



The Role of Parents in Preventing Children's Gadget Game Addiction Through Child-Friendly Sports

Dewi Kustanti,^{1*} Nurlinah²

^{1,2} UIN Sunan Gunung Djati Bandung, Indonesia

* Corresponding Author, Email: dewikustanti@uinsgd.ac.id

ARTICLE INFO	ABSTRACT
<p>Keywords: Addiction; Child-friendly sports; Gadgets; Parental role; Value education.</p> <hr/> <p>Article history: Received 2024-12-06 Revised 2024-12-15 Accepted 2024-12-16</p>	<p>Gadget addiction in children is a growing concern in the digital age, negatively impacting their physical, social, emotional, and academic development. Parents play a vital role in preventing this addiction by understanding their children's developmental needs and guiding them toward healthier activities. Engaging children in sports can effectively reduce gadget dependency, as studies indicate that excessive screen time decreases physical activity. Parental involvement is essential, particularly as mothers often take a more active role in their children's lives. This study utilizes parental guidance and a literature review to explore the importance of parental education in promoting balanced gadget use. Ultimately, the findings highlight that parents are crucial in shaping their children's personalities and fostering positive habits for healthy development.</p> <p>Contribution: The findings underscore the necessity for targeted interventions that empower parents, particularly mothers, to take an active role in shaping their children's behaviors and promoting a balanced lifestyle in an increasingly digital world.</p> <p style="text-align: right;"><i>This is an open access article under the CC BY-SA license.</i></p> <div data-bbox="1145 1384 1369 1464" style="text-align: right;"></div>

1. INTRODUCTION

The development of the millennial era and the emergence of society 5.0 has revolutionized the world from conventional to completely digital, especially in the use of social media (Gladden, 2019). Social media, which was previously mostly used by adults or formal institutions such as offices, schools and universities, is now easily accessed by non-formal institutions and individuals, including children (Yasunaga, 2014). This access reaches various ages, from toddlers to teenagers. Toddlers, who are categorized as children under the age of five, are often introduced to digital devices before even entering elementary school, usually when they are in kindergarten (TK) or early childhood education (PAUD).

Ironically, although institutions such as kindergartens or PAUD usually avoid using gadgets in the teaching and learning process, many parents have introduced smartphones to their children at the age of 2-5 years (Soysal, 2020). Parents often give gadgets to their children with a simple goal: so that the child doesn't cry or fuss. This habit then continues until children enter elementary school age, where they become increasingly adept at using social media and playing with gadgets—especially playing games—even though this is not taught in school.

In contrast to previous generations, where children spent their free time playing traditional games with their peers, today's children spend more time individually, glued to their digital world. Even when they get together with their friends, each is busy with his own devices. Social interactions that were once full of laughter, familiarity and emotion are now replaced by individual digital gameplay (Anwar et al., 2018; Pella, 2020).

This change in behavior cannot be separated from the role of parents. Children, who are like blank sheets of paper, will absorb whatever is given to them. If parents direct their children to get to know gadgets from an early age without restrictions, it will become a habit. The role of parents in shaping children's habits and personality is very important, especially during early childhood and elementary school. Parental involvement in directing a child's growth and development really determines the direction of the child's development (Andhika, 2021; Vincent, 2017).

Unfortunately, many parents today prefer instant solutions to calm their children, namely by giving them gadgets or smartphones. Children easily accept what is given, so they become busy with the device. This habit, which is continuously left without time control, eventually creates addiction in children (Setiawati et al., 2020). Children even keep asking to play games on their gadgets, whether they are fussy or not. Parents often don't think about the long-term impacts of this habit. They just believe that as long as the child is quiet and not annoying, everything is fine. However, this simple mindset can endanger the child's future (Anwar et al., 2021; Niran, 2019).

This problem requires serious attention assisting parents so that they get the right knowledge about how to educate children and solutions to prevent gadget addiction. One effective approach is to direct children to positive activities, such as child-friendly sports. Physical activity not only helps children avoid dependence on gadgets but also improves their physical, emotional and social health. Research shows that gadget addiction is often associated with a lack of physical activity because children tend to spend time lying down or being passive, which can ultimately affect their physical growth (Bustamam, 2024).

However, before introducing children to child-friendly sports, assistance to parents is very important. Parents need to understand their role in encouraging healthy physical activity and creating an environment that supports children to avoid gadget addiction. This assistance is needed because of the diverse educational backgrounds of parents (Bustamam, 2024). In this case, the role of mothers is very significant because they are generally closer to children than fathers.

The rapid development of information and communication technology has changed many aspects of life, including the way children play and learn. Gadgets, such as game consoles, smartphones, and tablets, have become an inseparable part of their lives. Even though technology has many benefits, its uncontrolled use, especially for playing games, can have negative impacts (Marpaung, 2018). The solution lies in balance, where parents actively direct their children to useful activities so that technology can become a tool to support children's growth and development, not a source of dependence.

2. METHOD

This research uses field research methods in the form of qualitative research. This research focuses on the role of parents in managing children's gadget use, especially in preventing gadget addiction, as well as the potential for child-friendly sports as a solution to this problem. This research was also carried out by reviewing relevant literature, including books, journal articles, and theoretical references about parenting, gadget addiction, and physical activity (Hooper et al., 2018; Lieberman, 2020; World Health Organization, 2019). The theory used in this research is social learning theory, which emphasizes the influence of parental behavior on child development. This research is descriptive in nature, which aims to provide a valid picture of the role of parents and the impact of gadget addiction on children (Sugiyono, 2013).

3. RESULTS AND DISCUSSION

Parents need to set clear rules regarding their children's use of gadgets. Considering the impact that excessive use of gadgets can have, parents should limit screen time to a maximum of between 1 and 2 hours per day, in accordance with recommendations from various world health organizations (Muawanah, 2021). This limitation aims to avoid negative effects that could arise, such as sleep disturbances, decreased social quality, or even gadget addiction. Apart from that, parents also need to be role models for their children in terms of using gadgets. Children tend to imitate the behavior they see around them, especially from their parents, who are the main role models in everyday life. Therefore, parents must show a wise and disciplined attitude in using gadgets, for example, by limiting themselves in using gadgets at certain times and not neglecting direct interaction with children (Juwita & Yunitasari, 2024).

Gadget games, as part of technological developments, have now become a form of entertainment that is very popular with many people, especially children and teenagers. Games played via gadgets allow players to explore various virtual worlds, from simple to complex, with charming graphics and exciting gameplay (Lan, 2023). There are various types of gadget devices used for playing games, ranging from game consoles and mobile devices to virtual reality (VR) devices, which are increasingly popular. Game consoles such as PlayStation, Xbox, and Nintendo Switch are specialized devices designed for playing video games. These devices are usually connected to a television or external display and equipped with a physical controller that allows the player to control the game with high precision (Bojic, 2022). Apart from that, smartphones and tablets are now also the main choice for playing games because they are easy to access, practical, and offer various game applications that can be downloaded via platforms such as Google Play and the Apple App Store (Mohammed et al., 2024). Not only that, portable gaming devices such as the Nintendo 3DS and PlayStation Vita allow users to play games anywhere, even when they are on the go. What's more, emerging virtual reality (VR) technology, with devices like the Oculus Rift or PlayStation VR, is taking the gaming experience to the next level. By using a VR headset and motion controllers, users can experience a more immersive gaming sensation, as if they were actually inside the virtual world they are playing in (Giddings, 2014).

