Gender Differences in Internet Gaming Disorder and Mental Health among University Students in Indonesia

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Background

Internet Gaming Disorder (IGD) was defined by the 5th Edition Diagnostic and Statistical Manual of Mental Disorders as the recurrent and persistent use of online games as indicated by symptoms of preoccupation, withdrawal, tolerance, uncontrollable behavior, loss of interests in previous hobbies, and psychosocial problems.[1] IGD is very much relevant today since the popularity of online gaming have grown to over 2.5 billion gamers worldwide as of 2019.[2] Based on a rapid scoping review by the WHO, there has been no IGD prevalence data found in South East Asia as of 2018.[3] Since males and young adults were seen as the most at risk for IGD, this calls for further study among university students in Indonesia.[4]

Aims and Hypothesis

Aims: To map gender differences in IGD, determine the motivations for gaming, and uncover the mental health burdens associated with IGD among Indonesian university students.

Hypotheses:

- IGD is more prevalent among male Indonesian university students compared to females.
- IGD is associated with depression.
- Male and female Indonesian university students have different motivations for gaming.

Methods

1.Ethics approval obtained from MUHREC.

2. Questionnaire selection:

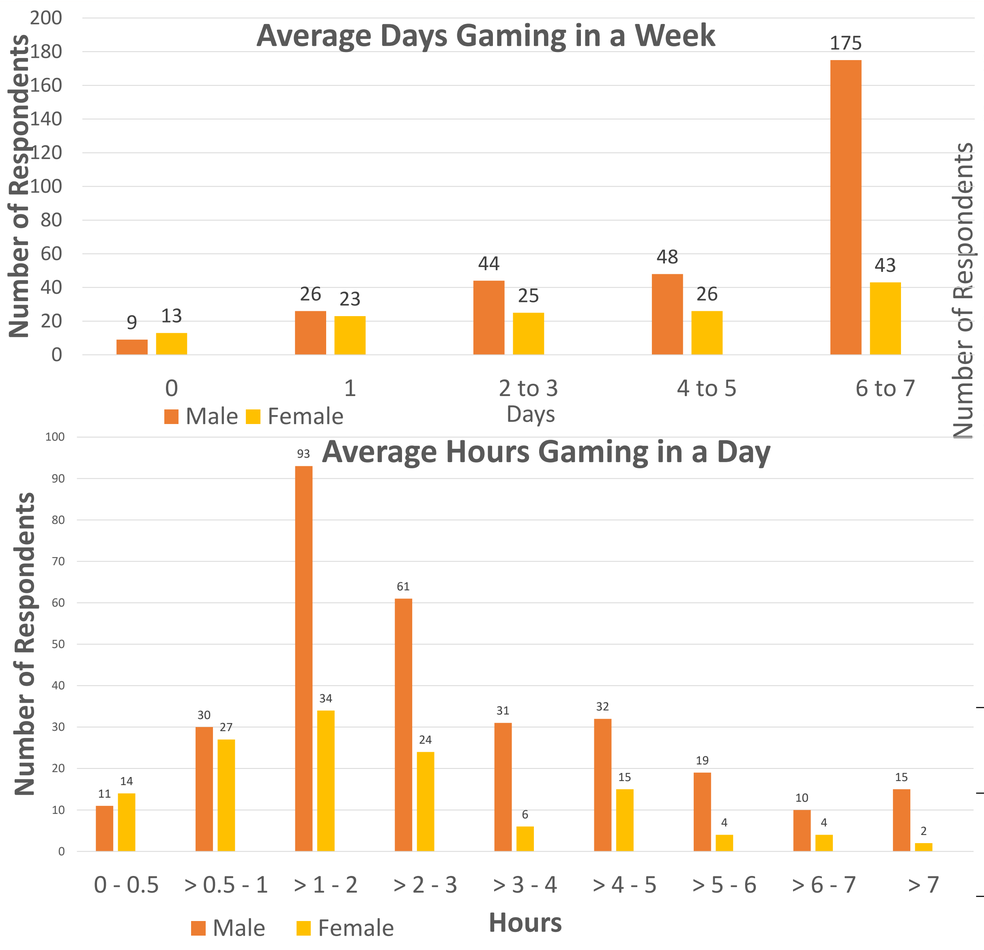
- Internet Gaming Disorder Short Scale (IGDS9)
- Motives for Online Gaming Questionnaire (MOGQ)
- Indonesian Online Gaming Addiction Questionnaire (IOGAQ)
- Problematic Online Gaming Questionnaire (POGQ)
- Depression, Anxiety, & Stress Scale (DASS-21)

