



## Article

# The Correlation Between Fear of Missing Out (FoMO) and Internet Addiction in Vocational High School Students

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## Abstract

**Introductions:** Advanced and rapid technologic developments are changing the way of life. They also affect Indonesia, the sixth-largest internet user in the world. On the brighter side, internet growth helps a lot in the Indonesian education system development, especially during the COVID-19 pandemic. In contrast, the increasing number of internet users potentially increases the number of internet addicts as well, which can be caused by many factors, such as fear of missing out (FoMO). To determine the correlation between FoMO and internet addiction cases in Mitra Karya Mandiri Vocational High School, Brebes. **Methods:** This was a quantitative study with a cross-sectional design. The subjects of this study were all 11th-grade students of Mitra Karya Mandiri Vocational High School selected using a stratified random sampling method. The instruments used in this study were the Indonesian version of the sociodemographic questionnaire, the Internet Addiction Diagnostic Questionnaire (KDAI), and the Fear of Missing Out questionnaire (FoMO-scale). **Results:** Most subjects (68.9%) did not have an internet addiction. There was a significant correlation between internet addiction with FoMO ( $p=0.009$ ). The result of the ANOVA test showed that there were no significant differences in internet addiction from three majors of Mitra Karya Mandiri Vocational High School ( $p=0.586$ ) and FoMO from three majors of Mitra Karya Mandiri Vocational High School ( $p=0.969$ ). **Conclusions:** There was a significant correlation between internet addiction and FoMO. There was a significant correlation between internet addiction with gender and peer environment. However, there were no significant differences found between internet addiction and FoMO between majors.

## Introductions

In this digitalization era, rapidly developed and increasingly sophisticated technology is influencing humans in various life aspects, such as work, education, and entertainment aspects. Nowadays, high internet technology is not only used by adults to support workers but also by young adults, mainly for their entertainment purpose. The millennial generation refers to a generation growing up in the internet and digitalization era. They are currently aged 18-28 years old, which is an important period of exploration for search and identity formation [1]. Self-concept is the first psychological aspect in young adults and is closely related to the formation of self-identity. The establishment of self-identity has a close influence through the internet, and the social and family environment [2]. The use of the internet is considered excessive when psychological problems and behavioral changes appeared, which means someone feels that the internet is one's life and doesn't do any work except access the internet, distancing social contacts from friends and families [3]. This phenomenon is called internet addiction and is described further as the use of the internet for more than 38.5 hours per week or 6 hours a day. Internet addiction is marked by euphoric feelings during internet activities, leading to time-adjusting difficulties, having problems completing work or home tasks, also being isolated from family and friends. This could be a big problem since all of those signs and symptoms may cause children and adolescents to become introverted and indifferent to their surroundings [4]. Most likely millennials tend to be more affected since they were the "always connected generation" and were still looking for self-identity. They turned life in cyberspace into an ideal self-concept and fulfilled the need for "relatedness" through social media [5]. With this emerging problem, a new symptom called Fear of Missing Out (FoMO) was introduced. FoMO is

a constant social anxious feeling, marked by the fear of losing precious moments of another individual or group while the affected individual can't be present, causing an obsession to be connected all the time. FoMO may cause feelings of loss, stress, and a sense of distance from not knowing significant events from other individuals [6]. Some studies suggested that teenagers with poor mental health conditions, including depression and anxiety, sleep deficits, low self-esteem, low self-control, and any other personal factors, were having more tendency to develop FoMo [3].

