

## Exploration of the fear of missing out internet based on demography

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### ABSTRACT

Rapid technological developments make it easier for humans to carry out daily activities. Technology that is experiencing very rapid development today is information technology, one of which is a smartphone. Smartphones require internet access to be able to perform as a sophisticated mobile phone. The purpose of this study is to measure the difference in fear of missing out (FoMO) internet students based on gender, faculty, and domicile based on the area of residence. The method in this study uses descriptive comparative, which combines two-way analysis of variance (ANOVA) with Rasch racking model by transforming raw data into logarithmic data. The data in this study were five-point Likert scale polytomy data collected using the FoMO scale instrument which was disseminated online and the research data were analyzed using the Rasch model. The findings show that there are significant differences in FoMO internet in terms of men and women. Furthermore, this study discusses differences in the FoMO internet regarding faculty and domicile, therefore a context is needed to improve the alignment program with technology counseling.

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## 1. INTRODUCTION

The rapid development of technology, information and communication in the millennial era made a significant increase in the field of networking, especially in the use of internet access [1]. As a result of these conditions, researchers are trying to uncover problems in the millennial era related to the correlation between fear of missing out (FoMO) on smartphones and motivation, emotions and behavior [2], addiction to using social media [3], anxiety and depression are associated with excessive use of smartphones [4], internet addiction [5], phubbing behavior [6]. In line with the concept of human-computer interaction (HCI), which explains that computers can affect the emotions of users, for example when a network is lost, this condition makes the user emotional because his smartphone does not respond to the user's wishes [7]–[9]. This invites the interest of researchers to conduct studies related to the use of the internet network, until a statement appears among the public about “cannot live without the internet” [10].

This condition is supported by research in Indonesia which states that internet users in Indonesia have increased by 10.12% [11]. According to the secretary-general of Association of Indonesian Internet Service Providers, this survey involved 5,900 samples with a margin of error of 1.28% [12]. This field data was obtained from March to April, 2019, 98% of students are active internet users, and 97% actively use social

media [13]. Meanwhile, research results in Turkey found that students use the internet at 13.1% for 2-3 hours, 5.1% for 3-4 hours, 4.9% for 4-5 hours and 4.4% for use of more than five hours per day [14].

Emotional dependence on the internet can trigger anxiety and in most people that can lead to a FoMO mindset in individuals [15]. Supported by research results from the United Kingdom which found that more than half of young adults have been diagnosed with FoMO problems, they are afraid of losing access to playing social media [2]. Previous study [16] explained that the reason social media is so popular among young adults is because humans are social creatures, so they need social networks. Strong social networks increase our chances of living longer and happier lives [17]. Real or imaginary sense of social exclusion can have a negative impact on both the quantity and quality of our lives [18]. Social exclusion poses a significant threat to a person's innate need to have a social network [19], [20].

The increase that occurred in internet use has made internet usage data in the world increase the estimated use of the internet worldwide is 3.7 billion people [21]. This certainly correlates with an increase in the number of smartphone users, experiencing an increase in the number of smartphone purchases [22], [23]. The applications used to communicate with social networking sites are Facebook, WhatsApp, Telegram, Twitter, Line, and Instagram [24]. This condition is exacerbated by the sophistication of smartphones that provide many applications and platforms that make smartphones increasingly loved by people of all ages. This condition is caused by all the information available and spread on social media, and they can see all the daily activities of their friends there [25], [26]. Therefore, social networking sites are often used as an environment for shy or lonely people to interact with others.

In this context, it is easier for people of all ages to get information on social media without having to leave the house [27]–[29]. This condition certainly has an impact on individual needs, they are no longer worried about staying at home, because information can be obtained from social media. However, a new problem emerged, namely FoMO, which is a feeling of discomfort, anxiety when the internet network is not on a smartphone [30]. FoMO is a condition where individuals feel uneasy or worried because of the loss of internet access on their smartphones [2].