However, even though gadget games can provide fun and educational entertainment, excessive use or control can give rise to various problems, one of which is gadget addiction. Addiction is a psychological condition characterized by a strong and uncontrollable urge to continue doing an activity, even though it can have negative impacts. In this context, gadget addiction is often accompanied by increasingly deep feelings of dependence, both physically and psychologically (Xiao et al., 2024). Someone addicted to gadgets may find it difficult to tear themselves away from their devices, even when they realize that they interfere with other activities, such as work, studying, or social relationships. Gadget addiction can change a person's way of thinking and interacting with the world around them, which in the end, can affect their overall quality of life (Klimenko et al., 2024). Apart from that, gadget addiction can also cause physical disorders such as tired eyes, sleep disorders and posture problems, as well as psychological disorders such as anxiety, depression and attention disorders (Nawaz, 2023).

This addiction actually doesn't just happen to gadgets but can happen to various other things, such as drugs, alcohol, food, or even activities that seem trivial, such as shopping or playing games excessively. The addiction process itself involves changes in the brain, which causes a decrease in self-control and makes a person feel compelled to continue repeating certain behaviors or consumption to feel satisfaction or to avoid emotional discomfort (Lavalley, 2020). This is a condition that must be watched out for, especially in the current digital era, where gadgets and technology are increasingly integrated into everyday life. Gadget addiction not only impacts a person's physical and psychological aspects, but can also disrupt their social and emotional relationships, and has the potential to damage their overall quality of life (Büsche et al., 2022). Therefore, parents, educators and society need to pay more attention to balance in the use of gadgets, with the aim of creating an environment that supports children's development in a healthy and balanced manner (Snoek, 2024). Addiction can have a variety of damaging effects on a person's physical, psychological, social and emotional aspects. Here are some of the main effects that addiction can cause:

Physical Aspects

Addiction, whether to substances such as alcohol, drugs, or cigarettes, or to behaviors such as playing games, excessive shopping, or using gadgets, has a very significant impact on a person's physical health (Pogozheva et al., 2022). In many cases, this addiction not only attacks certain body organs but also damages the function of the body as a whole. Serious health problems, physical deterioration, and the phenomena of tolerance and dependence are the three main aspects that illustrate how addiction can become a real threat to a person's life (Ramakrishnan et al., 2023).

One of the most serious impacts of addiction is the physical health problems that result from using certain substances. For example, alcohol addiction can cause liver cirrhosis, namely permanent damage to liver tissue that disrupts the body's metabolic function (Hyun et al., 2021). This damage is often not only limited to the liver but can also worsen the function of other organs such as the kidneys and digestive system. Likewise, addiction to drugs such as heroin or methamphetamine can damage the central nervous system, affect heart rate, and increase the risk of organ failure (Liu et al., 2021). Even cigarette addiction, which is often considered "lighter" than drugs, in the long term can cause chronic obstructive pulmonary disease (COPD) or lung cancer. The organ damage caused by this addiction shows the complexity of the impact of addiction, which involves various body systems at once (Halimova, 2023). Biopsychosocial theory explains that a person's physical health condition is

often worsened by interactions between biological, psychological, and social factors, such as stress, stigma, or lack of access to adequate medical care (Hunt, 2024).

Not only does it cause organ damage, addiction can also result in a decline in overall physical condition. This is not only experienced by substance addicts but also those who are trapped in addictive behavior such as playing games or shopping excessively. Excessive activity in front of a screen, for example, often sacrifices time for exercise or adequate sleep, resulting in decreased stamina, weight gain, or even chronic insomnia (Lieberman, 2020). In the long term, this unhealthy lifestyle can trigger more complex health problems, such as metabolic disorders or cardiovascular disease. From the perspective of behavioral reinforcement theory, individuals who engage in addictive behaviors are often motivated by the momentary sense of satisfaction they feel, so they ignore the long-term negative impacts on their bodies (Koob, 2021). As a result, this addictive cycle continues until the body finally shows signs of exhaustion or serious damage.

No less important, addiction is also often accompanied by phenomena of tolerance and dependence, which exacerbate existing physical effects. Tolerance occurs when the body becomes immune to the initial dose of a certain substance, so it requires a larger dose to get the same effect (Ilan, 2022). For example, an alcoholic may initially only need one or two drinks to feel "satisfied," but over time, this dose increases until it is well beyond the safe threshold. Physical dependence also develops simultaneously, where the body begins to depend on the substance to carry out its normal functions. At this stage, sudden cessation can cause severe withdrawal symptoms, such as tremors, seizures, or even life-threatening complications (Ahmad et al., 2022). Within the framework of neuroadaptation theory, addiction can be explained through changes in brain systems, especially in those that regulate reward (Koob & Vendruscolo, 2023). Addictive substances artificially increase dopamine levels, but with continued use, the brain becomes less responsive to natural dopamine. This makes the body require more of the substance to achieve the same level of satisfaction, creating a cycle of addiction that is increasingly difficult to break (Ferrer-Pérez et al., 2024).

All of these impacts, including organ health problems, decreased physical condition, as well as the phenomenon of tolerance and dependence, show how widespread and serious the effects of addiction are on the human body. Therefore, a comprehensive approach is needed to treat addiction, which does not only focus on physical recovery but also pays attention to the psychological and social aspects that support the healing process. Treatment involving medical intervention, psychological counseling, and support from the social environment can be important steps to help individuals who experience addiction recover and live healthier lives (De Leon & Unterrainer, 2020). By understanding the deep impact of this addiction, prevention and treatment efforts can be carried out more effectively, so that the bad effects can be minimized or even avoided.

Psychological Effects

One of the most serious impacts of addiction is the emergence of mental disorders such as anxiety, depression, or bipolar disorder. This can be explained by the chemical changes that occur in the brain due to addiction (Hu et al., 2022). Use of addictive substances or engagement in compulsive behavior can disrupt the function of neurotransmitters, such as dopamine and serotonin, which are responsible for emotion and mood regulation (Gu et al., 2022). This imbalance often worsens existing mental conditions or even triggers new mental disorders. For example, alcohol addiction can increase the risk of depression due to the depressant effect of alcohol, which disrupts certain neural activity in the brain. In the context of dual diagnosis theory, addiction often coexists with mental disorders, exacerbating each other. Therefore, an integrated treatment approach, which treats both conditions simultaneously, is key to recovery (Szerman et al., 2022).

Extreme emotional fluctuations are another hallmark of addiction. Individuals who engage in addictive behavior or use addictive substances often experience a surge of emotions in the form of temporary euphoria, which is then followed by feelings of anxiety, depression, or deep regret when the effects wear off (Laestadius et al., 2024). This phenomenon not only affects mental well-being but can also damage an individual's social relationships with those around them (Bozzatello et al., 2021). For example, a gaming addict may feel great joy when winning a game, but then feel guilty when realizing that time spent playing has neglected other responsibilities (Fineberg et al., 2022). This condition can be explained through the theory of reward deficiency syndrome, which reveals that individuals with addiction experience disruptions in the brain's reward system. They continue to seek external stimulation to achieve happiness, which ironically strengthens their dependence on this source of addiction (Blum et al., 2021).