Undeniably, Indonesia as the sixth-largest internet user in the world is also affected by internet addiction and the FoMO phenomenon. According to the Association of Indonesian Internet Service Providers (APJII) 2017, the number of internet users was 143.26 million, and this number doubled in 2018, becoming 264.16 million users, reaching around 64.8% of Indonesia's total population. According to APJII 2018, most Indonesian internet users (55.7%) are concentrated in Java and 16.7% of it is concentrated in Central Java. Based on the age range, internet users were dominated by teenagers aged 15-19 years old, as much as 91%. The same study mentioned that 90.2% of high school students were internet users. Internet usage motives are varied, but mostly for easy communication and social media [7]. Brebes is one of the districts in Central Java. It is the area with the largest population, reaching 1,802,829 people in 2019 [8]. Adapted from the Indonesian Ministry of Education and Culture's website, Brebes ranked the 3rd lowest in national exam scores in the 2018-2019 academic school year [9]. One of the causes may be the excessive misuse of the internet. This is confirmed by the counseling teachers in Mitra Karya Mandiri Vocational High School, reporting that the majority of students used the internet beyond the normal limit. Unfortunately, this excessive use of the internet isn't fully utilized to

support learning activities so most students have decreased performance. Knowing the possible big number of people with internet addiction and FoMO, plus how the impact can be, we were interested in conducting a further study on the correlation between FoMO and internet addiction in high school students, particularly in Mitra Karya Mandiri Vocational High School Brebes.

## Methods

**Design, Time, and Setting of the Study:** This study was a quantitative study with a cross-sectional study design. The data collection was carried out once in June 2020 at Mitra Karya Mandiri Vocational High School, Brebes.

**Population and Samples:** The research subjects included in this study were eleventh-grade students at Mitra Karya Mandiri Vocational High School for the 2019/2020 academic year. The inclusion criteria cover male and female eleventh-grade students of the 2019/2020 school year who are willing to take part in the study. A total of 124 students were selected and five dropped out because they weren't giving consent, leaving 119 remainder. Those who are willing to take part in this study got randomized using the stratified random sampling method using the lottery number provided. Previously, researchers already made 36 lotteries consisting of numbers 0 and number 1. Every student in each department chose the lottery and participants who chose number 1 will be included in the study.

**Data measurement:** The instruments used in this study were the sociodemographic questionnaire, the Internet Addiction Diagnostic Questionnaire (KDAI), and the Fear of Missing Out questionnaire (FoMO-scale). Internet addiction is defined as excessive or improperly controlled preoccupation, compulsions, and behaviors regarding internet use that cause disturbance or difficulty in several domains of life. Internet addiction was measured with the

KDAI Questionnaire, a validated questionnaire by Dr. dr. Kristiana Siste, Sp.KJ(K) in 2019, consisted of 44 statements describing subjects' self-condition in the last 12 months. Each item was scored 0 to 6 (0: Not suitable; 1: Very Rare; 2: Rarely; 3: Sometimes; 4: Often; 5: Very often; 6: Always). A total score of 0-107 is considered normal (not having internet addiction) and 108-264 was considered to have an internet addiction [10]. Meanwhile, FoMO (Fear of Missing Out) is defined as a fear of missing out on precious moments that their peer groups have when that individual is not present. The higher the FoMO value is, the more often individual checks out their mobile phone to find out what their peers are doing. This study used the Indonesian version of the Fear of Missing Out questionnaire (FoMO-scale) to measure FoMO level. This questionnaire consists of 10 statements, where each statement was scored from 1 to 5. Score 1 implied "very unsuitable" and score 5 implied "very suitable". The score of each item was added, and then interpreted as the followings: "Very high level = 43-50"; "High level= 35-42"; "Medium level=27-34"; "Low level=19-26"; "Very low level = 10-18"[11]. Ethical approval, Data Processing, and Analysis: The study protocol had been approved by the Health Research Ethics Committee of The Faculty of Medicine, Diponegoro University. The ethical license number is No.73/EC/KEPK/FK-UNDIP-V/2020. Collected data were statistically processed using the SPSS software.

