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Abstract

The study aimed to adapt the Fear of Missing Out (FoMO) Scale developed by Alt (2015). Instead of measuring FoMO only in a social context such as in previous studies, the development of this FoMO Scale was to also identify the levels of FoMO in the context of social media use during learning processes. The cross-cultural scale adaptation process referred to the forward-backward translation procedure by Beaton et al. (2000). Psychometric properties were assessed from its construct validation and reliability. Validation evaluation was carried out using Confirmatory Factor Analysis (CFA) from 534 samples of college students who experienced online lectures during the pandemic situation in Java. The construct validation supported the multidimensionality of the scale; Social FoMO, News FoMO, and Commercial FoMO had met the Goodness of Fit criteria (RMSEA ≤ 0.1; GFI ≥ 0.9; CFI≥ 0.8; AGFI ≥ 0.8) with factor loadings ranging from 0.42—0.74. The scale also proved to be reliable (α=0.842). Thus, the Indonesian version of the FoMO Scale is eligible to measure the three dimensions of FoMO in Indonesia.

Keywords

Adaptation, Fear of missing out, FoMO, Scale

In the digital era, fear of missing out (FoMO) has become a relevant phenomenon due to increasingly ubiquitous Internet usage that allows users to remain continuously connected with cyberspace. The Internet's rapid information exchange makes it seem as if humans cannot—shall not—miss out on even a single piece of information, and thus, some people have difficulty refraining from scrolling their devices' screens every few minutes in order to be the most up-to-date individual. This phenomenon is commonly known as the fear of missing out (FoMO), namely, a fear or anxiety characterized by the desire to stay connected and keep an eye on news developments so as not to be left behind (Przybylski et al., 2013). FoMO can also be constructed as a social anxiety developed consequent to technological advancement that enables various exchanges of information through the Internet (Abel et al., 2016). Furthermore, Alt (2015) defines FoMO as the fear of being left out of valuable experiences, activities, and conversations (Social FoMO), and the fear of being left out of information news (News FoMO) and commercial information (Commercial FoMO).

Moreover, the FoMO phenomenon has emerged in various life circumstances. According to Qualtrics' (2018) survey results in the United States (US), nearly 40% of the millennial generation (aged 18– 34) prefer to splurge to the point of indebtedness rather than having to miss out from their peers. In addition, according to a survey from The Harris Poll (2016) of US Internet users, almost 40% reported they were terrified of missing out on news and other important information if they were not connected to the Internet. Not surprisingly, FoMO research is ex-

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panding in countries other than the US, including Indonesia. Based on the Internet World Stats (2020) survey, Indonesia has the fourth greatest number of Internet users in the world, behind only China, India, and the United States. Thus, that FoMO research in Indonesia has begun to be studied. This is not unexpected, especially as the number of Indonesian Internet users continues to grow every year. According to the Association of Indonesian Internet Service Providers (APJII, 2022), until 2021–2022, approximately 77% of the total Indonesian population or roughly 210 million citizens were reported to use the Internet, with the highest overall percentage (43.92%) from Java Island and the highest penetration rate (99.26%) from students and college students. The APJII survey revealed that the most common motives for Internet use are access to social media and public services, online transactions, and remote study or work. Based on these data, students constitute the largest group of Internet users.

Besides that, Sobaih et al. (2020) found that due to the Coronavirus Disease 2019 (COVID-19) pandemic, social media functioning as an alternative tool for formal communication in tertiary institutions encouraged greater online interaction and learning. Consequently, college students are now shifting to social media as a means of study. This is supported by We Are Social and Hootsuite (2022) survey data which shows that most social media users are aged 18 to 24 (32%; 15.4% female, 16.6% male) and 25 to 34 (32.6%; 14.6% women, 18% men). Meilinda (2018) found that apart from personal communication purposes, students often access social media for academic information to facilitate the learning process.

Increased time on the Internet and social media, however, has the potential to increase FoMO. Alutaybi et al. (2019) opined that, for the abundance of interaction and real-time information on social media, users pay the price of FoMO. In addition, a positive correlation exists between FoMO and emotional distress (Fabris et al., 2020) and social media addiction (Varchetta et al., 2020), which is mediated by social media engagement (Fathadhika & Afriani, 2018). In other words, the more users worry about missing out on moments on social media, the higher their attachment to activities on social media will be, which will then lead to emotional distress and addictive behavior. Essentially, FoMO has been shown to correlate positively with distraction and disengagement from learning in lectures (Al-Furaih & Al-Awidi, 2021). FoMO can also increase individuals' negative affect (Milyavskaya et al., 2018) and overall reduce subjective well-being (Stead & Bibby, 2017). FoMO level directly impacts the level of problematic social media use (Casale et al., 2018), which can also place individuals' mental health at risk (Hayran & Anik, 2021).

