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Online Gaming Addiction and Self-Reported Emotional Responses Among Married Men in Sidoarjo, Indonesia: A Cross-Sectional Study

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Abstract

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Background: Problematic online gaming may interfere with emotional control and family functioning, but evidence among married adult men in Indonesian community settings remains limited. Objective: To examine the association between online gaming addiction severity and self-reported emotional response levels among married male heads of household in Sidoarjo, Indonesia. Methods: This analytical cross-sectional study included 91 married male heads of household aged 28-43 years who played online games and were recruited by purposive sampling from two neighborhood units in Gelam Village, Sidoarjo, during July-August 2023. Gaming addiction was assessed using the 21-item Game Addiction Scale, and emotional responses were assessed with a 15-item study-specific questionnaire covering anger, sadness, fear, and happiness. Descriptive statistics and Spearman rank correlation were used. Results: Severe gaming addiction was reported by 46 participants (50.5%), and a high emotional response level was reported by 41 participants (45.1%). Among participants with severe gaming addiction, 26 of 46 (56.5%) had a high emotional response level, compared with 1 of 14 (7.1%) among those with mild gaming addiction. Gaming addiction severity was positively associated with emotional response level (Spearman $\rho = 0.371$, $p < .001$). Conclusion: Greater online gaming addiction severity was associated with higher self-reported emotional response levels among married men in this community sample. Because the design was cross-sectional and both measures were self-reported, the findings do not establish causality. Community and mental health nursing programs should consider family-centered screening, emotion-regulation support, and referral for individuals with persistent gaming-related impairment.

Keywords: behavioral addiction; emotional regulation; family nursing; gaming disorder; married men; online gaming

INTRODUCTION

Digital gaming is a common form of entertainment and social interaction, and most people who play games do not develop a disorder. Gaming becomes clinically concerning when control over gaming is impaired, gaming increasingly takes priority over other activities, and play continues despite negative consequences that substantially impair personal, family, social, educational, or occupational functioning (World Health Organization [WHO], 2020). The American Psychiatric Association similarly describes Internet Gaming Disorder as a condition requiring further research and emphasizes persistent patterns of preoccupation, withdrawal, tolerance, unsuccessful attempts to reduce play, loss of interest in other activities, continued use despite harm, deception, mood escape, and jeopardized relationships or opportunities (American Psychiatric Association, 2022).

The development and maintenance of problematic gaming are likely to involve interactions among individual vulnerability, affective responses, gaming-related expectancies, reward processes, and reduced inhibitory control. The updated Interaction of Person-Affect-Cognition-Execution model proposes that repeated cue-reactivity and craving, together with diminished executive control, may gradually shift gaming from goal-directed behavior toward habitual or compulsive use (Brand et al., 2019). In this process, gaming may be used to escape distress or alter mood, while frustration, competitive losses, or interruptions may provoke anger and interpersonal conflict.

Emotion-regulation difficulties have increasingly been identified as a central correlate of problematic gaming. Longitudinal and cross-sectional evidence indicates that emotional dysregulation predicts more problematic gaming symptoms (Schettler et al., 2024), while attachment-related vulnerability may operate partly through difficulties in regulating emotion (Tang et al., 2024). A meta-analysis also found a positive association between Internet Gaming Disorder and aggression among adolescents and young adults (Li et al., 2023). These findings are consistent with the possibility that excessive gaming and heightened emotional reactivity reinforce one another, although directionality may differ across individuals.

Family context is particularly relevant for married adults because gaming-related time

displacement, reduced communication, neglect of household responsibilities, and irritability may affect partners and children. Family impairment is explicitly included in the WHO conceptualization of gaming disorder (WHO, 2020), yet much of the available research has focused on adolescents, students, or young adults rather than married men with household responsibilities. Indonesian mental health research has also shown that stress, anxiety, coping mechanisms, and the problems individuals face are important contributors to mental health crises (Priyantini, Nursalam, & Sukartini, 2021a). In another Indonesian cross-sectional study, mental health crisis and psychological first aid were associated with psychological preparedness, highlighting the importance of coping resources and early support (Priyantini, Nursalam, & Sukartini, 2021b).

Local evidence is needed to inform culturally appropriate community and family nursing strategies. Therefore, this study examined the association between online gaming addiction severity and self-reported emotional response levels among married male heads of household in a residential community in Sidoarjo, Indonesia. The study hypothesized that greater gaming addiction severity would be associated with higher emotional response levels.

METHODS

Study Design and Setting

This study used an analytical cross-sectional design and is reported in accordance with relevant items of the Strengthening the Reporting of Observational Studies in Epidemiology statement (von Elm et al., 2007). Data were collected during July-August 2023 in Neighborhood Units 15 and 17 of the Griya Candi Asri residential area, Gelam Village, Candi Subdistrict, Sidoarjo Regency, East Java, Indonesia. The area included several local coffee shops where community members commonly gathered and played online games.