## Results

### Sociodemographic Characteristics of the Subjects

This study involved 107 females and 12 males. Based on the majors, 38 subjects belonged to the nursing assistant major, 45 subjects belonged to the clinical and community pharmacy major, and 36 subjects belonged to the medical laboratory technology major. Most fathers (56.3%)

and mothers (58.0%) finished elementary school, and the majority of students (87.4%) had complete parents. Next, most parents (72.3%) earned below the regional minimum wage. On top of that, among the influence of the environment on internet use, the public environment influenced most students (83.2%) on internet use. Secondly, the school environment influenced 82.4% of students, commonly for education purposes. Go with family-influenced internet use, as affirmed by 79.8% of stu-

dents. At last, a total of 75.6% of students stated the peer influence on internet use. To give an overview, before the pandemic, the students had 8-10 hours of direct contact and 15-30 minutes of academic use of the internet, creating a strong and warm friendship. However, during the pandemic, the students used the internet for around 4 hours a day for academic use. The more detailed sociodemographic characteristics of the subjects was listed in **Table 1**

Table 1. Distribution of Sociodemographic Characteristics of the Subjects

Variable	F	%
Sex		
Male	12	10.1
Female	107	89.9
Religion		
Catholic	1	0.8
Islam	118	99.2
Major		
Nursing assistant	38	31.9
Clinical and community pharmacy	45	37.8
Medical laboratory technology	36	30.3
Father's occupation		
Civil servant	3	2.5
Non-civil servant	107	89.9
Unoccupied	9	7.6
Mother's occupation		
Civil servant	2	1.7
Non-civil servant	85	71.4
Unoccupied	32	26.9
Father's highest education level		
College	6	5.0
High school	29	24.4
Secondary school	17	14.3
Elementary school	67	56.3
Mother's highest education level		
College	7	5.9
High school	25	21.0
Secondary school	16	13.4
Elementary school	69	58.0
Uneducated	2	1.7
Complete parents		
No (Orphan)	15	12.6
Yes	104	87.4
Parents' income		
Above the regional minimum wage	33	27.7
Under the regional minimum wage	86	72.3
Family environment influence		
Yes	95	79.8
No	24	20.2
School environment influence		
Yes	98	82.4
No	21	17.6
Peer environment influence		
Yes	90	75.6
No	29	24.4
Public environment influence		
Yes	99	83.2
No	20	16.8

The Incidence of FoMO Among Respondents

**Table 2** below showed the incidence of Fear of Missing Out (FoMO) among the respondents. The level of FoMO experienced by the students mostly was at a moderate level, namely 48 people (40.3%).

**Table 2.** The Incidence of Fear of Missing Out (FoMO)

Level of FoMO	Number of people experiencing FoMO	%
Very low	11	9.2
Low	40	33.6
Moderate	48	40.3
High	19	16.0
Very High	1	0.8

The Incidence of Internet Addiction Among Respondents

**Table 3** below showed the incidence of internet addiction among respondents. Most respondents were normal/not having internet addiction (68.9%).

**Table 3.** The Incidence of Internet Addiction

Internet Addiction	Number of people experiencing FoMO	%
Normal (not having internet addiction)	82	68.9
Having internet addiction	37	31.1

The Correlation between Internet Usage and Sociodemographic Variables

The correlation analysis between sociodemographic characteristics and internet addiction incidence were shown in Table 4. This study found that internet addiction has a weak correlation with sex ( $p=0.014$ ). Besides that, we also found that internet addiction significantly correlates with peer-group influence ( $p=0.021$ )

**Table 4.** The Correlation between Sociodemographic Characteristics of the Subjects and the Incidence of Internet Addiction

Variable	The Incidence of Internet Addiction		P	R
	Normal/ No Addiction	Internet Addiction		
Sex				
Male	12 (100%)	0 (0%)	0.014 <sup>**</sup>	0.225
Female	70 (65.4%)	37 (34.6%)		
Religion				
Catholic	1 (100%)	0 (0%)	0.500 <sup>‡</sup>	0.062