In addition to physical dependence, addiction also creates a deep psychological dependence. This addiction often appears as a form of escape from stress or problems in life. Addicted individuals tend to feel that they are

unable to face challenges without help from the substance or behavior they rely on (Tarantino et al., 2022). For example, someone who is addicted to nicotine may find it difficult to cope with anxiety without smoking, while a shopaholic may impulsively buy things as a way to distract from stress (Jouhki & Oksanen, 2022). In this context, the theory of coping mechanisms provides important insight that addiction is often used as a strategy to avoid or reduce stress (Agbaria & Mokh, 2022). However, this strategy only has a temporary effect and, in the long term, tends to make existing problems worse.

These three psychological aspects—mental disorders, mood swings, and psychological dependency—reinforce each other, creating a dynamic that is increasingly difficult to overcome. Mental disorders can exacerbate emotional fluctuations, ultimately driving individuals to become increasingly psychologically dependent on the source of their addiction. To break this cycle, a holistic approach is essential. An approach like cognitive-behavioral therapy (CBT), which focuses on recognizing negative thought patterns and developing new strategies for dealing with stress, has been shown to be effective in helping addicted individuals (Diachkova et al., 2024). By integrating relevant theories and interventions, recovery efforts can not only address the psychological impact of addiction but also help individuals build more balanced and meaningful lives.

Social Effects

One of the most common social impacts of addiction is social isolation. Addicted individuals tend to withdraw from social interactions due to shame, stigma, or a desire to hide their habit (Dagnino et al., 2020). Addictive behavior often forces them to prioritize their addiction over healthy social relationships, such as with family or friends. This is exacerbated by the fact that addiction can drive individuals to ignore or manipulate those closest to them in order to fulfill their addictive needs, ultimately alienating them further (Kato et al., 2020). This social isolation can be explained through the theory of social withdrawal, where individuals feel unable to fulfill expected social norms, so they choose to withdraw from the community (Rawat et al., 2022). This condition creates a vicious circle: the more isolated they are, the more difficult it is for them to seek the support necessary to recover from addiction.

Apart from social isolation, problems in interpersonal relationships are another social effect that often arises from addiction. Conflicts with family members, partners, or close friends become commonplace, especially when addictive behavior begins to damage mutual trust and respect (Wessells & Kostelny, 2022). For example, addicted individuals often lie or neglect their responsibilities, both at home and at work, which can trigger frustration or anger from those around them. In fact, in certain cases, addictive behavior can lead to physical or emotional violence, which further damages interpersonal relationships (Bouffard et al., 2022). According to the theory of attachment, healthy relationships require trust and emotional support, but addiction tends to destroy these important elements, resulting in dysfunction in the relationship (Civilotti et al., 2021).

No less important, addiction also has a big impact on performance at work or education. Many addicted individuals have difficulty maintaining commitments or responsibilities at school or work (Martinelli et al., 2021). For example, they may be frequently absent, arrive late, or fail to complete assigned tasks due to loss of focus or motivation due to addiction. As a result, they may miss out on opportunities to develop professionally or academically, and in some cases, even lose their jobs or be expelled from educational institutions. This condition is in line with the theory of occupational functioning, which states that an individual's productivity is highly dependent on their physical, mental, and social health. When addiction damages these aspects, the individual's ability to function optimally in the work or school environment is also disrupted (Toscano & Zappalà, 2020).

These three social effects—social isolation, relationship problems, and disruption in work or education—create a mutually exacerbating pattern. Social isolation often triggers deeper reliance on addiction as an escape mechanism, while conflict in relationships exacerbates the emotional stress that drives addictive behavior, (Bergefurt et al., 2022). On the other hand, failure at work or education can reinforce feelings of inferiority and helplessness, making it even more difficult for individuals to break out of the cycle of addiction. Therefore, treating addiction requires not only medical and psychological approaches but also social interventions aimed at repairing and rebuilding individuals' relationships with their social environment (Baum et al., 2024). An approach like therapy-based support groups, which combines individual therapy with community support, can be an effective solution to overcome the social effects of addiction (Lo Coco et al., 2024). This not only helps individuals overcome their addiction but also re-establish healthy relationships and productivity in everyday life.

Emotional Effects

When someone fails to kick an addiction despite trying, this can create feelings of inferiority and reduce their self-esteem significantly (Simonič & Osewska, 2023). In many cases, this shame is further exacerbated by the

social stigma of addiction, which makes individuals feel judged by society or even by those closest to them (Şamar et al., 2023). According to the theory of self-stigma, Negative feelings about oneself as a result of addiction are often a major barrier to individuals seeking help, as they feel unworthy or fearful of facing judgment from others. As a result, they are increasingly trapped in a cycle of addiction without being able to get out (Adams, 2023).

Additionally, addiction also triggers significant stress and anxiety. Dependence on certain substances or behaviors makes individuals face great emotional pressure, both from within themselves and from their social environment. Fear of losing access to addictive substances, guilt about neglecting responsibilities, or pressure to hide addictive habits all contribute to high-stress levels. Furthermore, addiction can also worsen the body's response to stress (Ma et al., 2024). Research shows that the use of addictive substances such as alcohol or drugs can damage the function of the limbic system—the part of the brain that regulates emotions—making individuals more vulnerable to feelings of anxiety (Thatcher, 2024). The theory of stress-vulnerability explains that addiction creates a cycle in which stress exacerbates addiction, and addiction, in turn increases vulnerability to stress (Zhou et al., 2024).

These emotional impacts do not stand alone, but are interrelated and strengthen each other's negative effects. Feelings of shame and hopelessness often exacerbate stress and anxiety, which then drives individuals to increasingly rely on addictive substances or behaviors as an escape mechanism (Mazzari, 2024). However, this escape only provides a temporary sense of relief, while the long-term effects actually worsen their emotional condition. In the long term, these emotional effects not only affect an individual's well-being but also their relationships with others, work productivity, and overall quality of life (Becker et al., 2022).

To overcome the emotional effects of addiction, an approach that focuses on emotional recovery, such as emotion-focused therapy, (EFT), is needed (Shojaeian et al., 2024). This approach helps individuals understand and process the negative emotions underlying their addiction while developing healthier strategies for dealing with emotional distress. Apart from that, social support from family, friends, or the community also plays an important role in reducing shame and increasing the self-confidence of individuals who are struggling with addiction (Carroll, 2020). With integrated attention to emotional, physical, and social aspects, individuals have a greater opportunity to break out of the cycle of addiction and restore their emotional balance (Sims et al., 2021).

Economic Effects

Addiction not only impacts physical, psychological, social and emotional health but also has serious implications on an individual's economic condition. This economic effect is often one of the biggest causes of additional stress for those caught in the cycle of addiction, exacerbating an already difficult situation. The two main impacts of addiction on the economic aspect are significant financial losses and potential job loss (Serafini et al., 2020).

One of the most striking economic consequences of addiction is financial loss. Large expenses to feed an addiction, such as purchasing drugs, alcohol, or gambling, can quickly deplete an individual's savings. The ever-increasing costs of addictive substances or activities often drive individuals to take on debt or sell valuable assets to fund their habit (Di Sarno et al., 2021). Gambling addiction, for example, can destroy a person's financial stability in a short time because of its highly addictive and unpredictable nature. In some cases, individuals even engage in illegal acts such as theft or fraud to obtain money, which not only worsens their financial situation but also results in legal consequences. Economic strain theory explains that financial stress caused by addiction often strengthens addictive behavior because individuals feel trapped in a situation with no way out (Lawrance et al., 2022).

