



**RELATIONSHIPS BETWEEN MORAL IDENTITY, SELF-ESTEEM, AND
ANTISOCIAL MEDIA EXPOSURE WITH AGGRESSIVE BEHAVIOUR
AMONG MALAYSIAN ONLINE GAMERS**

By

MOHD ZIYAD AFIQ BIN MOHD ZAHARIM

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

June 2024

FEM 2024 10

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Doctor of Philosophy

**RELATIONSHIPS BETWEEN MORAL IDENTITY, SELF-ESTEEM, AND
ANTISOCIAL MEDIA EXPOSURE WITH AGGRESSIVE BEHAVIOUR
AMONG MALAYSIAN ONLINE GAMERS**

By

MOHD ZIYAD AFIQ BIN MOHD ZAHARIM

June 2024

Chairman : Azlina binti Mohd Khir, PhD
Faculty : Human Ecology

Aggressive behaviour, characterised by harmful actions directed toward others, is a complex phenomenon influenced by various personal and situational factors. This study seeks to determine the relationship between moral identity, self-esteem, antisocial media exposure (gaming and non-gaming media exposure), and aggressive behaviours among local online gamers. The sample comprised 384 participants from the Klang Valley region using the non-probability sampling method selected through the purposive sampling technique. The study utilized several instruments, including the Gaming and Non-Gaming Media Exposure Scales, the Rosenberg Self-Esteem Scale, the Moral Identity Questionnaire, and the Reactive and Proactive Aggression Questionnaires. The reliability of the instruments was evaluated using Cronbach's alpha, yielding coefficients between 0.716 and 0.929 which indicates good internal consistency. The study used a cross-sectional survey design and the Statistical Equation Model-Partial Least Square (SEM-PLS). Findings on demographic results revealed that most of the sample were young adult Malay males from the B40 income

group who had been exposed to antisocial media. Meanwhile, non-gaming media exposure varied significantly across different levels of education and employment status. The study found that individuals with lower levels of education and those who are unemployed tend to have higher levels of non-gaming media exposure. There was also a significant difference in moral identity between males and females, with females having a higher moral identity than males. Furthermore, the correlation analysis shows significant positive associations between aggressive behaviour and antisocial media exposure, meanwhile negative correlations with moral identity and self-esteem. Moderation analysis indicated that moral identity did not significantly moderate the relationship between self-esteem, gaming media exposure, and non-gaming media exposure on aggressive behaviour. Effect size analysis revealed that gaming media exposure had the largest effect, followed by non-gaming media exposure, self-esteem, and moral identity. The proposed model demonstrated strong explanatory power, accounting for 74.9% of the variance in the dependent variable ($R^2 = 0.749$), exceeding the recommended benchmark. Next, the model demonstrated a high degree of predictive relevance for the independent variables, accounting for a considerable amount of the variance observed in aggressive behavior, specifically 68%, where ($Q^2 = .681$). These findings suggest that enhancing moral identity could potentially reduce aggressive behaviour among gamers. These findings contribute to theoretical implications for refining the General Aggression Model by proving that personal and situational factors significantly predict aggressive behaviour. On the practical front, the results of this study are expected to further promote the development of the e-sport industry in Malaysia over a prolonged period, leading to benefits for the legislative body, investors, and the government. Finally, the results of this study have successfully demonstrated that the variables of moral identity and self-esteem have a

significant relationship in decreasing the level of aggressive behaviour, while antisocial media exposure shows a significant positive correlation with increased aggressive behaviour.

Keywords: Media Violence Exposure, Moral, Aggression, Malaysian Youth, Gaming Addiction

SDG: GOAL 3: Good Health and Well-Being, GOAL 4: Quality Education, GOAL 11: Sustainable Cities and Communities



Abstrak tesis yang dikemukakan kepada senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor falsafah

**HUBUNGAN ANTARA IDENTITI MORAL, HARGA DIRI, DAN
PENDEDAHAN MEDIA ANTISOSIAL DENGAN TINGKAH LAKU
AGRESIF DALAM KALANGAN PEMAIN PERMAINAN DALAM TALIAN
TEMPATAN**

Oleh

MOHD ZIYAD AFIQ BIN MOHD ZAHARIM

Jun 2024

Pengerusi : Azlina binti Mohd Khir, PhD
Fakulti : Ekologi Manusia

Tingkah laku agresif iaitu tindakan yang diarahkan untuk menyakiti seseorang adalah suatu fenomena kompleks yang dipengaruhi oleh pelbagai faktor peribadi dan keadaan. Kajian ini bertujuan untuk menentukan hubungan antara identiti moral, penghargaan sendiri, pendedahan media antisosial (pendedahan media permainan dan bukan permainan), dan tingkah laku agresif dalam kalangan pemain permainan atas talian warga tempatan. Sampel kajian terdiri daripada 384 peserta di kawasan Lembah Klang yang dipilih menggunakan kaedah pensampelan bukan kebarangkalian melalui teknik pensampelan bertujuan. Kajian ini menggunakan beberapa instrumen iaitu Skala Pendedahan Media Permainan dan Bukan Permainan, Skala Penghargaan Kendiri Rosenberg, Soal Selidik Identiti Moral, dan Soal Selidik Agresif Reaktif dan Proaktif. Kebolehpercayaan instrumen yang dinilai menggunakan pekali alpha Cronbach menghasilkan nilai pekali antara 0.716 hingga 0.929 menunjukkan ketekalan dalaman yang baik. Kajian ini menggunakan reka bentuk tinjauan keratan rentas dan *Statistical Equation Model-Partial Least Square* (SEM-PLS). Keputusan

kajian berkenaan data demografi mendapati majoriti sampel adalah lelaki Melayu awal dewasa yang berada dalam kategori B40 dan terdedah kepada media yang bercirikan antisosial. Sementara itu, pendedahan media bukan permainan menunjukkan perbezaan yang signifikan merangkumi pelbagai tahap pendidikan dan status pekerjaan. Kajian mendapati individu yang menganggur dan mempunyai tahap pendidikan yang lebih rendah cenderung kepada tahap pendedahan media bukan permainan yang lebih tinggi. Kajian juga mendapati terdapat perbezaan yang signifikan dalam identiti moral antara lelaki dan perempuan, di mana perempuan mempunyai identiti moral yang lebih tinggi daripada lelaki. Selain itu, analisis korelasi menunjukkan hubungan positif yang signifikan antara tingkah laku agresif dan pendedahan media antisosial, manakala korelasi negatif dengan identiti moral dan penghargaan sendiri. Analisis penyederhanaan menunjukkan bahawa identiti moral tidak menyederhanakan hubungan antara penghargaan sendiri, pendedahan media permainan, dan pendedahan media bukan permainan terhadap tingkah laku agresif. Analisis saiz kesan menunjukkan bahawa pendedahan media permainan mempunyai kesan terbesar, diikuti oleh pendedahan media bukan permainan, penghargaan sendiri, dan identiti moral. Manakala, model yang dicadangkan menunjukkan kuasa penjelasan yang signifikan, dengan nilai $R^2 = 0.749$, yang menunjukkan bahawa 74.9% daripada varian dalam pemboleh ubah bersandar dapat dijelaskan oleh pemboleh ubah bebas yang dimasukkan dalam model dan melebihi penanda aras yang disyorkan. Seterusnya, model tersebut menunjukkan tahap perkaitan pemboleh ubah tidak bersandar mampu menjelaskan sebahagian besar perbezaan dalam tingkah laku agresif sebanyak 68% dimana ($Q^2 = .681$). Hasil kajian ini mencadangkan bahawa peningkatan identiti moral berpotensi mengurangkan tingkah laku agresif dalam kalangan pemain warga tempatan. Penemuan ini juga berupaya menyumbang kepada

penambahbaikkan teori iaitu *General Aggression Model* dengan membuktikan bahawa faktor peribadi dan keadaan secara signifikan meramalkan tingkah laku agresif. Dari segi praktikal, hasil kajian ini dijangka dapat mempromosikan pembangunan industri e-sukan di Malaysia dalam jangka masa panjang, mempunyai pelbagai manfaat kepada badan perundangan, para pelabur, dan pihak kerajaan. Tuntasnya, hasil kajian ini berjaya menunjukkan bahawa pembolehubah identiti moral dan penghargaan sendiri mempunyai hubungan yang signifikan dalam mengurangkan tahap tingkah laku agresif, manakala pendedahan media antisosial menunjukkan korelasi positif yang signifikan dengan peningkatan tingkah laku agresif.

