

**Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online
Mobile Gamers in a Private Higher Education Institution**

A Thesis

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Abstract

This study aimed to know the Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution. The 171 College of Arts and Science who participated in the study's sample were chosen by simple random sampling. A face to face survey was utilized to collect quantitative data as part of the descriptive comparative research design. A rating scale and survey questionnaires were provided by the researchers for the study. Using the Level of Anger Scale (LAS) by DiGiuseppe and Plutchik's Impulsivity Scale by Psiquiatr as an instrument. The data's results underwent statistical analysis using both descriptive (frequency count, percentage, mean, and standard deviation) and inferential methods (t-test and ANOVA). The results revealed that male respondents made up a bigger portion of the sample. Additionally, when classified by tilting levels, they were assessed, revealing an overall high level. Both sex respondents exhibited high tilting levels, and across types of online mobile gaming and online mobile gaming durations, high tilting levels were consistently observed. The study also explored impulsive behavior, revealing a prevalent high level. Both sexes, across types of online mobile gaming and online mobile gaming durations, exhibited high impulsive behavior. Additionally, the study's findings showed that the results of the analysis showed non-significant differences between tilting levels and demographic variables, supporting the null hypothesis of no significant difference. The study also showed non-significant differences, reinforcing the

null hypothesis of no significant difference in impulsive behavior. The findings indicate that, within the College of Arts and Sciences, students engage in online mobile gaming with considerable tilting and impulsive behavior, but these behaviors do not significantly differ based on demographic factors, types of online mobile gaming, and online mobile gaming durations. The research contributes valuable insights into the gaming behavior of this specific student population.

Keywords: Tilt Phenomenon, Tilting, Impulsive Behavior, Online Mobile Gamers, Types of Online games, Online mobile gaming duration, simple random sampling, descriptive comparative research design

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Chapter I

Introduction

This chapter discussed the importance of this study. It contains the following: background of the study, statement of the problem, hypothesis, theoretical framework, and conceptual framework, the definition of terms, the significance of the study, and the scope and limitations of the study. (1) Background of the study (2) Statement of the problem (3) Hypothesis (4) Theoretical Framework (5) Conceptual Framework (6) Definition of terms (7) Significance of the study (8) Scope and Delimitations

Background of the study

“Mobile Games,” despite being a common enough phenomenon in today’s technologically intense societies, is not necessarily self-evident what exactly constitutes and defines it. The literature on mobile games is often technically focused and generally moves directly to discuss the implementation of games for mobile phones and other mobile devices without clarifying the key concept itself (Hamer, 2017). However, there are multiple different kinds of mobile devices, and even personal computers could be considered “mobile” today because of the popularity of small and lightweight laptop computers. Nevertheless, the most common ways of understanding mobile games relate to two distinct lines of game development and publishing. The first is mobile phone games, and the second refers to handheld electronic games and video game consoles.

An observation of forms dedicated to online video games found that players often mention a particular experience that causes difficulties, named “rage” and “tilt. Players define rage as expressing violent and impulsive reactions through excessive frustration or lousy faith. At the same time, gaming appears to cause a change in the gamer’s behavior, a loss of control over behavior and emotion, and a loss or a cessation of the game. (Przybylski et al., 2014).

On the other hand, tilt describes a state in which the player can no longer control his game with rational decisions because he is overwhelmed by emotions. (Tendler, 2012). As an outcome, tilt impacts behavioral, emotional, and cognitive processes as well as generates negative feelings (disappointment in oneself for losing control, guilt, and feelings of anxiety, depression, and sadness). Moreover, being on tilt leads to a deterioration in the decision-making process, which can lead to a loss of money. (Barrault et al., 2014). Thus, in this study, the research focused on the concept of tilt rather than rage.

Failure to self-regulate while playing can contribute to impulsive actions while playing games. One instance of perpetuating anger can be referred to as “tilt,” a phenomenon in which players are triggered by a person or event in the game that generates frustration and other negative emotions and, in turn, starts to negatively impact decision-making and gameplay overall. (Leonard, 2012). Other definitions emphasize repeated failures, hard work that does not seem to pay off, or heightened effects that interfere with objective decision-making (Ni et al., 2022). While all these definitions lurk in the cultural understanding of tilt, this exploratory study highlights young players' understanding of tilt. Understanding not only what tilt is but also how young players understand it will help designers and educators better understand how emotional regulation happens in esports, identify opportunities for pedagogical growth, and address an emotion regulation failure that may be undermining young players' gaming behaviors.

Mobile gaming had a rise towards the start of the pandemic. People had more spare time to play mobile games while under quarantine. As a result, certain mobile games improved in rank and moved up the app store ladder. In an International Data Corporation (IDC) poll, 63% of participants reported longer playtime sessions, particularly in the nations hardest hit by COVID-19. According to the same survey, 6% of

mobile gamers had never played a game before the pandemic (Knezovic, 2023).

Esports, or electronic sports, are competitive videogame play that incorporates elements of individual accomplishment, friendly competition, teamwork, and entertainment (Seo & Jung, 2016). High levels of competition and brief contact between players paired randomly within esports may also promote toxic behavior, such as negative player communication and in-game behavior that makes individuals tilt (Gilleade & Dix, 2014).

In 2020, the Philippines had over 100 million registered users and 25 million active monthly users, according to Moonton. Mobile Legends: Bang Bang Professional League is home to Southeast Asia's biggest and most prominent esports event. Despite the pandemic, Esports in Asia achieved \$543.8 million in revenue in 2020, and they are expected to reach or surpass \$600 million in 2021. CoD: Mobile reportedly produced around 500 million in 2019, just a few months after its introduction. Nearly \$215 million, or more than half of that revenue, originated in the United States, mainly from Brazil. Japan and Germany came in second and third, according to activeplayer.io, which calculated that 70%, or 210 million users, are actively playing CoD: Mobile; 30 million players play it daily. The logged League of Legends: Wild Rift monthly active players are summarized in Wildrift: monthly statistics. We have also recorded a surge in the number of players for League of Legends: Wild Rift. Peak daily players total 1,475,178, while monthly average players are 22,127,675.

The daily circumstances and habits associated with using mobile applications are vital determinants in mobile games and gameplay, in addition to the data mentioned above. The average user of an Android phone accessed one or more applications on their device about 50 times each day on average, for a total of more than an hour per day, according to a 2011 research of more than 4000 Android phone users. However, the typical session, which included launching and closing an application, only lasted 71 seconds. (Böhmer et al., 2011). Due to the coronavirus outbreak and the extra

time that people have to kill at home during advised isolation, interest has risen significantly in the gaming and virtual reality industries. Playing computer and video games is a simple method to pass the time and keep people "busy" instead of just sitting around. (Knezovic, 2023).

Between 2023 and 2027, 461.3 million U.S. dollars (+35.46 percent) in revenue is expected to constantly expand in the media market's mobile games segment in the Philippines. The perceived gain reached 1.8 billion dollars after four years of increases, marking a new high in 2027. Notably, the media market's smartphone and tablet gaming section has seen steadily rising income over the previous few years.

Considering the findings, it is clear that there is a lack of literature on impulsive conduct and the tilt phenomena, as some studies emphasize anger, violence, and impatience more than the "tilt phenomenon." This work quantitatively analyzes and explains this occurrence. Additionally, there is no Asian or local literature about the above-mentioned variables in the Philippines. The researchers focused on the three most popular video games in the Philippines: Mobile Legends, Call of Duty Mobile, and League of Legends Wildrift.

Given the shortcomings, researchers at a private higher education institution aim to help by analyzing the tilt phenomenon among online mobile gamers. This study seeks to comprehend the degree of tilting and impulsive behavior demonstrated by these students. The study offers insights into mobile gaming among students by measuring impulsiveness and rage using approved measures. By studying in this area, we can add to the body of existing knowledge, create specialized solutions, and offer significant help to improve comprehension of the tilt phenomenon.

Research Objectives

This study aimed to determine the Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution:

1. To determine the demographic profile of the respondents.
2. To determine the level of tilting phenomenon of students engaging in online mobile games in private higher educational institutions when taken as a whole and when grouped according to sex, type of online mobile games, and online mobile gaming duration.
3. To determine the level of impulsive behavior of students engaging in online mobile games in private higher educational institutions when taken as a whole and when grouped according to sex, type of online mobile games, and online mobile gaming duration.
4. To determine the significant difference among the level of tilting of students engaging in online mobile games in private higher educational institutions when grouped according to sex, type of online mobile games, and online mobile gaming duration.
5. To determine the significant difference among the level of impulsive behavior of students engaging in online mobile games in private higher educational institutions when grouped according to sex, type of online mobile games, and online mobile gaming duration.

Hypotheses

1. There is no significant difference among the level of tilting of students engaging in online mobile games in private higher educational institutions when grouped according to sex, type of online mobiles games and online mobile gaming duration.
2. There is no significant difference among the level of impulsive behavior of students engaging in online mobile games in private higher educational institutions when grouped according to sex, type of online mobiles games, and online mobile gaming duration.

Theoretical Framework

Frustration–Aggression Theory has been used in a variety of domains, ranging from self-regulation (Harrison et al., 2015) and imitation learning (Zhou, 2016) to developmental (Jegard & Walters, 2014; Nelson et al., 2013), organizational (Aamodt, 2017), and media psychology (Breuer et al., 2015). Overall, there is ample empirical evidence for the link between frustration and aggression. However, the original theoretical explanation for this relationship has developed and become more refined over the decades, and competing theoretical considerations have emerged. One of the factors that play a role in this is the degree to which frustrations are perceived as arbitrary, which is considered to be a predictor of the probability and intensity of potential aggressive reactions (McCartney, 2019). Similarly, Dill & Anderson (2018) looked at justification—which can be understood as the opposite of arbitrariness—and found that unjustified frustration produced more hostile aggression than justified frustration. Okon (2011) further concluded from their study that the tendency to be aggressive is also reduced when frustration is expected. These expectations are, of course, largely based on previous experiences (i.e., an individual’s learning history) with similar situations (Dolar, 2019).

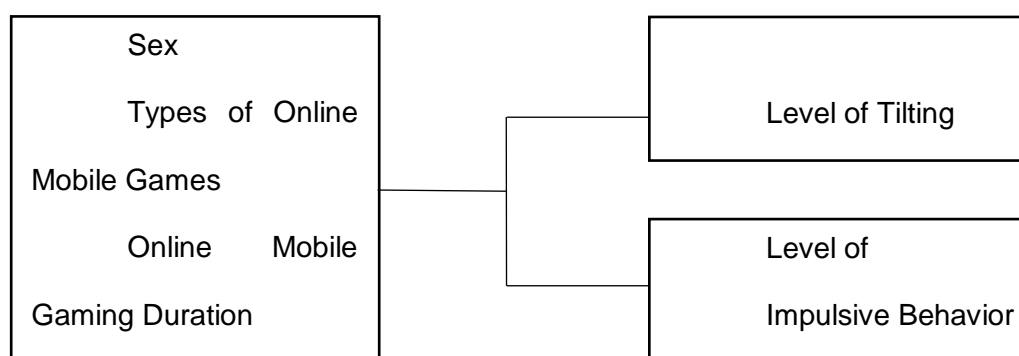
Aggressive responses to frustration are not necessarily detrimental to the attainment of goals. Another variable that affects the intensity of an aggressive reaction following frustration is its instrumental value—that is, the degree to which the aggression contributes to overcoming the frustration (Crawford, 2016). The fact that aggression can be functional is something that also has implications for its association with frustration (da Gloria, 1984). According to Rummel (2017), aggression is one of several possible consequences of frustration. In some of the early publications on the frustration-aggression hypothesis, it was argued that the threat of being punished for aggressive

behavior itself can also be a frustration that can, again, increase the inclination to act or react aggressively in further interactions.

To synthesize, frustration-aggression relates to the tilting attributes and the impression of arbitrariness matters in the context of frustration. In the context of gaming or online gaming culture, the term “tilting” refers to a state of frustration or anger that a player experiences, often leading to a decline in their performance. When a player becomes tilted, they are emotionally and mentally affected by negative events or outcomes within the game, such as losing multiple rounds or matches, encountering challenging opponents, or experiencing perceived unfairness. In addition, as frustration-aggression relates to impulsive behavior, the loss of focus, or engaging in risky or irrational strategies. It can be a self-perpetuating cycle, as the frustration from poor performance further impairs the player’s ability to play effectively, leading to more losses and heightened frustration.

Figure 1.

Conceptual Framework



The schematic diagram above displays the various variables within this study. The schematic diagram displays the independent variables such as sex (female and male), type of online mobile games (Mobile Legends Bang Bang, Call of Duty mobile, and League of Legends: Wildrift), and online mobile gaming duration (less than 1 hours, 1-2 hours, more than 2 hours) while the dependent variable is the level of tilting and

impulsive behavior of students engaging in the online mobile game in a Private Higher Education Institution. This study explored if there is a significant level between the variables.

Definition of Terms

The definition of terms in this study contains the conceptual and operational definitions of each variable within the study, which helps clarify the meaning of each variable.