Variable	The Incidence of Internet Addiction		P	R
	Normal/ No Addiction	Internet Addiction		
Islam	81(68.6%)	37 (31.4%)		
Father's occupation				
Civil servant	2 (66.7%)	1 (33.3 %)	0.835 ¥	-0.051
Non-civil servant	73 (68.2%)	34 (31.8%)		
Uneducated	7 (77.8%)	2 (22.2%)		
Mother's occupation				
Civil servant	2 (100%)	0 (0%)	0.631 ¥	0.020
Non-civil servant	58 (68.2%)	27 (31.8%)		
Uneducated	22 (68.8%)	10 (31.3%)		
Father's highest education level				
College	4 (66.7%)	2 (33.3%)	0.545 ¥	-0.089
High school	17 (58.6%)	12 (41.4%)		
Secondary school	13 (76.5%)	4 (23.5%)		
Elementary school	48 (71.6%)	19 (28.4%)		
Mother's highest education level				
College	4 (57.1%)	3 (42.9%)	0.672 ¥	-0.123
High school	16 (64.0%)	9 (36.0%)		
Secondary school	10 (62.5%)	6 (37.5%)		
Elementary school	50 (72.5%)	19 (27.5%)		
Uneducated	2 (100%)	0 (0%)		
Complete parents				
No (Orphan)	11 (73.3%)	4 (26.7%)	0.692 ¥	0.036
Yes	71 (68.3%)	33 (31.7%)		
Family environment influence				
Yes	65 (68.4%)	30 (31.6%)	0.820 ¥	-0.021
No	17 (70.8%)	7 (29.2%)		
School environment influence				
Yes	66 (67.3%)	32 (32.7%)	0.427 ¥	-0.073
No	16 (76.2%)	5 (23.8%)		
Peer environment influence				
Yes	57 (63.3%)	33 (36.7%)	0.021 ¥*	-0.212
No	25 (86.2%)	4 (13.8%)		



Variable	The Incidence of Internet Addiction		P	R
	Normal/ No Addiction	Internet Addiction		
No	25 (86.2%)	4 (13.8%)	0.240 <sup>¥</sup>	-0.108
Public environment influence				
Yes	66 (66.7%)	33 (33.3%)		
No	16 (80.0%)	4 (13.8%)		

Note: \* significant (p <0.05); ¥ Chi-square

### The Correlation between Fear of Missing Out (FoMO) level with the Incidence of Internet Addiction

The correlation between the Fear of Missing Out (FoMO) level and internet addiction was listed in Table 5. This study discovered a significant correlation between the incidence of internet addiction and FoMO with the p-value=0.009.

**Table 5.** The Correlation between the Fear of Missing Out (FoMO) level with the Incidence of Internet Addiction

Variable	The Incidence of Internet Addiction		P	r
	Normal/ No Internet Addiction	Internet Addiction		
<b>Fear of Missing Out (FoMO)</b>				
Very low	8 (72.7%)	3 (27.3%)	0.009*	0.232
Low	31 (77.5%)	9 (22.5%)		
Moderate	36 (75.0%)	12 (25.0%)		
High	7 (36.8%)	12 (63.2%)		
Very high	0 (0%)	1 (100%)		

### The Internet Addiction Score and FoMO Score Regarding the School Majors

The internet addiction score and FoMO score regarding the school majors was shown in Table 6. In this study, there wasn't a significant difference between the school majors and the internet addiction score (p=0.586). The mean values of internet addiction score, as evaluated by the Internet Addiction Diagnostic Questionnaire (KDAI), were 110.79, 112.31, and 105.75 respectively for nursing assistants, clinical

& community pharmacy, and medical laboratory technology majors. Comparably, this study also didn't find any significant difference in FoMO scores between the three majors (p=0.969). The mean values of FoMO scores, rated by the Indonesian version of FoMO questionnaire, in each major were as much as 27.97 in nursing assistants, 27.96 in clinical and community pharmacy, and 27.61 in medical laboratory technology

**Table 6.** The Incidence of Internet Addiction and FoMO Regarding the School Majors

Majors	The Incidence of Internet Addiction			FoMO		
	N	Mean±SD	P	N	Mean±SD	P
Nursing assistant	38	110.79±32.593	0,586	38	27.97±7.535	0.969
Clinical and community pharmacy	45	112.31±27.745		45	27.96±7.000	
Medical laboratory technology	36	105.75±26.806		36	27.61±6.366	

Note: \* significant ( $p < 0.05$ ). One-way ANOVA test.