One cohort vulnerable to FoMO is the young (Przybylski et al., 2013), coincidentally, students or college students. FoMO has been extensively studied in the context of social media use (Rahardjo & Soetjiningsih, 2022; Shen et al., 2020; Schneidera, 2020; Durak & Seferoğlu, 2020) as well as in terms of individual internal factors and personality (Sianipar & Kaloeti, 2019; Siddik et al., 2020; Uram & Skalski, 2020; Barry & Wong, 2020; Li et al., 2020). However, FoMO research in the academic context remains very scarce, and this scarcity can be attributed to FoMO measurement tools' limitations within the scope of academics and learning. Meanwhile, Nursodiq et al. (2020) found that FoMO experience and its response in an academic context can differ greatly depending on triggering events, that is, whether the source comes from the individual's personal life, the information/news sector, and/or the work/school sector. Hence, a FoMO measurement tool is needed for social media use within the educational context.

The Development of FoMO Scales

FoMO was first constructed as individual differences and deemed as a form of ramification from using social media. It was defined as a pervasive fear that others might be having more rewarding experiences from which one is absent and is characterized by a desire for continuous connection (Przybylski et al., 2013). Moreover, early FoMO scales measured individual affective, cognitive, and behavioral components in one dimension (unidimensional).

Przybylski et al. (2013) first pioneered the development of the FoMO Scale by generating 32 items in its first stage of studies. The scale

was tested on a diverse sample across countries to identify a small number of representative items using latent trait analysis. After an iterative process of confirmatory factor analysis (CFA), eight suboptimal items were excluded, leaving 25 items. To maximize the scale's sensitivity and conciseness, item response theory (IRT) was used. Based on IRT analysis results, much information could be identified from 10 items. Hence, the final 10-item scale could measure FoMO at low, medium, and high levels, and subsequent studies have supported it (Giola et al., 2021; Fabris et al., 2020; Shen et al., 2020; Fathadhika & Afriani, 2018; Lemay et al., 2019; Sianipar & Kaloeti, 2019; Varchetta et al., 2020). The 10-item scale has since been adapted to various languages and cultures, including Indonesian, which produced four components: comparison, being left out, missed experience, and compulsion (Helmi, 2020).

Meanwhile, in an academic context, Alt (2015) studied the correlation between social media engagement and FoMO, managing to elaborate on the 10-item scale by compiling the 10 items into one dimension termed Social FoMO, which arose from information exchange in the individual's social environment (e.g., family, friends, social media). Contrary to Przybylski et al. (2013), Alt (2015) argued that FoMO should not be considered a general factor but rather multidimensional in nature. Thus, on top of the Social FoMO dimension, Alt (2015) added the two dimensions of FoMO news information (News FoMO) and FoMO commercial information (Commercial FoMO) to facilitate research on social media use during learning processes. Furthermore, bivariate correlation analysis revealed higher correlation between factors within the same domain—social, news, and commercial—thus confirming FoMO's multidimensionality. Specifically, the News FoMO dimension involves activities related to news, such as the behavior during class of frequently checking notifications not related to academic activities; the Commercial FoMO dimension refers to the behavior during learning activities of finding and sharing information about available sales, discounts, and coupons through social media.

While Alt (2015) developed a scale to determine FoMO levels in an academic context, Abel et al. (2016) categorized FoMO based on psychological components: the sense of self, social interaction, and social anxiety. Wegman et al. (2017) also argued that FoMO is not unidimensional but has two constituent factors (bifactorial), that is, individual predisposing factors (trait-FoMO) and factors from the impact of Internet use itself (state-FoMO). The scale developed by Wegmann et al. (2017) contained additional items to measure state-FoMO by retaining and modifying some items from Przybylski et al.'s (2013) original 10-item FoMO Scale.

