia et al. (2020), Cronbach's  $\alpha$  internal consistency coefficient was 0.78 for "trait" sub-dimension, 0.81 for "state" sub-dimension and the total internal

consistency coefficient was 0.8411. The Cronbach's alpha internal consistency coefficients suited the original scale and other scales translated into other languages, and Turkish version of FOMOs was highly reliable in terms of its total structure and sub-dimensions.

The total item correlation coefficients were  $\geq 0.20$ , meaning they were over the acceptable threshold in terms of item selection, and the total item correlation coefficients ranged between 0.271- 0.696 for "FOMOs". High correlation coefficient for each item indicates that the item is effective and sufficient for measuring the desired attitude. The correlation between each item and total score was acceptable and statistically significant ( $p < 0.05$ ) in the present study. The correlation values ranged between 0.986 and 1.00 between the mean scores regarding the first practice implemented on 20 dentistry student for test-retest analysis and second practice that was performed three weeks later (Table 5); a positive and statistically significant relationship was found ( $p < 0.05$ ). Moreover, the t test value did not significantly differ in the pre- and post-test stages within the dependent groups ( $p > 0.05$ ), and the scale was invariant against the time. In Chinese version of FOMOs The two-week test-retest reliability of the T-SFoMOS-C was also 0.81, and state-FoMO and trait-FoMO were 0.79 and 0.80, respectively.

Regarding the mean scores from FOMOs, the total mean score from the scale was  $25.24 \pm 8.50$ ; the mean score of "trait" sub-dimension was  $12.49 \pm 5.6$  and  $12.74 \pm 4.06$  for "state".

The scale cut-off point was not determined in either the original scale developed by Przybylski (2013) or the chinese version adapted by Lia (2020). however, the cut-off point was calculated using ROC analysis in the Turkish adaptation study of FOMOs. FOMO's cut-off point score for the total scale was calculated 23, the cut off point score of "trait" sub-dimension was 14, and 12 for "state"

"Gen Z" is a generation that grows with technology and conducts its business in interactive ways. Career planning is influenced by the information they gain online. With the impact of the Covid-19 Pandemic also, students cannot benefit from the academy as much as they need and tend to more interactive resources. With the increase of time spent on interactive resources and social media, this interaction has reached the top stage. Students from "Gen Z" may not pay too much attention to details and consider the first information they hear as valid.<sup>6</sup> Social media can also affect career planning in this way. Even if they do not intend to specialize, they may unwittingly feel themselves competing for postgraduate education by being influenced by environmental/familial factors, friends and social media. For fear of missing out from their peers, they can actually embark on a career path that is not the first choice for them. Therefore, in this study, the FOMO test

was adapted to dentistry, provided a set of predictions on how effect the fear of missing out on career planning with motivation, behavior, well-being, and demographic factors.

## CONCLUSION

The FoMO concept is common among dentists in their daily lives, but the literature on both motivation and career planning dentistry is limited. This scale was made to define and analyze the concept of FoMO in dentistry postgraduate career planning. Current scale is a valuable tool to guide the the idea behind career planning and provides a great contribution to the literature. It can help determine whether students are genuinely interested in postgraduate education or whether their interest is based on fear of missing an opportunity that others have. Use of this version will be beneficial for educators to better guide and advise students on career planning.

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Corresponding Author:

Pınar DEMİR  
Inonu University Faculty of Dentistry  
Department of Pediatric Dentistry,  
Malatya, Turkey  
Phone : +90 422 341 01 06-6205  
Phone : +90 533 143 16 56  
E-mail : pinardemir101@hotmail.com