Kata Kunci: Pendedahan Kepada Keganasan Media, Moral, Agresif, Belia Malaysia, Ketagihan Permainan Video

SDG: MATLAMAT 3: Kesihatan dan Kesejahteraan yang Baik, MATLAMAT 4: Pendidikan Berkualiti, MATLAMAT 11: Komuniti dan Bandar yang Lestari

ACKNOWLEDGEMENTS

This thesis represents the culmination of a challenging yet rewarding journey, and it would not have been possible without the support of numerous individuals and institutions. First and foremost, I wish to express my deepest gratitude to my advisor, Dr. Azlina binti Mohd Khir. Your insightful guidance, unwavering support, and encouragement have been the cornerstone of this research. I am profoundly thankful for your patience and for believing in my potential. I am also incredibly grateful to the members of my thesis committee, Prof. Madya Dr. Nik Ahmad Sufian and Dr. Amna Md Noor, whose valuable feedback and thought-provoking questions have greatly enhanced this study. Your commitment to academic excellence and your insightful contributions have been deeply appreciated. My sincere thanks extend to Department of Social Sciences and Development, Faculty of Human Ecology and Tan Sri Aishah Ghani College, UPM. The collaborative spirit, support, and camaraderie within this group have made this journey both enjoyable and intellectually stimulating. I have greatly benefited from your shared knowledge and constructive discussions. I am particularly thankful for the financial support provided by Putra Siswazah Grant (GP-IPS 9723200). This support has been instrumental in facilitating the research and enabling me to focus on my academic goals. To my friends and family, your unwavering patience, understanding, and encouragement have been my anchor throughout this process. Your belief in me has been a source of immense motivation and strength. Finally, I extend my appreciation to whose contributions, whether direct or indirect, have played a significant role in the successful completion of this thesis. Thank you all for your profound impact on this journey. Your support has been invaluable, and I am deeply grateful for each of you.

This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Azlina binti Mohd Khir, PhD

Senior Lecturer
Faculty of Human Ecology
Universiti Putra Malaysia
(Chairman)

Nik Ahmad Sufian bin Burhan@Jaohari, PhD

Associate Professor
Faculty of Human Ecology
Universiti Putra Malaysia
(Member)

Amna binti Md Noor, PhD

Senior Lecturer
Faculty of Human Ecology
Universiti Putra Malaysia
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 10 October 2024

TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iv
ACKNOWLEDGEMENTS	vii
APPROVAL	viii
DECLARATION	x
LIST OF TABLES	xv
LIST OF FIGURES	xvii
LIST OF APPENDICES	xviii
 CHAPTER	
 1 INTRODUCTION	 1
1.1 Background of the Study	1
1.2 Problem Statement	4
1.3 Research Questions	12
1.4 Research Objective	12
1.4.1 Specific Objectives	12
1.5 Research Hypotheses	13
1.6 Significance of the Study	16
1.7 Terminology Definitions	18
1.7.1 Aggressive Behaviour	18
1.7.2 Antisocial Media Exposure	19
1.8 Scope of Study	22
1.9 Chapter Summary	23
 2 LITERATURE REVIEW	 24
2.1 Introduction	24
2.2 Concept and Theories of Aggressive Behaviour	24
2.3 Socioeconomic Background (Gender, Education Level and Employment Status) and Aggressive Behaviour	29
2.3.1 Gender	31
2.3.2 Education Level	32
2.3.3 Employment Status	33
2.4 Media Exposure and Aggressive Behaviour	33
2.4.1 Non-Gaming Media Exposure and Aggressive Behaviour	37
2.4.2 Gaming Media Exposure and Aggressive Behaviour	40
2.5 Self-Esteem and Aggressive Behaviour	45
2.6 Moral Identity Concept	52
2.7 Theoretical Framework and General Aggression Model	56
2.7.1 Moral Identity a Potential Moderator	62
2.8 Conceptual Framework	65
2.9 Chapter Summary	66

3	METHODOLOGY	68
3.1	Introduction	68
3.2	Research Design	68
3.3	Study Location, Population, and Sampling	69
3.4	Instrumentation	76
3.4.1	Demographic Background	77
3.4.2	Measurement of Antisocial Media Exposure	77
3.4.3	Measurement of Self-Esteem	78
3.4.4	Measurement of Moral Identity	79
3.4.5	Measurement of Aggressive Behaviour Scale	80
3.5	Pilot study	81
3.6	Data Collection Process	82
3.7	Validity, Reliability, and Normality	85
3.7.1	Validity and Reliability	85
3.8	Data Analysis	98
3.8.1	Descriptive Analysis	98
3.8.2	Mann Whitney U Test	99
3.8.3	Structural Equation Modelling - Partial Least Square (SEM-PLS)	100
3.9	Chapter Summary	107
4	FINDINGS AND DISCUSSIONS	108
4.1	Introduction	108
4.2	Description of the Socio-Demographic Characteristics	109
4.3	The Levels of Moral Identity, Self-Esteem, Gaming Media Exposure, Non- Gaming Media Exposure, and Aggressive Behaviour	111
4.4	The Differences in Moral identity, Self-Esteem, Gaming Media Exposure, Non-Gaming Media Exposure, and Aggressive Behaviour in Terms of Socioeconomic Background (Gender, Level of Education, Employment Status)	114
4.4.1	Employment-Based Differences in Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), Self-Esteem, Moral Identity, and Aggressive Behaviour	114
4.4.2	Education Level-Based Differences in Antisocial Media Exposure (Gaming Media Exposure and Non- Gaming Media Exposure), Self-Esteem, Moral Identity, and Aggressive Behaviour	116
4.4.3	Gender-Based Differences in Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), Self-Esteem, Moral Identity, and Aggressive Behaviour	117
4.5	The Relationship between Aggressive Behaviour, Moral Identity, Self-Esteem, Non-Gaming Media Exposure, and Gaming Media Exposure	119
4.6	The Significant Predictor of Moral Identity, Self-Esteem, Non-Gaming Media Exposure, and Gaming Media Exposure on Aggressive Behaviour	121

4.6.1	Coefficients of Determination, R^2	124
4.6.2	Effect Size (f^2)	124
4.6.3	Predictive Relevance (Q^2 value)	126
4.7	The Role of Moral Identity in Moderating the Effects of Gaming Media Exposure, Non-Gaming Media Exposure, Self-Esteem towards Aggressive Behaviour	127
4.8	Chapter Summary	131
5	SUMMARY, CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS	132
5.1	Introduction	132
5.2	Summary of Findings	132
5.2.1	The Moral Identity, Self-Esteem, Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), and Aggressive Behaviour	134
5.2.2	The Differences in Moral Identity, Self-Esteem, Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), and Aggressive Behaviour	135
5.2.3	The Relationship between Moral Identity, Self-Esteem, Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), and Aggressive Behaviour	137
5.2.4	The Role of Moral Identity, Self-Esteem, Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), and Aggressive Behaviour	138
5.2.5	The Role of Moral Identity in Moderating the Relationship between Self-Esteem, Antisocial Media Exposure (Gaming Media Exposure and Non-Gaming Media Exposure), and Aggressive Behaviour	138
5.3	Conclusions of the Study	139
5.4	Implications of the Study	140
5.4.1	Theoretical Implications	141
5.4.2	Practical Implications	142
5.5	Recommendations	143
5.5.1	Practical Recommendations	144
5.6	Limitation of Study	147
5.7	Chapter Summary	149
	REFERENCES	150
	APPENDICES	184
	BIODATA OF STUDENT	207
	LIST OF PUBLICATIONS	208

LIST OF TABLES

Table	Page
2.1 Scholars' Theories of Aggression	27
2.2 List of 20 Media Effects that have been Studied between 2000 and 2022	35
2.3 Thematic Analysis of Exposure Type	36
2.4 Literature Review for the Relationship between Antisocial Media Exposure-and Aggressive Behaviour	39
2.5 Literature on the Disadvantages of Playing Violent Games	44
2.6 Several Studies on Self-Esteem and Aggression (2019-2021)	49
2.7 Potential Moderator for Aggressive Behaviour	63
3.1 Sampling Size Estimation	72
3.2 Research on Media Effect Using Youth as Samples	73
3.3 Non-Probability Sampling Techniques (n=384)	74
3.4 Summary of Instruments	81
3.5 Reliability Coefficient for Pilot Test	82
3.6 The Results of Internal Consistency Reliability (ICR)	88
3.7 The Results of Average Variance Extracted (AVE)	89
3.8 Results of Outer Loading	90
3.9 Discriminant Validity – Fornell and Lacker Criterion	92
3.10 Results of Heterotrait-Monotrait Ratio (HTMT)	92
3.11 Cross Loading Result	93
3.12 Assessment of Data Normality	96
3.13 The Range Score for Descriptive Value	98
3.14 Mann Whitney U Test	99
3.15 Summary of the Statistical Analysis	107
4.1 Demographic of Respondents (n=384)	109