## Discussions

### The Demographical Characteristics and Internet Addiction

This study was conducted during the COVID-19 pandemic, where at this time Indonesian government established PSBB (Pembatasan Sosial Berskala Besar), a national “large scale physical distancing”, which people are encouraged to stay at home. Unavoidably, people were using the internet as part of their daily routines, such as socializing, studying, holding meetings, etc [12]. A previous study on factors associating with increased internet use time during the pandemic stated that more time spent on recreational internet use was associated with being a student, having fewer social supporters, experiencing negative life events (perceived pressure and impact of the pandemic on mental health, dissatisfaction with living conditions), and playing online video games [13].

Based on the study result, internet addiction was found to have a significant correlation with sex and among 107 female subjects, 34.6% of them experienced internet addiction while no male experienced internet addiction. This result is in conjunction with a study conducted by Li, et al, stating that being a female, a student, and having fewer social supports increased the severity of internet addiction [13]. Gender affects

the cause of an individual is an addiction to the internet. Males are usually addicted to online games, porn sites, and online gambling while females often get addicted to chatting and online shopping. This may be because females in their adolescence were more concerned about social evaluation and more anxious about rejection in peer groups [14]. However, this result wasn't in conjunction with a study conducted by Gultom which stated that high internet addiction (2,53%) was found in males and 0.63% in females [15]. This difference existed maybe because most students in Mitra Karya Mandiri Vocational High School were female [16].

Next, a significant correlation was found between peer influence and the incidence of internet addiction, as confirmed by 36.7% of students. This result was supported by Rahmayanthi, who stated that peer conformity often occurs in teenagers, given the developmental stages of teenagers tend to be clustered [17]. Along with that, adolescents had high curiosity and tend to experience peer pressure to be accepted according to “peer norms” [14].

### The Demographical Characteristics, Internet Addiction, and FoMO

The COVID-19 pandemic situation requires an adaptive change in many sec-



tors, including the education sector, one of which is studying from home. This regulation made students couldn't make direct interactions with their peer group [12]. With this, people turned internet and social media to meet their social needs, proven by increased internet traffic of up to 70% in the initial phase of the pandemic [18].

Social media is considered a way to stay connected with peers and being connected is important for teenagers. In that case, teenagers are using the internet to search for information about any activities, events, or anything else in real-time to keep updated. In another word, teenagers are experiencing FoMO [1].

This study found that 31.1% of subjects were having internet addiction and most subjects (40.3%) had a moderate level of FoMO. The low incidence of internet addiction in Mitra Karya Mandiri Vocational High School may be because students in the health sector had high task loads and were passionate to serve the community. This is similar to the study from Kargin, et al [19] and Turan, et al [20], showing that internet addiction among nursing students was low to moderate level. Along with that, a study conducted by Marlina RD found that 50.7% of subjects aged 18-25 years in Yogyakarta had a moderate level of FoMO [21]. However, even at a moderate level, FoMO had impactful detrimental effects, such as lower self-esteem, stress, anxiety, depression, sleep deprivation, and loss of focus, which probably ends in poor social life, and also declined productivity and performance [18].