Impulsive Behavior. There are three ways to define it: quick action without conscious thought or judgment, acting without thinking enough, and a propensity to act less thoughtfully than those with comparable knowledge and skill levels. (Arce & Santisteban, 2016)

In this study, impulsive behavior refers to the tendency to act with a reckless disregard for the feelings of others. This research study's instrumentation entails analyzing the level of impulsive behavior using a questionnaire based on Plutchik's Impulsivity Scale (IS) 1989, cited by Psiquiatr (2015). It is a 15 Likert-type questionnaire with five possible answers (never, rarely, sometimes, often, always), scored respectively from 1 to 5 with mean ranges such as "very high impulsive behavior" (3.51 – 4.50) which indicates that a person is things without thinking and conscious judgment; "high impulsive behavior" (2.51 – 3.50) explained that a person is doing things with less thinking and act spontaneously with less conscious judgmental; "low impulsive behavior" (1.51 – 2.50) means a person is engaging in an act impulsively but thinking and conscious judgment is somewhat there; and "very low impulsive behavior" (1.0 – 1.50) which shows that a person's chance of engaging in an act impulsively diminishes due to self-awareness in which thinking and conscious judgment is intact. The higher scores will insinuate very high impulsive behavior, and the lower scores will infer very low impulsive behavior.

Online Mobile Games. Digital games on smartphones and other portable electronics like iPads, iPods, and tablet computers are referred to here. (2015) (Video Games). They differ from conventional console or PC games because they are more easily accessible, simpler to use, and frequently have shorter gameplay sessions.

In this study, online mobile games come in various genres, including multiplayer online battle arena (MOBA) games, strategy games, and role-playing games (RPGs) specifically referring to Mobile Legends, Call of Duty Mobile, and Wildrift.

Online Mobile Gaming Duration refers to the amount of time a player spends actively participating in the game (Grguric, 2023). Filipino internet users who play mobile games do so for an average of one hour and thirty minutes to two hours each day (Marciano, 2023).

In this study, the mobile gaming duration refers to the hours spent playing mobile games, and the reference for the mobile gaming duration will be adopted from Marciano (2023), which are less than 1 hour, 1-2 hours, and more than 2 hours.

Sex. This refers to certain sex traits that are noticed during a person's birth, yet it can also apply to the sex of a person at that time as opposed to what they saw during delivery (The Standard for Sex, Gender, Variations of Sex Characteristics and Sexual Orientation Variables, 2020).

In this study, sex refers to its two categories: male and female. Based on observable traits such as reproductive organs. The sex of an individual is determined by biological factors, specifically their reproductive anatomy and genetic makeup. In most species, including humans, there are two primary sexes: male and female.

Tilt Phenomenon. This term is used to describe a gaming phenomenon linked to rage, frustration, impulsivity, and a decline in gameplay skills. Their teammates more frequently tilt the players than opponents, and they usually reserve their worst tilt reactions for themselves (Williams, 2017).

In this study, the tilt phenomenon refers to a gaming situation wherein we can feel tilting in times of losing and having a bad game. Researchers used a self-report instrument, specifically the Level of Anger Scale (LAS) by DiGiuseppe (2013), to represent the tilt phenomenon, Consisting of 13 items on a 5-point Likert-scale with 5 – strongly agree and 1 – strongly disagree answer choices. It utilizes three mean ranges: 4.21 – 5.00 “high tilting,” demonstrating a very high manifestation of anger leading to sustained tilt; 2.61 - 3.40 “moderate tilting,” exhibiting anger and chances of being modestly tilted with restrain; and 1.00 - 1.80 indicating “low tilting” in which there is a low level of anger signifying low chances of tilting.

Significance of the Study

The findings of this study are beneficial to the following:

Game Developers. The findings of this study will inform game designers about the harmful and destructive habits of gamers, such as flaming teammates. Wherein they will implement a more stringent strategy for these behaviors.

Game Moderators. This study can help moderators improve the overall gaming experience by implementing targeted interventions based on their understanding of the tipping points at which players become frustrated or stressed. Equipped with knowledge of player behavior, moderators can tweak gameplay elements, change the degree of difficulty, or add features to lessen factors that cause players to lose their balance.

Gamers. The findings of this study may persuade gamers to reconsider their unfavorable opinions of other players and the nature of the game. This study can educate players about how they act while playing mobile games and how their bad habits affect other players.

Content Creators. This study will encourage content producers to avoid toxic behavior when streaming their games and to make their content mentally beneficial and motivating for players.

Educational institutions. This study can help educators understand students' involvement in the gaming community and encourage campus-wide video gaming events and school groups.

Counselors. When dealing with these issues with their clients, counselors might reference studies on the subject. Since some students are being sent to counselors by their parents due to video game addiction, this paper can improve their awareness of the issue.

Teacher. This paper can aid teachers in better comprehending the significance of their students' classroom behavior. By first determining whether the student plays video games, they can determine the cause of the behavior. This essay can serve as a reference for them to comprehend the students' behavior.

Parents. For parents, this research is essential because it can help them learn about and comprehend gaming. Since there are students whose parents are referring them to counselors because of video game addiction, it is advantageous that sports are evolving to the point where e-sports can compete on an equal footing with traditional sports. This can help parents understand why and how their child behaves in a particular way on any given day.

Future Researchers. Numerous studies have been conducted on this subject, and the researchers hope to discover new results that will serve as a helpful guide for those who wish to reproduce and confirm findings made elsewhere using different techniques and designs.

Scope and Delimitations

The scope of this study investigated the tilt phenomenon by looking into the level of tilting and impulsive behavior of online mobile gamers in a Private Higher Education Institution, specifically at Central Philippine University. The researchers used Slovin's formula to solve for the sample, specifically of online mobile gamers in the College of

Arts and Sciences, followed by simple random sampling to get the desired sample. The study focused only on the level of tilting and impulsive behavior. The study also used questionnaires Level of Anger Scale (LAS) by DiGiuseppe (2013) and Plutchik's Impulsivity Scale (Psiquiatr, 2015). Participants must be currently enrolled in Central Philippine University and must be a College of Arts and Sciences student. At least 18 years old with experience and expertise in mobile games on a mobile device with access to the internet.

Thus, if a student is not in a specific university or not a student of the College of Art and Sciences, then he/she is not qualified to participate. Nonetheless, this research is likely to face specific challenges, such as assembling a capable research team, recruiting participants, collecting samples, persuading them about the importance of the study, and ensuring optimal time management. This study's time frame began in May 2023 and is anticipated to end in April 2024.

Chapter 2

Review of Related Literature

In this chapter, this literature review focused on the existing literature and studies on the Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution is synthesized in the present study that will be used to guide the conduct of the study and support the findings. (1) Students Engaging in Online Mobile Games, (2) Positive Aspects of Online Mobile Games, (3) Tilt Phenomenon, (4) Study of Student Tilting During Online Mobile Games Engagement, (5) Tilt Phenomenon in terms of Sex, (6) Tilt Phenomenon in terms of Online Mobile Gaming Duration, (7) Impulsive Behavior in Relation to Online Mobile Games, (8) Student's Impulsive Behavior Engaging in Online Mobile Games, (9) Impulsive Behavior in terms of Sex, (10) Synthesis.

Students Engaging in Online Mobile Games

Since this generation was raised in the midst of the technology revolution, mobile games have become increasingly popular over time. The Internet and desktop functionalities are now available on mobile devices. Mobile phone addiction may have similar bad emotions, negative social interactions, and negative behaviors as Internet addiction. To appeal to varied personalities and tastes, mobile games might combine multiple levels and content categories. Martin, et al. (2020). All age groups are represented, not only young individuals. The evolution of casual and mobile gaming can also be understood in light of changing norms, attitudes, and practices. A smartphone in the pocket offers the potential for game sharing. However, people will only engage in gaming if they are strongly prohibited from doing so or if their culture and society place a premium on principles and behavioral models that are opposed to gaming.

The prevalence and appeal of mobile gaming may be an indicator of the growing cultural and societal value placed on play and playfulness in society as a whole. The

notion of a "Ludic Society" or an "Era of Games" is a fascinating concept that has garnered attention in various fields. One subject under investigation in this field is the cultural dominance of specific practices in a late modern civilization. (Mäyrä & Alha, 2020). According to a recent meta-study on smartphone addiction (Panova & Carbonell, 2018), it could be more appropriate to discuss problematic use rather than true addiction in the case of mobile gaming. There is insufficient evidence to speak about widespread mobile gaming addiction in society despite the fact that the constant availability of stimuli and distractions has become problematic for many people. Problematic smartphone use also includes excessive use, issues with impulse control, and unfavorable outcomes that can harm relationships and work. As stated (Moroni A., 2022), students play smartphone games for a variety of reasons, including avoiding stress, meeting new friends, Fulfilling their ambitions, achieving goals, getting rewards, fostering creativity, and winning. In a study they did with college students, (Johnson & Smith, 2017) discovered a link between frequent use of mobile games and lower academic performance. Similarly, (Brown et al., 2019) investigated how mobile gaming addiction affected students' academic performance and found that those who were severely hooked to the habit had a considerable drop in their marks. In a qualitative study, Wilson and Thomas (2018) discovered that college students who played too many mobile games had fewer in-person interactions and were more socially isolated. In contrast, (Smith et al., 2020) investigated the social advantages of cooperative mobile gaming and found that students who played multiplayer mobile games had stronger social ties and cooperation abilities.

When (Lee et al., 2016) looked at the connection between adolescent mobile gaming addiction and mental health outcomes, they discovered that those who were extremely addicted had higher levels of anxiety and depressive symptoms. In their investigation of the possible therapeutic benefits of mobile gaming, (Johnson et al.,

2019) found that college students who used these games to unwind had better moods and experienced less stress. A meta-analysis (Brown & Davis, 2018) found that strategy-based mobile games have a favorable impact on students' cognitive capacities, such as their problem-solving and critical thinking skills. (Chen and Wilson, 2020) looked into the effects of educational mobile games on learning outcomes and discovered that students who used educational gaming apps had better academic performance and knowledge retention. (Kim et al., 2017) into the variables influencing college students' choice of mobile games, game genre, graphics, and social elements were all significant predictors of game preferences. (Miller & Johnson, 2021) looked into the motives for playing mobile games and found that escapism, achievement, and competition were the main motivators for student involvement. (Ferguson & Olson, 2013) found no significant difference in tilting levels among participants who played online mobile games for varying durations, suggesting that longer exposure does not necessarily lead to increased anger (Wang et al., 2018). Also, it failed to establish a significance between gaming duration and acute sustained anger in online mobile gaming contexts. Jones and Weaver(2014) highlighted the importance of individual differences in susceptibility to anger in online gaming environments, suggesting that factors beyond mere duration of exposure may influence anger responses.

Positive Aspects of Online Mobile Games

These games also provide a number of advantages to an online mobile gamer despite the numerous bad remarks and perceptions from those who are not in favor of playing online mobile games. These games, which include Mobile Legends: Bang Bang, Call of Duty Mobile, and Wildrift, can help players improve their cognitive abilities in areas such as strategic thinking, problem-solving, and speedy decision-making. Adolescents' cognitive skills can advance as they traverse challenging game settings, come up with plans of attack, and adjust to shifting game circumstances. Video gamers

were discovered to have quicker reaction times in tests of cognitive performance involving working memory and response inhibition, as well as differences in fMRI BOLD signals in important regions of the cortex responsible for processing visual, attention, and memory (Chaarani, 2022).

Games that involve multiplayer online battle arenas (MOBAs) require real-time movement that depends on quick reflexes, which calls for quick reactions and excellent hand-eye coordination. Online mobile gamers will push themselves beyond their capacity to spend so many hours playing the game owing to competition, improving their hand-eye coordination. Comparing the gaming group to the non-gaming group, the gaming group greatly improved. This demonstrates that action video game players are better equipped to develop their sensory and motor skills and have an advantage when it comes to learning patterns (Humbe, 2017). In MOBA games, teamwork is required to accomplish shared goals. As they collaborate with peers to accomplish goals, adolescents can pick up important leadership, teamwork, and communication skills. When played constructively, video games can improve teamwork and performance, whereas when played competitively, they can have the opposite effect (Badatala, 2017). In broad terms, occasional players seem to be driven by extrinsic motivations (e.g., completing the game), whilst more dedicated players are driven by intrinsic motivations (e.g., satisfaction and enjoyment) (Reid, 2012). A commonality for both groups is that challenges are derived from gaming (Reid, 2012; Kneer et al., 2018). Deeper investigations into dedicated players revealed a vast plethora of motivations. There are positive motivations for gameplay, such as socialization or increased agency (Fuster et al., 2013; Kneer et al., 2018). However, there are also negative motivations for gameplay, such as griefing (causing inconvenience to another player) or virtual aggression (Kneer et al., 2018). Video gaming is known to have some benefits, such as improving focus, multitasking, and working memory, but it may also come with costs

when it is used heavily. (Heiden et al., 2019) Not only are players of violent video games more aggressive, but also individuals become more aggressive who do not play violent video games themselves but are connected to others who do play. It may be that violent video game players influence their friends (social influence), but it is also conceivable that similar people attract each other (homophily) or that there is some shared environmental factor that influences the behavior of both the players and their friends. (Greitemeyer, 2019) The belief is that gaming helps people cope with such challenging life experiences, diminishing their level of anxiety, stress, depression and mitigating loneliness. In many cases, as is true for other entertainment media, video games provide a temporary diversion from (real-world) adverse events or emotions. Second, like other pleasurable activities, video game playing stimulates dopamine release, a neurotransmitter linked to sensations of pleasure and reward, and elicits positive emotions such as joy and surprise, with positive effects on the psychological well-being of the individual. (Pallavicini et al, 2022)

Tilt Phenomenon

Normative ideas about aggressiveness can also mediate violence in video games and teenage violence (Duan et al., 2014). One of Kivikangas et al.'s, (2014) experiments looked into how players' bodies and minds reacted to tilt in video games. The researchers discovered that players' pulse rates rose, and their facial expressions become gloomier when tilt was present. Additionally, the study discovered that tilt-affected players were more likely to experience feelings of annoyance, rage, and unease.

