Parenting strategies: applying basic psychological needs to children at risk of Internet Gaming Disorder in Indonesia

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Abstract

Every parent desires their child to engage in both play and learning. Often, parents find themselves attributing any challenges to perceived shortcomings in their parenting and struggle to leverage digital media effectively. This research endeavors to examine the fundamental psychological needs - autonomy, competence, and relationship - in relation to parenting strategies for children vulnerable to Internet Gaming Disorder. Employing an analytical cross-sectional design, the study focused on parents with children aged 8 to 12 years in Gresik City, East Java, Indonesia. A purposive sample of 125 participants was selected. The research employed the satisfaction and frustration of the Basic Psychological Needs (BPN) questionnaire along with a parenting strategy scale. Descriptive statistical tests and multiple linear regression were utilized to analyze the BPN and parenting strategies. Simultaneously, BPN significantly influenced parental strategies (p=0.026, which is ≤0.05). In terms of effective contributions, autonomy, competence, and relationship collectively accounted for 7.3%, with individual effects of 1.82%, 5.56%, and 0.04%, respectively. Parents whose BPN were fulfilled exhibited effective parenting strategies, reducing the risk of Internet Gaming Disorder. Consequently, there is a crucial role for nurses and healthcare professionals in educating parents about preventing Internet Gaming Disorder in children.

Introduction

A common grievance among parents in various parts of Indonesia is associated with the provision of internet facilities and permitting children to engage in games.[1-4] However, these facilities can have a detrimental impact on children. Parental perplexity increases as children begin to exhibit attention disorders, emotional dysregulation, disruptions in family relationships, and an excessive need for play.[5] Consequently, children may overlook school assignments that should be completed at home and engage less with their peers.[6]

The role of parents' strategies in educating children in the digital era has not been extensively researched, particularly concerning the fulfillment of Basic Psychological Needs (BPN). Research on the use of online games and associated risks in children is scarce compared to studies on online game addiction in adolescents and adults.[2,3,7] Given the critical importance of childhood for parental involvement in growth, development, meeting basic needs such as nutrition and housing, as well as educating children, it is imperative to prevent online game addiction.[6]

Data on online game players in Indonesia show an increase from 23.7 million people in 2019 to 28.1 million people in 2020, making Indonesia the seventh-ranked country globally for gamers.[8] Despite the benefits, empirical data consistently demonstrates that excessive gaming has negative consequences on physical and psychological functioning.[9] Gamers exhibit worse emotional responses, impaired prefrontal cortex function, compromised cognitive control, diminished working memory and decision-making abilities, decreased visual and auditory functions, and deficiencies in their neural reward system. These parallels

with individuals with substance-related addictions suggest shared predisposing factors, indicating a potential addiction syndrome.[10]

The onset of gaming behavior in industrialized countries typically occurs around the age of 8 years.[11] In Indonesia, where access to games is easily affordable, some games may be expensive for children,[3,12] prompting the extension of the current research to cover the age range from 7-8 years and above. Neurobiological examinations in addicted children reveal activity in the bilateral middle and inferior temporal gyrus, responsible for visual processing, and the right superior parietal lobule, responsible for spatial orientation, indicating impaired visual and auditory function.[9] Magnetic Resonance Imaging (MRI) examinations show lower brain activity in the left inferior frontal gyrus and right inferior parietal lobe compared to matched casual game controls, indicating barriers to control ability, attention and error processing, self-concept, and social anxiety. Pleasurable experiences in the brain due to frequent play result in a lower physiological response in the ventral striatum when anticipating rewards, motivating gamers to play intensely and disregard fatigue, rest, and daily life activities, including assignments and schoolwork.[10,13]

Satisfaction of BPN supports parents' awareness of their role in parenting, as evidenced in studies related to game addiction. Parental knowledge about preventing gaming addiction is considered protective, reducing the impact of the risk of peer victimization through BPN satisfaction mediation.[6] On the other hand, forecasts about gaming and social addiction depend on factors like the level of psychological control exerted by parents, the frustration of needs, or the child's gender, along with the resulting outcomes. Parents' experiences of parenting practices are identified as highly relevant to parents' psychological needs according to Self-Determination Theory (SDT).[14] SDT, coupled with parents' strategies in preventing internet gaming disorder, emphasizes autonomy support, structure, and connectedness support.[15]