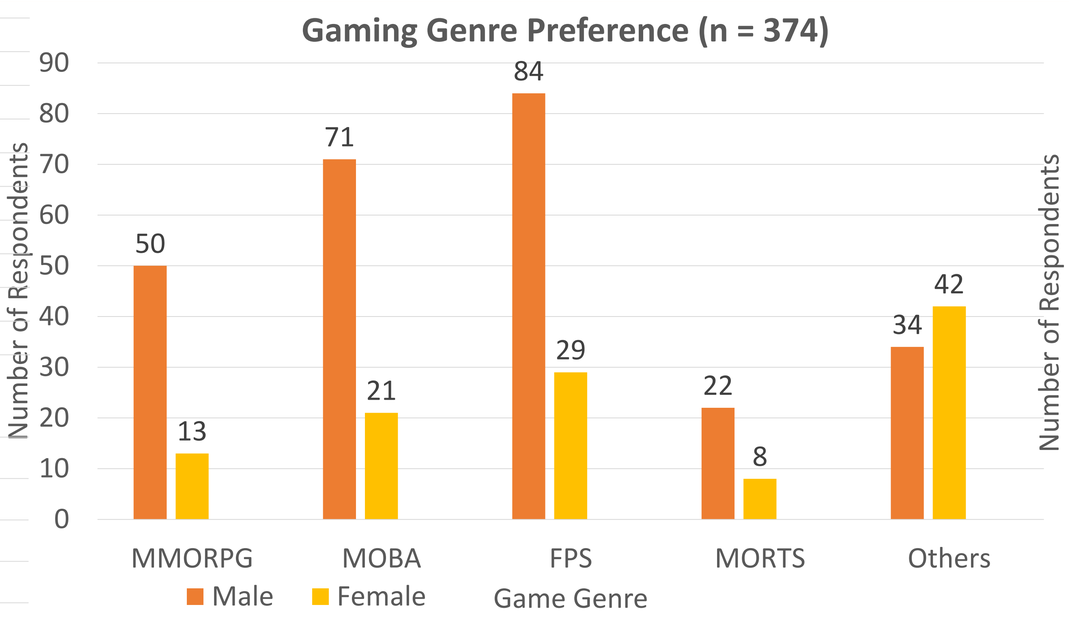
3.Cross-sectional study with RedCap Online Questionnaire.

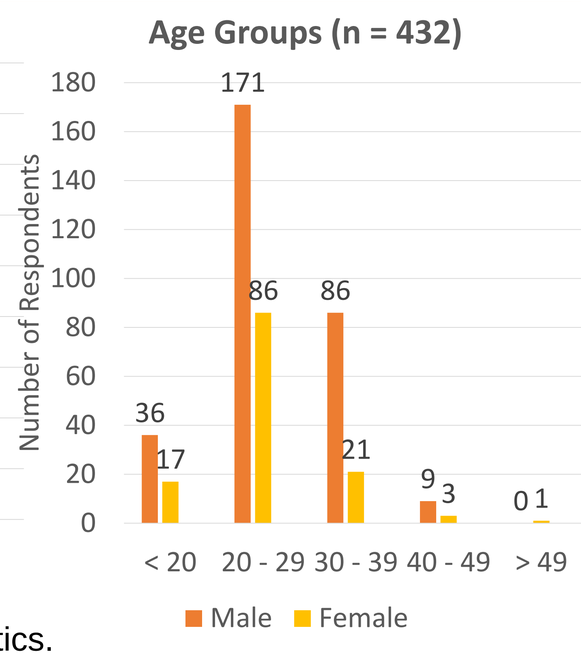
4.Uploaded to Social Media: Instagram, Facebook, Twitter for 3 weeks.

5.Analyse data with the Chi-Square Test and Bivariate Logistic Regression in SPSS Version 20

Results







Figures 1-4: Descriptive statistics of respondent characteristics.