Participants and Sampling

The source population consisted of 121 adult male residents. Purposive sampling was used to recruit 91 married male heads of household. Eligibility criteria were residence in Neighborhood Unit 15 or 17, playing online games at local coffee shops, and willingness to provide informed consent. Men who did not play online games, did not attend the local coffee shops, or were not residents of the two neighborhood units were excluded. All 91 enrolled participants were

included in the reported analyses.

Measures

Demographic characteristics included age, religion, and the principal online game played. Age was categorized as 28-35 or 36-43 years. The principal game categories were Mobile Legends, PlayerUnknown's Battlegrounds (PUBG), and FIFA Mobile.

Online gaming addiction was measured using the 21-item Game Addiction Scale developed by Lemmens, Valkenburg, and Peter (2009). The scale assesses seven domains: salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems. Items were rated from 1 (never) to 5 (very often). The source study categorized total scores as mild (31-49), moderate (50-79), or severe (80-100) gaming addiction. The Game Addiction Scale is a screening measure rather than a clinical diagnostic assessment; systematic reviews have also emphasized the need to interpret gaming scales in relation to their specific criteria, populations, and psychometric evidence (King et al., 2020; Yoon et al., 2021).

Emotional responses were measured using a 15-item study-specific questionnaire covering anger, sadness, fear, and happiness in the context of married life. Responses were rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Total scores were categorized as low (<36), moderate (36-70), or high (>70). Reliability and validity coefficients for this questionnaire were not reported in the source thesis.

Data Collection

After institutional and neighborhood-level permission was obtained, potentially eligible residents were approached by the researcher with assistance from two trained community assistants. The study purpose and procedures were explained, written informed consent was obtained, and participants completed the questionnaires. Data were checked for completeness, coded, scored, and entered into IBM SPSS Statistics version 21.

Statistical Analysis

Categorical variables were summarized using frequencies and percentages. The cross-tabulation between gaming addiction severity and emotional response level was examined descriptively. Because both principal variables were ordinal, Spearman rank correlation was used to assess their association. A two-sided p value < .05 was considered statistically significant. The thesis reported the association coefficient as 0.371; in

this manuscript it is presented as Spearman rho.

Ethical Considerations

Participation was voluntary and written informed consent was obtained. The study procedures addressed anonymity, confidentiality, beneficence, nonmaleficence, and justice. Participant names were replaced with initials and data were kept confidential. The source thesis did not report the name of the research ethics committee or an approval number. This information must be verified and inserted before journal submission.

RESULTS

The study included 91 married male heads of household. Most participants were aged 28-35 years ($n = 71$, 78.0%), and 20 (22.0%) were aged 36-43 years. Sixty-two participants (68.1%) identified as Muslim and 29 (31.9%) as Christian. Mobile Legends was the most frequently reported principal game ($n = 46$, 50.5%), followed by PUBG ($n = 31$, 34.1%) and FIFA Mobile ($n = 14$, 15.4%) (Table 1).

Table 1. Characteristics of the participants ($N = 91$)

Characteristic	n	%
Age, years		
28-35	71	78.0
36-43	20	22.0
Religion		
Islam	62	68.1
Christianity	29	31.9
Principal online game		
Mobile Legends	46	50.5
PUBG	31	34.1
FIFA Mobile	14	15.4

Severe gaming addiction was reported by 46 participants (50.5%), moderate gaming addiction by 31 (34.1%), and mild gaming addiction by 14 (15.4%). A high emotional response level was reported by 41 participants (45.1%), a moderate level by 31 (34.1%), and a low level by 19 (20.9%) (Table 2).

Table 2. Distribution of gaming addiction severity and emotional response level (N = 91)

Characteristic	n	%
Gaming addiction severity		
Mild	14	15.4
Moderate	31	34.1
Severe	46	50.5
Emotional response level		
Low	19	20.9
Moderate	31	34.1
High	41	45.1

The proportion of participants with a high emotional response level increased across gaming addiction categories. A high emotional response level was present in 1 of 14 participants (7.1%) with mild gaming addiction, 14 of 31 (45.2%) with moderate gaming addiction, and 26 of 46 (56.5%) with severe gaming addiction. Conversely, a low emotional response level was present in 57.1% of the mild group and 8.7% of the severe group (Table 3). Spearman rank analysis indicated a positive association between gaming addiction severity and emotional response level ($\rho = 0.371$, $p < .001$).

Table 3. Emotional response level according to gaming addiction severity (N = 91)

Gaming addiction severity	Low, n (%)	Moderate, n (%)	High, n (%)	Total, n
Mild	8 (57.1)	5 (35.7)	1 (7.1)	14
Moderate	7 (22.6)	10 (32.3)	14 (45.2)	31
Severe	4 (8.7)	16 (34.8)	26 (56.5)	46
Total	19 (20.9)	31 (34.1)	41 (45.1)	91

DISCUSSION

In this community sample of married men, approximately half of participants were classified in the severe gaming addiction category and nearly half reported a high emotional response level. Gaming addiction severity showed a statistically significant positive association with emotional response level. The clearest descriptive gradient

was observed in the high emotional response category: only 7.1% of the mild gaming group had high emotional scores, compared with 56.5% of the severe group. These findings support the study hypothesis, while the modest correlation indicates that gaming severity explained only part of the variation in emotional responses.