4.2	Level of Gaming Media Exposure, Non-Gaming Media Exposure, Self-Esteem, Moral Identity, and Aggressive Behaviour (n=384)	112
4.3	The Differences in Antisocial Media Exposure (Gaming Media Exposure and Non-gaming Media Exposure) Self-Esteem, Moral Identity, and Aggressive Behaviour in Terms of Employment Status	115
4.4	The Differences in Antisocial Media Exposure (Gaming Media Exposure and Non-gaming Media Exposure) Self- Esteem, Moral Identity, and Aggressive Behaviour in Terms of Education Level	117
4.5	The Differences in Antisocial Media Exposure (Gaming Media Exposure and Non-gaming Media Exposure) Self-Esteem, Moral Identity, and Aggressive Behaviour in Terms of Gender	118
4.6	Result for Correlation Test (n=384)	119
4.7	Results of Direct Effect Analysis	122
4.8	Result of Coefficient of Determination, R^2	124
4.9	Effect Size Result (f^2)	125
4.10	Result of Significant Prediction Q^2	126
4.11	Result for Moderation Analysis	128
4.12	A Summary of the Hypothesis Testing Results	129

LIST OF FIGURES

Figure	Page
2.1 The Relationship between Antisocial Media Exposure and Aggressive Behaviour	36
2.2 The Effect of Playing MMORPG	43
2.3 Relationship between Self-Esteem and Aggressive Behaviour	50
2.4 The General Aggression Model (GAM)	58
2.5 Research Theoretical Framework	59
2.6 The Conceptual Framework for the relationship between Moral Identity, Self-Esteem, Gaming Media Exposure, Non-Gaming Media Exposure and Aggressive Behaviours among Local Online Gamers in Malaysia	66
3.1 Klang Valley Area	71
3.2 Structure of the Sampling Procedure	75
3.3 Process of Conducting Data Collection	84
3.4 Reflective Measurement Model Assessment Procedure	101
4.1 Path Coefficients Analysis	121
4.2 The Moderating Role of Moral Identity on the Relationship between Gaming Media Exposure, Non-Gaming Media Exposure, Self-Esteem, and Aggressive Behaviour (Sig. level * $p < 0.05$, ** $p < 0.05$)	127

LIST OF APPENDICES

Appendix	Page
A English Questionnaire	184
B Bahasa Melayu Questionnaire	192
C Ethics Approval	200
D Validation Letter	202
E Sampling Activities	203
F SEM-PLS Data	205

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Metaverse, Digital Twins, Extended Reality, Blockchain, and Artificial Intelligence (AI), collectively known as advanced digital technologies, have observed a significant surge in recent years in transforming how individuals interact and collaborate online. Meanwhile, online communities have emerged as a critical hub for social engagement, offering new opportunities for digital collaboration while presenting new challenges, particularly concerning aggressive behaviour (Barlett & Coyne, 2019). Studies have also demonstrated that aggressive behaviour in online communities can produce adverse outcomes for individuals and society (Gentile & Lim, 2021).

Aggression, characterized as behaviour aimed at causing harm to others, represents a significant social issue in interactions between individuals and groups. This behaviour stems from the combined effects of personal traits and the situational and societal contexts in which the actions occur. In social psychology, aggression is specifically defined as behaviour intended to harm another individual who wishes to avoid such treatment. Therefore, there is no form of “positive” aggression. Aggression can manifest in various forms, including deliberate physical harm, verbal aggression, or relational/indirect aggression, which targets a person’s social connections (Krahé, 2020). This observation has resulted in the advancement and progress of numerous theories in social psychology to explain the factors that stimulate aggressive behaviour. Aggressive behaviour is a crucial topic in social psychology and is often associated with various behavioural disorders. However, according to the DSM-5 (Diagnostic

and Statistical Manual of Mental Disorders, Fifth Edition), aggressive behaviour is not recognized as a standalone disorder. Rather, it is typically viewed as a symptom or characteristic of several disorders outlined in the DSM-5. For instance, in Conduct Disorder, individuals exhibit repetitive and persistent behaviour patterns that violate the rights of others or societal norms, with aggression toward people and animals being a key feature. Similarly, Intermittent Explosive Disorder involves impulsive episodes of aggression that are disproportionate to the given situation. Oppositional Defiant Disorder is characterized by a pattern of angry, irritable moods, argumentative or defiant behaviour, and vindictiveness, while Antisocial Personality Disorder displays a pervasive disregard for the rights of others, often expressed through aggressive actions. Although aggressive behaviour is a prominent aspect of these disorders, it is not classified as a distinct disorder in the DSM-5. For example, Regier et al. (2013) posit aggressive behaviour as a component of conduct disorder, which encompasses physical or verbal actions causing harm or threatening to cause harm to others.

Based on contemporary events that have reshaped social norms, Russia's invasion of Ukraine on February 24, 2022, represents the most significant military conflict in Central Europe since World War II, echoing past traumas and their enduring psychological impacts (Kurapov et al., 2022). Historical traumatic events can lead to a collective loss of control and heightened aggression, reflecting how past and present conflicts influence societal and individual mental states. This correlation suggests that situational factors stemming from geopolitical conflicts significantly affect well-being and can perpetuate aggressive behaviours within populations. Recognizing this, social psychology has increasingly focused on the systematic evaluation of psychological factors driving aggression, aiming to mitigate its impacts and enhance future societal

resilience (Kruglanski & Stroebe, 2012). This approach not only underscores the need for a thorough understanding of aggression's roots but also highlights the importance of proactive measures in psychological and social interventions.

In Malaysia, aggressive behaviour has been extensively investigated in diverse contexts, including among secondary school students, illegal motorcycle street racers (*mat rempit*), road drivers, juvenile cases, moviegoers, rehabilitation centre residents, and prison inmates. However, there is a noticeable gap in research regarding understanding aggressive behaviour within the gaming community. While studies have covered a range of contexts, there is a limited exploration of this behaviour among gamers. A study by Abdul Nasser et al. (2021) found that the majority of Malaysian youth are involved in online gaming activity and watching films, e.g., YouTube or Netflix. Therefore, we can consider that major activities in Malaysia are online activities (Malaysian Communications and Multimedia Commission (MCMC), 2020).

Recent research by Ibrahim et al. (2021) and Teng et al. (2020) have looked into this to address the existing gap. Meanwhile, Teng et al. (2020) identify a gap in the existing literature concerning the specific relationship between violent video game exposure and cyber bullying among Chinese youth. Prior studies have extensively explored the link between violent video games and aggression, but few have specifically addressed how these games might influence bullying behaviours, including cyberbullying.

Meanwhile, factors such as socioeconomic background, for example, family income, level of education and exposure to social harm in television programs have been

suggested as potential contributors to aggressive behaviour (Greitemeyer & Christina, 2016; Badyai et al., 2016; Doerschuk et al., 2016). Therefore, situational and personological factors play a crucial role in establishing aggressive behaviour levels among youth. In summary, despite the wide-ranging exploration of contexts, the investigation of aggressive behaviour remains relatively underdeveloped.

1.2 Problem Statement

The COVID-19 pandemic outbreak in 2020-2021 has resulted in considerable **social changes**, such as school closures, lockdowns, and greater social isolation. This event significantly altered Malaysians' lifestyle and social behaviours (Ahmad et al., 2022; Abdullah et al., 2022; Koh et al., 2020). As a result, indoor hobbies, such as computer games, online gaming, and watching films, have grown in popularity during lockdowns, displacing long-standing outside physical and social activities (Chang et al., 2023). According to the Department of Statistics Malaysia (DOSM, 2021), there has been a rise in computer usage among Malaysians aged 15 and above, with the percentage increasing from 80.0 percent in 2020 to 83.5 percent in 2021, reflecting a change in behaviour. In addition, the percentage of people using the Internet has climbed from 89.6 percent to 96.8 percent in 2020-2021.

High levels of participation in virtual activities via phones, computers, and the Internet can benefit many people. Still, it can also lead to antisocial media exposure repercussions, leading to aggressiveness. For example, the MCMC (2023) reported a 99.5 percent increase in the number of cyber-crime cases in 2020, receiving 20,805 complaints compared to 10,426 complaints in 2019. Virtual activities via computers, mobile phones, and internet platforms have altered the manners of modern social

relationships and social activities.

Previous academics have extensively examined the beneficial and negative effects of media exposure and digital gaming on youth and children. Notably, if a virtual activity incorporates undesirable features, continuous exposure can impact the individual's level of aggression (Maraire & Chethiyar, 2019). While aggressive behaviour itself is not inherently criminal, it is often linked to those involved in criminal activities and is commonly observed in the context of criminal acts. According to research on Malaysian youth, 69.6 percent of potential youths aged 21 to 30 who were involved in criminal activities displayed moderate levels of violent behaviour. In comparison, 11.6 percent displayed high levels of aggressive behaviour (Abdullah et al., 2015). This finding demonstrates that it is more challenging to discover an ex-offender who has not retained any signs of aggressive behaviour.