Apart from that, addiction also has a big risk of losing your job. Decreased performance due to addiction, such as frequent absences, tardiness, or inability to complete tasks, is the main reason someone loses their job. Alcohol addiction, for example, is often associated with concentration and productivity problems at work, making it difficult for individuals to maintain their positions (Akkus & Çinkir, 2022). Behavioral problems related to addiction, such as conflicts with coworkers or superiors, can also exacerbate this situation. Losing a job not only impacts financial conditions but also increases feelings of shame, stress, and anxiety, which in turn can worsen addiction (Olleras et al., 2022). According to the theory of self-determination, job loss can reduce an individual's sense of autonomy and competence, two important factors that contribute to a person's motivation to change, thereby making the recovery process more difficult (Vanovenberghe et al., 2021).

The economic effects of addiction often create a vicious cycle that is difficult to break. Financial problems caused by addiction increase stress, which in turn drives individuals to return to addictive habits as an escape (St-Onge & Beauchamp Legault, 2022). This not only worsens their financial condition but also creates wider impacts, such as dependence on family or social support. In a societal context, the economic impact of addiction

can extend to a financial burden on communities, including the costs of health care, social intervention, or rehabilitation (Olleras et al., 2022).

To break this cycle, interventions focused on economic recovery become an important part of the addiction recovery process. Financial counseling can help individuals manage debt and plan their finances better after breaking addictive habits (Hing et al., 2024).). Apart from that, vocational rehabilitation programs can also be a solution to help individuals return to the world of work by providing new skills training or supporting them in finding work. With a holistic approach, individuals can not only restore their financial well-being but also build a stronger foundation for a stable and productive life (Ramsey, 2020).

Legal Effects

One of the main legal problems that often arises as a result of addiction is the involvement of individuals in illegal activities. Those addicted to drugs, for example, may commit crimes such as theft, robbery, or embezzlement to fund their need for addictive substances. Additionally, some addicted individuals even engage in drug dealing activities as a way to make money quickly (Harding, 2020). According to the theory of rational choice, individuals in situations of economic or psychological distress due to addiction may view illegal acts as a “rational choice” to meet their immediate needs, even though the consequences are detrimental in the long term (Rossmo & Summers, 2022).

Direct law violations related to addiction are also common, such as drunk driving (DUI) or committing physical violence while under the influence of alcohol or drugs (Ovcharenko et al., 2020). These violations not only endanger the safety of the addicted individual but also create significant risks for others. For example, DUI cases are one of the leading causes of fatal traffic accidents. In the context of criminal law, these actions demonstrate the close relationship between addiction and impulsive crimes, which often occur as a result of loss of self-control or decreased cognitive abilities when a person is under the influence of a substance (Feltmann et al., 2021).

Additionally, addiction also often worsens an individual's legal status through long-term consequences, such as a criminal record. For those arrested for addiction-related offenses, the criminal record they obtain can impact their ability to obtain employment, access education, or obtain social support in the future (Hollman, 2023). This creates a vicious cycle where individuals struggle to get out of an addictive situation because the legal repercussions limit their opportunities to start a new life. Labeling theory in criminology helps explain that the stigma of being a “criminal” often worsens an individual's situation and drives them back to destructive behavior (Zhao et al., 2021).

The legal impact of addiction shows that this problem is not only personal but also has broad social dimensions. Therefore, the addiction treatment approach needs to include legal aspects. Programs such as drug courts have been developed in many countries to address addiction through rehabilitation rather than criminal punishment. This model aims to reduce reoffending by providing access to mental health services, addiction counseling, and social support so that individuals can improve their behavior without having to face too harsh legal consequences (Proctor, 2021).

Ultimately, addressing the legal effects of addiction requires cross-sector collaboration between the legal system, health services and society. By providing a more humane approach and focusing on rehabilitation, it is hoped that addicted individuals can overcome their problems without having to be trapped in a cycle of crime that continues to repeat itself (Diekmann, 2022). This also contributes to improving the overall safety and well-being of society.

Long Term Effects

Addiction has serious impacts and often persists long-term, even after the individual stops using the substance or engaging in the addictive behavior. The long-term effects of addiction not only affect physical health but also the brain's ability to function optimally, ultimately damaging a person's overall quality of life (Lazarus et al., 2021).

One of the most serious impacts of addiction is the risk of death or long-term health damage. In the case of drug or alcohol addiction, this risk increases significantly. Overdose, for example, is one of the main causes of sudden death among drug users (Birch et al., 2024). In addition, continued use of addictive substances can cause chronic health problems such as liver damage in alcoholics, respiratory problems in opioid users, or heart damage in stimulant users such as cocaine. Even if death does not occur immediately, these long-term health impacts can significantly reduce life expectancy and reduce quality of life (Mazza et al., 2024). Oxidative stress theory in

medical science explains that addiction can accelerate the process of cell damage due to oxidative stress triggered by dangerous substances, thereby accelerating the occurrence of chronic disease (Lai et al., 2024).

Additionally, addiction can cause long-lasting changes in brain structure and function. Research shows that addiction affects areas of the brain associated with decision-making, impulse control, and reward, such as the prefrontal cortex and limbic system. These changes make it difficult for individuals to experience happiness without the addictive substance or behavior, so they continue to be trapped in the cycle of addiction (Volkow & Li, 2005). The concept of negative neuroplasticity explains that the brain tends to adapt to addictive patterns in detrimental ways, such as forming new neurological pathways that strengthen addictive habits and weaken the individual's ability to think rationally or control their urges (Luciana & Collins, 2022).

These long-term effects also impact an individual's ability to recover from addiction fully. Even after rehabilitation, many individuals report difficulty returning to enjoying normal activities or social relationships without feeling the urge to return to old habits. The recovery process often takes years, even a lifetime, because the brain takes a long time to rebuild healthy neurological pathways (Angres & Bettinardi-Angres, 2008). The biopsychosocial model in the psychology of addiction emphasizes the importance of integrating medical, psychological, and social approaches in treating these long-term effects, as addiction affects individuals on multiple, interrelated levels (Wiss et al., 2020).

Considering these dangerous long-term impacts, prevention and rehabilitation efforts become increasingly important. Public education about the dangers of addiction, early intervention, and ongoing recovery programs can help reduce long-term risks and help individuals rebuild their lives. With a better understanding of these long-term effects, more effective approaches can be designed to support individuals struggling with addiction (Bayassi-Jakowicka et al., 2021).

Gadget addiction in children has become an increasingly widespread problem, considering the increasingly dominant role of technology in everyday life. Excessive dependence on gadgets can disrupt various aspects of children's lives, especially those related to sleep patterns, physical health and their social relationships with family and peers. Decreased sleep quality often occurs due to the habit of using gadgets late at night, while reducing physical activity can worsen children's health, causing obesity and motor disorders (Singha, 2025). Furthermore, gadget addiction can also hinder a child's ability to interact socially, affecting their communication skills and relationships with others. Therefore, parents have a big responsibility in controlling gadget use and providing wise guidance to their children. One step that can be taken is to implement child-friendly sports as a healthy alternative to overcome gadget addiction (Belfiore et al., 2024).