FoMO can also be measured in other specific contexts. Budnick et al. (2020) developed an instrument specifically to measure FoMO in the context of work settings. That scale includes two dimensions—relational exclusion and informational exclusion. FoMO measurement's rapid development in various contexts demonstrates its manifestations in various aspects of life. Research developments also suggest that FoMO is multidimensional, rather than unidimensional as presumed in the initial psychological FoMO study.

Some of the FoMO scales mentioned above have been adapted to the Indonesian language. Helmi (2020) adapted and validated Przybylski's FoMO Scale into the Indonesian language; this resulted in four factors: (1) Comparison, (2) Being Left Out, (3) Missed Experience, and (4) Compulsion. Many studies have been conducted using a modified version of Przybylski's FoMO Scale (Fathadhika & Afriani, 2018; Sianipar & Kaloeti, 2019; Siddik et al., 2020). Kurniawan and Utami (2022) also conducted a study on the validation of the Online-FoMO Scale that produced four dimensions: (1) the Need to Belong, (2) the Need for Popularity, (3) Anxiety, and (4) Addiction. Abel's FoMO Scale has also been adapted to the Indonesian context (Vivaldie & Agustin, 2022). However, Alt's FoMO Scale has still not been adapted to Indonesia to date even though there were many studies on FoMO aimed at students or were conducted in the academic context. A 2023 Google Scholar search resulted in approximately 1170 results when "FoMO" and "mahasiswa" (Indonesian for "university students") were used as keywords.

Based on the explanation above, this study aims to adapt the scale developed by Alt (2015) because it allows FoMO measurement in various

contexts, including the academic context. Hence, the study examines the three dimensions of Social FoMO (cognitive, affective, behavioral), News FoMO, and Commercial FoMO. This study does not use the FoMO components from Abel et al. (2016) and Wegmann et al. (2017) because in Alt (2015), they are represented in the Social FoMO dimension.

Method

Participants

Data collection was carried out using a questionnaire consisting of informed consent, self-identity, and a scale using Google Forms. The form was distributed through various social media platforms, for instance, WhatsApp and Twitter. This study's scale is the FoMO Scale's Indonesian version consisting of 17 items.

The study's participant inclusion criteria were (1) active university students and (2) had taken or were taking online lecture courses at universities on Java Island. Here, the term "online lectures" covers all academic activities in tertiary institutions, including all forms of teaching and learning activities, thesis and other final -project guidance and supervisory processes, and examination activities conducted with devices connected to the internet network. The basis for choosing participants from universities in Java was because, according to Indonesian Statistics 2022 by Badan Pusat Statistik (BPS) Indonesia (2022), 47.8% of Indonesia's higher education institutions were centralized on Java Island. Until 2022, in fact, Java had 5.398.982 higher education students (BPS, 2022). According to Isaac and Michael in Sugiyono (2007), the minimum sample size for a population of more than 100.000 is about 385 people.

To gather participants from such a large scope, multi-stage cluster random sampling technique was used. The first step was to cluster groups based on geographical area (primary sampling units). The second step was to cluster groups based on higher education status (e.g., public, private) and on types of higher education established by the government (e.g., diploma, such as institutes, universities, academy schools; polytechnics (secondary sampling units). The next step was to finalize the ultimate sampling unit, which was the establishments' names. Thus, the ultimate sampling units generated from a computerized randomization process were Universitas Gadjah Mada, Universitas Padjadjaran, Universitas Diponegoro, Universitas Negeri Semarang, and Universitas Jenderal Soedirman. To meet the minimum sample size of 385 people from these 5 institutions, the minimum sample from each institution should be about 80 people. Samples obtained with this technique were then included in further data analysis.

Measures

FoMO in this study was measured based on the Fear of Missing Out Scale by Alt (2015). The scale consisted of the three dimensions of Social FoMO, News FoMO, and Commercial FoMO. The FoMO Scale in English had five alternative responses as follow: not at all true of me, slightly true of me, moderately true of me, very true of me, and extremely true of me. In the adaptation process, the responses in Indonesian became sangat tidak sesuai (STS), tidak sesuai (TS), cukup sesuai (CS), sesuai (S), and sangat sesuai (SS), presented as linear options with labels at each extreme end. The scale had a mid-category response to provide opportunities for respondents who had an inherently moderate attitude toward the given statement (Klopfer & Madden, 1980). The FoMO Scale used the Likert model, with a rating of 1 for the response choice not at all true of me (STS) option and a rating of 5 for extremely true of me (SS).