This condition was reinforced by Young, Yue, and Ying [5], who found that currently internet users are dominated (98%) by teenagers and young adults with an age range of 16-20 years, they use the internet four hours a day. In fact, if the addiction to using the internet gets worse, it will lead to phubbing behavior, as the results of recent research explain that there is a significant contribution between FoMO on phubbing behavior of high school students [31]. In addition, excessive use of the internet can lower student morale [32]. This study was adjusted to fill a gap from previous studies on FoMO which were conducted in high schools, and none have focused on tertiary institutions, especially across faculties to evaluate the fear of missing our internet in campus environments. For this reason, the purpose of this study was to measure differences in internet FoMO in terms of gender, faculty, and domicile based on the area of residence.

## 2. RESEARCH METHOD

### 2.1. Participants

Sampling using incidental sampling technique (non-probability sampling), the sample in this study amounted to 331 Universitas Negeri Padang (Indonesia) students as respondents. Students who were respondents were 71 males and 260 females, consisting of four faculties and three living quarters of respondents living. The details of the sample in this study can be seen in Table 1.

Table 1. Research sample details

Gender	Faculty	Domicile	Age
Male (n=71)	Faculty of Education (FIP), n=173	City, n=137	16-20 years, n=70
Female (n=260)	Faculty of Mathematics and Natural Sciences (FMIPA), n=61	District, n=161	21-25 years, n=239
	Faculty of Engineering (FT), n=44	Village, n=33	26-30 years, n=22
	Faculty of Economics (FE), n=53		

### 2.2. Procedures

The method in this study uses descriptive comparative, which combines two-way analysis of variance (ANOVA) with Rasch racking model by transforming raw data into logarithmic data. Respondents were given a FoMO instrument site consisting of 19 statements distributed via online. each respondent can choose one of the five alternative answers provided and 15 minutes given to fill in the FoMO instrument.

### 2.3. Measuring

Data were collected using the FoMO scale using a five-point Likert scale with answer choices ranging from very appropriate to very inappropriate. The FoMO scale measures three aspects, namely autonomy, competence, and relatedness developed by Przybylski *et al.* [2], as for an example of one item “I am worried that my friends will upload photos of them together without me.” Reliability indicates that the quality of the answers given by each person for each test is good and the quality of the items used in the measurement is very good. While the value of each test on Cronbach’s alpha (KR-20) is 0.89, this indicates that the interaction between people and items is good.

Furthermore, the validity of the FoMO scale shows good validity results, 19 items on the scale are able to measure FoMO as seen from the raw variance value described by the size is 48% (unidimensional requirements of at least 40% have been met) [33]. In addition, the categorization of fit and misfit items on the instrument can be shown by comparing the mean square (MnSq) outfit value of each instrument item with an average MnSq outfit value of +1.00 logit, this means that 19 items on the instrument are not misfit (the ideal fit is at MnSq outfit range 0.5–1.5 logit) [34]–[36]. Complete information on the quality of the FoMO scale can be seen in Table 2.

Table 2. FoMO scale quality (item=19)

Estimation	Values
Item reliabilities	99
Person reliabilities	86
Cronbach alpha (KR-20)	89
Separation index of item	11.41
Mean item	00
Mean person	-1.03
Mean infit MnSq item	1.00
Mean infit MnSq person	1.02
Mean outfit MnSq item	1.00
Mean outfit MnSq person	1.00
Raw variance explained by measures	48%

### 2.4. Data analysis

The data of this study uses the logit on the Rasch model. The total score is converted into logit form and processed with ANOVA to test differences. The research data were analyzed using two way ANOVA and Rasch model racking [34]–[36].