The observed association is consistent with evidence that emotion-regulation difficulties and problematic gaming are closely linked. Schettler et al. (2024) found that emotional dysregulation predicted problematic gaming across cross-sectional and longitudinal analyses, and Tang et al. (2024) identified emotion dysregulation as a mechanism linking attachment vulnerability to gaming disorder symptoms. The meta-analysis by Li et al. (2023) similarly found a positive association between Internet Gaming Disorder and aggression. In the present context, competitive losses, interruptions, unmet expectations, and prolonged engagement may have contributed to irritability or anger, while gaming may also have been used to avoid or temporarily modify unpleasant emotions.

The I-PACE model provides one explanation for this reciprocal pattern. Predisposing characteristics and stress may interact with gaming-related cues and expectancies, producing craving and mood modification; repeated reinforcement may then weaken inhibitory control and increase habitual play (Brand et al., 2019). As gaming becomes more dominant, family interaction and household responsibilities may be displaced. Conflict with a spouse may then create additional distress, which can further strengthen escape-motivated gaming. The present cross-sectional data cannot determine whether gaming preceded emotional difficulties, emotional difficulties increased gaming, or both developed together.

Implications for Nursing and Family Support
The findings have practical implications for community, family, and mental health nurses. Screening should focus not only on hours of play but also on loss of control, priority given to gaming, continued play despite consequences, and impairment in family or occupational functioning. Because the Game Addiction Scale is a screening tool and was originally developed in adolescents, a high score should prompt a fuller clinical assessment rather than be treated as a definitive diagnosis (King et al., 2020; Lemmens et al., 2009; Yoon et al., 2021).

Interventions should address emotional regulation, coping, family communication, and realistic gaming limits. Brief nursing strategies may include psychoeducation, motivational interviewing, identifying gaming triggers, planning alternative stress-management activities, scheduling protected family time, and involving spouses in mutually agreed behavioral goals. Psychological first aid may also be useful when participants experience acute distress. Indonesian research showed that psychological first aid with psychological preparedness, and a subsequent quasi-experimental study found that psychological first aid reduced anxiety and post-pandemic trauma (Priyantini et al., 2022). These findings support early, structured, and supportive responses, although gaming-specific intervention trials are still needed.

Culturally congruent coping resources may be incorporated when they are acceptable to participants. Priyantini (2023) reported beneficial effects of spiritual religious coping for grief-related trauma among COVID-19 survivors. In the present setting, spiritual practices, family recreation, and shared meals may serve as supportive alternatives to gaming or as components of a broader coping plan. Such approaches should complement, not replace, evidence-based assessment and treatment for persistent behavioral addiction, depression, anxiety, aggression, intimate partner conflict, or risk of violence.

This study contributes evidence from a population that is underrepresented in gaming research: married adult men with household responsibilities in an Indonesian community setting. The use of an established gaming scale and the presentation of the full cross-tabulation are additional strengths. However, several limitations are important. First, the cross-sectional design precludes causal or temporal conclusions. Second, purposive sampling from two neighborhood units and recruitment of men who played games at local coffee shops may have produced selection bias and substantially limits generalizability. Third, all participants were male heads of household aged 28-43 years; the results should not be generalized to women, unmarried adults, older adults, or other communities.

Fourth, both variables were self-reported and may be affected by recall and social desirability bias. Fifth, the emotional response questionnaire was study-specific and its psychometric properties

were not reported. It combined anger, sadness, fear, and happiness into a single ordinal score, which may not represent a unified construct. Sixth, the Game Addiction Scale was developed for adolescents, and the categorical thresholds used in the thesis did not fully correspond to contemporary ICD-11 diagnostic procedures. Seventh, potentially important confounders - including depression, anxiety, work stress, marital satisfaction, sleep, alcohol use, gaming duration, financial problems, and exposure to violence - were not measured. Finally, the analysis used categories rather than continuous scores, which reduced statistical information. Future studies should use validated adult measures, probability or multi-site sampling, multivariable analysis, partner-reported outcomes, and longitudinal designs.

CONCLUSION

Online gaming addiction severity was positively associated with self-reported emotional response level among married male heads of household in Sidoarjo, Indonesia. Participants in the severe gaming category were substantially more likely to report high emotional responses than those in the mild category. The findings support family-centered screening and early nursing interventions focused on emotional regulation, coping, communication, and gaming-related functional impairment. Longitudinal and clinically validated studies are required before causal conclusions or diagnostic inferences can be made.

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