Procedure

In accordance with the International Test Commission (2017) prerequisites prior to cross-cultural adaptation, this study obtained written permission from the holder of the intellectual property rights to proceed with the FoMO Scale's Indonesian adaptation. Correspondence with the copyright owner was also conducted to obtain details on items from the scale's original version. This entire correspondence was conducted via electronic mail.

In addition to factor loading, several goodness of fit indices parameters must be met to prove that an observed model accords with the theoretical model (model fit). Three types of fit indices for assessing a model are absolute fit, incremental fit, and parsimony fit (Hair et al., 2009). The goodness of fit (GOF) threshold value of a model parameter will be in accordance to

the guideline (Pahlevan Sharif & Sharif Nia, 2018; Ghozali, 2017).

The FoMO Scale used in this study is an adaptation of the 17-item FoMO Scale developed by Alt (2015). The adaptation of the scale from English into Indonesian was conducted in several stages. Additionally, Beaton et al. (2000) proposed five stages in the process of cross-cultural adaptation of measuring tools: (1) Forward translation, (2) Synthesis, (3) Backward translation, (4) Review by an expert committee, and (5) Pretesting.

For the forward translation, the researcher assembled a team of translators involving a linguist and a translator with a master's degree in psychology with an International English Language Testing System score of ≥7.5. The translators were assigned to ensure that the adaptation process considered differences in language, culture, test content, and principles of testing in general.

Each translator performed an independent translation (T1 & T2), later synthesized into one (T12) through an online discussion between the translators, in which the researcher moderated. For example, the translation of item 4 ("When I go on vacation, I continue to *keep tabs* on what my friends are doing") produced these two different translations: (T1) "*Ketika saya pergi liburan, saya tetap* memantau *apa yang teman-teman saya lakukan*" and (T2) "*Ketika saya pergi tamasya, saya terus* mengawasi *apa yang teman-teman saya sedang lakukan*." Through the discussion, a T12 consensus and thus a synthesis was obtained, namely "*Ketika saya pergi liburan, saya tetap memantau apa yang teman-teman saya lakukan*." This process maintained the original item's meaning while remaining both comprehensible to and culturally relevant to Indonesians.

The following stage, the backward translation, was conducted by two other Indonesian translators who had English language qualifications; they had never seen the scale's original version before re-translating the T12 synthesis into English. This step aimed to maintain the meaning's suitability and the instrument's validity. For instance, the back translation of the T12 item 4 "When I go on vacation, I *keep track* of what my friends are doing" indicated that the Indonesian translation had a compatible meaning with the original even though it did not generate exactly the same wording as in the original version.

At the expert committee's review stage, three FoMO researchers examined the previous steps' results to reach consensus on the translations' differences. For instance, the expert committee highlighted the diction used by the forward translators for item 4, mentioning that the words "*mengecek*" and "*memantau*" required different duration and that the words "*memantau*" and "*mengawasi*" had a different hierarchy of subject and object. Therefore, item 4 required further consideration. Eventually, the expert committee established a final Indonesian translation of the FoMO Scale with 17 items conceptually and semantically equivalent to the original scale. Also following the original scale, the three dimensions of Social FoMO, News FoMO, and Commercial FoMO were included. Table 1 shows the Indonesian version's item distribu-

Table 1. *Indonesian version of the FoMO Scale*

Dimension	Item No.	Total	Item Example
Social FoMO	1, 2, 5, 9	4	Saya takut orang lain punya pengalaman yang lebih menyenangkan daripada saya.
	7, 14 16	3	
	4, 10, 13	3	
News FoMO	3, 6, 8	3	Saya kesal ketika teman-teman lebih dulu tahu berita terbaru (update) sebelum saya.
Commercial FoMO	11, 12, 15, 17	4	Ketika pergi berlibur, penting bagi saya untuk tetap mengikuti informasi tentang promosi komersial (diskon, voucher/kupon).

Table 2. *Factor Loading Significance Based on*

Factor Loading	Minimum Sample Size
0.30	350
0.35	250
0.40	200
0.45	150
0.50	120
0.55	100
0.60	85

tion. The scale's testing was conducted from April 19 to May 03, 2022.