A parenting style that includes parental autonomy can support the child's volitional function, aligning with an authoritative parenting style, involving guiding the child during play.[16] Parents, especially mothers, are advised to initially prohibit children from interacting with captivating objects.[17] Mothers are expected to manage the child's response to rejection through reasoning, polite requests, positive comments, and suggestions. This authoritative parenting approach aims to cultivate committed obedience in children.[18]

A parenting style that emphasizes connectedness involves parents expressing love and attention, fostering a close and understanding relationship with their children.[14,19,20] Patterns that support competence involve implementing daily task routines, planning joint activities, visualizing environments at risk of game addiction, identifying positive behaviors, and consistently enforcing agreed-upon rules. Competence support stimulates children's social and emotional development.[14,21] SDT-based parenting, with its focus on need satisfaction, enables parents to better control independence, connectedness, and competence compared to frustrated and dissatisfied parents.[22,23] In light of the above, the researcher formulates the research objectives, aimed to analyze the relationship between parents' basic psychology and parenting strategies in preventing internet gaming disorder in children.

Materials and Methods

Design and sample

This study employed an analytical cross-sectional study approach. Specifically, it included all parents with children of primary school age in the Gresik Regency area, East Java, Indonesia. The sample consisted of parents with children aged 8-12 years in the Gresik area, totaling 125 people. The inclusion criteria were as follows: parents (both father and mother) responsible for their own children, parents who provide their children with gadgets, and parents with children aged 8-12 years engaging in gaming for at least 1-3 hours per day in the last 3 months. Exclusion criteria comprised parents who were absent due to sickness, job relocation, or having children in ill condition.

Variable, instrument and data collection

This research encompassed demographic characteristics variables: child gender, parent age (years), child age, number of children, parent education, household income, family structure, and work. The independent variable was BPN (autonomy, competence, and relationships), while the dependent variable was parenting strategies. Two instruments were utilized in this study. First, the Basic Psychological Needs Frustration (BPNF) questionnaire: controlling for the Big Five Personality Traits.[24] The validity test yielded a correlation value for each question ranging from 0.369 to 0.857, with a reliability Cronbach alpha of 0.915. Second, the Digital Parenting questionnaire: perceptions on Digital Risks.[25] The validity test resulted in a correlation value for each question ranging from 0.486 to 0.700, with a reliability Cronbach alpha of 0.789.

Procedure

The initial step in this study involved obtaining permission from the Research Ethics Commission and the research site. Data collection commenced on November 1, 2021, with questionnaires distributed using a Google form to parents in the respondent group willing to participate, accompanied by proof of information permission.

Data analysis

Data management and analysis were conducted using SPSS 22.0. The influence of BPN (Competence, Relatedness, and Autonomy) on parenting strategies in children was analyzed using the Multiple Linear Regression test with a significance value of $p<0.05$.

Ethical clearance

The research protocol adhered to the Helsinki Declaration. Prior to participation, all parents willing to be respondents signed a voluntary consent form. All procedures in this study were approved by the University Health Research Ethics Committee (Nahdlatul Ulama University, Surabaya), with the approval code: 273/EC/KEPK/UNUSA/2021.

Results

The characteristics of the respondents indicate that 125 parents participated in the study, with 79% being female and 21% male. The respondents' ages ranged from 33 to 50 years, with an average age of 40.42. The children involved in the study were between 8 and 12 years old, with an average age of 11.1. Regarding parental employment, 30.3% were employed full-time, 13.2% were part-time, 11.6% were housewives, and 5% worked from home. Further

details can be found in Table 1. The results of the BPN analysis, consisting of autonomy, relatedness, and competence, indicate that autonomy has no significant effect on parenting strategies (0.068), relatedness also shows no significant effect (0.923), while competence has a significant effect on parenting strategies (0.005). Simultaneously, the combination of autonomy, relatedness, and competence collectively affect parenting strategies (0.026). In terms of the effective contribution (SE), autonomous, relatedness, and competence together contribute 7.3%, with individual effects being autonomous 1.82%, relatedness 0.04%, and competence 5.56%. For the relative contribution (SR), autonomous contributes 24.97%, relatedness 0.61%, and competence 76.28%, as illustrated in Table 2.