### **The Relationship between FoMO and the Incidence of Internet Addiction**

This study found a significant correlation between FoMO and the incidence of internet addiction. The study result was in line with a study conducted by Marlina, stating that there was a positive correlation between FoMO and a tendency of internet addiction in emerging adulthood, as

much as 46.4% [21]. FoMO is defined as the feeling of fear when one has a valuable experience when the individual is not present. It's characterized by a desire to be constantly connected to what others are doing [22]. There are several theories explaining this phenomenon, such as the self-determination theory, the need-to-belong theory, and the self-construal theory [18,22]. The self-determination theory explained that an individual's goal or behavior was motivated by the need for autonomy (control of their own behaviors and goals), competence (the need of learning different skills and master tasks), and relatedness (the need to stay connected with others). Similarly, the need-to-belong theory also stated that people need to stay connected with others. Any lack of these psychological needs may increase FoMO, leading to social media usage hoping that it could satisfy psychological needs. They may get anxious when can't be connected to the internet (being online). Next, the self-construal theory proposed the theory of how a person's identity grows. People can develop independent-self (autonomous and independent) or interdependent (self as a part of various interpersonal relationships). Individuals with interdependent self-construal find it difficult to imagine themselves without relationships and being part of a group because they are interdependent on others. Individuals with interdependent self-construal are more common in non-Western cultures, and they emphasize human beings' interconnectedness [22]. To add more, adolescence is a critical period when an individual's personality is blooming, and become aware of their own identity, also how others treat or respect them. This means they may use maladaptive lifestyle behaviors seeking for social approval, which may worsen FoMO [23].

### **Internet Addiction Scores and FoMO Scores Between Majors**

Internet Addiction Diagnostic Questionnaire (KDAI) is a questionnaire used for

internet addiction screening, consisting of 44 statements, portraying the participant's conditions in the last 12 months [10]. This study found that the mean values of internet addiction score, as evaluated by the KDAI, were as big as 110.79, 112.31, and 105.75 respectively for Nursing assistants, Clinical and Community Pharmacy, and Medical Laboratory Technology majors. There weren't any significant differences between majors ( $p=0.586$ ). In terms of FoMO scores, the study showed a similar result, where there was no significant FoMO scores difference between majors ( $p=0.969$ ). This result is in contrast with Gorgich, et al who found that among nursing, anesthesia, and environmental major, there was a significant relationship between majors and internet addiction [24].

### Management of Internet Addiction and FoMO

Targeted early prevention is needed for populations at high risk, and those with internet addiction and other psychiatric problems should receive treatment(s). The biological dimension of internet addiction made a place for pharmacotherapy. Anti-depressants, anxiolytics, or antipsychotics can help reduce the symptoms. Moreover, Cognitive Behavioral Therapy (CBT) was found to be effective for patients with internet addiction to recognize what can trigger feelings and addictive actions and help them to modify and reconstruct their maladaptive cognition. CBT can be given in 12 sessions for 6 months. Other holistic approaches were prevention action research and family therapy [13,25].

### Conclusions

This study showed that there was a significant correlation between FoMO and the incidence of internet addiction. The levels of FoMO in Mitra Karya Mandiri Vocational High School students were divided into very high (0.8%), high (16%), moderate (40.3%), low (33.6%), and very low

(9.2%). As much as 31.1% of students were experiencing internet addiction, and 68.9% remaining didn't experience internet addiction. There was a significant correlation between internet addiction and gender, as well as peer environment. However, there was no difference in FoMO levels and the incidence of internet addiction between each major at Mitra Karya Mandiri Vocational High School. This study had several potential limitations. As internet addiction and FoMO is highly correlated with interpersonal problems (dysfunctional family and lack of support systems) and several psychological problems (such as depression and anxiety), further research should be done on these matters. In addition, this study also didn't include the variety of internet use motives by students, so the type of internet addiction couldn't be made. Third, rather than relying on clinical diagnosis, the evaluation of internet addiction and FoMO relied on self-reported data.

### Conflict of Interest

The authors declared no conflict of interest. No special funds are provided for this article.

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### References

- [1] Maysitoh, Ifdil, and Z. Ardi, "FoMO (Fear of Missing Out) Tendency in Millennials," *Journal of Counseling, Education and Society*, vol. 1, no. 1, pp. 1–4, Jan. 2020, Accessed: Apr. 21, 2022. [Online]. Available: <https://jurnal.iicet.org/index.php/jces/article/view/447/472>
- [2] A. Kay, "Erikson Online: Identity and Pseudospeciation in the Internet Age," *Identity*, vol. 18, no. 4, pp. 264–273, Oct. 2018,

doi: [10.1080/15283488.2018.1523732](https://doi.org/10.1080/15283488.2018.1523732).