Data Analysis

The data obtained from the testing were analyzed for the instrument's psychometric properties. Confirmatory factor analysis (CFA) assessed the instrument's construct validity using the Analysis of Moment Structure (AMOS) program version 23.0. This procedure contributed to defining the variables' connections in the form of factors or a group of limited variables (Azwar, 2019). Factor loading determined the validity, indicating the correlation between a variable and a factor. The higher the factor loading result, the greater the item's significance or validity. This study's minimum acceptable range for factor loading was 0.30–0.40. Table 2 contains the guideline for identifying factor loading's significance based on sample size (Hair et al., 2009).

In addition to factor loading, there are several goodness of fit (GOF) index parameters that must be met to demonstrate that an observed model is in accordance with the theoretical model (model fit). The three types of fit indices for assessing a model are absolute fit, incremental fit, and parsimony fit (Hair et al., 2009). Guidelines for a model parameter's GOF threshold value can be seen in Table 3 (Pahlevan Sharif &

Table 3. *Recommended Criteria for Fit Indices*

Fit Indices		Value	Authors
Absolute fit indices	χ^2	p-value>0.05	Meyers et al. (2005)
	CMIN/DF	<5.0	Marsh dan Hocevar (1985)
	GFI	>0.90	Chau (1997)
		>0.90	Segars dan Grover (1993)
	RMSEA	<0.08	Byrne (2001)
		< 0.08: good fit; 0.08—0.1: moderate fit; >0.1: poor fit	Meyers et al. (2005)
Incremental fit indices	CFI	>0.90	Bentler (1990)
		0.8—0.9 moderate fit	Ghozali (2017)
	NFI	>0.90	Bentler dan Bonett (1980)
		0.8—0.9: moderate fit	Ghozali (2017)
Parsimony fit indices	AGFI	>0.80	Hair et al. (2009)

Note.: AVE = average variance extracted, CR = composite reliability

Table 4. *Normality Testing*

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		534
Normal Parameters[a,b]	Mean	0.0000000
	Std. Deviation	9.89563818
Most Extreme Differences	Absolute	0.027
	Positive	0.027
	Negative	-0.021
Test Statistic		0.027
Asymp. Sig. (2-tailed)		**0.200[c,d]**

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Sharif Nia, 2018; Ghozali, 2017).

Furthermore, construct validity assessed by CFA can also be based on composite reliability (CR) values and average variance extracted (AVE) values. Construct reliability in each dimension can be determined from the CR value (Hair et al., 2009). Meanwhile, to estimate the internal consistency of the FoMO Scale's Indonesian version as a whole, the study assessed Cronbach's alpha with the Statistical Package for the Social Sciences (SPSS) version 25.0.

Results

Participants

The study's participants were 534 university students, mostly women (n=416, 84.4%), aged 18—25 years (M=19.9, SD=1.47). Most participants lived in Java (Central Java 42.5%, West Java 30.3%, DIY 8.6%, DKI Jakarta 5.8%, East Java 5.1%, Banten 3.2%), while the rest of the participants domiciled outside Java (4.5%).

Normality testing was performed with One Sample (1-S) Kolmogorov-Smirnov Test. Result in Table 4 showed that the sample in this study had a normal distribution with significance value of 0.200 (p>0.05).

Validity Estimation

Through CFA processes, the study assessed construct validity by determining each item's factor loading for each item as well as the AVE and CR values for each dimension. In the first run, CFA analysis showed poor model fit based on the fit indices value that was still below the minimum threshold. For the second run, the model was modified by examining the modification indices value to bind error variance (error covariance). CFA analysis results after modification are displayed in Table 5.

Factor loadings on the Indonesian version of the FoMO Scale ranged from 0.42 to 0.74. According to Hair et al. (2009), the minimum factor loading value for a sample size n> 350 is 0.3. Tabachnick and Fiddell (2007) also suggested that an excellent factor loading has a minimum value of 0.63, a good factor loading had a value of 0.55, an adequate loading for 0.45, and a poor factor loading for 0.32.

The FoMO Scale's Indonesian version also met several GOF criteria. Although the chi-square value did not meet the fit index criteria, this can be explained by the influence of the large sample size (n>500), which is likely to produce significant chi-square values; hence, determining criteria for model parameters must be conducted based on other fit indices (Hair et al., 2009).