## 3. RESULTS AND DISCUSSION

Internet FoMO tests are viewed from gender, faculty and domicile based on the area of residence presented in Table 3. Based on the table, it can be stated that there are differences in men and women for FoMO internet, as seen from the p-value of 0.026 smaller than 0.05. While the faculties of Faculty of Education (FIP), Faculty of Mathematics and Natural Sciences (FMIPA), Faculty of Engineering (FT), and Faculty of Economics (FE) have no significant differences, it can be seen from the p-value of 0.125. Furthermore, FoMO internet is reviewed from the domicile of the area of residence in the city, regency and village there is no significant difference. The same is true for FIP, FMIPA, FT, and FE faculties who live in the city, regency, and village areas with no significant difference with the fear of the absence of the internet. The results show that all FIP, FMIPA, FT, and FE students really need internet access every day, so student dependence on internet access causes students to be afraid if there is no internet access in their lives.

Based on the explanation, FIP, FMIPA, FT, and FE faculty students who live in cities, counties and who live in villages fear that there is no internet access due to students from Universitas Negeri Padang who need internet network every day to help with their assignments, apart from internet activities carried out by male students playing games, and women shopping online and playing social media. For more details, it can be seen in Figure 1 about the difference in FoMO in terms of gender, faculty, and domicile of the student residence in Universitas Negeri Padang.

Figure 1 shows the difference between men with code one and women with code two because the fear of losing the internet makes a difference. It can be seen from the dotted triangle line that the male (code 1) is higher than the rectangular line for the female (code 2). This means that higher men will not be seen on the internet compared to women. Different from research Syahputra *et al.* [37] states that there is no difference in internet use between men and women, what distinguishes it is the use of the internet.

Table 3. Differences in FoMO internet in based on gender, faculty, and domicile

No	Differentiated aspects	Distinct item	N	FoMO mean	Tests of between F	Sig.
1	Gender	Male	71	-7693	5.027	026
		Female	260	-1.0511		
2	Faculty	FIP	173	-9552	1.929	125
		FMIPA	61	-1.2044		
		FT	44	-1.0030		
		FE	53	-8502		
3	Domicile	City	137	-9862	185	831
		Regency	161	-9484		
		Village	33	-1.2152		
4	Gender*Faculty				1.201	310
5	Gender*Domicile				173	841
6	Faculty*Domicile				365	901
7	Gender*Faculty*Domicile				847	496

FIP=Faculty of Education, FT=Faculty of Engineering, FMIPA=Faculty of Mathematics and Natural Sciences, FE=Faculty of Economics

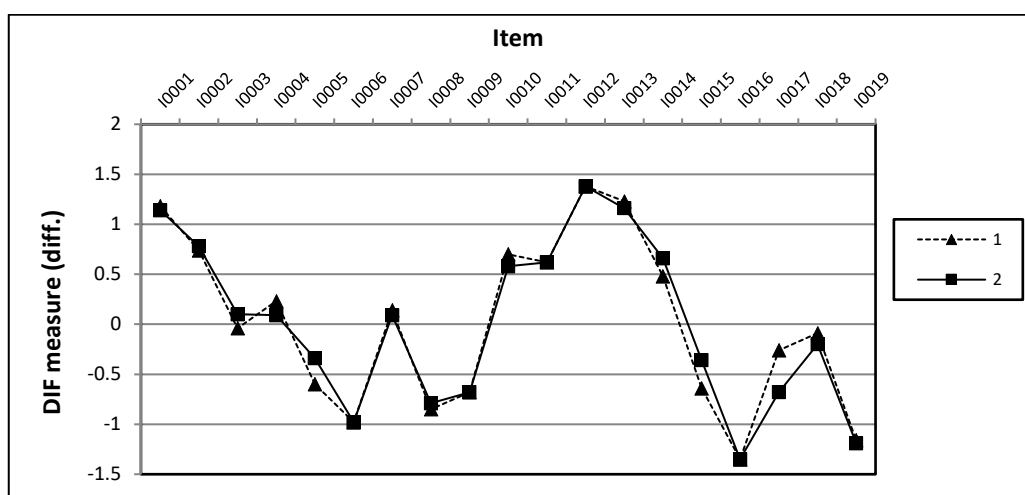


Figure 1. FoMO internet (the gender)

This condition is reinforced from the results of previous studies which stated that men play games every day using internet access so that men fear the lack of internet in their lives [38], [39]. Meanwhile, women use internet access to spend more time playing social media [40] and upload status, chat and online shopping with purchase intentions dominated by women [41]. In addition, one study in America states that 30% of men use the internet more to consume pornography than women, fear that the absence of the internet creates barriers for men in America to consume pornography [42]. Figure 2 shows some codes, namely: 1=FIP; 2=FMIPA; 3=FT; 4=FE. From some of the codes, it can be seen the line representing the code is the same tendency. Based on the results of Figure 2, it supports the results of two-way ANOVA which revealed no significant differences between FIP, FMIPA, FT, and FE.