Child-friendly sports are designed to provide fun and safe physical experiences for children. This type of sport not only takes into account their physical needs but also their mental and emotional development. One of the main characteristics of child-friendly sports is a focus on fun and no coercion (Ajodo et al., 2024). According to the positive reinforcement theory of B.F. Skinner, children who feel happy and appreciated when playing sports tend to be more motivated to continue participating (St-Onge & Beauchamp Legault, 2022). In this context, fun sports can strengthen children's positive behavior and increase their engagement, reducing dependence on gadgets which often leads to bad habits.

Apart from that, child-friendly sports also aim to develop basic skills such as balance, coordination, flexibility and strength. This is in line with Jean Piaget's theory of motor development, which emphasizes the importance of physical activity in supporting children's cognitive development. This sport provides an opportunity for children to develop gross motor skills, such as running and jumping, as well as fine motor skills, such as throwing a ball or kicking a ball. This process is not only beneficial for children's physical health but also for developing their self-confidence (Ondog & Kilag, 2024). When children successfully master new skills, they will feel more confident and confident, which in turn has a positive impact on their social and emotional development (Munatri, 2024).

Safety in child-friendly sports is also an important aspect that should be addressed. Sports that are adapted to the child's developmental stages will minimize the risk of injury. This is relevant to developmental safety theory, which reminds us that physical activity carried out without considering the child's age and physical abilities can be high risk. Therefore, it is important to choose sports that are appropriate to the child's age and abilities and provide a supportive environment so that children can move safely (Khoirunnisak et al., 2023).

Furthermore, child-friendly sports prioritize social interaction and cooperation. Many sports involve children working in teams, interacting with peers, and developing social skills such as sharing and respecting others (Jansson et al., 2022). For example, ball games or relay races can encourage team collaboration, teaching children about the importance of cooperation and respecting differences. This is in line with Albert Bandura's social learning theory, which states that children learn a lot from social interactions and observing other people's

behavior. By participating in sports that involve many people, children can also learn values such as sportsmanship and supporting each other (Neely & Holt, 2014).

With all the benefits it offer, child-friendly sports have a very important role in supporting children's physical, mental and social development. Enjoyable physical activity can help children overcome gadget addiction and reduce its negative impact on their physical and mental health (Ritchie et al., 2015). In this context, parents play a major role in creating an environment that supports healthy physical activities. Parents need to direct their children to engage in physical activities that reduce dependence on gadgets and invite them to play outside the house or take part in fun sports. The presence of parents in accompanying children when using gadgets is also very important, especially in choosing safe and educational content. Educating children about the risks of excessive gadget use and its impact on their health is a very necessary step in preventing gadget addiction (Neely & Holt, 2014).

In the end, open communication between parents and children is the main key to preventing gadget addiction. Parents must understand their children's world, including their interests in cyberspace, and set healthy limits regarding gadget use (Buerkie, 2023). Open discussions about healthy times for using gadgets and the importance of physical activity will also help children manage their time more wisely. With the right approach, child-friendly sports can be one of the best ways to create a balance between technology and children's development, ensuring that they grow up healthy, active and happy.

4. CONCLUSION

Parents have a very important role in preventing gadget addiction in children. By setting clear rules, being a good example, and being actively involved in accompanying their children, parents can help reduce the risk of gadget addiction. Apart from that, supporting children's physical and social activities and building open communication will help children manage their gadgets wisely. Preventing gadget addiction is not only the responsibility of parents but also involves the community and schools in creating an environment that supports healthy child development. The recommendation extends beyond individual families, advocating for a community and school partnership to create an environment conducive to healthy child development. This collaborative approach can further enhance efforts to mitigate gadget addiction among children.

References

- Adams, L. (2023). *The Experience of Self-Stigma and Social Norms in Treatment Utilization for Alcohol Use in College Students*. Indiana University.
- Agbaria, Q., & Mokh, A. A. (2022). Coping with stress during the coronavirus outbreak: The contribution of big five personality traits and social support. *International Journal of Mental Health and Addiction*, 20(3), 1854–1872.
- Ahmad, H. I., Jabbar, A., Mushtaq, N., Javed, Z., Hayyat, M. U., Bashir, J., Naseeb, I., Abideen, Z. U., Ahmad, N., & Chen, J. (2022). Immune tolerance vs. immune resistance: the interaction between host and pathogens in infectious diseases. *Frontiers in Veterinary Science*, 9, 827407.
- Ajodo, F. M., Zamani, A. E., & Alhassan, E. O. (2024). Systematic Appraisal of Substance Abuse Theories and Models of Relapse Prevention. *African Journal of Social and Behavioural Sciences*, 14(4).
- Akkus, M., & Çinkir, S. (2022). The Problem of Student Absenteeism, Its Impact on Educational Environments, and the Evaluation of Current Policies. *International Journal of Psychology and Educational Studies*, 9, 978–997.
- Andhika, M. R. (2021). Peran orang tua sebagai sumber pendidikan karakter bagi anak usia dini. *AT-TA'DIB: Jurnal Ilmiah Prodi Pendidikan Agama Islam*, 73–81.
- Angres, D. H., & Bettinardi-Angres, K. (2008). The disease of addiction: Origins, treatment, and recovery. *Disease-a-Month*, 54(10), 696–721.
- Anwar, R. K., Lusiana, E., & Rahman, M. T. (2021). Understanding the Development of Children's Education Caused by Parents Perception. *2nd Southeast Asian Academic Forum on Sustainable Development (SEA-AFSID 2018)*, 218–224.
- Anwar, R. K., Rizal, E., & Rahman, M. T. (2018). *Consideration of Parents' Beliefs about Guiding Children's Usage of the Internet*. <https://doi.org/10.5220/0008818901950199>