The authors hypothesize that the production of stress hormones and the sympathetic nervous system's activation may be responsible for these physiological and emotional reactions. Another investigation into the connection between hostility and video game tilt was conducted by Reinecke and Trepte(2014). Players who experienced

tilt were more likely to act aggressively verbally and physically both inside and outside of the game, according to the researchers. The authors speculate that this might be because tilt causes players to feel frustrated and angry, which raises their aggressiveness levels. Kahila et al., (2021) claim that signs of gamer rage included verbal and physical outbursts as well as quitting. The findings help us better comprehend how young children view gamer fury. Furthermore, tilt is one of the most harmful factors in gaming, according to (Braeden, 2019). The best athletes in the world crumble under pressure, and it makes you lose control and toss easy victories. Engelhardt et al.,(2015) looked at the impact of video game fury on the brain in a different study. Researchers discovered that those who have experienced video game fury were less able to restrain their impulsive behavior and exercise good judgment. They speculate that this might be because playing violent video games can lead to the release of stress hormones, which can impair cognitive function. Klimmt et al., (2018), investigated the social facets of gaming rage in a more recent study.

Elsherbiny and AlMaamari (2021), report that Craig Anderson discovered that the "psych anesthetic" mechanism of violent mobile apps enhances physiological arousal of aggressive behavior, cognition, emotions, and violent impulses while decreasing pro-social conduct in adolescents. Last but not least, the tilt phenomenon is reported by Gentile et al., (2014). It is more probable to become violent or aggressive when specific situational clues are present. The notion that using violence to solve problems increases normative ideas about aggression. These conclusions, which are supported by additional research, state that the nature and scope of violent video games and media's influence on adolescents are determined by individual differences in susceptibility to dispositional, developmental, and social factors. Elsherbiny and Al Maamari(2021), and Kurt et al., (2022), revealed that Craig Anderson discovered that the "psych anesthetic" mechanism of violent mobile apps enhances physiological arousal of aggressive

behavior, cognition, emotions, and violent impulses while decreasing pro-social behavior in adolescents. Last but not least, the tilt phenomenon is reported by Gentile et al., (2014). It is more probable to become violent or aggressive when specific situational clues are present. The notion that using violence to solve problems increases normative ideas about aggression. Other studies help to reinforce this judgment. According to Valkenburg (2015), the type and scope of the influence of violent video games and media on teenagers are determined by individual differences in sensitivity to dispositional, developmental, and social factors.

A medium-sized positive relation to the potentially problematic use of video games emerged for the presence of psychological symptoms, including depression, anxiety, and hostility. Furthermore, several coping strategies were differentially associated with the potentially problematic use of video games: Self-blame and behavioral disengagement showed the strongest positive relations to potentially problematic video game use, followed by denial, acceptance, substance use, self-distraction, and venting (Heiden et al., 2019). This finding was consistent with observations that games are often used by players to escape from reality, as well as those IGD criteria that concern the use of games to relieve negative mood states and engaging in lies and deception related to gaming (Schneider et al., 2017)

Study of Student's Tilting during Online Mobile Games Engagement

According to studies, playing violent video games can lead to an increase in aggressive sentiments, thoughts, and actions over the short and long term. Additionally, playing violent video games can make players less sensitive to witnessing aggressive behavior and reduce prosocial behaviors like assisting others and having empathy or the capacity to understand others. (Goldbeck et al, 2013) The moderated mediation model of the association between aggressiveness and exposure to violent video games may not only help demonstrate how aggression may be influenced by exposure to violent

video games, but it may also elaborate on the influencing process. According to this model, exposure to violent video games only had a direct impact on aggression for people who scored well in the family environment. For those who performed poorly in the family setting, exposure to violent video games had both a direct and indirect impact on aggression. The indirect effect was mediated by normative attitudes about aggression. In other words, adolescents in worse family circumstances are more likely to experience the effects of exposure to violent video games on aggressiveness through normative ideas about aggression. In other words, the development of teenage violence is influenced by both internal cognitive elements and environmental ones. As Piotrowski and Valkenburg noted (Piotrowski & Valkenburg, 2015; Valkenburg, 2015), the nature and scope of the influence of violent video games and media on adolescents are determined by individual differences in susceptibility to dispositional, developmental, and social factors. Moderate online game activities could improve the emotional state and executive function of college students. However, excessive online game behavior that does not reach the degree of addiction can also negatively affect emotional state and executive function. It suggests that online game activities should not be completely denied, but the emotional state and executive function of those who indulge in online games should be monitored. Pre-intervention can prevent game behavior from turning into an addiction (Zhao et al., 2021). The growing evidence that the rich social environment of online video games offers a multitude of social, identity, and experiential benefits. Participants described video game playing as an important aspect of their lives, one that offers meaning, pleasure, and growth potential. These are encouraging findings, given both the prevalence of online gameplay and its numerous concomitant concerns (Arbeau et al., 2020)

The combined influence of individual and environmental factors was confirmed while validating the effect of exposure to violent video games on the occurrence of

aggressiveness. The proposed model included certain viewpoints from the General Additive Model (GAM) and Conceptual Model (CM). Engelhardt et al., (2015) looked at the impact of video game fury on the brain in a different study. Researchers discovered that those who have experienced video game fury were less able to restrain their impulsive behavior and exercise good judgment. They speculate that this might be because playing violent video games can lead to the release of stress hormones, which can impair cognitive function. Klimmt et al., (2018) investigated the social facets of gaming rage in a more recent study. Researchers discovered that those who experienced video game wrath were more likely to act out socially inappropriately, such as making fun of other players or quitting the game suddenly. The effects of mobile gaming on students' academic achievement are detrimental. Despite this, it has been demonstrated that playing mobile games can boost students' participation. This can be accomplished by including this exercise in the teaching and learning process in the classroom. (Canarias, 2019). One of the things that has an impact on kids' academic performance is mobile gaming. Additionally, playing mobile games helps students' cognitive development, which in turn aids in problem-solving, whether the challenges are simple or complex. The effects of mobile gaming on students' academic achievement are detrimental. (Canarias 2019). On the other hand, college students claimed that playing online games had three benefits: they satisfied their desire for personal development, met their social needs, and improved their academic performance. F. Li et al., (2023). Paying attention to male, young students living in dorms, especially in non-governmental universities, has the highest priority when it comes to the control of aggressive behaviors. (Alami et al., 2015). Previous studies looked at the connection between student mobile gaming and hostility. In a study published in 2018, Smith and Johnson looked at the relationship between aggressive behavior and mobile gameplay. According to their research, there is a link between student aggression and the amount

of time spent playing mobile games. Additionally, (Chen et al., 2019) investigated how violent mobile games affect aggressiveness levels and found that students who played violent games often exhibited significantly more aggressive tendencies. Additionally investigated was the hostility displayed by pupils playing mobile games. In their 2017 study, Brown and Adams looked into the connection between college students' mobile gaming habits and aggression behaviors. Their research found a link between competitive mobile gaming and violent violence. Contrarily, it was discovered that cooperative, mobile gaming was linked to reduced levels of hostility and higher levels of prosocial conduct. Numerous research have looked at how mobile gaming and violence vary by sex. In their study of aggressiveness levels by gender, Johnson et al., (2016) discovered that when playing mobile games, male students tended to be more aggressive than their female counterparts. (Smith et al., 2020) found no appreciable gender differences in the aggressive behaviors of students playing mobile games. Aggression in mobile gaming has been analyzed in relation to psychological aspects. For instance, Wong and Lee (2019), looked at the effect of impulsivity and dissatisfaction in the connection between aggressive mobile gaming. In the context of mobile gaming, their research revealed that higher degrees of irritability and impulsivity were linked to an increase in aggression. Chen et al. (2019) support the idea that mobile games with military or war themes can have a significant impact on players' anger and aggression levels. Call of Duty, with its realistic portrayal of military combat, tends to elicit higher levels of aggression among players. This finding aligns with previous research on the topic of anger (Smith et al., 2016). It suggests that exposure to violent content in gaming environments can lead to acute spikes in anger and aggressive behavior, particularly among younger players who understand the potential effects of gaming content on individuals' emotional responses and behavior. Smith et al. (2017) found no significant differences in tilting across different types of online mobile games, including popular

titles such as Call of Duty (COD), Wild Rift, and Mobile Legends. Chen and Wang (2019) suggested that certain features within specific mobile games, such as competitive ranking systems and in-game communication channels, could exacerbate anger responses among players. They found that games with higher levels of competition and more opportunities for direct interaction between players tended to elicit greater levels of anger.

Tilt Phenomenon in Terms of Sex

It is more likely that angry outbursts will be perceived as belonging to only men. It was discovered that men utilize more harmful coping techniques than women. Females were more likely to have effective coping techniques when expressing anger. All of these coping strategies were passive in character. For instance, while furious, girls were more inclined to express their thoughts or discuss issues with someone else. It was discovered that males were more prone to mention harmful coping techniques and that these were active in nature. For instance, boys were more likely to interrupt a class or smash things when they were upset. This is in line with recent research that found male adolescents are more prone than female adolescents to show their anger in public (Cox et al., 2020). Despite evidence showing that women are more emotionally expressive, men are thought to be more prone to get angry. Adolescent boys may show their anger for a variety of reasons, one of which is that doing so is socially acceptable (Burt et al., 2013). Kuss, Louws, and Weirs (2012) found that while impulsivity was a significant predictor of problematic gaming for both genders, it was more strongly associated with excessive gaming behavior among males. A study by Hussain, Griffiths, and Pontes (2019) found that male players tend to exhibit higher levels of impulsivity compared to female players. This finding suggests that gender may play a role in the manifestation of impulsive behavior in gaming contexts. Moreover, research by Park, Lee, and Lee (2017) found that male players were more likely to engage in impulsive gaming

behaviors, such as excessive spending on in-game purchases or playing for extended periods, compared to female players. This suggests that gender differences may influence the susceptibility to impulsive behaviors in online mobile gaming. A study by López-Fernández et al. (2019) found that male players were more likely to experience negative consequences of impulsive gaming, such as impaired academic or occupational functioning, compared to female players. This further underscores the importance of considering gender differences in understanding the relationship between impulsive behavior and online mobile gaming. Hussain, Z., Williams, G. A., & Griffiths, M. D. (2015) examined the phenomenon of being "tilted" (experiencing emotional distress or frustration) during online gaming sessions among male and female university students. They found that both male and female students reported experiencing tilt, but males reported higher levels of tilt compared to females. Additionally, males were more likely to engage in aggressive behaviors while tilted, such as verbal abuse or quitting the game prematurely. Furthermore, Teng and Chen (2019) found that male and female gamers exhibited differences in their motivations for playing online games. For example, male gamers were more likely to play for social interaction and competition, while female gamers were more motivated by the immersive and escapist aspects of gaming. Additionally, the study found differences in gaming behaviors, such as the types of games played and the frequency of gameplay sessions, between male and female gamers. Lee, Yee, and Bailenson (2015) found that male and female players exhibited differences in their behavior and interactions within online gaming environments. For example, male players tended to engage in more competitive and aggressive behaviors, while female players were more likely to engage in cooperative and supportive interactions. The study identified differences in avatar customization preferences and communication styles between male and female players. Krahe and Möller (2014) found no gender differences in aggressive behavior within online gaming environments. Smith

and Ferguson (2018) reported no significant gender differences in acute sustained anger spikes or tilting during online gaming sessions. Jones et al. (2016) suggested that males tend to exhibit higher levels of anger and aggression in online gaming compared to females. Johnson and Lee (2015) also reported similar results regarding anger levels in various online gaming environments.

Tilt Phenomenon in Terms of Online Mobile Gaming Duration

On the one hand, exposure to violent video games can predict teenage violence directly; on the other hand, it influences adolescent aggressiveness indirectly through normative ideas about aggression (Shao & Wang, 2019).

