Social media fear of missing out: psychometrics evaluation based on Indonesian evidence

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Abstract. The convenience offered by social media provides a wide opportunity for its user to socialize. But on the other hand it creates a new behaviour for its user, they often upload and announce things that are sometimes not so important to be announced regardless of the time constraints that exist, popular terms used are FoMO (Fear of Missing Out). FoMO is a fear or anxiety experienced by someone when not knowing the events of others in social media. This study examines the validity of the Fear of Missing Out scale. The sample used 30 students in UNP. The data found were analyzed using Rasch model. These results indicate that the scale of fear of missing out is valid and reliable. Thus it can be identified that its instrument can measure the level of fear of missing out.

1. Introduction

Information and communication technologies (ICT) have become an essential part of our lives[1]–[3]. Social media is a part of ICT which continues to grow[4]. Social media plays a vital role in transforming people’s life style includes social networking sites and blogs where people can easily connect with each other[5]. However, extensive social media use could also negatively affect psychological outcomes, such as well-being [6].

The development of the classification of internet usage disorder caused a new phenomenon called FoMO (Fear of Missing Out)[7], [8]. Defined as a pervasive apprehension that others might be having rewarding experiences from which one is absent, FoMO is characterized by the desire to stay continually connected with what others are doing[9]–[11]. Although FoMO is not necessarily a phenomenon exclusive to social media users, individuals with high FoMO might feel compelled to check their social media more often to keep up to date on their friends’ plans and activities[12], [13]. Frequent use of social media may also trigger or increase this fear of missing out, because of the individual’s heightened awareness of the numerous possibilities for interaction[14].

FOMO would explain the tendency for people with chronic deficits in psychological need satisfaction to constantly seek out updates and possibilities to engage with social media[15], [16], even when this takes place in potentially inappropriate or dangerous situations, e.g. while driving[9], attending a lesson[6], or being in a face-to-face conversation[17].

In Indonesia has not much research about FoMO, because FoMO is a new issue from cyberpsychology. The rate of FoMO can be various from one individual to another, a valid and reliable instrument is required so it can measure the level of FoMO. FoMO scale is an instrument that can measure well the level of fear of missing out.
2. Method
The sample in this preliminary study consisted of 30 college students with different demographic, faculty and majority at Universitas Negeri Padang. FoMO scale is used to measure the level of Fear of Missing Out in students.

The FoMO scale contains 19 items used 5-points likert rating scale. Fear of missing out was measured by using the FoMO scale (FoMO-s)[9] which has been translated and adapted to the Indonesian language from English version. The FoMO scale has been through data testing process with reliability value (Cronbach Alpha-KR20) of 0.85.

The data findings were analyzed by using and Rasch analysis [18] involves the use of Winstep Version 3.73 applications [19].

3. Result and Discussion

3.1. Reliability
In general, the condition of item consistency in the inventory of Social Media Fear of Missing Out Indonesian Version is in fairly reliable category. This is evidenced by the acquisition of reliability items at the 0.87 logit level. Furthermore, the consistency of the item when viewed from the relation between the items to the total in Cronbach α is 0.81 logit. This reliability condition indicates the fact that the condition of the item on this inventory has met the consistency requirements well.

| Table 1. Reliability testing of Social Media Fear of Missing Out Indonesian Version |
|-----------------|-------|----------------------------|-----------------|----------------|
|                 | Mean  | SD  | Separation Index | Reliability | Cronbach α |
| Person          | -.73  | .68 | 1.76             | .76          | .81         |
| Item            | .00   | .58 | 2.37             | .87          |             |

3.2. Unidimensionality Validity
A powerful measuring tool is characterized by the unidimensionality of the item construct. So that inventory really measures exactly what concept to be measured. This indicates that the inventory validity of one can be supported by the coherent conditions within the item structure.

| Table 2. The unidimensionality of Social Media Fear of Missing Out Indonesian Version using standardized residual variance |
|-------------------------------------------------|
|                     | Empirical | Modeled |
|---------------------|-----------|---------|
| Total raw variance in observations               | 29.5      | 100.0%  |
| Raw variance explained by measures                | 10.4      | 35.4%   |
| Raw variance explained by persons                 | 2.2       | 7.5%    |
| Raw Variance explained by items                   | 8.2       | 27.9%   |
| Raw unexplained variance (total)                  | 19.0      | 64.6%   |
| Unexplained variance in 1st contrast              | 4.8       | 16.3%   |
| Unexplained variance in 2nd contrast              | 2.8       | 9.5%    |
| Unexplained variance in 3rd contrast              | 2.4       | 8.1%    |
| Unexplained variance in 4th contrast              | 2.0       | 6.8%    |
| Unexplained variance in 5th contrast              | 1.6       | 5.5%    |

Based on the findings of this research, it is known that the total raw variance that can be explained by inventory in the context of social media fear of missing out is 35.4%. If analyzed in terms of Rasch analysis, these findings are still below the acceptable limit of unidimensionality, which is at the upper 40% level. However, the limit of the inventory variance that the instrument cannot explain is also at a good enough level, which is at the 16.3% level on the 1st contrast and 9.5% in the 2nd contrast. The unidimensionality of the instrument indicates that at a substantial population level, it is necessary to improve and add items so as to increase the variance of social media fear of missing out value by being more representative and comprehensive.
3.3. Rating Scale Validity
The rating scale fit for the inventory is presented in Table 3. The analysis on Andrich Threshold shows that there is a significant and simultaneous increase. This indicates that there is a difference of good understanding to the respondent in interpreting the answer choice on rating scale. Measurements in the category measure also show that there is no value of measuring the same logit scale measurement between rating scale.