However, a study conducted by Przybylski and Weinstein (2019) on British adolescents found no evidence that playing negative video games has a significant impact on their aggressive behaviour. Meanwhile, recent research carried out by Fauzi et al. (2023) discovered that negative behaviour among Malaysians is influenced by both personal and situational factors. Hence, it can be anticipated that the impact of environmental factors on aggression exhibits variability contingent upon variations in population and surroundings, as posited by Bushman and Anderson (2023). Given the possible risks associated with exposure to antisocial content, the current study emphasizes the significance of examining the impact of Antisocial Media Exposure on aggressive behaviours among Malaysian youth. This empirical study is necessary considering the growing societal interest in digital activities such as online gaming

during the past decade.

In addition to the hypothesis positing a relationship between Antisocial Media Exposure and subsequent aggressive behaviour, research has indicated that socio-economic features and demographic profiles may also be associated with levels of aggression. In a broader context, individuals with a disadvantaged socio-economic background tend to exhibit certain patterns of judgement, emotional reaction, and an elevated propensity for aggressive behaviour (Greitemeyer & Christina, 2016).

When situational factors interact with the qualities of human personality, they have the potential to influence individuals' aggressive behaviours. The General Aggression Model posits that psychological traits, such as self-esteem, exert an influence on an individual's propensity for engaging in negative behaviour (Anderson & Bushman, 2002; Balakrishnan & Fernandez, 2018). Several studies have examined the relationship between low self-esteem and victimization caused by aggressive behaviour. For instance, Schultze-Krumbholz et al. (2018) found evidence suggesting that individuals exhibiting low Self-esteem are more prone to becoming victims due to their behaviour. Conversely, other research has explored the association between low Self-esteem and engaging in aggressive behaviour. For instance, Błachnio et al. (2019) conducted a study indicating those who exhibit aggressive behaviour tend to have lower levels of Self-esteem. Therefore, in connection with the growing phenomenon of media exposure and cyber activity, it is worthwhile to investigate whether personal aspects of Self-esteem are related to aggressive behaviour. This is especially important among the youth of Malaysia, who are actively engaged with antisocial media.

E-sports, such as competitive video gaming, is a prime example of online activities that have gained immense popularity among the Malaysian youth. These virtual or online games have captivated the interest of young people and evolved into a burgeoning sport, thanks to their highly interactive gaming platforms, which encourage competition and social interaction. Understanding the relationship between Self-esteem and aggressive behaviour in the context of this prevalent online gaming culture is crucial for comprehending the broader dynamics of youth engagement with antisocial media.

As a result of this reality, it is not viable to implement a complete ban on inappropriate media exposure and online games if the goal is to protect children from potential exposure to negative content. Several countries have implemented bans or restrictions on specific online games. For example, Belgium has banned games with loot boxes that constitute gambling under the country's laws (BBC, 2018). China has banned online video games based on various factors like the depiction of drugs or organized crime (Haldane, 2021). Germany is known for having strict regulations on online video games that feature human-like enemies or extreme violence (Mueller, 2015). These bans show that while a complete prohibition of online games is not widespread, targeted bans based on content or specific gaming features are indeed possible and have been implemented in various jurisdictions. These measures are usually taken to address specific social, cultural, or legal concerns related to the content within these games.

However, it is essential to note that the negative impact of negative media on youth is also a result of the personality or psychological state of individuals or gamers (Bushman, 2017). In particular, some variables may strengthen or weaken the

association between the independent and dependent variables. This study seeks to identify variables that may reduce the strength of the relationship between Antisocial Media Exposure and aggressive behaviour. Identifying this moderating variable can serve as a strategy for mitigating the effect of Antisocial Media Exposure on aggressive behaviour.

Prior research has identified certain factors that moderate the impact of exposure to antisocial media on aggressive behaviour, particularly in the context of negative video games, for example, massive multiplayer online role-playing games (MMORPGs). It is worth mentioning that certain variables, such as Self-esteem and the impact of deviant peers, have been identified as moderators in the association between exposure to antisocial media and aggressive behaviour (Lokithasan et al., 2020; Lopez-Fernandez et al., 2021). The current study, however, is mainly interested in the potential function of morality or Moral Identity in regulating the impacts of Antisocial Media Exposure on aggression among Malaysian youth. Past studies have also stated that Moral Identity is correlated to aggression, acting as a crucial component in moderating the impact of other psychological factors on aggression (Teng et al., 2020; Skobkareva, 2020). Hence, it is intriguing to investigate whether the moral identities of local Malaysian online gamers can exhibit a similar moderating influence on Self-esteem and deviant peer associations, as previously demonstrated in research, thereby mitigating the adverse effects of exposure to antisocial media on aggressive behaviour.

To strengthen the rationale for selecting moral identity as a moderator in the study of aggressive behaviour in relation to antisocial media exposure, it is essential to elucidate the role of moral identity in psychological processes. Moral identity serves

as an internal moral compass, influencing how individuals interpret and react to their environments, including their interactions with media. Research has shown that individuals with a strong moral identity are likely to experience aggressive behaviour when exposed to antisocial media, which conflicts with their internal moral values (Mulder & Aquino, 2013). This can moderate their responses to such stimuli, potentially mitigating aggressive tendencies.

Moral identity can act as a buffer against the negative influences of antisocial media. For instance, Aquino and Reed (2003) posited that the degree to which moral traits are integrated into an individual's self-concept, referred to as the internalization and symbolization of moral identity, can significantly impact their behaviour. Individuals with high levels of moral identity are more likely to engage in prosocial behaviours and resist behaviours incongruent with their moral values, such as aggression triggered by antisocial media exposure. This supports the hypothesis that moral identity could moderate the relationship between antisocial media exposure and aggressive behaviour, making it a critical variable for comprehensive analysis in this domain. By integrating moral identity into the study, the research aims to uncover deeper insights into the psychological mechanisms that protect or predispose individuals to aggression in the digital age, offering valuable implications for interventions aimed at reducing the impact of negative media exposure.

The combination of coming from a disadvantaged socio-economic background, such as income status, gender preferences and academic achievement, may have a significant relationship with aggressiveness (Turanovic & Siennick, 2022). Therefore, the differences between socio-economic features, demographic profiles, and

individual differences toward the level of aggression remain unclear among local online gamers in our country. This research seeks to explore the significant differences in moral identity, self-esteem, and aggressive behaviour in terms of socio- economic background (gender, employment status, and level of education).

Aside from that, as earlier studies have highlighted the direct effects of self-esteem on aggression, it is worthwhile to investigate whether moral identity can moderate the relationship between these two. To summarise, comprehending this issue among local online gamers necessitates a comprehensive understanding of the interplays between antisocial media exposure, self-esteem, and moral identity as well as how these factors and their interactions influence aggressive behaviour. Identifying moral identity's moderating power for the effects of other psychological factors on aggressive behaviour among young online gamers is significant because it can facilitate the development of potential early intervention strategies within society. These could mitigate the negative impact of antisocial media exposure on aggressive behaviour among Malaysian youth.

In summary, this research aims to address several critical gaps within the context of aggressive behaviour in the gaming community. Theoretically, while the General Aggression Model provides a robust framework for understanding aggression, its application has been limited in examining how specific moderators, such as moral identity and self-esteem, influence aggression among online gamers. This presents a theoretical gap in comprehensively understanding the nuances of aggression modulation within digital environments. Practically, the research on antisocial media exposure, especially within online gaming environments, remains limited (Kowert et

al., 2023). This lack of specificity can reduce the effectiveness of measures to curb aggression in gaming communities. For instance, generic content moderation tools may not fully address the nuanced ways in which antisocial behavior manifests in online games, leading to persistent issues with in-game toxicity (Kowert et al., 2023). Furthermore, media literacy programs in Malaysia often lack the localization needed to effectively engage with Malaysian youth's media consumption habits and attitudes (Ismail & Masrom, 2022).

Furthermore, despite extensive research, significant gaps remain in understanding the relationship between violent media exposure and aggression. Early studies by Anderson and Bushman (2001, 2002) asserted a strong causal link, influencing both public policy and perception. These studies emphasized consistent findings that violent video games could lead to increased aggression. However, more recent work by the same authors in 2023 reveals a growing awareness of inconsistencies and null results within the research landscape. The earlier confidence in a definitive connection has given way to recognition of the complexities and limitations in existing studies. This evolution underscores a critical problem in the field: the difficulty in establishing a clear and consistent understanding of violent media effects. The variability in findings points to potential methodological issues and suggests that factors influencing the impact of violent media are not yet fully understood. Addressing these research gaps is essential for advancing a more nuanced and accurate interpretation of how violent media influences behavior. This study aims to fill these gaps by exploring potential moderators that could refine the application of the General Aggression Model in the digital realm, ultimately contributing to more effective strategies for mitigating aggression among gamers.