The Social FoMO dimension yielded indice values of RMSEA ≤ 0.08; GFI ≥ 0.9; NFI≥ 0.9; CFI≥ 0.9; and AGFI ≥ 0.9, all indicating the model had a good fit. The News FoMO dimension showed indice values of RMSEA ≤ 0.1; GFI ≥ 0.9; NFI≥ 0.9; CFI≥ 0.9; and AGFI ≥ 0.9, implying a moderate–good fit. The Commercial FoMO dimension also had a moderate—–good fit based on the indice values of RMSEA ≤ 0.1; GFI ≥ 0.9; NFI≥ 0.8; CFI≥ 0.8; and AGFI ≥ 0.8. Thus, the In-

Table 5. *CFA Results of the Indonesian version of the FoMO Scale*

Dimension	Item	Factor Loading	Goodness of Fit	AVE	CR
Social FoMO	F1	0.42	χ^2=130.5; p=0.00; RMSEA=0.066; GFI=0.950; NFI=0.902; CFI=0.929; AGFI=0.930	0.2	0.72
	F2	0.43			
	F4	0.46			
	F5	0.44			
	F7	0.47			
	F9	0.47			
	F10	0.46			
	F13	0.42			
	F14	0.50			
	F16	0.49			
News FoMO	F3	0.67	χ^2=11.25; p=0.01; RMSEA=0.1; GFI=0.986; NFI=0.951; CFI=0.955; AGFI=0.918	0.4	0.85
	F6	0.66			
	F8	0.64			
Commercial FoMO	F11	0.66	χ^2=73.2; p=0.00; RMSEA=0.1; GFI=0.933; NFI=0.867; CFI=0.873; AGFI=0.833	0.5	0.77
	F12	0.66			
	F15	0.74			
	F17	0.66			

donesian version's model parameter for the FoMO Scale could be accepted.

Once it has been established that the theoretical model was in line with the observational data and each item has shown correlation with a factor, construct validity can be determined from AVE and CR values. Hair et al. (2009) suggested that to show good convergent validity, the AVE value should be greater than or equal to 0.5. However, Fornell and Larcker (1981) argued that construct validity would still be acceptable even when the AVE value is below 0.5 granted that the CR value exceeds 0.6.

As Table 4 shows, the Social FoMO dimension had an AVE value below 0.5 but a CR of 0.72. Likewise, the AVE value for the News FoMO dimension was less than 0.5 but yielded a CR value of 0.85. The Commercial FoMO dimension had an AVE value of 0.5 and a CR value of 0.77. These findings indicate that the three FoMO dimensions had a CR value above 0.6, so it can be concluded that the construct validity was acceptable.

Reliability Estimation

Besides being used to determine the scale's construct validity, CFA was used to estimate construct reliability based on CR values. According to Hair et al. (2009), a CR value of 0.7 indicates good reliability.

Data in Table 4 shows that each dimension of the FoMO Scale's Indonesian version had a CR value above 0.7. For the Social FoMO dimension, the CR value was 0.72, for the News FoMO dimension, 0.85, and for the Commercial FoMO dimension, 0.77. Thus, each dimension was shown to be reliable.

Reliability estimation for the FoMO Scale's Indonesian version as a whole was determined by the Cronbach's alpha coefficient. Analysis results from SPSS showed that the scale produced a coefficient of 0.842. Priyatno (2012) explained that α>0.8 can be interpreted as a good reliability for measurement instruments.

Discussion

This study proposed to adapt and test the psychometric properties of the measuring instruments of Fear of Missing Out Scale developed by Alt (2015) to the Indonesian culture and language. The Indonesian version has three dimensions; Social FoMO, News FoMO, and Com-

mercial FoMO. CFA analysis results indicated that each dimension had good construct validity and reliability.

Model modification based on modification indices improved model parameters by applying error-covariance in the first testing. From the Social FoMO dimension, error variances were obtained on items 1, 2, 5, 7, and 16. The result of covariance calculation signified that items 1, 2, and 5 had similarities: (F1) "Saya takut orang lain punya pengalaman yang lebih menyenangkan daripada saya"; (F2) "Saya khawatir ketika tahu bahwa teman-teman bersenang-senang tanpa saya"; and (F5) "Saya takut teman-teman saya punya pengalaman yang lebih menyenangkan daripada saya." (F5), and "Saya kesal ketika melewatkan kesempatan untuk bertemu dengan teman-teman" and (F16) "Saya kesal ketika melewatkan acara yang sudah direncanakan bersama." Model modification was also performed on F3 and F6 for the News FoMO and on F11 and F15 for the Commercial FoMO. Brown (2015) believed that calculating the covariance of the error variance in several items is likely to be performed if the indicator is asked repeatedly (Brown, 2015).