Discussion

This study aims to demonstrate a strong correlation between BPN and parenting strategies among parents with children at risk for internet gaming disorders. The sample criteria include parents who provide Internet (Wi-Fi) facilities at home along with gadgets

for their children. Additionally, participants consist of parents who live in the same household or do not live separately from their children, parents whose children play online games for at least 3 hours a day, and parents willing to participate in the study. These findings underscore the significance of the quality of parental involvement, particularly for parents with strong BPN, in employing effective parenting strategies for children at risk of internet gaming disorder.

Basic psychological needs of parents

The results of the partial t-test for each BPN variable, specifically the autonomy variable, indicate no significant impact on parenting strategies. This lack of impact is attributed to parents experiencing pressure when confronted with disciplined parenting patterns that yield substantial parental autonomy in child care. Parents may feel helpless due to the reliance on gadget media for many children's activities during online school, making it challenging to monitor whether children are engaging in assignments or playing. Parents with lower income levels may prioritize their work, leading to decreased attention to their children. Housewives, in turn, may allow their children to explore

Table 1. Demographic characteristics of parents of elementary school students (N=125).

	Characteristics	Frequency (f)	Percentage (%)
Child gender	Men	86	68.8
	Women	39	31.2
Parent age	30-49	3	2.4
	50-64	120	96
	> 65	2	1,6
Child age	8-10	46	36.8
	11-12	79	63.2
Number of children	1-2	68	54.4
	3-4	57	45.6
Education	Basic	17	13.6
	Middle	66	52.8
	Higher	42	33.6
Household incomes	High	26	20.8
	Medium	16	12.8
	Low	83	66.4
Family structure	Nuclear	108	86.4
	Binuclear	1	0.8
	Single parent	5	4
	Extended	11	8.8
Work	Full-time job	4	3.2
	Part-time job	34	27.2
	Unemployed	17	13.6
	Housewife	70	56

Table 2. Basic psychological needs of parents of elementary school students.

Model	Unstandardized coefficients		Standardized coefficients	t	p	F		R	R Square	SE	SR
	B	Std. Error	Beta								
Constant	52.933	6.882		7.692	0.000	3.199	0.026	0.271	7.3		
Autonomous	-1.065	0.578	-0.172	-1.844	0.068					1.8232	24.975
Relatedness	156	1.608	0.009	0.097	0.923					-0.045	-0.616
Competence	1.861	0.656	0.259	2.836	0.005					5.5685	76.281

the gaming world if the children are not demanding and prefer staying indoors.

The support of the three BPN (autonomy, competence, and relatedness) within an individual's social environment contributes significantly to the psychological well-being of parents.[18] The findings of this study align with research articles indicating that parental basic need satisfaction serves as a predictor of autonomy support from parents. This conclusion is corroborated by Costa (2019), demonstrating that parents who perceive their basic needs as fulfilled are more likely to employ practices that support autonomy with their children.[26] Additionally, the need for gender autonomy influences the fulfillment of the BPN for autonomy, which tends to be more pronounced in women.[27]

The results of this research indicate that the variable of relationship does not significantly affect parenting strategies. According to the questionnaire results, many parents foster relationships among family members, particularly with their children, by engaging in shared gaming activities. They often come together after exhausting activities outside and find entertainment through cellphone features. Parents who experience frustration in their relationship with their children may permit their children to play games as a reward after studying, and not monitoring their children's screen time for more than 3 hours per day may pose a risk of interference with internet gaming. It's noteworthy that in this study, only 21% of participants were mothers, contrasting with the majority (79%) of participants who were fathers. The lack of effect observed for the relatedness variable may also be influenced by gender, as fathers tend to maintain attachment relationships with their children more than mothers.