Figure 3 shows some codes, namely: 1=city; 2=district; 3=village. The results show that there is no significant difference between students residing in cities, districts and villages. This condition supports that in the millennial era all individuals are very dependent on internet access. In the millennial era, there was no significant influence between the domicile of residence in the city, district, and in the village towards individual internet access needs. Contradiction, with research in Belgium stating that rural areas use the internet less to shop online than in cities [43].

FoMO on the internet is felt by all individuals in the world, from villages to cities. However, research by Suyanto, Subiakto, and Srimulyo [44] explained that young people in urban areas are starting to go online shopping from offline shopping. As many as 53.2% of respondents stated that online shopping is interesting because there are pictures and examples of desired products that can be clearly seen in online stores. This condition is caused by low socioeconomic rural areas that have caused no online shopping, supported by research Beckers, Cárdenas, and Verhetsel [43] which stated that rural areas in the northern part of Belgium have less buying online than in urban areas due to the socio-economic conditions of the region.

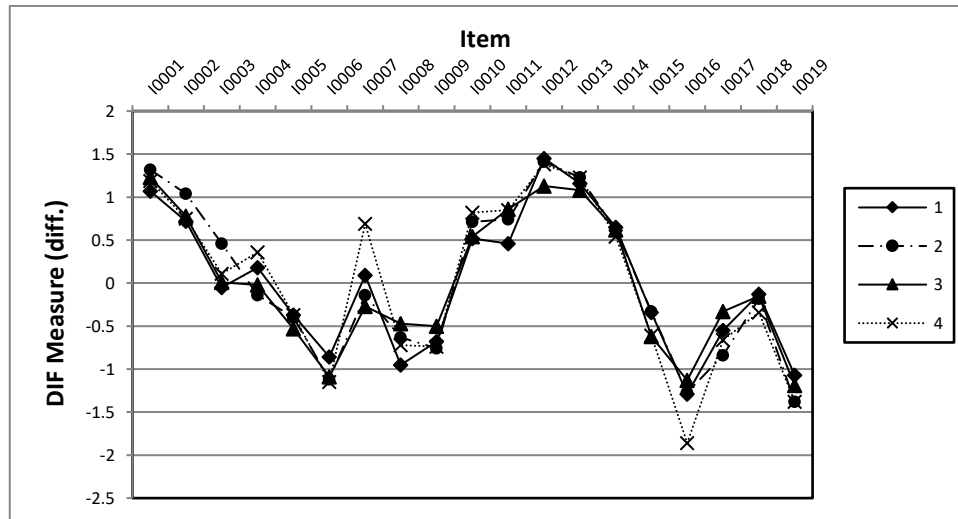


Figure 2. FoMO internet (the faculty)