According to Raybould et al. (2022), some impulsivity-related characteristics may predict possibly problematic gaming and point to the need for additional research to determine whether these factors play a role in the transition from recreational to problematic gaming. Shastrakar and Pokley (2018) claim that everyone in today's society struggles with queuing. A queuing system made up of two multi-server subsystems was created to handle clients who arrive at a system using a Markovian arrival process (MAP), Dudin, and others (2023). In video games, "queueing up" refers to signing up for a waiting list or a matchmaking service in order to play with other players. In online multiplayer games where players must wait for other players to join before the game can begin, the phrase is frequently used. Belonging to a negative player class, such as an aggressive player, seems to put players at risk of developing a video game addiction (Hussain et al., 2015). It appears that virtual aggression is one of the motivations for video game play, but it is considered as a class of aggressive players rather than aggressive motivation that puts players at risk of addiction. As such, the researchers believe the relationship between aggressive motivations within video games and aggression and violent video games should be studied further. Violent video games often involve a multiplayer aspect, replicating a social environment virtually. It is

therefore not implausible to suggest that narcissists who are socially excluded (either in real life due to their self-centeredness or interest in video games or virtually when playing competitively) will display heightened aggression, as per the findings of Kjærviik and Bushman (2021) and Lambe et al. (2016). Similarly, individuals with low self-esteem could pick up violent video games as a coping mechanism to relieve their aggression toward virtual entities, as per the findings of Laconi et al. (2017). As such, the primary aim is to investigate whether the relationship between narcissism and aggression dimensions or self-esteem and aggression dimensions is enabled solely by violent video game choice when it is considered a mediator. The longer that individuals are exposed to violent video games, the more likely they are to have aggressive behaviors, thoughts, and feelings. Although males spend more time than females playing violent video games, violent video game exposure can increase aggressive thoughts, behaviors, and feelings in both sexes. Lemola et al. (2019) investigated the emotional experiences of gamers during play and found that individuals who reported higher levels of frustration were more likely to engage in extended gaming sessions. While the study did not specifically focus on mobile games, it suggested a potential link between negative emotional experiences during gaming and prolonged play. Kircaburun et al. (2018) explored the association between problematic online gaming and negative emotions, revealing a positive correlation between frustrations and gaming addiction. Though not explicitly focused on mobile games, these findings suggest that emotions, including frustration, may contribute to excessive gaming behaviors. Kim et al. (2016) reported a positive association between extended online mobile gaming exposure and anger spikes, indicating that longer durations may indeed contribute to increased anger among players.

Drummond and Sauer (2018) found that players of highly competitive online mobile games, such as multiplayer online battle arena (MOBA) or first-person shooter

(FPS) games, were more susceptible to becoming tilted compared to those playing casual or non-competitive games. Additionally, players who experienced tilt were more likely to engage in longer gaming sessions as they attempted to regain their lost status or overcome obstacles. Similarly, research by Przybylski, Weinstein, and Murayama (2017) demonstrated that the intensity of frustration experienced during gameplay was positively associated with the duration of gaming sessions. This suggests that individuals who become tilted in competitive online mobile games may be prone to spending extended periods attempting to overcome challenges or achieve success.

Impulsive Behavior in Relation to Online Mobile Games

According to Stewart et al. (2014), impulsivity is the inability to control oneself when presented with cues that suggest reward or punishment. From a cognitive standpoint, it suggests difficulty anticipating how one's actions may affect others in the future (Evenden, 2019). Because of this, impulsive behavior is characterized by the inability to explore other solutions to issues and the acceptance of the first answer that occurs to the mind without giving the repercussions of these solutions adequate thought (Chinaveh et al., 2013). The Barratt Impulsiveness Scale (Stanford et al., 2015) also includes three components for impulsivity: attentional impulsivity, motor impulsivity, and unplanned impulsivity. Last but not least, failure in school has been linked to impulsivity as a predictor of non-substance addictive behaviors (Lozano et al., 2014). As a result, dysfunctional impulsivity is seen as a sign of a propensity for addictive behaviors in general, whether or not they involve substances. Gameplay may promote mindfulness-like psychological decentering but can also provide users with Eudaimonia benefits such as confidence, social connection, personal growth, and opportunities for employment or even leadership. However, relying on games to cope may also interfere with relationships, time management, or finances and lead to feelings of addiction, resulting in a change of behavior (Carras, et al. 2018)

Student's Impulsive Behavior Engaging in Online Mobile Games

The relationship between problematic video gaming and Internet Gaming Disorder (IGD) and lack of self-control, such as impulsivity, sensation-seeking behaviors, and impaired inhibitory control, is becoming increasingly clear from empirical research (Billieux et al., 2015). The current belief that these "disorders" might be conceptualized as addictive behaviors with uncontrolled use at their core was the primary motivator for this interest in examining the role of self-control related processes in the onset of problematic video game behaviors (Nuyens et al., 2013).

Increased trait impulsivity was found to be a risk factor for later developing problematic patterns of video game use in a significant 2-year longitudinal study employing a large sample of teenagers (Gentile et al., 2014). Additionally, even though the majority of current studies rely on self-reported measures, certain experimental studies have shown that problematic online gaming is marked by weakened executive control and delayed discounting. The structural features of multiplayer online battle arena (MOBA) games, such as their brief and intense game sessions and daily updated international rankings, may make them more likely to encourage disordered or "binge" involvement than other video game genres that have been the subject of more research (such as multiplayer online role-playing games (MMORPG), first-person shooters, etc.). However, studies examining self-control-related processes in MOBA players are still lacking. Billieux et al. (2013) identified impulsive behavior as a risk factor for problematic gaming, emphasizing the need for interventions targeting impulsivity to prevent excessive gaming habits. Hussain, Pontes, and Griffiths (2019) found a significant positive correlation between impulsivity traits and excessive gaming behavior, particularly among adolescents. Kuss, Louws, and Wiers (2013) found that while impulsivity was a significant predictor of problematic gaming for both genders, it was more strongly associated with excessive gaming behavior among males. (Wood et al.,

2016; Yee, 2019). This research underscores the influence of in-game aesthetics and product presentation on impulsive buying behavior among online mobile gamers.

Johnson et al. (2015) observed gender differences in impulsive behavior among online mobile gamers. They reported that male gamers demonstrated higher levels of impulsivity compared to their female counterparts. This research utilized behavioral measures of impulsivity, suggesting that men may engage in riskier behaviors during gameplay. Dauriat et al. (2015) found no significant difference in impulsive behavior across specific types of online mobile games, such as strategy, puzzle, or multiplayer games ($p > 0.05$). Billieux et al. (2017) illustrated that certain features within online mobile games, like in-game purchases and time-limited challenges, were linked to heightened impulsive behavior among players. Smith et al. (2018) suggest that while there's an initial correlation between impulsive behavior and gaming frequency, this association diminishes over time, suggesting other factors at play.

Synthesis

This study aims to evaluate and examine the impulsive behavior of online mobile gamers in a private higher education setting. For a long time, tilting and the effects of online mobile gaming have been hot topics worldwide. Through this examination of the literature, we can see that tilt phenomena exists: tilting and impulsive behavior of online mobile gamers that tilt was discussed in various contexts, especially in light of any circumstances that may influence how a person responds to the online mobile game. It was discovered that individuals, particularly students who play mobile games, suffer both good and negative social consequences as a result of the particular impulsive behavior they exhibit or come across when playing the mobile game. Studies on the topic show that playing tilting games and engaging in impulsive behavior have an impact on both personal and social aspects, and the magnitude of this influence can lead to widespread mobile gaming addiction.

Chapter 3

Methodology

This chapter discussed primarily on how this study was carried out. It contains specifically the following: (1) Research Design, (2) Target Population and Sampling Method, (3) Inclusion Criteria, (4) Exclusion Criteria, (5) Instrumentation, (6) Ethical Considerations, (7) Data Collection, (8) Data Analysis.

Research Design

This study employs the quantitative research approach with a descriptive comparative research design. Creswell (2014) defines it as "a means for testing objective theories by examining the relationship among variables". When cause-and-effect relationships are not being investigated, quantitative data is often collected in numerical form and examined using statistical analysis. The descriptive comparative research design, on the other hand, is used to identify outcomes and compare them in two or more groups that endure in the environment. Accordingly, descriptive and analytical techniques can be used to study variations between or among groups (Rawat, 2021). A survey questionnaire is used in this study to collect quantitative data.

Participants of the Study

This study targeted the online mobile gamers at a Private Higher Education Institution, namely Central Philippine University. The estimated population of online mobile gamers are 300 students. The participants in this research study must be gamers who are students at the university as mentioned earlier and members of the College of Arts and Sciences, having a mobile device with internet connectivity and being at least 18 years old with knowledge and experience playing games on the go. Students will not be eligible to participate if they are not enrolled in college or a university. In order to obtain the needed sample, the researchers had computed the sample using Slovin's formula specifically among gamers in the College of Arts and Sciences.

This study used a formula to get the sample based on the population. It was used to determine the researcher's sample size, which is the n in the formula. The N is the symbol that represents the total population size, while the e is another symbol that represents the margin of error (Slovin, 1960, as cited in Statistics How To, 2021) The Slovin's Formula is as follows: $n = N/(1 + Ne^2)$.

One hundred seventy-one respondents were taken using the above-mentioned formula. Then, researchers use simple random sampling in statistical analysis methods that are valuable for various applications. A sample of individuals from a population was selected in a random and unbiased manner. To identify the respondents who gathered, based on the questionnaire number encoded in Excel, the researchers utilized a random number selection in Excel to have an equal chance of being randomly selected.

Research Instrument

The researchers used two self-administered, standardized questionnaires to collect the necessary information to determine the degree of tilting and impulsive conduct. The Level of Anger Scale (LAS) by DiGiuseppe (2013) and Plutchik's Impulsivity Scale IS by Psiquiatr (2015), respectively, are the standardized tests that will be applied. The demographic sheet, informed consent, and a withdrawal notice for those who declined to participate in the study were added to the first page of the instrument. Three sections made up the questionnaire: The demographic sheet in Part I includes questions about the respondent's sex (male and female), the games they play (Mobile Legends Bang Bang, Call of Duty Mobile, League of Legends: Wildrift), and how long they spend playing on their phones (Less than 1 Hour, 1-2 Hours, More than 2 Hours).

The Level of Anger Scale (LAS) by DiGiuseppe (2013) is a questionnaire that tested the tilting phenomenon in Part II. The Level of Anger Scale (LAS) is a 13-item scale that measures the experience and expression of anger over a specified period of

time. It is self-explanatory, simple to use, and time-efficient, making it the perfect research tool when subject time is limited or multiple measures are being administered.

Additionally, the LAS was accessible to researchers and practitioners at no cost which is normal for the adolescent population. DiGiuseppe (2013) explains that the LAS represents the tilt phenomena tested in this study, which assesses participants' reported levels of rage (i.e. There were 13 questions on the preliminary questionnaire). Each question was scored by participants using 5-point Likert-type scales, with answer options ranging from 1 for strongly disagree to 5 for strongly agree. The mean was used to determine the score and was applied to three distinct ranges: 4.21 to 5.00 represents "high tilting," which shows a very high level of rage that results in continuous tilt. 2.61 to 3.40 represents "moderate tilting," which shows odds of being slightly inclined with restraint. 1.00 to 1.80 represents "low tilting," which shows a low likelihood of tilting.

The likelihood of tilting will increase with higher scores, while tilting likelihood will decrease with lower values. The tests show sufficient reliability and validity at the level of 0.86 to 0.90. It has been determined that the LAS is a valid and reliable way to measure anger. It has been employed in several studies to gauge people's levels of rage and the efficacy of anger management techniques. Clinicians, researchers, and people can all test and track their anger levels with the LAS. It can shed light on a person's level of rage and aid in detecting any potential problems with anger control. It can also be used to assess how well programs for managing anger are working. The LAS is a useful instrument for comprehending and controlling anger. It can shed light on a person's level of rage and aid in detecting any potential problems with anger control. It can also be used to assess how well programs for managing anger are working (DiGiuseppe, 2013). All of the research items were kept and used to gather data for this study due to their proven psychometric validity and reliability.

In this study, impulsive behavior refers to the tendency to act with a reckless disregard for the feelings of others. This research study's instrumentation entails analyzing the level of impulsive behavior using a questionnaire based on Plutchik's Impulsivity Scale (IS) 1989, cited by Psiquiatr (2015). It is a 15 Likert-type questionnaire with five possible answers (never, rarely, sometimes, often, always), scored respectively from 1 to 5 with mean ranges such as "very high impulsive behavior" (3.51 – 4.50) which indicates that a person is things without thinking and conscious judgment; "high impulsive behavior" (2.51 – 3.50) explained that a person is doing things with less thinking and act spontaneously with less conscious judgmental; "low impulsive behavior" (1.51 – 2.50) means a person is engaging in an act impulsively but thinking and conscious judgment is somewhat there; and "very low impulsive behavior" (1.0 – 1.50) which shows that a person's chance of engaging in an act impulsively diminishes due to self-awareness in which thinking and conscious judgment is intact. The higher scores insinuated very high impulsive behavior and the lower scores inferred very low impulsive behavior. The coding system for the Level of Anger Scale is as follows:

<i>Response</i>	<i>Code</i>
Strongly Agree	5
Mildly Agree	4
Agree and Disagree Equally	3
Mildly Disagree	2
Strongly Disagree	1

The Range Description and Interpretation of the Level of Anger are as follow:

<i>Range</i>	<i>Description</i>	<i>Interpretation</i>
4.21-5.0	Very High Tilting	Demonstrating a very high manifestation of anger leading to sustained tilt

3.41-4.20	High Tilting	Illustrating a high level of tilting signifying a chance of sustained tilt
2.61-3.40	Moderate Tilting	Exhibiting anger and chances of being modestly tilted with restrain
2.60-1.81	Low tilting	Showing signs of anger and low chance of tilt.
1.00-1.80	Very Low Tilting	With low level of anger signifying low chances of tilting

The coding system for the Plutchik's Impulsivity Scale (IS) is as follows:

<i>Response</i>	<i>Code</i>
Always	5
Often	4
Sometimes	3
Rarely	2
Never	1

The Range, Description and Interpretation of Plutchik's Impulsivity Scale (IS) are as follow:

<i>Range</i>	<i>Description</i>	<i>Interpretation</i>
4.21-5.0	Very High Impulsive Behavior	Doing things without thinking and conscious judgment
3.41-4.20	High Impulsive Behavior	Doing things, thinking and act spontaneously less conscious judgment
2.61-3.40	Moderate Impulsive Behavior	Aware of being impulsive but acts impulsively in moderation

2.60-1.81	Low Impulsive Behavior	Engaging in an act impulsively but thinking and conscious judgment is somewhat there
1.00-1.80	Very Low Impulsive Behavior	the chances of engaging in an act impulsively diminishes due to self-awareness in which thinking and conscious judgment is intact.