[3] R. Servidio, "Fear of missing out and self-esteem as mediators of the relationship between maximization and problematic smartphone use," *Current Psychology*, pp. 1–11, Feb. 2021, doi: [10.1007/S12144-020-01341-8/TABLES/2](https://doi.org/10.1007/S12144-020-01341-8/TABLES/2).

[4] "Asosiasi Penyelenggara Jasa Internet Indonesia." <https://apjii.or.id/content/read/39/342/Hasil-Survei-Penetrasi-dan-Perilaku-Pengguna-Internet-Indonesia-2017> (accessed Dec. 12, 2021).

[5] Z. kui Zhou, G. feng Niu, Q. qi Liu, and W. Chen, "Internet Use and Self-Development in Chinese Culture," *Boundaries of Self and Reality Online: Implications of Digitally Constructed Realities*, pp. 75–96, Feb. 2017, doi: [10.1016/B978-0-12-804157-4.00005-0](https://doi.org/10.1016/B978-0-12-804157-4.00005-0).

[6] D. J. Lemay, T. Doleck, and P. Bazalais, "Self-determination, loneliness, fear of missing out, and academic performance," *Knowledge Management and E-Learning*, vol. 11, no. 4, pp. 485–496, 2019, doi: [10.34105/J.KMEL.2019.11.025](https://doi.org/10.34105/J.KMEL.2019.11.025).

[7] Asosiasi Penyelenggara Jasa Internet Indonesia and Polling Indonesia, "Penetrasi & Profil Perilaku Pengguna Internet Indonesia," 2018.

[8] Badan Pusat Statistik Kabupaten Brebes, "Kabupaten Brebes Dalam Angka," Brebes, 2019.

[9] Kementerian Pendidikan dan Kebudayaan, "Laporan Hasil Ujian Nasional Tahun Pelajaran 2018/2019," 2019. Accessed: Apr. 26, 2022. [Online]. Available: <https://hasilun.puspendik.kemdikbud.go.id/>

[10] K. Siste, "Pengembangan Kuis Diagnostik Adiksi Internet bagi Remaja: Studi Konektivitas Fungsional Otak Melalui FMRI Bold, Prevalensi, Penelusuran Faktor Risiko, dan Proteksi," University of Indonesia, Jakarta, 2019.

[11] D. A. Putra, "Hubungan antara Fear of Missing Out dengan Kesejahteraan Psikologis Pengguna Instagram pada Masa Transisi Menuju Dewasa," Sanata Dharma University, Yogyakarta, 2018.

[12] K. Siste et al., "The Impact of Physical Distancing and Associated Factors Towards Internet Addiction Among Adults in Indonesia During COVID-19 Pandemic: A Nationwide Web-Based Study," *Frontiers in Psychiatry*, vol. 11, p. 924, Sep. 2020, doi: [10.3389/FPSYT.2020.580977/BIB-TEX](https://doi.org/10.3389/FPSYT.2020.580977/BIB-TEX).

[13] Y. Y. Li et al., "Internet Addiction Increases in the General Population During COVID-19: Evidence From China," *Am J Addict*, vol. 30, no. 4, pp. 389–397, Jul. 2021, doi: [10.1111/AJAD.13156](https://doi.org/10.1111/AJAD.13156).

[14] J. Li, D. Li, J. Jia, X. Li, Y. Wang, and Y. Li, "Family functioning and internet addiction among adolescent males and females: A moderated mediation analysis," *Children and Youth Services Review*, vol. 91, pp. 289–297, Aug. 2018, doi: [10.1016/J.CHILDYOUTH.2018.06.032](https://doi.org/10.1016/J.CHILDYOUTH.2018.06.032).