- Baum, C. M., Christiansen, C. H., & Bass, J. D. (2024). The person-environment-occupation-performance (PEOP) model. In *Occupational Therapy* (pp. 47–55). Routledge.
- Bayassi-Jakowicka, M., Lietzau, G., Czuba, E., Steliga, A., Waśkow, M., & Kowiański, P. (2021). Neuroplasticity and multilevel system of connections determine the integrative role of nucleus accumbens in the brain reward system. *International Journal of Molecular Sciences*, 22(18), 9806.
- Becker, W. J., Belkin, L. Y., Tuskey, S. E., & Conroy, S. A. (2022). Surviving remotely: How job control and loneliness during a forced shift to remote work impacted employee work behaviors and well-being. *Human Resource Management*, 61(4), 449–464.
- Belfiore, C. I., Galofaro, V., Cotroneo, D., Lopis, A., Tringali, I., Denaro, V., & Casu, M. (2024). A Multi-Level Analysis of Biological, Social, and Psychological Determinants of Substance Use Disorder and Co-Occurring Mental Health Outcomes. *Psychoactives*, 3(2), 194–214.
- Bergefurt, L., Weijs-Perrée, M., Appel-Meulenbroek, R., & Arentze, T. (2022). The physical office workplace as a resource for mental health—A systematic scoping review. *Building and Environment*, 207, 108505.
- Birch, E., Downs, J., & Ayton, A. (2024). Harm reduction in severe and long-standing Anorexia Nervosa: part of the journey but not the destination—a narrative review with lived experience. *Journal of Eating Disorders*, 12(1), 140.
- Blum, K., Bowirrat, A., Braverman, E. R., Baron, D., Cadet, J. L., Kazmi, S., Elman, I., Thanos, P. K., Badgaiyan, R. D., & Downs, W. B. (2021). Reward Deficiency Syndrome (RDS): a cytoarchitectural common neurobiological trait of all addictions. *International Journal of Environmental Research and Public Health*, 18(21), 11529.
- Bojic, L. (2022). Metaverse through the prism of power and addiction: what will happen when the virtual world becomes more attractive than reality? *European Journal of Futures Research*, 10(1), 22.
- Bouffard, S., Giglio, D., & Zheng, Z. (2022). Social media and romantic relationship: Excessive social media use leads to relationship conflicts, negative outcomes, and addiction via mediated pathways. *Social Science Computer Review*, 40(6), 1523–1541.
- Bozzatello, P., Rocca, P., Baldassarri, L., Bosia, M., & Bellino, S. (2021). The role of trauma in early onset borderline personality disorder: a biopsychosocial perspective. *Frontiers in Psychiatry*, 12, 721361.
- Buerkie, D. (2023). *Assessing Parental Awareness of the Health Impacts of Excessive Smartphone/Tablet usage in Children in the Greater Accra Region, Ghana*. Ensign Global College.
- Büsche, K., Stark, R., Brand, M., & Antons, S. (2022). Self-regulatory processes in problematic pornography use. *Current Addiction Reports*, 9(4), 344–352.
- Bustamam, M. (2024). Tinjauan Metode Skinner Dalam Pembentukan Perilaku Anak Usia Dini Di TK Raudhatul Ula Aceh Timur. *Jurnal Seumubeuet*, 3(1), 11–20.
- Carroll, T. D. (2020). *On the Road to Recovery from Alcohol and Drug Addiction: A Mixed Methods Investigation of Experiences of Self-Forgiveness in Emotion-Focused Therapy*. University of South Alabama.
- Civilotti, C., Dennis, J. L., Acquadro Maran, D., & Margola, D. (2021). When love just ends: An investigation of the relationship between dysfunctional behaviors, attachment styles, gender, and education shortly after a relationship dissolution. *Frontiers in Psychology*, 12, 662237.
- Dagnino, P., Anguita, V., Escobar, K., & Cifuentes, S. (2020). Psychological effects of social isolation due to quarantine in Chile: An exploratory study. *Frontiers in Psychiatry*, 11, 591142.
- De Leon, G., & Unterrainer, H. F. (2020). The therapeutic community: A unique social psychological approach to the treatment of addictions and related disorders. *Frontiers in Psychiatry*, 11, 786.
- Di Sarno, M., De Candia, V., Rancati, F., Madeddu, F., Calati, R., & Di Pierro, R. (2021). Mental and physical health in family members of substance users: A scoping review. *Drug and Alcohol Dependence*, 219, 108439.
- Diachkova, O., Yeremenko, L., Donets, I., Klymenko, I., & Kononenko, A. (2024). *The role of positive thinking in overcoming stress a cognitive-behavioural approach*.
- Diekmann, A. (2022). Rational choice sociology: Heuristic potential, applications, and limitations. In *Handbook of sociological science* (pp. 100–119). Edward Elgar Publishing.
- Feltmann, K., Gripenberg, J., Strandberg, A. K., Elgán, T. H., & Kvillemo, P. (2021). Drug dealing and drug use

- prevention—a qualitative interview study of authorities' perspectives on two open drug scenes in Stockholm. *Substance Abuse Treatment, Prevention, and Policy*, 16, 1–14.
- Ferrer-Pérez, C., Montagud-Romero, S., & Blanco-Gandía, M. C. (2024). Neurobiological Theories of Addiction: A Comprehensive Review. *Psychoactives*, 3(1), 35–47.
- Fineberg, N. A., Menchón, J. M., Hall, N., Dell'Osso, B., Brand, M., Potenza, M. N., Chamberlain, S. R., Cirnigliaro, G., Lochner, C., & Billieux, J. (2022). Advances in problematic usage of the internet research—A narrative review by experts from the European network for problematic usage of the internet. *Comprehensive Psychiatry*, 118, 152346.
- Giddings, S. (2014). *Gameworlds: Virtual media and children's everyday play*. Bloomsbury Academic.
- Gladden, M. E. (2019). Who will be the members of Society 5.0? Towards an anthropology of technologically posthumanized future societies. *Social Sciences*, 8(5), 148.
- Gu, W., Zhao, Q., Yuan, C., Yi, Z., Zhao, M., & Wang, Z. (2022). Impact of adverse childhood experiences on the symptom severity of different mental disorders: a cross-diagnostic study. *General Psychiatry*, 35(2).
- Halimova, Y. S. (2023). Morphofunctional Aspects of Internal Organs in Chronic Alcoholism. *AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI*, 2(5), 83–87.
- Harding, S. (2020). *County lines: Exploitation and drug dealing among urban street gangs*. Bristol University Press.
- Hing, N., Thorne, H., Lole, L., Sproston, K., Hodge, N., & Rockloff, M. (2024). 'Getting addicted to it and losing a lot of money... it's just like a hole.' A grounded theory model of how social determinants shape adolescents' choices to not gamble. *BMC Public Health*, 24(1), 1270.
- Hollman, L. M. (2023). *No Single Story: Contributions of General Strain, Social Control, and Rational Choice Theories to the Perceived Role of Agency in Narrative Identities of Women Exiting the Sale of Sex*. Wheaton College.
- Hooper, P., Boruff, B., Beesley, B., Badland, H., & Giles-Corti, B. (2018). Testing spatial measures of public open space planning standards with walking and physical activity health outcomes: Findings from the Australian national liveability study. *Landscape and Urban Planning*, 171, 57–67.
- Hu, B., Cha, J., Fullerton, J. M., Hesam-Shariati, S., Nakamura, K., Nurnberger, J. I., & Anand, A. (2022). Genetic and environment effects on structural neuroimaging endophenotype for bipolar disorder: a novel molecular approach. *Translational Psychiatry*, 12(1), 137.
- Hunt, J. (2024). Holistic or harmful? Examining socio-structural factors in the biopsychosocial model of chronic illness, 'medically unexplained symptoms' and disability. *Disability & Society*, 39(4), 1032–1061.
- Hyun, J., Han, J., Lee, C., Yoon, M., & Jung, Y. (2021). Pathophysiological aspects of alcohol metabolism in the liver. *International Journal of Molecular Sciences*, 22(11), 5717.
- Ilan, Y. (2022). Next-generation personalized medicine: implementation of variability patterns for overcoming drug resistance in chronic diseases. *Journal of Personalized Medicine*, 12(8), 1303.
- Jouhki, H., & Oksanen, A. (2022). To get high or to get out? Examining the link between addictive behaviors and escapism. *Substance Use & Misuse*, 57(2), 202–211.
- Juwita, T., & Yunitasari, S. E. (2024). Pengaruh Keteladanan Orang Tua Dalam Pembentukan Perilaku Anak Usia Dini. *Jurnal Ilmiah Wahana Pendidikan*, 10(6), 877–888.
- Kato, T. A., Shinfuku, N., & Tateno, M. (2020). Internet society, internet addiction, and pathological social withdrawal: the chicken and egg dilemma for internet addiction and hikikomori. *Current Opinion in Psychiatry*, 33(3), 264–270.
- Khoirunnisak, I., Nihayah, U., & Alghifahmy, A. F. (2023). Effort to increase self-esteem through positive reinforcement techniques for adolescent victims of divorce. *Al-Tazkiah: Jurnal Bimbingan Dan Konseling Islam*, 12(2), 99–114.
- Klimenko, N. O., Muñoz-Figueroa, J. A., Hernández-Flórez, N., Arroyave-Jaramillo, D. L., Londoño-Vásquez, D. A., Lhoeste-Charris, Á., & Gutiérrez-Vega, I. (2024). Smartphone Dependency and its Relationship with the Meaning of Life, Psychological Well-Being and Self-Regulation in a Sample of University Students. *Journal of Positive Psychology and Wellbeing*, 8(1), 36–54.
- Koob, G. F. (2021). Drug addiction: hyperkatifeia/negative reinforcement as a framework for medications