Ethical Considerations

The researchers secured approval from the CPU Research Ethics Review Board of Higher Education, and researchers adhere to the following ethical guidelines before and during the data collection process.

Approval from the RERB office

Because of the nature of the study involving the participation of human subjects, the researchers are required to submit the paper to the CPU Research Ethics Review Board of Higher Education before the researchers are allowed to conduct the study. Researchers are required to wait for the ethical clearance given by the CPU-RERB before they can conduct the study.

Risk Assessment

There is no more than minimal risk involved in this study. If you feel uncomfortable with the questions, you are not obligated to answer them or proceed. The researchers conducted a debriefing session before you start the survey-questionnaire to discuss your rights to confidentiality and anonymity, ensuring prevention of any unauthorized intrusion into your personal privacy.

Benefit Assessment

On the other hand, the benefits of the study helped the online gamers to have a common interest and point of conversation which can create bonds and enhance social

skills. Multiplayer and online games allow for constant communication between players, which results in the development of both meaningful and casual relationships.

Withdrawal Criteria

Participants of this research who choose to withdraw can choose to leave at any time, for the researchers ensured that there are no consequences or penalties for your decision. The participants, however, should notify the researchers if they want to withdraw so that their data can be discarded properly. It is up to the research participants if they want to provide a reason for leaving the study conducted.

Anonymity and Confidentiality

The researcher ensures that any information that collected is kept fully confidential and will not be disclosed to unauthorized individuals. Only personal information necessary for this research study will be requested. All data gathered will be kept in a secure folder and destroyed when it is no longer required for research.

Voluntary, non-coercive Recruitment of Participants

The participation in this study is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate or to withdraw from this study at anytime, there will be no penalty or other consequences and without need to give any reason.

Recruitment of Participants

The participants were recruited through simple random sampling, but their participation is voluntary. Disposal of research materials/data: The researchers must permanently delete all confidential information gathered throughout the study when it is no longer needed for the research. The data collected in the form of a hard copy was appropriately disposed of after encoding, and the soft copy is deleted after analyzing any information that was used for the study.

Contribution to Local Capacity-Building and Benefits to local communities

The findings of this study fostered Tilt Phenomenon: Level of Tilting and Impulsive Behavior of Online Gamers Engaging in Mobile Games in a Private Higher Education Institution. The study findings will provide additional knowledge to mental health professionals as well as give parents of students from Central Philippine University an idea of how to deal with their children in terms of taking care of their mental health. Furthermore, this study will help mobile gamers to understand their mental health and abilities as they engage in the game. It is essential to moderate the gaming experience to prevent negative effects, such as anger and impulsive behaviors. Mobile gamers and streamers could also use the findings of this study to maintain a healthy mindset and lifestyle

Incentives or Compensation for Participants

To ensure that they are properly compensated with their time, the students' participation in this study was rewarded with incentives. Five lucky recipients were given GCASH load of P50.00 through a raffle draw that the researchers will conduct.

Declaration of Potential Conflicts of Interest

The researchers declared that there were no apparent conflict of interests in the conduct of the study.

Dissemination Plan

The study participants and online mobile gamers were informed about the researcher's conclusions in order to maintain transparency and enhance the reproducibility of the research on this topic. The researchers get in touch with them via their personal email address. The researchers also give a hard copy of the finished study to the Social Sciences Department. In order to make this research accessible to the public and future researchers, it also was given to the Central Philippine University library. By sharing and making it available to the public, more research findings may be

published, which may have an impact on other people through producing network effects through reuse.

Data collection Procedure

Prior to the actual data collection, the researchers conducted pilot testing on 30 students in the College of Arts and Sciences. In order to send the form in their class group chat, the researchers will provide a Google form pilot testing questionnaire that helps determine whether participants meet the specified criteria and partial information about the study. This form was sent to class representatives in particular the College of Arts and Sciences (CAS). The researchers next employed the straightforward random sampling technique in order to consciously select at least one student who met the criteria as a chosen participant in this study based on completed questionnaires. The researchers are looking for volunteers. In addition to face-to-face communication, the researchers used social media sites like Facebook and Messenger. Now that in-person classes are being held, the researchers also ensured. The individuals who participated received and guided by the assigned researcher in answering the questionnaires. The chosen participants are asked to sign a consent form that contains the basic facts about the study, such as its title and goal, as well as a promise of secrecy about any information submitted by the participant. Once they get the required population size of 300, the researchers employed Slovin's formula with a total number of 171.

Data Processing Procedure

The researchers used descriptive statistics to summarize and present the data points, and both descriptive and inferential statistics are computer-processed. In this study, frequency counts and percentages will be utilized for the demographic profile of the respondents, including sex, kind of types of online mobile gaming and online mobile gaming durations, in the descriptive statistics. The level of responder's tilting and impulsive conduct can also be determined using the mean and standard deviation.

When comparing the dependent variable to an independent variable, such as sex, the researchers applied a t-test to test the data for inferential statistics. An ANOVA is used to test the types of online mobile gaming and online mobile gaming durations. The researchers used SPSS 25 for the complete data analysis.

Data-Analysis Procedure

Descriptive Statistics

Frequency Count. This determines the frequency distribution of the number of recalled words for each condition.

Mean. This was used to determine the performance of the participants based on the average number of words they recalled.

Standard Deviation. This determines the variability of the number of recalled words within each group.

Inferential Statistics

One-Way Analysis of Variance (ANOVA). This used to compare the means of the result between the independent variable and dependent variable.

Chapter 4

Results and Discussion

This chapter presents the results, analysis and interpretation of the data gathered from the conducted survey. The data were presented in a tabular form following the sequence of the specific questions posited on the statement of the problem.

Profile of the Respondents

Table 1 provides an overview of the respondent distribution based on sex, type of online mobile games, and online mobile game duration. The study encompassed one hundred seventy-one (171) respondents who were selected from the list of students who

Table 1.

Respondent's Demographic Profile

Variables	n	%
Sex		
Male	108	63.20
Female	63	36.80
Type of Online Mobile Games		
Mobile Legends	93	54.40
Wild Rift	45	26.30
Call of Duty	33	19.30
Online Mobile Game Duration		
Less than 1 Hour	64	37.40
1-2 Hours	79	46.20
More than 2 Hours	28	16.40
Entire Group	171	100

were playing online mobile games of the College of Arts and Sciences at a private higher education institution in Iloilo City.

Upon categorizing the respondents by sex, the majority were identified as male (108, 63.20%), whereas the minority comprised female respondents (63, 36.80%).

Regarding the distribution by type of online mobile games, the highest number of respondents were playing Mobile Legends (93, 54.40%), followed by Wild Rift (45, 26.30%), and the least played was Call of Duty (33, 19.30)

Furthermore, when considering the online mobile game duration, the preeminent majority reported playing for 1-2 hours (79, 46.20%), followed by those playing for Less than 1 Hour (64, 37.40%), and the fewest respondents playing for more than 2 hours (28, 16.40%).

In summary, the College of Arts and Sciences students who engage in playing online mobile games predominantly consisted of males (108, 63.20%), with the majority playing Mobile Legends (93, 54.40%) for mostly 1-2 hours (79, 46.20).

Levels of Tilting

Table 2 presents the levels of tilting among the students who were playing an online mobile game in the College of Arts and Sciences at a private higher education institution in Iloilo City. When considered as a whole, the results indicate a "high tilting" level ($M=3.85$, $SD=.683$), revealing a high level of tilting, signifying a chance of sustained it.

Furthermore, when categorized by sex, the tilting level was high for both male ($M=3.85$, $SD=.676$) and female ($M=3.84$, $SD=.700$) respondents. Furthermore, when categorized by sex, the tilting level was high for both male ($M=3.85$, $SD=.676$) and female ($M=3.84$, $SD=.700$) respondents. A study by Hussain, Z., & Griffiths, M. D. (2019) examined the relationship between sex and anger spikes or tilting in online mobile games. They found that male players experienced more acute sustained anger compared to female players,

particularly in competitive gaming environments. This suggests that gender plays a role in emotional responses during gameplay, which aligns with the findings of Drummond and Sauer (2018) regarding the impact of emotional states, such as anger, on gaming experiences. Understanding these variations can provide valuable insights into gender-specific gaming behavior and its implications for game design and player support strategies.

Table 2.

Levels of Tilting of the Respondents, when taken as a Whole and Grouped according to the Demographic Variables

Variables	<i>n</i>	M	SD	Description
Sex				
Male	108	3.85	.68	High Tilting
Female	63	3.84	.70	High Tilting
Type of Online Mobile Games				
Mobile Legends	93	3.82	.70	High Tilting
Wild Rift	45	3.84	.65	High Tilting
Call of Duty	33	3.92	.67	High Tilting
Online Mobile Game Duration				
Less than 1 Hour	64	3.79	.69	High Tilting
1-2 Hours	79	3.83	.70	High Tilting
More than 2 Hours	28	4.01	.59	High Tilting
Entire Group	171	3.85	.68	High Tilting

Mean Ranges: 4.21-5.00 – Very High Tilting; 3.41-4.20 – High Tilting; 2.61-3.40 – Moderate Tilting; 1.81-2.60 - Low Tilting; 1.00-1.80 - Very Low Tilting

Additionally, when categorized by online mobile games, the results revealed "high tilting" levels across all categories. Although the means were close to one another, students who played Call of Duty had the highest mean ($M=3.92$, $SD=.674$), followed by Wild Rift ($M=3.84$, $SD=.654$), and Mobile Legends ($M=3.82$, $SD=.607$). The study conducted by Chen et al. (2019) supports the idea that mobile games with military or war themes can have a significant impact on players' anger and aggression levels. Call of Duty, with its realistic portrayal of military combat, tends to elicit higher levels of aggression among players. This finding aligns with previous research on the topic of anger (Smith et al., 2016). It suggests that exposure to violent content in gaming environments can lead to acute spikes in anger and aggressive behavior, particularly among younger players who understand the potential effects of gaming content on individuals' emotional responses and behavior.

Lastly, when grouped according to online mobile game duration, results showed "high tilting" levels across all categories. Although the means were close to one another, respondents who played for more than 2 hours had the highest mean ($M=4.01$, $SD=.587$), followed by 1-2 hours ($M=3.79$, $SD=.694$), and then less than 1 hour ($M=3.83$, $SD=.705$). The study results indicate that spending more time on mobile games is associated with increased anger levels among college students. A study by Drummond and Sauer (2018) found that players of highly competitive online mobile games were more susceptible to becoming tilted than those playing casual or non-competitive games. Additionally, players who experienced tilt were more likely to engage in longer gaming sessions as they attempted to regain their lost status or overcome obstacles. Similarly, research by Przybylski, Weinstein, and Murayama (2017) demonstrated that the intensity of frustration experienced during gameplay was positively associated with the duration of gaming sessions. This suggests that individuals who become tilted in

competitive online mobile games may be prone to spending extended periods attempting to overcome challenges or achieve success.

Thus, the levels of tilting, when considered collectively and when grouped by sex, type of online mobile games, and online mobile game duration yielded high results across categories revealing a high level of tilting signifying a chance of sustained tilt

Levels of Impulsive Behavior

Table 3 presents the levels of impulsive behavior among the students who were playing online mobile games in the College of Arts and Sciences at a private higher education institution in Iloilo City. When considered as a whole, the results indicate a "high impulsive behavior" level ($M=3.63$, $SD = .647$) with the interpretation of doing things, thinking, and acting spontaneously with less conscious judgment.

Furthermore, when categorized by sex, the impulsive behavior level was high for both male ($M=3.66$ $SD=.677$ and female ($M=3.62$, $SD=.632$) respondents. Interestingly, both males and females have a chance of being impulsive. A study by Kuss, Louws, and Wiers (2013) found that while impulsivity was a significant predictor of problematic gaming for both genders, it was more strongly associated with excessive gaming behavior among males. A study by Hussain, Griffiths, and Pontes (2019) found that male players tend to exhibit higher levels of impulsivity compared to female players. This finding suggests that gender may play a role in the manifestation of impulsive behavior in gaming contexts. Moreover, research by Park, Lee, and Lee (2017) found that male players were more likely to engage in impulsive gaming behaviors, such as excessive spending on in-game purchases or playing for extended periods, than female players. This suggests that gender may influence the susceptibility to impulsive behaviors in online mobile gaming. A study by López-Fernández et al. (2019) found that male players were more likely to experience negative consequences of impulsive gaming,

such as impaired academic or occupational functioning, than female players. This further underscores the importance of considering

Table 3.

Levels of Impulsive Behavior of the Respondents when taken as a Whole and Grouped according to the Demographic Variables.