The competence variable significantly influences parenting strategies, indicating that parents are content with their competence and believe they are effectively managing parenting tasks. However, caution is warranted if parents feel frustrated with their competence, as this may lead to reduced confidence in resolving their child's issues, particularly concerning difficulties related to playing internet games. The findings of this study align with research articles, demonstrating that parents who experience satisfaction BPN tend to exhibit greater independence in decision-making and increased confidence in their parenting skills. This suggests that they are more likely to enhance their ability to make informed decisions and apply reasoning to relevant rules for their children.[26] Furthermore, parents' screen time when interacting with gadgets and their attitudes are closely linked to children's screen time. Parents employ active, restrictive, and collaborative strategies in managing technological device use. The study emphasizes the need for parents to acquire more information about evolving digital risks, as they may lag behind their children's proficiency in playing advanced games.[28,29]

Based on the simultaneous F-test results, it is evident that Competence, Relatedness, and Autonomy each have a significant partial effect on parenting strategy. The regression test results indicate the percentage of influence exerted by BPN, either individually or collectively, on parenting. This is further supported by simultaneous results on R Square, suggesting a relationship between BPN and parenting strategies when considered together. The Standard Error (SE) variables of autonomy, relatedness, and competence also influence the parenting strategy. Previous research findings demonstrate that the satisfaction of BPN in parents contributes to both long-term and short-term happiness. Autonomy, competence, and attachment are identified as important mediators in shaping personality and providing parental support for children's happiness and mental health. Moreover, these findings contribute to the existing literature on this subject.[30]

Parental strategy from the parents' statement

The parenting strategy, as indicated by parents' statements, reveals a strict approach to overseeing children's use of gadgets, particularly engaging in online games. Parents emphasize limiting children's playtime to 1-2 hours per day, with a majority (90%) expressing the desire to understand how to control their children's usage. Their motivation stems from a wish to protect their children from potential threats posed by malicious gaming sites on the Internet. Upon reviewing the responses to the research questionnaire, it becomes apparent that parents who detail their respective parenting strategies regarding their children's digital media use are seeking effective strategies for parenting.

Parents need to gain a better understanding of their children's development while safeguarding their privacy from exposure to personal information and health issues.[31] Various parenting strategies can be employed. Previous research articles have elucidated that a supportive parenting style fulfills three BPN, ultimately enhancing overall well-being. Interventions aimed at equipping parents with the knowledge and skills to implement warmth, structure, and autonomy support are deemed essential.[32] A limitation of this study was the inability to conduct direct interactions with the participants' parents due to the pandemic. For future research, it is suggested to employ a cross-sectional analytic design with a survey or direct interaction with parents to ensure results align with expectations. Recommendations stemming from this study propose implementing parenting strategies in seven ways, including persuasion, control, protection, monitoring, managing/reducing children's screen time during online gaming, supporting children to use digital media appropriately (choosing age-appropriate applications), and minimizing gadget use, especially during family gatherings, as BPN have a strong relationship with parenting strategies. This study used a purposive sampling technique because, at the time of research Indonesia was facing the Covid-19 pandemic, and researchers could not meet directly with research respondents. There are also several influential variables in the study that have not been examined, namely the mother's personality factor and the health status of the mother and her child.

Implications

Our results suggest that parents should be made aware of the importance of continuing to provide autonomy support to their children even after they become adults. It is crucial for parents to comprehend and acknowledge their children's feelings, particularly during challenging transition periods. Additionally, they should foster an environment that encourages children to make their own decisions without imposing their opinions. Parents should recognize that establishing a psychologically controlling environment is counterproductive if they aim to promote healthy social media use by their children. Researchers may find it valuable to consider children's psychological needs and parenting styles when developing interventions to encourage healthy social media use and self-directed learning.

Conclusions

The research results demonstrate that parents with effective and robust parenting strategies can play a crucial role in preventing the risk of internet gaming disorders in school-aged children. Additionally, such strategies can aid in averting the enduring consequences of internet gaming addiction in children, including obsessive tendencies, anxiety, stress, persuasion, and anti-social

behavior. The three variables exerting the most significant influence on Parenting Strategy are Autonomy, Competence, and Relatedness. The primary limitation of this research is its conduction during the COVID-19 pandemic, leading to continued online learning. Consequently, the questionnaire was distributed via a Google form, facilitated by the homeroom teacher, who then informed all students. This method might result in some respondents facing challenges in understanding the questionnaire content on the Google form. Parents and teachers can utilize the findings of this research as a reference for providing care to children, aiming to prevent internet gaming disorders. Recommended actions include supervising children, staying informed about digital developments, and fostering warm relationships among parents, teachers, and children.

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