[15] S. A. Gultom, N. D. Wardani, and A. Fitrikasari, "Hubungan Adiksi Internet dengan Prokrasti Akademik," *Jurnal Kedokteran Diponegoro*, vol. 7, no. 1, Jan. 2018, Accessed: May 01, 2022. [Online]. Available: <https://ejournal3.undip.ac.id/index.php/medico/article/view/19392/18389>

[16] F. Kalekhan et al., "Addiction to social networking sites in healthcare students of a selected institution in Mangalore, Karnataka, India: A questionnaire study," *International Journal of Applied Research*, vol. 2, no. 7, pp. 965–968, 2016, Accessed: Dec. 29, 2021. [Online]. Available: <https://www.allresearchjournal.com/archives/?-year=2016&vol=2&issue=7&part=N&ArticleId=2395>

[17] R. Rahmayanthi, "Konformitas Teman Sebaya dalam Perspektif Multikultural," *JOMSIGN: Journal of Multicultural Studies in Guidance and Counseling*.

[18] C. Hayran and L. Anik, "Well-Being and Fear of Missing Out (FOMO) on Digital Content in the Time of COVID-19: A Correlational Analysis among University Students," *International Journal of Environmental Research and Public Health* 2021, Vol. 18, Page 1974, vol. 18,

no. 4, p. 1974, Feb. 2021, doi: [10.3390/IJERPH18041974](https://doi.org/10.3390/IJERPH18041974).

[19] M. Kargin, H. Türkben Polat, and D. Coşkun Şimşek, "Evaluation of internet addiction and fear of missing out among nursing students," *Perspectives in Psychiatric Care*, vol. 56, no. 3, pp. 726–731, Jul. 2020, doi: [10.1111/PPC.12488](https://doi.org/10.1111/PPC.12488).

[20] N. Turan et al., "Relationship between nursing students' levels of internet addiction, loneliness, and life satisfaction," *Perspectives in Psychiatric Care*, vol. 56, no. 3, pp. 598–604, Jul. 2020, doi: [10.1111/PPC.12474](https://doi.org/10.1111/PPC.12474).

[21] R. D. Marlina, "Hubungan antara Fear of Missing Out (FoMO) dengan Kecenderungan Kecanduan Internet pada Emerging Adulthood," *Mercu Buana University, Yogyakarta*, 2017. Accessed: May 01, 2022. [Online]. Available: <http://eprints.mercubuana-yogya.ac.id/id/eprint/129>

[22] D. John Lemay, T. Doleck, and P. Bazalais, "Self-determination, loneliness, fear of missing out, and academic

performance," *Knowledge Management & E-Learning: An International Journal (KM&EL) Knowledge Management & E-Learning*, vol. 11, no. 4, pp. 485–496, 2019, doi: [10.34105/j.kmel.2019.11.025](https://doi.org/10.34105/j.kmel.2019.11.025).

[23] A. Soni, B. Kaur, and R. and W. Indian Association of Health, "Psychological well-being and internet addiction among adolescents: A systematic review," *IAHRW International Journal of Social Sciences*, vol. 8, no. 7–9, pp. 242–245, Sep. 2020, Accessed: May 03, 2022.

[24] E. Alhagh, C. Gorgich, L. Moftakhar, S. Barfroshan, and A. Arbabisarjou, "Evaluation of Internet Addiction and Mental Health Among Medical Sciences Students in the Southeast of Iran," vol. 19, no. 1, p. 55561, 2018, doi: [10.5812/semj.55561](https://doi.org/10.5812/semj.55561).

[25] A. Alutaybi, D. Al-Thani, J. McAlaney, and R. Ali, "Combating Fear of Missing Out (FoMO) on Social Media: The FoMO-R Method," *International Journal of Environmental Research and Public Health*, vol. 17, no. 17, pp. 1–28, Sep. 2020, doi: [10.3390/IJERPH17176128](https://doi.org/10.3390/IJERPH17176128).