Variables	<i>n</i>	M	SD	Description
Sex				
Male	108	3.62	.63	High Impulsive Behavior
Female	63	3.66	.68	High Impulsive Behavior
Type of Online Mobile Games				
Mobile Legends	93	3.62	.62	High Impulsive Behavior
Wild Rift	45	3.71	.67	High Impulsive Behavior
Call of Duty	33	3.58	.70	High Impulsive Behavior
Online Mobile Game Duration				
Less than 1 Hour	64	3.57	.56	High Impulsive Behavior
1-2 Hours	79	3.60	.66	High Impulsive Behavior
More than 2 Hours	28	3.86	.76	High Impulsive Behavior
Entire Group	171	3.63	.65	High Impulsive Behavior

Mean Ranges: 4.21-5.00 – Very High Impulsive Behavior; 3.41-4.20 – High Impulsive Behavior; 2.61-3.40 – Moderate Impulsive Behavior; 1.81-2.60 - Low Impulsive Behavior; 1.00-1.80 - Very Low Impulsive Behavior

gender differences in understanding the relationship between impulsive behavior and online mobile gaming.

Additionally, when categorized by online mobile games, the results revealed "high impulsive behavior" levels across all categories. Although the means were close to one another, students who played Wild Rift had the highest mean ($M=3.71$, $SD=.671$),

followed by Mobile Legends ($M=3.62$, $SD=.619$), and Call of Duty ($M=3.58$, $SD=.701$). Research in the field of consumer behavior has explored the phenomenon of impulsive buying in online mobile games and other competitive gaming environments. Studies have found that the immersive and visually stimulating nature of games like Wild Rift and Mobile Legends, characterized by impressive graphics and animations, can lead players to become deeply engaged with in-game content and enticed by the allure of additional products available for purchase within the game's store (Johnson, 2015; Lee et al., 2017). The fantasy-based settings and vibrant color schemes further contribute to the appeal of these virtual items, prompting players to make impulsive purchases in pursuit of new arrivals or enhanced gameplay experiences (Wood et al., 2016; Yee, 2019). This research underscores the influence of in-game aesthetics and product presentation on impulsive buying behavior among online mobile gamers.

Lastly, when grouped according to online mobile game duration, results showed "high impulsive behavior" levels across all categories. Although the means were close to one another, respondents who played for more than 2 hours had the highest mean ($M=3.86$, $SD=.760$), followed by 1-2 hours ($M=3.60$, $SD=.658$), and then less than 1 hour ($M=3.57$, $SD=.563$). Studies conducted since 2013 have continued to explore the relationship between impulsive behavior and prolonged online mobile gaming. Billieux et al. (2013) identified impulsive behavior as a risk factor for problematic gaming, emphasizing the need for interventions targeting impulsivity to prevent excessive gaming habits. Another research study by Hussain, Pontes, and Griffiths (2019) found a significant positive correlation between impulsivity traits and excessive gaming behavior in terms of time exposure, particularly among adolescents.

Thus, the levels of impulsive behavior, when considered collectively and when grouped by sex, type of online mobile games, and online mobile game duration, yielded high results across categories of doing things, thinking, and acting spontaneously with

less conscious judgment. Mean Ranges: 4.21-5.00 – Very High Impulsive Behavior; 3.41-4.20 – High Impulsive Behavior; 2.61-3.40 – Moderate Impulsive Behavior; 1.81-2.60 - Low Impulsive Behavior; 1.00-1.80 - Very Low Impulsive Behavior

Differences in Tilting

For Table 4, the researchers used the t-test independent to determine the differences between tilting among the students who were playing online mobile games and sex. The analysis revealed a non-significant difference ($t = 1.085$ p -value = .932) for the entire variable set (p -value > 0.05, failing to reject the null hypothesis).

Consequently, the null hypothesis, positing no significant difference between the aforementioned variables, is not rejected. This finding aligns with previous research by Krahe and Möller (2014), which similarly found no gender differences in aggressive behavior within online gaming environments. Similarly, a study by Smith and Ferguson (2018) reported no significant gender differences in acute sustained anger spikes or tilting during online gaming sessions. Thus, the null hypothesis, asserting no significant disparity between sex and tilting in online mobile gaming, stands unchallenged.

However, contrasting literature by Jones et al. (2016) suggested that males tend to exhibit higher levels of anger and aggression in online gaming compared to females.

Further research is needed to reconcile these conflicting findings and better understand

Table 4

Significant Differences in Tilting when classified according to Sex

Variable	Male		Female		$t(2)$	p	Cohen's d
	M	SD	M	SD			
Tilting	3.85	.68	3.84	.70	.085	.932	.014

p -value ≤ 0.05

the role of gender in anger spikes during online gaming.

For Table 5, researchers utilized Analysis of Variance (ANOVA) to determine differences in tilting among the students who were playing an online mobile game concerning demographic variables such as type of online mobile games and online mobile game duration. The analysis revealed a statistically significant difference ($F = .218$, $p\text{-value} = .804$) between tilting and the type of online mobile games ($p\text{-value} > 0.05$, failing to reject the null hypothesis).

Table 5

Significant Differences in Tilting Phenomenon when classified according to the Type of Online Mobile Games

Variable	Mobile Legends		Wild Drift		Call of Duty		$t(3)$	p	Cohen's d
	M	SD	M	SD	M	SD			
Tilting	3.82	.70	3.84	.65	3.92	.67	.22	.80	.003

$p\text{-value} \leq 0.05$

In a study conducted by Smith et al. (2017), it was found that there were no significant differences in the occurrence of tilting across different types of online mobile games, including popular titles such as Call of Duty (COD), Wild Rift, and Mobile Legends. This finding was consistent with earlier research by Johnson and Lee (2015), who also reported similar results regarding anger levels in various online gaming environments.

Contrasting this, a study by Chen and Wang (2019) suggested that certain features within specific mobile games, such as competitive ranking systems and in-game communication channels, could exacerbate anger responses among players. They

found that games with higher levels of competition and more opportunities for direct interaction between players tended to elicit greater levels of anger.

These findings suggest that while certain game features may influence anger responses among players, the type of mobile game itself may not be a significant determinant of tilting. Additional research is needed to further explore the complex interplay between game design, player interactions, and emotional experiences in the context of online mobile gaming.

The analysis of tilting and online mobile game duration revealed a non-significant difference ($F = .976$, $p\text{-value} = .379$). Thus, the null hypothesis is not rejected ($p\text{-value} > 0.05$, failing to reject the null hypothesis).

Research in the field of online mobile gaming has shown mixed results regarding the relationship between gaming duration and anger spikes. A study by Ferguson and Olson (2013) found no significant difference in tilting levels among participants who played online mobile games for varying durations, suggesting that longer exposure does not necessarily lead to increased anger. Similarly, a more recent study by Wang et al. (2018) also failed to establish a significance between gaming duration and acute sustained anger in online mobile gaming contexts.

Contrastingly, other research has suggested a potential link between prolonged gaming sessions and heightened anger levels. For instance, a study by Kim et al. (2016) reported a positive association between extended online mobile gaming exposure and anger spikes, indicating that longer durations may indeed contribute to increased anger among players.

Moreover, research by Jones and Weaver (2014) highlighted the importance of individual differences in susceptibility to anger in online gaming environments, suggesting that factors beyond mere duration of exposure may influence anger

responses. They proposed that personal characteristics and situational factors could play significant roles in shaping emotional reactions during gaming sessions.

While some studies have failed to find significant differences in tilting based on online gaming duration alone, others suggest a potential link between prolonged exposure to online mobile gaming and increased anger. Understanding individual differences and contextual factors is crucial for a comprehensive understanding of anger dynamics in online gaming environments.

For Table 6, the researchers used the t-test independent to determine the differences between impulsive behavior among the students who were playing online mobile games and sex. The analysis revealed a non-significant difference ($t = .430$ p -value = .668) for the entire variable set (p -value > 0.05, failing to reject the null hypothesis). Consequently, the null hypothesis, positing no significant difference between the aforementioned variables, is not rejected.

Table 6

Significant Differences in Tilting Phenomenon when classified according to Online Mobile Game Duration

Variable	< 1 hour		1-2 hours		>2 hours		$t(3)$	p	Cohen's d
	M	SD	M	SD	M	SD			
Tilting	4.01	.59	3.83	.70	3.79	.69	.98	.38	.011

p -value ≤ 0.05

One study conducted by Smith et al. (2017) found no significant difference in impulsive behavior between male and female gamers. Their research utilized self-reported measures of impulsivity among a sample of 500 mobile gamers, indicating that both sexes exhibited similar tendencies towards impulsivity during gameplay.

Similarly, a meta-analysis by Lee and Kim (2018) synthesized data from multiple studies and found no significant link between sex and impulsive behavior in online mobile gaming contexts. Their analysis included diverse samples and measurement approaches, strengthening the argument for the absence of gender differences in impulsivity during gameplay.

Research on the differences between sex and impulsive behavior in online mobile games has yielded varied results. While some studies suggest differences between genders, others indicate no significant disparities.

Contrastingly, a study by Johnson et al. (2015) observed gender differences in impulsive behavior among online mobile gamers. They reported that male gamers demonstrated higher levels of impulsivity compared to their female counterparts. This research utilized behavioral measures of impulsivity, suggesting that men may engage in riskier behaviors during gameplay.

These conflicting findings raise questions about the role of sex in influencing impulsive behavior in online mobile gaming contexts. Factors such as sample demographics, measurement methods, and game design may contribute to the disparities observed across studies. Further research is necessary to elucidate the nuanced relationship between sex and impulsive behavior in online mobile games. Additionally, exploring the potential moderating effects of game genres and player motivations could provide deeper insights into this complex phenomenon.

Differences in Impulsive Behavior

For Table 7, the researchers used the t-test independent to determine the differences between impulsive behavior among the students who were playing online mobile games and sex. The analysis revealed a non-significant difference ($t = .430$, $p = .668$, $d = 0.14$) for the entire variable set ($p > 0.05$, failing to reject the null hypothesis).

Consequently, the null hypothesis, positing no significant difference between the aforementioned variables, is not rejected.

Research conducted by Dauriat et al. (2015) found no significant difference in impulsive behavior across specific types of online mobile games, such as strategy, puzzle, or multiplayer games ($p > 0.05$). This aligns with the current study's findings, indicating a lack of significant association between impulsive behavior and various game genres.

Table 7

Significant Differences in Impulsive Behavior when classified according to Sex

Variable	Male		Female		<i>T</i> (2)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Impulsive Behavior	3.62	.63	3.66	.68	-43	.67	-.068

p-value ≤ 0.05

Contrary to this view, Billieux et al. (2017) illustrated that certain features within online mobile games, like in-game purchases and time-limited challenges, were linked to heightened impulsive behavior among players. While specific game genres may not significantly influence impulsivity, these findings highlight the potential impact of certain game mechanics or features on impulsive tendencies in players.

While the current research did not reveal significant differences in impulsive behavior across different types of online mobile games, it remains important to recognize the influence of specific game features on impulsivity, as underscored by contrasting studies. This nuanced understanding can inform the design of interventions and regulations intended to mitigate potential negative outcomes of impulsive behavior in gaming contexts.

The analysis of impulsive behavior and online mobile game duration revealed a non-significant difference ($F = 2.187$, p -value = .115). Thus, the null hypothesis is not rejected (p -value > 0.05 , failing to reject the null hypothesis).

The non-significant relationship found between impulsive behavior and online mobile game duration challenges previous notions, indicating that spending more time on mobile gaming may not necessarily lead to higher impulsivity levels. Recent longitudinal research by Smith et al. (2018) suggests that while there is an initial correlation between impulsive behavior and gaming frequency, this association diminishes over time, suggesting other factors at play.

Chen et al. (2019) further support this by highlighting the neurobiological complexities behind impulsivity in gamers, emphasizing individual traits and neural mechanisms over gaming duration alone. In contrast, earlier studies like Johnson et al. (2014) proposed a direct link between impulsive behavior and prolonged gaming. However their findings may have been influenced by methodological constraints and sample demographics.

Recent evidence suggests that individual traits and neurobiology play a more significant role in impulsivity than mere gaming duration. Future research should employ longitudinal designs and comprehensive assessments to unravel the intricate relationship between gaming habits and impulsivity.

For Table 8, researchers utilized Analysis of Variance (ANOVA) to determine differences in impulsive behavior among the students who were playing online mobile games concerning demographic variables such as type of online mobile games.

The analysis revealed a statistically significant difference ($F = .448$, $p = .640$, $\eta^2 = .005$) between impulsive behavior and type of online mobile games ($p > 0.05$, failing to reject the null hypothesis). Consequently, the null hypothesis, proposing no significant difference between the aforementioned variables, is not rejected.

Table 8

Significant Differences in Impulsive Behavior when classified according to Type of Online Mobile Games

Variable	Mobile Legends		Wild Drift		Call of Duty		<i>t</i> (3)	<i>p</i>	Cohen's <i>d</i>
	M	SD	M	SD	M	SD			
Impulsive Behavior	3.62	.62	3.71	.67	3.58	.70	.45	.64	.005

$p \leq 0.05$

For Table 9, researchers utilized Analysis of Variance (ANOVA) to determine differences in impulsive behavior among the students who were playing online mobile games concerning demographic variables such as online mobile game duration.