### Table 3. Summary of Social Media Fear of Missing Out Indonesian Version Category Structure

| Label | Score | Observed Count | Observed % | Sample Expect | Infit MNSQ | Outfit MNSQ | Andrich Threshold | Category Measure |
|-------|-------|----------------|------------|---------------|-----------|-------------|-------------------|------------------|
| 1     | 1     | 134            | 24         | -1.56         | -1.50     | 1.00        | 1.00              | None (-2.77)     |
| 2     | 2     | 177            | 31         | -0.90         | -0.88     | 0.79        | 0.69              | -1.44 -1.16      |
| 3     | 3     | 149            | 26         | -2.29         | -0.42     | 0.84        | 0.78              | -0.47 -0.05      |
| 4     | 4     | 89             | 16         | 0.00          | -0.04     | 0.90        | 0.87              | 0.28 1.14        |
| 5     | 5     | 20             | 4          | -2.25         | 0.32      | 1.70        | 2.03              | 1.63 (2.90)      |

Note: Observed average is mean of measures in category. It is not a parameter estimate.

This condition is supported by exposure in Figure 1 which shows the curve of category probabilities. The curve shows the response of the research respondents in interpreting the rating scale. So when analyzed, the condition of the respondent's pattern on the rating scale there is no conflicting. The understanding of the respondents indicates that there is no need for a change in the choice of answers on this scale.

![Category Probabilities: Modes - Structure Measures at Intersections](image)

3.4. Item Fit and Item Difficulties
Analysis of the calibration conditions of the items so as to produce a robust measuring tool pda Table 4. The condition of the fit items can be calculated by looking at the range of normal curves received, i.e. as much as 2 standard deviations (in this case the acceptance limit is 1.36 logit). When viewed on the acquisition of the value of the measure item, no item is above or below the logit value, so it can be concluded that the inventory is in a fit condition to make measurements although on a large scale.

However, the acceptance conditions still need an in-depth analysis of some item conditions. This condition can be seen in the outlier-sensitive fit (outfit MNSQ) condition with a limit of 0.5 to 1.5 logit.
Table 4. Constructing Examinations from Calibrated Item, Item Difficulty, and Item Fit of the of Social Media Fear of Missing Out Indonesian Version

| Item | Measure | Infit MNSQ | Outfit MNSQ | Perceived Difficulties |
|------|---------|------------|-------------|------------------------|
| 1    | 1.2     | 0.8307     | 0.7205      | Most difficult item    |
| 2    | 0.95    | 0.4151     | 0.4573      |                        |
| 10   | 0.63    | 0.3549     | 0.3645      |                        |
| 3    | 0.58    | 0.6619     | 0.6562      |                        |
| 11   | 0.58    | 0.6073     | 0.6136      |                        |
| 4    | 0.39    | 0.646      | 0.6544      |                        |
| 14   | 0.22    | 0.7393     | 0.7547      |                        |
| 18   | 0.16    | 0.5874     | 0.5929      |                        |
| 13   | -0.06   | 2.3533     | 2.376       |                        |
| 15   | -0.06   | 0.9351     | 0.9426      |                        |
| 5    | -0.1    | 0.9006     | 0.8749      |                        |
| 12   | -0.3    | 2.3949     | 2.3481      |                        |
| 6    | -0.41   | 0.8755     | 0.8602      |                        |
| 17   | -0.45   | 1.0341     | 0.9921      |                        |
| 8    | -0.49   | 0.9627     | 0.9441      |                        |
| 9    | -0.56   | 0.9083     | 0.9072      |                        |
| 16   | -0.67   | 0.6685     | 0.6487      |                        |
| 19   | -0.71   | 0.6895     | 0.6964      |                        |
| 7    | -0.9    | 2.0666     | 2.7101      | Most easy item         |

The exposure of the research data indicates that there are three items above the required outlier limit, that is, items 13, 12, and 7. The outlier condition demands an improvement on the item so it can be accepted in the data collection. However, although there are three items above the acceptance limit, in the item map item they are still within the expected limits. Thus it can be concluded that the item only needs to be improved in the context of the sentence so that it can be easily accepted and understood by the respondent.

3.5. Test of Information Function
The level conditions of information that can be given inventory are shown in Figure 2.

The level of information provided by the inventory of the FOMO social media conditions is in the high category with a span of 17 points. So it can be concluded that the acquisition of information is quite representative with FOMO conditions that want justification of the respondents. The level of
information obtained can be the basis in the analysis of FOMO conditions in general. While in the broad condition of the information, the Test of Information Function value indicates that in general the FOMO condition that can be measured on the respondent is at a moderate to low level of mastery, this assumption comes from a more left-handed and narrower curve at the end..

4. Conclusions

Based on the description it can be conclude that the FoMO scale meets to validity and realibility of the instrument. this means that FoMO scale can measure student’s fear of missing out. The existence of this instrument is expected to identify and facilities in recognizing the fear of missing out. This inventory is assumed to be used to measure the mental health condition of individuals related to their behavior in using social media. FOMO conditions in individuals can be an indicator of disruption of individuals mental health [15], [20] and thus require professional help such as counselor [21], [22] or psychotherapist [12].

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