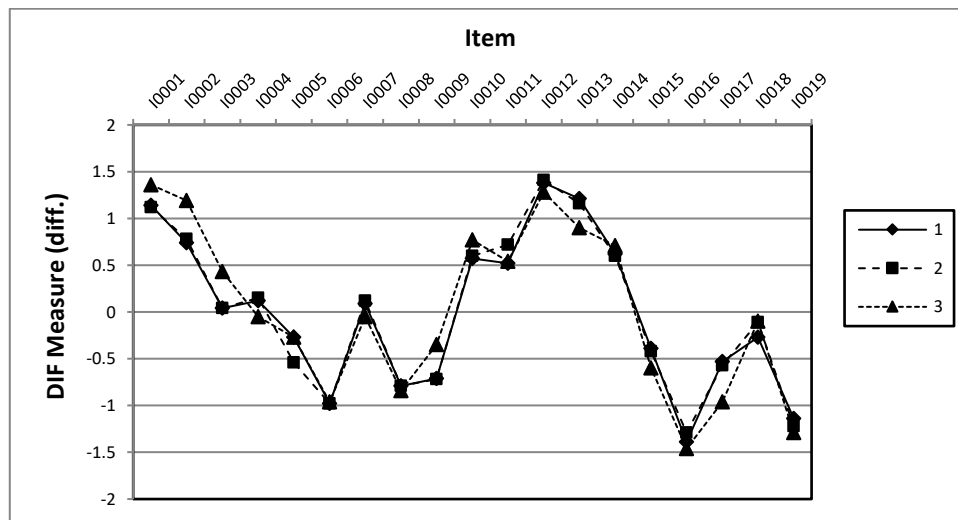


Figure 3. FoMO internet (the domicile)

Students who fill out the FoMO instrument are more dominant in using internet access for more than 6 hours. Meanwhile, research results in Turkey found that students use the internet at 13.1% for 2-3 hours, 5.1% for 3-4 hours, 4.9% for 4-5 hours and 4.4% for use of more than five hours per day [14]. It is based on millennials called digital natives (the idea of technology has been ingrained since birth) [45]. This generation is used to getting information instantly, communicating online, multitasking and engaging in narcissistic behavior on social media [46], [47]. It is often the case that students spend time surfing the internet to find resources to complete assignments, but the many advertisements appearing on the internet make moving to sites more interesting, and they even take the time to visit their friends' social media [48].

Social media posts consisting of pictures affect individual emotions, if the person doing the posing is his close friend, he will be happy, but it is different if the person posting is the enemy will make emotions, and all of that affects student performance in learning [48]. For this reason, the need for teachers and educators to use internet access as an activity to improve the quality of learning through weblogs and Facebook [49]. In addition, the need for counselors to use technological approaches in online counseling services [50] to align guidance and counseling activities by utilizing smartphones and internet networks.

A study conducted by Roberts and David [16] stated that the reason social media is so popular among young adults is because humans are social creatures so they need social networks. Strong social networks increase our chances of living longer and happier lives [17]. Real or imaginary sense of social exclusion can

have a negative impact on both the quantity and quality of our lives [18]. Social exclusion poses a significant threat to a person's innate need to have a social network [19], [20]. However, while excessive use of social media has a psychological impact, excessive use of social media has been associated with a variety of negative psychological outcomes including increased levels of stress, anxiety, depression, lower levels of self-esteem, reduced relationship quality, and sleep quality, lower rates, as well as increased suicidal ideation and suicide rates among adolescents [51]–[55].

The impact of a social media post can influence the individual in triggering negative emotions in the viewer, these negative emotions have the potential to reduce the individual's motivation and thus prevent him from completing the planned task efficiently [48]. Based on the visitors in this study, it is hoped that it can help social workers such as counselors, psychologists, and therapists to reduce the problem of FoMO on the internet which can affect the social life of individuals. With the results of this study, it can be used as a reference for further researchers in analyzing other social demographic variables to see the factors that influence the FoMO on the internet or by adding other variables (nomophobia and netless phobia) to see their contribution to FoMO.

#### 4. CONCLUSION

The findings show that there are significant differences in fear of missing out internet in terms of men and women. While the faculties of FIP, FMIPA, FT, and FE against the FoMO internet there were no significant differences. Just as there are no significant differences in student living in cities, counties, and villages in the FoMO internet. Similar to the male and female students who study at the faculties of education, mathematics and natural sciences, engineering, and economics who live in cities, counties and villages there is no significant difference to the FoMO internet. So that the findings prove that in the millennial era there was no difference in internet usage in students viewed from the faculty or from the student's own residence. This is due to the dependence of smartphones with internet access that are positively related which causes fear of the lack of internet access in everyday life.

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