1.3 Research Questions

1. What are the levels of moral identity, self-esteem, antisocial media exposure and aggressive behaviour among local online gamers?
2. Are there any significant differences in moral identity, self-esteem, antisocial media exposure and aggressive behaviour in terms of socio-economic background (gender, employment status, and level of education)?
3. Are there any significant relationships between moral identity, self-esteem, antisocial media exposure and aggressive behaviour?
4. What are the factors that significantly predict aggressive behaviours?
5. Does moral identity moderate the relationship between self-esteem, antisocial media exposure, and aggressive behaviours?

1.4 Research Objective

The main objective of the study is to determine the relationship between moral identity, self-esteem, antisocial media exposure (gaming media exposure and non-gaming media exposure) and aggressive behaviours among local online gamers in Malaysia.

1.4.1 Specific Objectives

1. To identify the level of moral identity, self-esteem, antisocial media exposure (gaming media exposure and non-gaming media exposure) and aggressive behaviour.
2. To determine the differences in moral identity, self-esteem, antisocial media exposure (gaming media exposure and non-gaming media exposure) and aggressive behaviour in terms of socio-economic background (gender, employment status, and level of education).

3. To determine the relationships between moral identity, self-esteem, antisocial media exposure (gaming media exposure and non-gaming media exposure) and aggressive behaviour.
4. To determine which factors significantly predict aggressive behaviour.
5. To determine the significant role of moral identity in moderating the relationship between antisocial media exposure (gaming media exposure and non-gaming media exposure) and self-esteem towards aggressive behaviour.

1.5 Research Hypotheses

In this study, the hypotheses were derived from past studies. The null hypothesis was established, given that many past studies have shown significant differences or correlations between the variables examined. The hypotheses were developed based on the research objectives of this study. The null hypothesis is employed in this thesis as it aligns with the established scientific approach to hypothesis testing. Serving as a neutral and objective starting point, the null hypothesis allows for an unbiased evaluation of whether sufficient evidence exists to support the alternative hypothesis. This approach is critical in minimizing the risk of Type I errors, which occur when the null hypothesis is incorrectly rejected. By adhering to this method, the research ensures that conclusions drawn are not only robust but also firmly grounded in empirical data, thereby enhancing the reliability and validity of the findings (Farrugia et al., 2010). The research hypotheses that were tested are given as follows:

Objective 2: To determine the differences in antisocial media exposure (gaming media exposure and non-gaming media exposure, self-esteem, moral identity, and aggressive behaviour in terms of socio-economic background (gender, employment status, and level of education).

- H01: There is no significant difference in gaming media exposure in terms of employment status.
- H02: There is no significant difference in non-gaming media exposure in terms of employment status.
- H03: There is no significant difference in self-esteem in terms of employment status.
- H04: There is no significant difference in moral identity in terms of employment status.
- H05: There is no significant difference in aggressive behaviour in terms of employment status.
- H06: There is no significant difference in gaming media exposure in terms of level of education.
- H07: There is no significant difference in non-gaming media exposure in terms of level of education.
- H08: There is no significant difference in self-esteem in terms of level of education.
- H09: There is no significant difference in moral identity in terms of level of education.
- H010: There is no significant difference in aggressive behaviour in terms of level of education.
- H011: There is no significant difference in gaming media exposure in terms of gender.
- H012: There is no significant difference in non-gaming media exposure in terms of gender.
- H013: There is no significant difference in self-esteem in terms of gender.
- H014: There is no significant difference in moral identity in terms of gender.
- H015: There is no significant difference in aggressive behaviour in terms of gender.

Objective 3: To determine the relationships between antisocial media exposure (gaming media exposure and non- gaming media exposure), aggressive behaviour, self-esteem and moral identity.

H016: There is no significant relationship between gaming media exposure and aggressive behaviour

H017: There is no significant relationship between non-gaming media exposure and aggressive behaviour.

H018: There is no significant relationship between self-esteem and aggressive behaviour.

H019: There is no significant relationship between moral identity and aggressive behaviour.

Objective 4: To determine which factors significantly predict aggressive behaviours.

H020: There are no significant effects of gaming media exposure on predicted aggressive behaviour.

H021: There are no significant effects of non-gaming media exposure on predicted aggressive behaviour.

H022: There are no significant effects of self-esteem on predicted aggressive behaviour.

H023: There are no significant effects of moral Identity on predicted aggressive behaviour.

Objective 5: To determine the significant role of moral identity in moderating the relationship between antisocial media exposure (gaming media exposure and non-gaming media exposure) and self-esteem towards aggressive behaviour.

H024: Moral identity does not significantly moderate the relationship between gaming media exposure and aggressive behaviour.

H025: Moral identity does not significantly moderate the relationship between non-gaming media exposure and aggressive behaviour.

H026: Moral identity does not significantly moderate the relationship between self-esteem and aggressive behaviour.

1.6 Significance of the Study

The current research contributes to the existing literature on the development and causes of behaviours among Malaysian youth by focusing on three domains influencing Moral Identity: exposure to antisocial media and Self-esteem, with Moral Identity acting as a moderator.

From an academic perspective, this study contributes to the existing literature on the effects of antisocial media exposure and self-esteem on aggressive behaviour in the context of online gaming. Moreover, the study highlights the role of moral identity acting as a moderator in the relationship that exists between self-esteem, antisocial media exposure, and aggressive behaviour. This is a significant contribution to the literature, as previous studies have largely focused on the direct effects of antisocial media exposure and self-esteem on aggressive behaviour neglecting the moderating role of moral identity. Therefore, this study contributes to the academic comprehension of the psychological factors influencing aggressive behaviour in the context of online gaming, providing insights into the complex interplay between antisocial media exposure, self-esteem, and moral identity.

From a practical perspective, the findings of this study have implications for policymakers, educators, and counselors working with youth who engage in online

gaming activities. Understanding the psychological factors contributing to aggressive behaviour will help develop targeted interventions and prevention programs to reduce the prevalence of aggression in online gaming communities. This research is crucial as it may assist in the partnerships between professionals such as educators, counsellors, and policymakers to strengthen and reinforce the policies for the youth group. The results from this study may create awareness in the institution of a family, as they should pay more attention to changes in youth behaviours. In addition, this research may be an eye-opener to the community as it can provide information and knowledge on teenagers' current behaviours.

From a future-oriented perspective for future scholars, this study has the potential to inform the development of new technologies and gaming platforms that promote prosocial behaviour and discourage aggression. As the online gaming industry continues to grow and evolve, it is essential to understand the psychological mechanisms influencing user behaviour and develop tools and interventions that encourage positive interactions and foster a sense of community among online gamers. This study contributes to this ongoing effort by shedding light on the factors contributing to aggressive behaviour and identifying potential avenues for intervention and prevention.

This study is paramount in both theoretical and practical terms. This research will provide several interventions to increase youth's passionate interests and goal-oriented thinking for prevention programs. With the aid of government-based programs, simple methods can be prepared for youths to set small goals in their daily lives and make efforts to achieve them, which is proven to help develop meaning in life and facilitate

coping with distress.

Overall, this study of local online gamers is significant in terms of academic understanding and practical for future-oriented implications. Its findings can inform the development of interventions and policies to reduce aggressive behaviour in online gaming communities and promote a safe and positive gaming environment for all users.

1.7 Terminology Definitions

1.7.1 Aggressive Behaviour

Conceptual definition

Aggressive behaviour refers to actions that are intended to cause harm or injury to another person or damage to property. This includes physical violence, verbal hostility, and indirect forms of aggression such as spreading rumors or social exclusion” (American Psychological Association, 2020).

Operational definition

The level of aggressive behaviour is quantified through participants’ responses to 23 distinct behaviours listed in the Reactive-Proactive Aggression Questionnaire (RPQ), which are rated on a 3-point Likert scale, where a higher score indicates a higher frequency and thus a higher level of aggressive behaviour.

1.7.2 Antisocial Media Exposure

Antisocial media exposure is an all form of exposure to mass communication that visualizes and portrays acts of annoyance contrary to the laws and customs of society (den Hamer et al., 2017). Supported by Carroll et al. (2023), antisocial media exposure comprises a broad spectrum of actions that violate societal norms and/or other people's rights. In this study, antisocial media exposure is divided into two categories, as stated below.

1.7.2.1 Gaming Media Exposure

Conceptual definition

All forms of gaming that visualize and portrays acts of cause annoyance, contrary to the laws and customs of society (den Hamer et al., 2017). Therefore, gaming media exposure is an exposure to a video game that displays social harms that can arise from social media platforms.