After modification, the Social FoMO dimension was discovered to have acceptable factor loading, (0.42–0.50), model fit (RMSEA ≤ 0.08; GFI ≥ 0.9; NFI ≥ 0.9; CFI ≥ 0.9; and AGFI ≥ 0.9), and qualified CR (0.72). The News FoMO dimension also had sufficient factor loading (0.64–0.67) and met the four qualifications of the five accuracy indices: RMSEA showed moderate fit (RMSEA ≤ 0.1), and other indices good fit (GFI ≥ 0.9; NFI≥ 0.9; CFI≥ 0.9; and AGFI ≥ 0.9), further supported by good CR (0.85). The Commercial FoMO dimension generated fair values for factor loading (0.66–0.74), while the accuracy index indicated moderate fit (RMSEA ≤ 0.1; NFI≥ 0.8; CFI≥ 0.8; and AGFI ≥ 0.8) and good fit (GFI ≥ 0.9), as well as acceptable CR (0.77). Of the three dimensions' factor loadings, the Commercial FoMO dimension had the highest correlation with the FoMO construct, albeit imperfect.

Other than evaluating the validity, a good model fit implied that the theorized construct reflected the observed model and vice versa. Hence, it could be established that the Social FoMO, News FoMO, and Commercial FoMO dimensions constituted the FoMO construct. However, future studies should consider analyzing divergent validity to further confirm the instrument's dimensionality. Deciding the correct dimensionality—whether a construct is unidimensional or multidimensional—for item scores is essential to ensure that, among other considerations, interpretive clarity is maintained, loss of information is prevented, and bias in parameter estimation is minimized (Garrido et al., 2019).

AVE values generated from the three dimensions were inadequate (0.2–0.5), but each dimension's CR was acceptable (0.72–0.85). Pahlevan

Sharif et al. (2018) argued that low AVE value is common, especially in the development of new measuring instruments; accordingly, if the CR value is greater than 0.6 and greater than the AVE value, the construct validity is still acceptable. CR values can be used to estimate construct reliability, and thus each dimension was reliable. In addition, according to the Cronbach's alpha, the scale's overall reliability estimation indicated that the scale was reliable (α =0.842).

Therefore, the FoMO Scale's Indonesian version may be utilized to determine individuals' FoMO levels. Following Alt (2015), this measurement tool's adaptation may be used to measure FoMO, particularly within the learning environment. Hence, in contrast to other FoMO scales successfully adapted to the Indonesian context, this study's FoMO Scale version will be more relevant to be used in an academic context. Even so, research on FoMO's construction may discover distinct indicators and dimensions not represented in this measurement tool.

Conclusions

The adaptation process for the FoMO Scale's Indonesian version produced a valid and reliable instrument to measure individuals' FoMO levels in an Indonesian academic context. CFA analysis showed that the factorial structure of the Indonesian version aligned with its original English version, which had the three dimensions of Social FoMO, News FoMO, and Commercial FoMO. Hence, this measurement tool can be applied to FoMO research in Indonesia.

Nevertheless, the study had some limitations. CFA analysis results suggested that factor

loadings and model parameters could be optimized in future research by, but not limited to, considering the sample size, model complexity, and number of variables (Kenny & McCoach, 2003; Tanaka, 1987). Study participants generally identified as university students, and as such, we did not perform demographic analyses (e.g., age and education level) because the sample was relatively homogenic, that is, university students aged 1825, a cohort Arnett (2006) refers to as "emerging adults." Moreover, the research did not use a group for comparison between individuals' differing FoMO levels. Thus, for future research, a measurement invariance test with multiple group analysis is strongly recommended. Furthermore, comparison between different model types may also be conducted to determine the best fit. Although this scale's dimensions were intended to determine individuals' experiences of FoMO in the academic context, the scale itself could not yet facilitate the FoMO experienced when individuals miss out on matters related to their academic activities; thus, deeper research is needed. Finally, this study analyzed construct validity but has not yet investigated criterion validity, in which, to establish more robust findings, this scale can be compared with other similar measurements.

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