- development. *Pharmacological Reviews*, 73(1), 163–201.
- Koob, G. F., & Vendruscolo, L. (2023). *Theoretical frameworks and mechanistic aspects of alcohol addiction: alcohol addiction as a reward deficit/stress surfeit disorder*. Springer.
- Laestadius, L., Bishop, A., Gonzalez, M., Illenčik, D., & Campos-Castillo, C. (2024). Too human and not human enough: A grounded theory analysis of mental health harms from emotional dependence on the social chatbot Replika. *New Media & Society*, 26(10), 5923–5941.
- Lai, W., Zhang, J., Sun, J., Min, T., Bai, Y., He, J., Cao, H., Che, Q., Guo, J., & Su, Z. (2024). Oxidative stress in alcoholic liver disease, focusing on proteins, nucleic acids, and lipids: A review. *International Journal of Biological Macromolecules*, 134809.
- Lan, Y.-J. (2023). The essential components of game design in 3D virtual worlds: From a language learning perspective. In *Learning, design, and technology: An international compendium of theory, research, practice, and policy* (pp. 2919–2935). Springer.
- Lavallee, Z. (2020). Addictive craving: There's more to wanting more. *Philosophy, Psychiatry, & Psychology*, 27(3), 227–238.
- Lawrance, E. L., Thompson, R., Newberry Le Vay, J., Page, L., & Jennings, N. (2022). The impact of climate change on mental health and emotional wellbeing: a narrative review of current evidence, and its implications. *International Review of Psychiatry*, 34(5), 443–498.
- Lazarus, J. V., Safreed-Harmon, K., Kamarulzaman, A., Anderson, J., Leite, R. B., Behrens, G., Bekker, L.-G., Bhagani, S., Brown, D., & Brown, G. (2021). Consensus statement on the role of health systems in advancing the long-term well-being of people living with HIV. *Nature Communications*, 12(1), 4450.
- Lieberman, D. (2020). *Exercised: The science of physical activity, rest and health*. Penguin UK.
- Liu, S.-Y., Tsai, I.-T., & Hsu, Y.-C. (2021). Alcohol-related liver disease: basic mechanisms and clinical perspectives. *International Journal of Molecular Sciences*, 22(10), 5170.
- Lo Coco, G., Graffeo, M. T., & Albano, G. (2024). Implementing group therapy for adults with substance use disorders: What research-based evidence? *Group Dynamics: Theory, Research, and Practice*.
- Luciana, M., & Collins, P. F. (2022). Neuroplasticity, the prefrontal cortex, and psychopathology-related deviations in cognitive control. *Annual Review of Clinical Psychology*, 18(1), 443–469.
- Ma, Q., Whipple, C. R., Kaynak, Ö., Saylor, E., & Kensinger, W. S. (2024). Somebody to Lean on: Understanding Self-Stigma and Willingness to Disclose in the Context of Addiction. *International Journal of Environmental Research and Public Health*, 21(8), 1044.
- Marpaung, J. (2018). Pengaruh penggunaan gadget dalam kehidupan. *KOPASTA: Journal of the Counseling Guidance Study Program*, 5(2).
- Martinelli, T. F., van de Mheen, D., Best, D., Vanderplasschen, W., & Nagelhout, G. E. (2021). Are members of mutual aid groups better equipped for addiction recovery? European cross-sectional study into recovery capital, social networks, and commitment to sobriety. *Drugs: Education, Prevention and Policy*, 28(5), 389–398.
- Mazza, M., Biondi-Zoccai, G., Lisci, F. M., Brisi, C., Sfratta, G., Rossi, S., Traversi, G., Gaetani, E., Pola, R., & Morini, S. (2024). The Brain–Heart Axis: An Umbrella Review on Impact of Psychiatric Disease on Incidence, Management, and Outlook of Cardiovascular Disease. *Life*, 14(8), 919.
- Mazzari, G. (2024). *Facilitating stress resilience by “Old friends”: Immunization with Mycobacterium vaccae prevents the negative effects of early life stress on chronic stress vulnerability during adulthood*.
- Mohammed, S. Y., Aljanabi, M., & Gadekallu, T. R. (2024). Navigating the nexus: a systematic review of the symbiotic relationship between the metaverse and gaming. *International Journal of Cognitive Computing in Engineering*.
- Muawanah, R. A. (2021). *Dampak Penggunaan Gadget terhadap Perkembangan Emosional Anak Usia 4-6 Tahun di PAUD PGRI 15A Iringmulyo Kota Metro Tahun Pelajaran 2021/2022*. IAIN Metro.
- Munatri, B. A. (2024). *The Implementation of Positive Reinforcement in The English Learning Program for New Students at Al-Mawaddah Islamic Boarding School for Girls*. IAIN Ponorogo.
- Nawaz, S. (2023). Rethinking classifications and metrics for problematic smartphone use and dependence:

- Addressing the call for reassessment. *Computers in Human Behavior Reports*, 100327.
- Neely, K. C., & Holt, N. L. (2014). Parents' perspectives on the benefits of sport participation for young children. *The Sport Psychologist*, 28(3), 255–268.
- Niran, K. (2019). *Trik Sukses Menjalin Relasi: Cara Mudah Bergaul, Membangun Pengaruh, dan Memenangkan Kepercayaan Siapa Saja*. Anak Hebat Indonesia.
- Olleras, J. L., Dagwayan, M., Dejacto, A. M., Mangay, J. R., Ebarsabal, M., Diaz, D. J., Puti-an, C., Lendio, A., Nadera, J., & Taneo, J. (2022). The life of the laters: Students procrastination in accomplishing academic deadlines in online learning. *Psychology and Education: A Multidisciplinary Journal*, 2(5), 444–454.
- Ondog, J., & Kilag, O. K. (2024). A Constructivist Framework for Early Grade Numeracy: Drawing on Jean Piaget's Cognitive Development Theory. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE)*, 1(5), 456–463.
- Ovcharenko, M. O., Tavolzhanskyi, O. V., Radchenko, T. M., Kulyk, K. D., & Smetanina, N. V. (2020). Combating illegal drugs trafficking using the internet by means of the profiling method. *Journal of Advanced Research in Law and Economics*, 11(4 (50)), 1296–1304.
- Pella, D. A. (2020). *All About Gen Y: Mitos, Realitas, Dan Pengelolaan Antar Generasi*. Infini.
- Pogozheva, O. V., Borisova, O. N., & Plieva, A. M. (2022). Addictive Behavior of Adolescents in the Context of the Modern Socio-economic Crisis. In *Business 4.0 as a Subject of the Digital Economy* (pp. 851–856). Springer.
- Proctor, M. S. (2021). *The Deterrent Effect of the Death Penalty: A Rational Choice Case Study*. University of Arizona Global Campus.
- Ramakrishnan, A., Kumar, D. V., & Yeleswarapu, S. S. M. (2023). A Review on Addiction Types, Involvement of Women, and Role of Covid-19 Lockdown in Addiction Behavior. *J Addtic Sci*, 9(2), 20–39.
- Ramsey, J. (2020). *How To Manage Your Money Blueprint: A Simple Debt Free Guide On Money Management & Financial Independence*. Jason Ramsey.
- Rawat, G., Dewani, P. P., & Kulashri, A. (2022). Social exclusion and consumer responses: A comprehensive review and theoretical framework. *International Journal of Consumer Studies*, 46(5), 1537–1563.
- Ritchie, K., Bora, S., & Woodward, L. J. (2015). Social development of children born very preterm: a systematic review. *Developmental Medicine & Child Neurology*, 57(10), 899–918.
- Rossmo, D. K., & Summers, L. (2022). Uncertainty and heuristics in offender decision-making: Deviations from rational choice. *Journal of Criminal Justice*, 81, 101923.
- Şamar, B., Taş, M., Kayın, M., & Ünübol, B. (2023). Comprehensive analysis of social stigma of individuals with substance use disorder in Turkey in the context of Erving Goffman's stigma theory. *Journal of Ethnicity in Substance Abuse*, 1–20.
- Serafini, G., Parmigiani, B., Amerio, A., Aguglia, A., Sher, L., & Amore, M. (2020). *The psychological impact of COVID-19 on the mental health in the general population*. Oxford University Press.
- Setiawati, Y., Fithriyah, I., & KJ, S. (2020). *Deteksi dini dan penanganan kecanduan gawai pada anak*. Airlangga University Press.
- Shojaeian, S., Khoshli, A. K., Azizi, L. S., & Asadi, J. (2024). Comparison of the Effectiveness of Mindfulness-Based Cognitive-Behavioral Therapy with Emotion-Focused Therapy on Sensation Seeking in Adolescents with Internet Addiction. *Journal of Adolescent and Youth Psychological Studies (JAYPS)*, 5(4), 65–74.
- Simonič, B., & Osewska, E. W. (2023). Emotional experience and consequences of growing up in a family with alcoholism in adult children of alcoholics. *The Person and the Challenges: The Journal of Theology, Education, Canon Law and Social Studies Inspired by Pope John Paul II*, 13(1).
- Sims, O. T., Gupta, J., Missmer, S. A., & Aninye, I. O. (2021). Stigma and endometriosis: a brief overview and recommendations to improve psychosocial well-being and diagnostic delay. *International Journal of Environmental Research and Public Health*, 18(15), 8210.
- Singha, R. (2025). Neuroeconomic Insights on Addiction: Integrating the Multidimensional Addiction Behaviour Scale for Treatment, Prevention, and Holistic Well-Being. In *Behavioral Economics and Neuroeconomics of Health*

- and Healthcare (pp. 181–212). IGI Global.
- Snoek, A. (2024). Addiction and living in the shadow of death: impact of the body on agency and self-control. *Addiction Research & Theory*, 32(2), 143–151.
- Soysal, A. (2020). *Upaya Orang Tua dalam Mendampingi Penggunaan Smartphone Pada Anak Usia Dini Di Taman Kanak-Kanak (TK) Kharisma Bangsa, Tangerang Selatan*. FITK UIN Syarif Hidayatullah Jakarta.
- St-Onge, S., & Beauchamp Legault, M.-È. (2022). What can motivate me to keep working? Analysis of older finance professionals' discourse using self-determination theory. *Sustainability*, 14(1), 484.
- Sugiyono. (2013). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif*. Alfabeta.
- Szerman, N., Torrens, M., Maldonado, R., Balhara, Y. P. S., Salom, C., Maremmani, I., Sher, L., Didia-Attas, J., Chen, J., & Baler, R. (2022). Addictive and other mental disorders: a call for a standardized definition of dual disorders. *Translational Psychiatry*, 12(1), 446.
- Tarantino, G., Cataldi, M., & Citro, V. (2022). Could alcohol abuse and dependence on junk foods inducing obesity and/or illicit drug use represent danger to liver in young people with altered psychological/relational spheres or emotional problems? *International Journal of Molecular Sciences*, 23(18), 10406.
- Thatcher, K. (2024). *Moral Injury Amongst Substance Users in Recovery: How Does It Relate to Self-stigma & Spiritual Well-being?* The Chicago School of Professional Psychology.
- Toscano, F., & Zappalà, S. (2020). Social isolation and stress as predictors of productivity perception and remote work satisfaction during the COVID-19 pandemic: The role of concern about the virus in a moderated double mediation. *Sustainability*, 12(23), 9804.
- Vanovenberghe, C., Du Bois, M., Lauwerier, E., & Van den Broeck, A. (2021). Does motivation predict return to work? A longitudinal analysis. *Journal of Occupational Health*, 63(1), e12284.
- Vincent, C. (2017). 'The children have only got one education and you have to make sure it's a good one': parenting and parent-school relations in a neoliberal age. *Gender and Education*, 29(5), 541–557. <https://doi.org/https://doi.org/10.1080/09540253.2016.1274387>
- Volkow, N. D., & Li, T.-K. (2005). Drugs and alcohol: treating and preventing abuse, addiction and their medical consequences. *Pharmacology & Therapeutics*, 108(1), 3–17.
- Wessells, M. G., & Kostelny, K. (2022). The psychosocial impacts of intimate partner violence against women in LMIC contexts: toward a holistic approach. *International Journal of Environmental Research and Public Health*, 19(21), 14488.
- Wiss, D. A., Avena, N., & Gold, M. (2020). Food addiction and psychosocial adversity: biological embedding, contextual factors, and public health implications. *Nutrients*, 12(11), 3521.
- World Health Organization. (2019). *Global action plan on physical activity 2018-2030: more active people for a healthier world*. World Health Organization.
- Xiao, Q.-L., Ding, Y.-Q., Cao, X.-X., Chen, W.-Y., Lian, S.-L., & Zhu, X.-W. (2024). Mobile phone addiction and emptiness among Chinese college students: the chain mediating role of attention control and self-concept clarity. *Current Psychology*, 1–14.
- Yasunaga, M. (2014). Non-formal education as a means to meet learning needs of out-of-school children and adolescents. *Montreal: UNESCO Institute for Statistics*.
- Zhao, J., Wang, X., Zhang, H., & Zhao, R. (2021). Rational choice theory applied to an explanation of juvenile offender decision making in the Chinese setting. *International Journal of Offender Therapy and Comparative Criminology*, 65(4), 434–457.
- Zhou, L., Yu, Y., Liu, B., Zhou, L.-F., Sheng, J., Zhang, X.-F., Deng, X.-P., & Ran, M.-S. (2024). Non-suicidal self-injury among youth students during COVID-19 pandemic: the role of psychological factors in Jingzhou, China. *Frontiers in Psychiatry*, 15, 1446727.