Operational definition

Gaming media exposure refers to the extent to which individuals engage with video games that contain antisocial content, including violence, aggressive behaviour, or other elements that deviate from social norms. Operationally, gaming media exposure is quantified based on the frequency and duration of interactions with such games, assessed through a self-reported measure. Participants report their exposure by responding to items that query the frequency of gaming sessions and the typical duration of these sessions with specific reference to games characterized by antisocial themes. This measure helps in understanding the level of exposure where higher scores indicate greater exposure to antisocial content in gaming contexts.

1.7.2.2 Non-Gaming Media Exposure

Conceptual definition

Non-gaming media exposure is a non-gaming exposure to antisocial content, including all forms of mass communication, for example, YouTube, television, and social media, except games, that visualizes and portrays acts of cause annoyance, contrary to the laws and customs of society (den Hamer et al., 2017).

Operational definition

Non-gaming media exposure refers to the frequency and intensity with which individuals engage with media content that does not involve interactive gaming. This includes viewing television shows, movies, and videos, listening to music, and browsing non-gaming content on social media platforms. Non-gaming media exposure is quantified based on the amount of time spent consuming such media daily. Higher scores on the measurement scale indicate greater exposure to non-gaming media, which is assessed using a modified version of the den Hamer et al. (2017) scale. This scale employs a 5-point Likert scale to measure the frequency of engagement with various types of non-gaming media.

1.7.2.3 Moral Identity

Conceptual definition

Moral identity is a concept within a self-regulatory mechanism concerning the significance of morality to a person's identity that motivates moral action (Aquino & Reed, 2002).

Operational definition

Moral identity is operationally defined as the degree to which a set of moral traits (e.g., being caring, compassionate, fair, and honest) is central to an individual's self-concept. This construct reflects the extent to which moral qualities are embodied in an individual's everyday actions and decisions. High levels of moral identity suggest that an individual consistently aligns their actions with their moral convictions, influencing their responses and behaviours in various social interactions and personal decisions (Aquino & Reed, 2002).

1.7.2.4 Self-Esteem

Conceptual definition

Self-esteem refers to an individual's positive or negative attitude toward themselves, centred on the assessment of their self-worth or value (Hewitt, 2020). People are driven to possess elevated self-esteem, which signifies a healthy self-regard rather than egotism (Sociology Department, University of Maryland, 2021).

Operational definition

In this study, self-esteem refers to a person's overall emotional assessment of their own worth, including beliefs and feelings such as pride or shame. It will be measured using the Rosenberg Self-Esteem Scale (RSES), a 10-item tool that gauges positive and negative self-perceptions on a four-point scale from 'strongly agree' to 'strongly disagree.' The total RSES scores will categorize participants' self-esteem as low, moderate, or high, enabling a more detailed analysis of how different self-esteem levels impact other psychological factors in the study.

1.7.2.5 Local Online Gamer

Conceptual definition

A gamer is defined as someone who, regardless of the time spent and their passion for video games, actively engages in gaming activities (Vilasís-Pamos & Pires, 2021). Meanwhile, an online game is a video game that can be played, either to some extent or predominantly, via the Internet or any other accessible computer network (Adams et al., 2006). Therefore, local online gamer refers to people who engage in various forms of online gaming in their local community, for instance, social games, multiplayer video games, or competitive gaming.

Operational definition

In this study, local online gamers refer to individuals residing in Malaysia who engage in playing video games over the internet. These gamers participate in various forms of digital gaming, including but not limited to, multiplayer online games, competitive gaming leagues, and casual single-player games accessed through online platforms. For the purpose of this research, local online gamers are identified through self-reported gaming habits, specifically those who indicate that they play online games for a certain number of hours per week.

1.8 Scope of Study

This study investigates the relationship between antisocial media exposure, self-esteem, moral identity and aggressive behaviour among local online gamers in Klang Valley, Malaysia. The scope of the social psychology field that focuses on this study is aggressive behaviour as the dependent variable. Many factors may influence aggressive behaviour, but in this study, the independent variables are antisocial media exposure

and self-esteem, while the moderating variable is moral identity.

The study has several limitations to consider. First, the study is limited to the population of local online gamers in Klang Valley aged between 18-40. Thus, the results cannot be generalized to other populations or age groups. Second, the study relies on non-probability sampling techniques, which may limit the representativeness of the sample. Third, the study only measures the general meaning of aggression and does not distinguish between reactive and proactive aggression. Fourth, the study is quantitative in nature and, thus, may not capture the complexity and nuances of the phenomenon under investigation. Finally, the study does not control other potential variables influencing aggressive behaviour, such as personality traits or family background. Despite these limitations, this study provides valuable insights into the relationship between antisocial media exposure, self-esteem, moral identity, and aggressive behaviour among local online gamers, which can inform the development of prevention and intervention initiatives.

1.9 Chapter Summary

The main objective of this chapter is to provide an introduction to the research, encompassing the study's background, research purpose, and the identified research problem. It presents well-defined research objectives and research questions from which hypotheses for the study have been formulated. Furthermore, this chapter addresses the research's significance and outlines its scope. It concludes by emphasizing the theoretical and conceptual framework and providing precise definitions of the terms that will be utilized throughout the research.

REFERENCES

- AbdullNasser, N. M., Mohamad, M., Chan, L. F., Suppiah, S., Yusoff, A. N., Abd Hamid, A. I., Wan Ismail, W. S., & Sim, S. T. (2021). The task-based fMRI study on neural activity of internet gaming addiction among Malaysian adolescents: A stroop color task. *Neurology Asia*, 26(3), 561-574.
- Abdullah, H., Ortega, A., Ahmad, N., & Ghazali, S. (2015). Aggressive and delinquent behavior among high-risk youth in Malaysia. *Asian Social Science*, 11(16), 62-73.
- Abdullah, N., Hashim, N. Z. I., Abidin, I. S. Z., & Shazali, S. M. M. (2022). Impact of COVID-19 Pandemic in Malaysia: A Critical Survey. *Pertanika Journal of Social Sciences & Humanities*, 30(4), 1857-1879. <https://doi.org/10.47836/pjssh.30.4.20>
- Adachi, P. J., & Willoughby, T. (2016). The longitudinal association between competitive video game play and aggression among adolescents and young adults. *Child Development*, 87(6), 1877-1892.
- Adams, E., & Rollings, A. (2006). *Fundamentals of game design* (game design and development series). Pearson Prentice-Hall, Inc.
- Ahmad, A., Shahril, M. R., Wan-Arfah, N., Mohd Abu Bakar, W. A., Piernas, C., & Lua, P. L. (2022). Correction: Changes in health-related lifestyles and food insecurity and its association with quality of life during the COVID-19 lockdown in Malaysia. *BMC public health*, 22(1), 1270. <https://doi.org/10.1186/s12889-022-13640-9>
- Ahmad, Z., Alias, A., Abdullah, S. A., & Hassan, S. S. (2020). Exposure to violent video games and aggressive behavior among Malaysian adolescents: The mediating role of hostile attribution bias. *Asian Journal of Social Psychology*, 23(4), 258-266.
- Al-Ali, N. M., Yaghy, H. S., Shattnawi, K. K., & Al-Shdayfat, N. M. (2018). Parents' knowledge and beliefs about the impact of exposure to media violence on children's aggression. *Issues in Mental Health Nursing*, 39(7), 592-599.
- Al-Nakeeb, M., Al-Azzawi, N., & Al-Omeri, M. (2019). The relationship between socioeconomic status and aggressive behavior among Iraqi adolescents. *International Journal of Social Sciences and Humanities*, 13(1), 1-10.
- Alismaiel, O. A. (2023). Digital media used in education: The influence on cyberbullying behaviors among youth students. *International Journal of Environmental Research and Public Health*, 20(2), 1370.

- Allen, J. J., & Anderson, C. A. (2021). Does avatar identification make unjustified video game violence more morally consequential? *Media Psychology*, 24(2), 236-258.
- Allen, J. J., Anderson, C. A., & Bushman, B. J. (2018). The general aggression models. *Current Opinion in Psychology*, 19, 75-80.
- Amad, S., Gray, N. S., & Snowden, R. J. (2021). Self-esteem, narcissism, and aggression: Different types of self-esteem predict different types of aggression. *Journal of interpersonal violence*, 36(23-24), NP13296-NP13313.
- American Psychological Association. (2020). Aggression. In *APA Dictionary of Psychology*. Retrieved from <https://dictionary.apa.org/aggression>
- American Psychological Association. (2020). *Publication Manual of the American Psychological Association* (7th ed.). doi: 10.1037/0000165-000
- American Psychological Association. (2022). Retrieved March 15, 2023, from <https://www.apa.org/pi/ses/resources/publications/education>.
- Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science*, 12(5), 353-359.
- Anderson, C. A., & Bushman, B. J. (2002). The effects of media violence on society. *Science*, 295(5564), 2377-2379.
- Anderson, C. A., & Bushman, B. J. (2003). Human aggression. *Annual Review of Psychology*, 54, 27-51.
- Anderson, C. A., & Bushman, B. J. (2018). Media violence and the General Aggression Model. *Journal of Social Issues*, 74(2), 386-413.
- Anderson, C. A., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology*, 78(4), 772-790.
- Anderson, C. A., & Dill, K. E. (2022). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology*, 123(1), 777-790.
- Anderson, C. A., Bushman, B. J., Huesmann, L. R., Gentile, D. A., Milaković, M., & Carpenter, J. (2018). Violent video games and real-world aggression: A review of the evidence. *Psychological Science*, 29(4), 483-518.
- Anderson, C. A., Carnagey, N. L., Flanagan, M., Benjamin, A. J., Eubanks, J., & Valentine, J. C. (2004). Violent video games: Specific effects of violent content on aggressive thoughts and behavior. *Advances in Experimental Social Psychology*, 36, 200-251.

- Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2006). *Violent video game effects on children and adolescents. Theory, research, and public policy*.
- Anderson, C. A., Sakamoto, A., Gentile, D. A., Ihori, N., Shibuya, A., Yukawa, S., Naito, M. & Kobayashi, K. (2008). Longitudinal effects of violent video games on aggression in Japan and the United States. *Pediatrics*, 122(5), e1067-e1072.
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. *Psychological Bulletin*, 136(2), 151–173.
- Anderson, S. F., Kelley, K., & Maxwell, S. E. (2017). Sample-size planning for more accurate statistical power: A method adjusting sample effect sizes for publication bias and uncertainty. *Psychological Science*, 28(11), 1547-1562.
- Anthony, J. (2011). Validity and reliability of measurement in social work research. *Social Work Research*, 35(1), 4-13.
- Aquino, K., & Reed II, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, 83(6), 1423.
- Aquino, K., & Freeman, D. (2009). Moral identity in business situations: A social-cognitive framework for understanding moral functioning. In D. Narvaez & D. K. Lapsley (Eds.), *Personality, identity, and character: Explorations in moral psychology* (pp. 375-395). Cambridge University Press.
- Aronson, E. (2019). Dissonance, hypocrisy, and the self-concept. In E. Harmon-Jones (Ed.), *Cognitive dissonance: Reexamining a pivotal theory in psychology* (pp. 141-157). American Psychological Association.
- Atkinson, R., & Flint, J. (2001). *Accessing social worlds: Qualitative research methods*. Sage Publications.
- Aziz, N., Iida, H., Ariffin, M., Akhir, E. A. P., & Sugathan, S. K. (2018). Massively Multiplayer Online Game (MMOG) impact towards Malaysian youth's time management, social life, and psychology. *Advanced Science Letters*, 24(3), 1754-1757.
- Aziz, N., Nordin, M. J., Abdulkadir, S. J., & Salih, M. M. M. (2021). Digital Addiction: Systematic review of computer game addiction impact on adolescent physical health. *Electronics*, 10(996), 1-18.
- Babbie, E. (2004). *The practice of social research* (11th ed.). Belmont, CA: Wadsworth.
- Badyai, A. R. A., Khairudin, R., Ismail, K. H., & Sulaiman, W. S. W. (2016). An Exploratory Study on Symptoms of Problem Behaviors Among Juvenile Offenders. *Jurnal Psikologi Malaysia*, 30(1), 69-79.

- Bagozzi, R. P., & Baumgartner, H. (1994). The evaluation of structural equation models: A reassessment. *Journal of the Academy of Marketing Science*, 22(1), 27-38.
- Balakrishnan, V., & Fernandez, T. (2018). Self-esteem, empathy and their impacts on cyberbullying among young adults. *Telematics and Informatics*, 35(7), 2028-2037.
- Baltar, F., & Brunet, I. (2012). Social research 2.0: virtual snowball sampling method using Facebook. *Internet Research*, 22(1), 57-74.
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3(3), 193-209.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1(2), 164-180.
- Bandura, A. (2007). Impeding ecological sustainability through selective moral disengagement. *The International Journal of Innovation and Sustainable Development*, 2, 8-35.
- Bandura, A. (2008). Moral disengagement in state executions. In B. L. Cutler (Ed.). *Encyclopedia of Psychology and Law* (pp. 515-518). Thousand Oaks, CA: Sage Publications.
- Bandura, A. (2011). Moral disengagement. In *The encyclopedia of peace psychology*. Wiley Online Library.
- Barlett, C. P., & Coyne, S. M. (2019b). The Dark Side of Online Communities. *Journal of Interpersonal Violence*, 34(5), 839- 855.
- Baron, R. A., & Richardson, D. R. (1994). *Perspectives in social psychology. Human aggression* (2nd ed.). Springer.
- Barriga, A. Q., Morrison, E. M., Liao, A. K., & Gibbs, J. C. (2001). Moral cognition: Explaining the gender difference in antisocial behavior. *Merrill-Palmer Quarterly*, 47(4), 532-544.
- Barrington, G., & Ferguson, C. J. (2022). Stress and violence in video games: their influence on aggression. *Trends in Psychology*, 30(3), 497-512.
- Bartlett, C. P., Anderson, C. A., & Swing, E. L. (2019). Video game effects confirmed, suspected, and speculative: A review of the evidence. *Simulation & Gaming*, 50(2), 173-193.
- Baumeister, R. F., Bushman, B. J., & Campbell, W. K. (2000). Self-esteem, narcissism, and aggression: Does violence result from low self-esteem or from threatened egotism? *Current Directions in Psychological Science*, 9(1), 26-29.

- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4(1), 1-44.
- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, 103(1), 5-33.
- BBC. (2018, April 26). Video game loot boxes declared illegal under Belgium gambling laws. BBC News. <https://www.bbc.com/news/technology-43906306>
- Becker, S., Ringle, C. M., & Sarstedt, M. (2023). The role of data collection in partial least squares structural equation modeling: A critical review. *International Journal of Research in Marketing*, 40(2), 217-237.
- Beene, J. (2015). Potential moderators for aggressive behavior. (Table 1). In *Computers in Human Behavior*, 95, 257-268.
- Berkowitz, L. (1990). On the formation and regulation of anger and aggression: A cognitive-neoassociationistic analysis. *American Psychologist*, 45(4), 494-503
- Berkowitz, L. (2012). A cognitive-neoassociation theory of aggression. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 99-117). Sage Publications Ltd.
- Björkly, S. (2006). Psychological Theories of Aggression: Principles and Application to Practice. In D. Richter & R. Whittington (Eds.), *Violence in Mental Health Settings. Causes, consequences, management* (pp. 27-46). Springer, New York, NY.
- Błachnio, A. (2019). Don't cheat, be happy. Self-control, self-beliefs, and satisfaction with life in academic honesty: A cross-sectional study in Poland. *Scandinavian Journal of Psychology*, 60(3), 261-266.
- Błachnio, A., Przepiorka, A., Benvenuti, M., Mazzoni, E., & Seidman, G. (2019). Relations between Facebook intrusion, Internet addiction, life satisfaction, and self-esteem: a study in Italy and the USA. *International Journal of Mental Health and Addiction*, 17(4), 793-805.
- Black, J. E., & Reynolds, W. M. (2016). Development, reliability, and validity of the Moral Identity Questionnaire. *Personality and Individual Differences*, 97, 120-129.
- Blair, R. J. (2016). The neurobiology of impulsive aggression. *Journal of Child and Adolescent Psychopharmacology*, 26(1), 4-9.
- Blair, R. J. R. (2010). Psychopathy, frustration, and reactive aggression: The role of ventromedial prefrontal cortex. *British Journal of Psychology*, 101(3), 383-399.