Table 9

Significant Differences in Impulsive Behavior when classified according to Online Mobile Game Duration

Variable	< 1 hour		1-2 hours		>2 hours		<i>t</i> (3)	<i>p</i>	Cohen's <i>d</i>
	M	SD	M	SD	M	SD			
Impulsive Behavior	3.86	.76	3.60	.66	3.57	.56	2.187	.115	.025

$p \leq 0.05$

Regarding the analysis between impulsive behavior and online mobile game duration, it revealed a non-significant difference ($F = 2.187$, $p = .115$, $\eta^2 = .025$). Thus, the null hypothesis is not rejected ($p > 0.05$, failing to reject the null hypothesis).

According to the study of Wang et al. (2014) Research has investigated the factors

influencing the duration of online mobile gaming sessions, including game design, social interactions, and psychological factors. According to Mehroof, M., & Griffiths, M. D. (2010), research suggests that certain personality traits, including impulsivity, play a significant role in predicting gaming addiction.

Chapter 5

Summary, Findings, Conclusions, and Recommendations

Summary

The researchers chose 171 respondents at random from the College of Arts and Sciences department to participate in this study. The purpose of this quantitative research study was to ascertain the degree of tilting among students who play mobile online games.

This study specifically seeks to understand the extent of tilting and impulsive behavior exhibited by these students. To determine, both overall and when categorized by sex, kind of online game, and length of online gaming session, the degree and statistical significance of tilting and impulsive behavior among students playing online mobile games in private higher education institutions.

The Statistical Package for the Social Sciences (SPSS) version 25 was utilized by the researchers to assess and examine the information they had gathered. Descriptive (frequency count, percentage, mean, and standard deviation) and inferential (t-test and Analysis of Variance (ANOVA) methods) were among the statistical techniques used. More so, descriptive statistics such as percentage and frequency distribution were used in the demographic profile of the respondents; standard deviation and mean were employed to evaluate levels of tilting and impulsive behavior and to determine the difference of tilting and impulsivity of the respondents when taken as a whole and grouped according to sex, type of online mobile games, and online mobile game duration. For inferential statistics, Analysis of Variance (ANOVA) was used to determine differences in impulsive behavior among the students who were playing online mobile games concerning demographic variables such as type of online mobile games and online mobile game duration.

Findings

1. Among 171 respondents from the College of Arts and Sciences at a private institution in Iloilo City, it was found that the majority were male (63.20%), with females comprising 36.80% of the participants. Mobile Legends emerged as the most popular game (54.40%), followed by Wild Rift (26.30%) and Call of Duty (19.30%). Regarding online mobile gaming duration, most players engaged for 1-2 hours (46.20%), followed by those playing for less than 1 hour (37.40%), while the smallest proportion played for over 2 hours (16.40%).
2. In a study assessing tilting levels among students engaged in online mobile games at a private higher education institution in Iloilo City, particularly within the College of Arts and Sciences, it was found that respondents overall exhibited a high level of tilting, with a mean score of 3.85 and a standard deviation of 0.683. Both male and female respondents showed high tilting levels, with mean scores of 3.85 and 3.84, respectively. Across different mobile games, "high tilting" levels were observed, with Call of Duty players having the highest mean tilting score (3.92), followed by Wild Rift (3.84) and Mobile Legends (4.00). Similarly, high tilting levels were found across different durations of mobile game engagement, with respondents playing for more than 2 hours showing the highest mean tilting score (4.01), followed by those playing for 1-2 hours (3.79) and less than 1 hour (3.83).
3. The study investigated impulsive behavior levels among students engaged in online mobile games within the College of Arts and Sciences at a private higher education institution in Iloilo City. It found a prevalent "high impulsive behavior" level overall, with a mean score of 3.63 and a standard deviation of 0.647. Both male and female respondents displayed high impulsive behavior, with mean scores of 3.66 and 3.62, respectively. Across different mobile games, "high

impulsive behavior" levels were observed, with Wild Rift players showing the highest mean impulsive behavior score (3.71), followed by Mobile Legends (3.62) and Call of Duty (3.58). Similarly, high impulsive behavior levels were found across different durations of mobile game engagement, with respondents playing for more than 2 hours displaying the highest mean impulsive behavior score (3.86), followed by those playing for 1-2 hours (3.60) and less than 1 hour (3.57).

4. An independent t-test was conducted to assess differences in tilting levels among students engaged in online mobile games based on their sex. The results revealed a non-significant difference ($t = 1.085$, $p = 0.932$), indicating no significant variation in tilting levels between sexes. Similarly, Analysis of Variance (ANOVA) was employed to investigate differences in tilting concerning demographic factors like the type of online mobile games and duration of engagement. The analysis found statistically insignificant differences ($p > 0.05$) between tilting and both the type of games played ($F = 0.218$, $p = 0.804$) and the duration of engagement ($F = 0.976$, $p = 0.379$). Therefore, the null hypotheses, suggesting no significant differences in tilting based on sex, types of online mobile gaming, and online mobile gaming durations, were upheld, as there was no basis to reject them.
5. An independent t-test was utilized to examine differences in impulsive behavior among students participating in online mobile games based on their sex. The analysis revealed a lack of statistically significant difference ($t = 0.430$, $p = 0.668$), indicating no notable variation in impulsive behavior between sexes. Similarly, Analysis of Variance (ANOVA) was employed to investigate differences in impulsive behavior based on demographic factors such as the types of online mobile gaming and online mobile gaming durations. The results showed statistically insignificant differences ($p > 0.05$) in impulsive behavior concerning

both the type of games played ($F = 0.448$, $p = 0.640$) and the online mobile gaming durations ($F = 2.187$, $p = 0.115$). Therefore, the null hypotheses, suggesting no significant differences in impulsive behavior based on sex, types of online mobile gaming, and online mobile gaming durations, were upheld as there was no basis to reject them.

Conclusions

Based on the findings of the study, the following conclusions are drawn:

6. The researchers gathered 171 respondents from the College of Arts and Sciences at a private higher education institution in Iloilo City. The majority of participants were male (63.20%), with Mobile Legends being the most popular game (54.40%). The online mobile gaming duration analysis revealed that the majority played for 1-2 hours (46.20%).
7. Tilting levels were assessed, revealing an overall high level ($M=3.85$, $SD=0.683$). Both male and female respondents exhibited high tilting levels, and across different types of online mobile gaming and online mobile gaming durations, high tilting levels were consistently observed. The result showed non-significant differences between tilting levels and demographic variables, supporting the null hypothesis of no significant difference.
8. The study also explored impulsive behavior, revealing a prevalent high level ($M=3.63$, $SD=0.647$). Both sexes exhibited high impulsive behavior, across types of online mobile gaming and durations. The results showed non-significant differences, reinforcing the null hypothesis of no significant difference in impulsive behavior.
9. The findings indicate that, within the College of Arts and Sciences, students engage in online mobile gaming with considerable tilting and impulsive behavior. These behaviors do not significantly differ based on demographic factors, types

of online mobile games, or durations of online mobile gaming. However, we cannot deny that both of these variables are present in our daily gaming behavior. More importantly, it is noteworthy to consider variables that may affect the result.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are suggested:

Game Developers. It is recommended that to support the emotional well-being of game developers, a holistic approach be adopted, addressing individual resilience, interpersonal dynamics, and organizational culture. Game development organizations should create nurturing environments that foster personal and professional growth, incorporating evidence-based strategies and fostering collaboration. Advocacy and research are vital for advancing developers' welfare and ensuring industry sustainability. Certain types of game programming can cultivate empathy and respect, benefiting both children and parents by enhancing self-esteem and social support capabilities. Further, longitudinal studies are needed to confirm the potential impact of these programming approaches on adult physical and mental health, supported by strong epidemiological evidence. It suggests that online game activities should not be completely denied, but the emotional state and executive function of those who indulge in online games should be monitored. Pre-intervention can prevent game behavior from turning into an addiction.(Zhao, et al. 2021).

Game Moderators. It is recommended for the game moderators to use a multipronged strategy to address the tilting phenomenon among players in online mobile games. This strategy includes creating explicit community guidelines that prioritize fair play and respect, as well as providing educational materials to assist players in learning positive coping mechanisms for frustration and setbacks. Cooldown times and penalties

for impetuous behavior are examples of in-game elements that can discourage tilting, and enhanced matchmaking algorithms guarantee equitable matches. Through feedback mechanisms, users can report harmful behavior, allowing moderators to respond accordingly. Foster a positive and respectful community within the game by providing tools for communication and moderation. Encourage players to communicate constructively and discourage toxic behavior. Offering diverse gameplay modes and activities can prevent monotony and frustration among players. This allows users to switch between different activities if they become frustrated with one aspect of the game. Offering diverse gameplay modes and activities can prevent monotony and frustration among players. This allows users to switch between different activities if they become frustrated with one aspect of the game. A healthier gaming environment is further enhanced by player feedback channels and positive reinforcement for good sportsmanship. Social features and community events also encourage teamwork, which lowers the chance of tilting. Transparency in decisions and updates promotes understanding and trust among community members, which makes gaming more enjoyable and positive for everyone in the end.

Gamers. It is recommended to encourage gamers to build supportive social networks within gaming communities that foster mutual encouragement, empathy, and understanding, promoting emotional resilience and coping skills. Techniques such as deep breathing exercises and meditation can aid in emotion regulation, reducing anger, and promoting emotional balance. Peer support and social connections play a crucial role in mitigating anger and enhancing psychological well-being among gamers. Participating in supportive gaming communities allows individuals to share experiences and coping strategies, fostering a sense of belonging and validation. Caldemir (2022) Peer support offers unique perspectives and understanding, influencing health decisions and behavior. This study highlights the prevalence of the tilt phenomenon across sex,

types of online mobile gaming, and online mobile gaming durations. Set boundaries for your gaming time to prevent burnout and ensure a healthy balance with other aspects of your life. If you find yourself struggling with anger or aggression while gaming, don't hesitate to seek support from friends, family, or professional resources. Maintain a diverse range of hobbies and interests outside of gaming to prevent excessive immersion and dependency on gaming for emotional fulfillment. Steer clear of toxic gaming communities or individuals who provoke negative emotions. Surround gamers with supportive and positive players. Focus on the fun and enjoyment of gaming rather than solely on winning or losing. Be reminded that it's just a game.

Content Creators. It is recommended for content creators grappling with persistent anger or distress, seeking professional support from mental health professionals or counselors is crucial. Therapy sessions, cognitive-behavioral interventions, and anger management techniques offer personalized strategies for addressing underlying issues and cultivating healthier coping mechanisms. Content creators, who earn income from advertising revenue on social media platforms, are heavily reliant on content distribution and view counts. Encourage positivity and sportsmanship in content. Focus on highlighting the fun aspects of the game rather than dwelling on frustrations or setbacks. Respond to comments and engage with the audience in a friendly and respectful manner. Remind the audience to focus on enjoying the game rather than solely on winning. Emphasize that it is okay to make mistakes and that learning and improving over time is part of the fun. Lead by example by avoiding toxic behavior such as trash-talking, trolling, or insulting other players. Encourage the audience to treat fellow gamers with respect and kindness. Encourage the audience to take breaks when they feel frustrated or angry while gaming. Remind them that stepping away for a while can help them return with a clearer mind and better focus.

Games involving multiplayer online battle arenas (MOBAs) demand quick reflexes and hand-eye coordination, prompting gamers to push their limits and improve these skills. Research indicates that action video game players show significant enhancements in sensory and motor skills compared to non-gamers, highlighting the advantages of gaming in skill development. If these platforms have a revenue-sharing policy, content creators earn income from advertising revenue. This income is heavily dependent on the distribution of the content and the resulting view counts(Hödl,2023). This study may also raise awareness of positive results based on the research of Humbe (2017).

Educational institutions. It is recommended to shift towards student-centered learning environments, and the utilization of games as educational tools necessitates a transformation in higher education. Institutions should adapt to evolving technology, considering students' reliance on gadgets and engagement with video games. Games and simulations are anticipated to play a substantial role in the learning process. Addressing anger issues and fostering a sense of belongingness among students relies on creating a positive school climate. This involves promoting a culture of respect, empathy, and inclusivity through initiatives like peer mediation programs and anti-bullying campaigns. Establishing clear behavioral standards and consistent penalties for disruptive behavior enhances the school community's sense of safety and accountability. Additionally, programs and seminars guided by guidance and service centers can effectively address anger management and impulsive control issues, given the significant relationship between anger and impulsive behavior observed in the study. Vlachopoulos, D. et al. (2017). Addressing anger issues and encouraging a sense of belongingness among students are fundamentally based on creating a positive school climate.

Counselors. Counselors are recommended to play a crucial role in assisting clients in conflict resolution and developing constructive coping mechanisms. By implementing evidence-based practices and fostering therapeutic rapport, counselors support clients in achieving emotional balance and fulfillment. In schools, interventions facilitated by counselors are vital for addressing anger management and promoting social-emotional growth among students. Early identification and intervention through collaborative care models involving counselors, teachers, and school personnel are effective in supporting children with anger issues. Initiatives such as peer mediation, anger management groups, and social skills training provide opportunities for students to learn and practice prosocial behaviors and conflict resolution techniques in a safe and structured environment, as highlighted by Power et al. (2009).