Table 1: Prevalence of IGD among the respondents.

Variable	Total	Gender (%)	
Internet Gaming Disorder	N=432 (%)	Male N=302	Female N=130
IGDS9-36 (Pontes)	11 (2.55)	11 (100)	0
IGDS9-32 (Qin)	21 (4.86)	19 (6.29)	2 (1.54)
IGDS9-22 (Monacis)	121 (28.0)	93 (30.8)	28 (21.5)

IGDS9-32 (Qin): The prevalence of IGD was 4.86% and significantly higher in males (6.29%) than females (1.52%).
POGQ: The prevalence of problematic gaming was 24.5% and significantly higher among males (27.5%) than females (17.7%).
IOGAQ: The prevalence of mild and online game addiction was 75% and significantly higher among males (78.8%) than females (66.2%).

Table 2: Association between IGDS9, POGQ, IOGAQ, and Gender with the DASS-21. N=432

Variable	IGDS9-32 (Qin)		POGQ		IOGAQ		Gender	
	Wald Score	*P*-value	Wald Score	*P*-value	Wald Score	*P*-value	Wald Score	*P*-value
Depression	0.510	0.475	0.205	0.651	7.174	0.007*	0.012	0.914
Anxiety	1.294	0.255	0.113	0.737	3.838	0.050	0.900	0.343
Stress	0.037	0.847	4.800	0.028*	6.065	0.014*	0.003	0.954

Table 3: Association between the IGDS9, POGQ, IOGAQ, and Gender with the MOGQ.

Variable (N=381)	Social	Escape	Competition	Coping	Skill	Fantasy	Recreation
POGQ							
P-value	0.501	0.003*	0.018*	0.698	0.328	0.705	0.186
IGDS9-32 (Qin)							
P-value	0.599	0.006*	0.044*	0.448	0.730	0.352	0.897
IOGAQ							
P-value	0.518	0.000**	0.069	0.257	0.677	0.703	0.002*
Gender							
P-value	0.354	0.011*	0.010*	0.762	0.850	0.432	0.013*

Discussion

Majority of gamers are **males** and **young adults** making them at risk of gaming problems.

Different cut-off scores of each instrument will affect the outcome. The IGDS9 had 3 different cut-off scores (22, 32, 36) validated for specific population groups that gave a different result for the same population. The lack of consensus in the past emphasizes the need for a standardized instrument in future studies.

Past studies associated gaming disorder and females with depression. Gender was not significant with mental health and stress was associated with problematic gaming based on the POGQ. Depression was significant with the IOGAQ but that instrument overestimated the number of addiction cases which raises a concern over its validity.

Males had a higher MOGQ mean score than females overall which may indicate more hard core male gamers than females. Escape and competition motives strongly indicated disordered and problematic gaming. Recreation may have been significant due to the inclusion of casual gamers.

Conclusion

- Gender differences included a higher prevalence of IGD among males than females for this sample of Indonesian university students.
- The escape and competition motives were strong indicators of IGD. Men were more motivated to play online games compared to women who preferred casual games. There were significant gender differences in gaming motivations for the escape, competition, and recreation categories.
- There were no gender differences in terms of mental health although IGD had a strong association with stress.
- Encourage more studies in South East Asia with the IGDS9 criteria, especially among competitive gamers, and determine the right cut-off score for Indonesia.

References

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5®).
2. Wijman T. The Global Games Market Will Generate $152.1 Billion in 2019 as the U.S. Overtakes China as the Biggest Market. Retreived From https://newzoo.com/insights/articles/the-global-games-market-will-generate-152-1-billion-in-2019-as-the-u-s-overtakes-china-as-the-biggest-market/ [Oct 23, 2020]. 2019.
3. Darvesh N, Radhakrishnan A, Lachance CC, Nincic V, Sharpe JP, Ghassemi M, et al. Exploring the prevalence of gaming disorder and Internet gaming disorder: a rapid scoping review. Syst Rev. 2020;9(1):68.
4. Ko CH, Yen JY, Chen CC, Chen SH, Yen CF. Gender differences and related factors affecting online gaming addiction among Taiwanese adolescents. J Nerv Ment Dis. 2005;193(4):273-7.