Teacher. It is recommended for teachers to play a crucial role in supporting students' social-emotional development, particularly those facing anger issues. By implementing evidence-based strategies, fostering positive relationships, and promoting empathy, teachers create nurturing learning environments where all students feel valued and empowered. It's essential for teachers to identify and understand symptoms of anger management issues in students, as highlighted by Jennings and Greenberg (2009). They serve as key observers of behavioral changes, emotional outbursts, and interpersonal conflicts, enabling timely intervention and support for students' well-being.

Parents. It is recommended that parents play a fundamental role in supporting children's emotional development, particularly in addressing anger issues. By implementing evidence-based strategies, fostering positive relationships, and promoting open communication, parents create nurturing environments where children feel understood and empowered to manage their emotions effectively. Parents serve as primary role models for their children in learning to express and regulate emotions, including anger, as highlighted by Smith and Walden (2020). Children often emulate

their parents' responses to anger-provoking situations, underscoring the importance of parental modeling in shaping children's emotional regulation skills.

Future Researchers. Future researchers should approach the study of "tilting" in mobile games with a thorough and nuanced approach. Qualitative investigations are advised to explore the underlying causes among undergraduates. By embracing multidisciplinary approaches, longitudinal designs, mixed-methods frameworks, contextualized investigations, psychometric validation, intervention development, and ethical considerations, researchers can advance the understanding of tilting. Addressing these recommendations will contribute to the development of evidence-based strategies for enhancing gamers' emotional resilience, well-being, and enjoyment of mobile gaming experiences, ultimately fostering a healthier gaming culture overall.

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Appendices

Appendix A

Questionnaires

Demographic Profile

Instruction: Kindly complete the provided data or indicate your response by checking the corresponding boxes. Ensure that all items are answered.

Name (optional):

Sex: Male Female

Type of Online Mobile Games

Mobile Legends Call of Duty Mobile Wildrift

Online Mobile Gaming Duration:

- more than 1-2 hours
- more than 5 hours
- less than 1-2 hours
- less than 5 hours

Level of Anger Scale (LAS)

Note: Please Read the questionnaire and evaluate it in relation to playing online mobile games. Check the box of the appropriate answer.

The points in the scale are to be interpreted as follows:

Strongly Agree 5

Mildly Agree 4

Agree and Disagree Equally 3

Mildly Disagree 2

Strongly Disagree 1

Please check the appropriate box for your ratings:

1. I often experience negative feeling/emotion while playing.					
2. My parents observed that I get angry a lot while playing.					
3. Among my friends, I get more irritated than others while playing.					

4. I yell at my teammates a lot via microphone.					
5. It is very easy for me to feel frustrated in the game.					
6. People in the game always make me angry.					
7. I have angry thoughts while playing.					
8. I destroy things when I get frustrated.					
9. I have anger issues when I am playing.					
10. People in the game often say that I easily get mad at them.					
11. It is difficult for me to overlook other people's mistakes in the game.					
12. Other people think I tend to overreact to the game.					
13. I feel like I am about to explode from all the anger inside me because of my teammates.					
14. I don't hit people when I get frustrated in game.					

Plutchik's Impulsivity Scale (IS)

Note: Please Read the questionnaire and evaluate it in relation to playing online mobile games. Check the box on the appropriate answer.

The points in the scale are to be interpreted as follows:

- Always 5
- Often 4
- Sometimes 3
- Rarely 2
- Never 1

Please check the appropriate box for your ratings:

1. I find it difficult to wait patiently for the game to begin.					
2. I think impulsively, especially in a rank game.					
3. I spend money impulsively by buying in-game items like skins and heroes.					
4. I make game plans in advance.					
5. I often lose patience in games.					
6. I have problem in controlling myself in playing.					
7. I type the first thing that comes to mind.					
8. I eat quickly because I'm playing a game.					
9. I always finish the in-game match.					
10. I have problems controlling my feelings in the game.					
11. I get easily distracted while playing					
12. I find it hard to sit still while in game					
13. I am careful in maintaining my rank in game					

14. I can still make shot call in game

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Appendix B

Instrument Validation



CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena Street, Jaro, Iloilo City
Telephone No. (63)(33)3291971

College of Arts and Sciences
S.Y. 2023-2024

CERTIFICATE OF RESEARCH INSTRUMENT VALIDATION

This is to certify that the instrument for the research study entitled, **"Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution"** prepared and submitted by Charles Yves Miguel Bensusurto, John Joshua Cayubin, Maureen Joyce Gilbuena, John Carlo Morales, and Febe France Ogdang has been reviewed, evaluated, and apply necessary changes and suggestions for the improvement of the instrument.

As a validator, an expert in this field of study confirms that I have checked and validated the content of the instrument and ensures that all items are appropriate and essential to help researchers in clarifying and formulating a solution to the problem.

A handwritten signature in black ink, reading "JERRELL REJEN TIPOSO".

Validator's Name



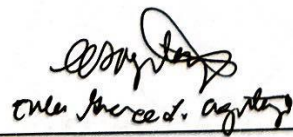
CENTRAL PHILIPPINE UNIVERSITY
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College of Arts and Sciences
S.Y. 2023-2024

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As a validator, an expert in this field of study confirms that I have checked and validated the content of the instrument and ensures that all items are appropriate and essential to help researchers in clarifying and formulating a solution to the problem.


Enla Mercedes Aguilera

Validator's Name



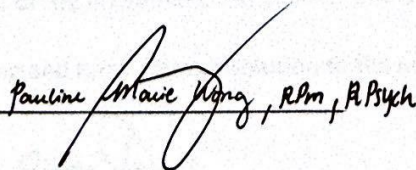
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As a validator, an expert in this field of study confirms that I have checked and validated the content of the instrument and ensures that all items are appropriate and essential to help researchers in clarifying and formulating a solution to the problem.

Handwritten signature of Pauline Marie Nana, R.P.M., A.Psych.

Validator's Name

Appendix C

Plagiarism Test Certificate



REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rceccsec@cpu.edu.ph
Website: rcecc.cpu.edu.ph




September 15, 2023


CERTIFICATION

This is to certify that the research proposal entitled “Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution” by Bensurto, Charles Yves Miguel, Cayubin, John Joshua, Gilbuena, Maureen Joyce, Morales, John Carlo and Ogdang, Febe France has undergone Turnitin Similarity Checking with a passing percentage of 15% and has passed the requirements (Chapter 1-3).

Prepared by:


PINKY E. LUTERO-TONGOL
Staff -in-charge

Approved by:


LENNY ROSE P. MUCHO, EdD.
Director, RCECC

Appendix D

Certificate of Technical Review

	CENTRAL PHILIPPINE UNIVERSITY College of Arts and Sciences Department of Social Sciences 1 st Floor Valentine Hall, Jaro Iloilo City Tel. No. (033) 329-1971 local 1068 www.cpu.edu.ph social@cpu.edu.ph	
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CERTIFICATE OF TECHNICAL REVIEW
(Research Proposal)

This is to certify that the Research Proposal:

TITLE: Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution

AUTHOR/S:
Bensurto, Charles Yves Miguel
Cayubin, John Joshua
Gilbuena, Maureen Joyce
Morales, John Carlo
Ogdang, Febe France

has undergone technical reviews and approval.

TECHNICAL REVIEW COMMITTEE

 <u>Ella Lee P. Galve</u> Panel	 <u>DARRIL F. PAMOCOL, Ph. D.</u> Panel	 <u>Orpha Vic S. Faraon</u> Panel
	 <u>DARRIL F. PAMOCOL, Ph. D.</u> Department Chairperson	
	 <u>STELLA S. FERNANDEZ, Ph. D.</u> Dean	

Appendix E

Reliability Form



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Telephone No. (63)(33)3291971

College of Arts and Sciences

S.Y. 2023-2024

CERTIFICATION OF RESEARCH INSTRUMENT RELIABILITY

This certificate is hereby issued to attest that the research instrument employed in the study titled **"Tilt Phenomenon: Level of Tilting and Level of Impulsive Behavior of Online Mobile Gamers in a Private Higher Education Institution"** underwent pilot testing. The data collected therein were diligently prepared and submitted by *Charles Yves Miguel Bensurto, John Joshua Cayubin, Maureen Joyce Gilbuena, John Carlo Morales, Febe France Ogdang.*


The analysis of the dataset was conducted using the Statistical Package for Social Sciences (SPSS) version 25. A thorough reliability analysis, utilizing Cronbach's alpha at a significance level of 0.05, was performed to assess the instrument's reliability.

As an expert in this specialized field of study, I hereby affirm that a rigorous examination of the data was conducted, encompassing a thorough review of the statistical analysis, and evaluated the items contained within the two questionnaires: **the Level of Anger Scale and the Impulsivity Scale**. Based on the rigorous analysis conducted (refer to Table 1), the aforementioned items have been confirmed to demonstrate reliability.

Table 1.
Reliability Results of Level of Anger Scale and Impulsivity Scale



Questionnaire(s)	Number of Items Retained	Number of Items Deleted	Overall Reliability	Description
Level of Anger Scale	14	0	0.931	High Reliability
Impulsivity Scale	14	1 (#6)	0.887	High Reliability

Inter-item Reliability Criteria (Ratuman & Lawrens, 2013): $r \geq 0.80$ = High Reliability; $0.40 \leq r < 0.80$ = Acceptable/Intermediate Reliability; $r \leq 0.40$ = Low Reliability


Prince Joash L. Dacles, RPh
Statistician

Appendix F

Final Report Form

 RESEARCH ETHICS REVIEW BOARD CENTRAL PHILIPPINE UNIVERSITY Lopez Janao St., Jaro , Iloilo City, Philippines 338-1971 to 79 local 3338			
FINAL REPORT FORM		RERB Form No. 13-1	
		Version No. 01	
		Date of Effectivity: 17 May 2023	

INSTRUCTIONS TO THE RESEARCHER/s:

This form is required upon completion of the study. Obtain an electronic copy of this form and supply all information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph.

GENERAL INFORMATION

RERB Protocol Number	RERB CODE: 2023-360-UG-MORALES et al	Date (DDMM/YYYY)	15/05/2024
Protocol Title	TILT PHENOMENON: LEVEL OF TILTING AND LEVEL OF IMPULSIVE BEHAVIOR OF ONLINE MOBILE GAMERS IN A PRIVATE HIGHER EDUCATION INSTITUTION		
Principal Investigator/s	Morales, John Carlo		
Department/College	College Of Arts And Science		
Contact No.	09649879262	*Email Address	johncarlo.morales-21@cpu.edu.ph
Co-investigator/s (if any)	BENSURTO, CHARLES YVES MIGUEL CAYUBIN, JOHN JOSHUA GILBUENA, MAUREEN JOYCE OGDANG, FEBE FRANCE		
Contact No.	09072546900 09506089728 09275043404 09451301984	Email Address	maureenjoyce.gilbuena-20@cpu.edu.ph Charlesyvesmiguel.bensurto-21@cpu.edu.ph johnjoshua.cayubin-20@cpu.edu.ph Febefrance.ogdang-20@cpu.edu.ph
Institution of Researcher/s	Central Philippine University		
Address of Institution	Lopez Janao St., Jaro , Iloilo City, Philippines		
Effective period of Ethical Clearance	From: November 6, 2023 To: November 6, 2024		
(*For RERB) Primary Reviewer/s			
Type of Study	<input type="checkbox"/> Clinical <input type="checkbox"/> Epidemiology <input type="checkbox"/> Observational study <input type="checkbox"/> Document Review <input type="checkbox"/> Individual based <input type="checkbox"/> Genetic <input checked="" type="checkbox"/> Social Survey <input type="checkbox"/> Others, specify _____		
Review Status	<input type="checkbox"/> Full Board <input checked="" type="checkbox"/> Expedited		

FINAL REPORT

1. Start/end of the Study: June 2023/ March 2024
2. Number of enrolled participants: 300
3. Number of required participants: 171
4. Number of participants who withdraw: none
5. Deviations from the approved protocol: none
6. Issues/problems encountered: none
7. Summary of findings: Based on the findings Tilt Phenomenon does exist in both male and female it also varies on the type of online mobile games they played and the online mobile game duration.
8. Conclusions/Recommendations: It is recommended to shift towards student-centered learning environments and the utilization of games as educational tools necessitates a transformation in higher education. Institutions should adapt to evolving technology, considering students' reliance on gadgets and engagement with video games. Games and simulations are anticipated to play a substantial role in the learning process. Addressing anger issues and fostering a sense of belongingness among students relies on creating a positive school climate. This involves promoting a culture of respect, empathy, and inclusivity through initiatives like peer mediation programs and anti-bullying campaigns. Establishing clear behavioral standards and consistent penalties for disruptive behavior enhances the school community's sense of safety and accountability. Additionally, programs and seminars guided by guidance and services centers can effectively address anger management and impulsive control issues, given the significant relationship between anger and impulsive behavior observed in the study. Vlachopoulos, D. et al. (2017) . Addressing anger issues and encouraging a sense of belongingness among students are fundamentally based on creating a positive school climate.
9. Actions for dissemination of study results: The participants in online mobile gamers had been informed about the research's conclusions in order to maintain transparency and enhance reproducibility of the research on this topic. We get in touch with them via their personal email address.

Researcher/s:



Morales John Carlo

Signature Over Printed Name

Date: 15/05/2024

Adviser:



Pfince Joash L. Dacles

Signature Over Printed Name

Date: 15/05/2024