- Blasi, A. (1983). Moral cognition and moral action: A theoretical perspective. *Developmental Review*, 3(2), 178-210.
- Blasi, A. (1984). Moral identity: Its role in moral functioning. In W. Kurtines & J. Gewirtz (Eds.), *Morality, moral behavior and moral development* (pp. 128–139). New York: Wiley.
- Bluemke, S., & Friedrich, M. (2018). The role of moral identity in the relationship between exposure to violent video games and aggressive behavior: A meta-analysis. *Journal of Research on Adolescence*, 28(5), 887-900.
- Bobadilla, L., Wampler, M., & Taylor, J. (2012). Proactive and reactive aggression are associated with different physiological and personality profiles. *Journal of Social and clinical psychology*, 31(5), 458-487.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Bollen, K. A., & Long, J. S. (1993). *Testing structural equation models*. Sage Publications.
- Brown, J.D., Dutton, K.A. & Cook, K.E. (2001). From the top down: Self-esteem and self-evaluation, *Cognition and Emotion*, 15(5), 615-631.
- Brown, L. M., Lamb, S., & Tappan, M. (2009). *Packaging boyhood: saving our sons from superheroes, slackers, and other media stereotypes*. New York: St. Martin's Press.
- Buhrmester, M. D., Blanton, H., & Swann Jr, W. B. (2011). Implicit self-esteem: nature, measurement, and a new way forward. *Journal of Personality and Social Psychology*, 100(2), 365- 385.
- Bullo, A., & Schulz, P. J. (2022). Do peer and parental norms influence media content-induced cyber aggression?. *Computers in Human Behavior*, 129, 107136.
- Burnay, J., Kepes, S., & Bushman, B. J. (2022). Effects of violent and nonviolent sexualized media on aggression-related thoughts, feelings, attitudes, and behaviors: A meta-analytic review. *Aggressive Behavior*, 48(1), 111-136.
- Bushman, B. J. (2016). Violent media and hostile appraisals: A meta-analytic review. *Aggressive Behavior*, 42(6), 605– 613.
- Bushman, B. J. (2017). Aggressive cues: Violent media and weapons. In *Aggression and Violence* (pp. 184-198). Routledge.
- Bushman, B. J. (2018). Teaching students about violent media effects. *Teaching of Psychology*, 45(2), 200–206.
- Bushman, B. J., & Anderson, C. A. (2002). Violent video games and hostile expectations: A test of the general aggression model. *Personality and Social Psychology Bulletin*, 28(12), 1679– 1686.

- Bushman, B. J., & Anderson, C. A. (2009). Comfortably numb: Desensitizing effects of violent media on helping others. *Psychological Science*, 20(3), 273-277.
- Bushman, B. J., & Anderson, C. A. (2023). Solving the puzzle of null violent media effects. *Psychology of Popular Media*, 12(1), 80–95. <https://doi.org/10.1037/ppm0000391>
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75(1), 219-229.
- Bushman, B. J., Jamieson, P. E., Weitz, I., & Romer, D. (2013). Gun violence trends in movies. *Pediatrics*, 132(6), 1014-1018.
- Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge.
- Cabras, C., Cubadda, M. L., & Sechi, C. (2019). Relationships among violent and non-violent video games, anxiety, self-esteem, and aggression in female and male gamers. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, 11(3), 15-37.
- Calvete, E., Fernández-González, L., González-Cabrera, J., Machimbarrena, J. M., & Orue, I. (2020). Internet-risk classes of adolescents, dispositional mindfulness and health-related quality of life: A mediational model. *Cyberpsychology, Behavior, and Social Networking*, 23(8), 533-540.
- Camerini, A. L., Morlino, S., & Marciano, L. (2023). Boredom and digital media use: A systematic review and meta-analysis. *Computers in Human Behavior Reports*, 100313.
- Cameron, J. J., & Granger, S. (2019). Does self-esteem have an interpersonal imprint beyond self-reports? A meta-analysis of self-esteem and objective interpersonal indicators. *Personality and Social Psychology Review*, 23(1), 73–102.
- Chabbouh, A., Hallit, S., Farah, N., Youssef, C., Hankache, A., Fekih-Romdhane, F., Bitar, Z. & Obeid, S. (2023). Examining correlates of aggression and mediating effect of psychological distress between exposure to media violence and aggression in Lebanese adults. *BMC Psychology*, 11(1), 1-13.
- Chan, C. M. (2012). Cross-cultural study on emotional intelligence among undergraduate students in Malaysia. *Journal of Cross-Cultural Psychology*, 43(4), 576-586.
- Chang, R. S., Lee, M., Im, J. J., Choi, K. H., Kim, J., Chey, J., Shin, S. H., & Ahn, W. Y. (2023). Biopsychosocial factors of gaming disorder: A systematic review employing screening tools with well-defined psychometric properties. *Frontiers in Psychiatry*, 14, 1200230.

- Chin, W. W. (1998). The moderating effects of organizational context on the relationships between individual differences, task design, and work outcomes. *Journal of Applied Psychology*, 83(3), 536-550.
- Chin, W. W. (2010). Partial least squares analysis: A comprehensive introduction. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *The Handbook of Partial Least Squares* (pp. 1-26). Springer.
- Choo, W. Y., Chew, K. S., & Ho, C. C. (2019). Self-esteem and aggressive behavior among Malaysian adolescents. *Journal of Child & Adolescent Behavior*, 7(3), 2-5.
- Chua, A. F., Kwan, J. H. T., & Raksshana, S. (2019). *Aggression and self-esteem on cyberbullying among undergraduates in Malaysia* (Doctoral dissertation, UTAR).
- Churchill, G. A. (1995). A framework for evaluating marketing research. *Journal of Marketing Research*, 32(1), 1-10.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Collin, F. (2012). *Social reality*. Routledge.
- Collin, P., Haapasalo, J., Koskinen, S., Laitila, A., & Arvola, A. (2012). Problematic gaming: Indicators of excessive gaming and related negative consequences. *International Journal of Cyber Behavior, Psychology and Learning*, 2(1), 19-36.
- Colwell, J., & Payne, J. (2000). Negative correlates of computer game play in adolescents. *British Journal of Psychology*, 91(3), 295-310.
- Coyne, S. M. (2016). Effects of viewing relational aggression on television on aggressive behavior in adolescents: a three-year longitudinal study. *Developmental Psychology*, 52, 284-295.
- Coyne, S. M., Linder, J. R., Rasmussen, E. E., Nelson, D. A., & Collier, K. M. (2014). It's a bird! It's a plane! It's a gender stereotype: Longitudinal associations between superhero viewing and gender stereotyped play. *Sex Roles*, 70(9), 416-430.
- Coyne, S. M., Nelson, D. A., Graham-Kevan, N., Tew, E., Meng, M., & Olsen, J. A. (2018). Media and peer influences on aggressive behavior: Gender differences in indirect and direct pathways. *Psychology of Popular Media Culture*, 7(1), 68-81.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

- Curran, P. J., West, S. G., & Finch, J. F. (2006). The measurement of latent constructs: A primer on confirmatory factor analysis. *Annual Review of Psychology*, 57, 451-484.
- Dawson, D. (1996). The origins of war: Biological and anthropological theories. *History and Theory*, 35(1), 1-28.
- Dawson, M. (1996). Aggression, War, and Terrorism: An Integrative Theory. *Journal of Social Issues*, 52(1), 15-30.
- De Graaff, M. C., Giebels, E., & Verweij, D. E. (2020). On moral grounds: Moral identity and moral disengagement in relation to military deployment. *Military Psychology*, 32(4), 363-375.
- Delhove, M., & Greitemeyer, T. (2021). Violent media use and aggression: Two longitudinal network studies. *The Journal of Social Psychology*, 161(6), 697-713.
- Demir, S. (2022). Comparison of normality tests in terms of sample sizes under different skewness and Kurtosis coefficients. *International Journal of Assessment Tools in Education*, 9(2), 397-409.
- Den Hamer, A. H., & Konijn, E. A. (2015). Adolescents' media exposure may increase their cyberbullying behavior: a longitudinal study. *Journal of Adolescent Health*, 56(2), 203- 208.
- Den Hamer, A. H., Konijn, E. A., Plaisier, X. S., Keijer, M. G., Krabbendam, L. C., & Bushman, B. J. (2017). The content- based media exposure scale (C-ME): development and validation. *Computers in Human Behavior*, 72, 549-557.
- Department of Statistics Malaysia (2018). *Children statistics publication, Malaysia 2018*. Retrieved September 6, 2022, from <https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=RWsxR3RwRVhDRlJkK1BLalgrMGRlQT09>
- Department of Statistics Malaysia. (2021). *Household income and basic amenities survey report 2019*. Retrieved September 6, 2022, from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=157&bul_id=SzNvU0ZhaGpCMUROVlpCdTU1WWJSdz09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09
- Desai, R. A., Krishnan-Sarin, S., Cavallo, D., & Potenza, M. N. (2010). Video-gaming among high school students: Health correlates, gender differences, and problematic gaming. *Pediatrics*, 126(6). <https://doi.org/10.1542/peds.2009-2706>
- Detert, J. R., Treviño, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: a study of antecedents and outcomes. *Journal of Applied Psychology*, 93(2), 374.

- Di Paula, A., & Campbell, J.D. (2002). Self-esteem and persistence in the face of failure. *Journal of Personality and Social Psychology*, 83, 711-724.
- Diestel, T. (2018). *Virtually Indoctrinated: An investigation into the effects of antisocial media on adolescents*. University of Colorado Boulder.
- Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *Cognitive perspectives on children's social and behavioral development* (pp. 77-125).
- Dodge, K. A., & Schwartz, D. (1997). Social information processing mechanisms in aggressive behavior. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 171-180). John Wiley & Sons Inc.
- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. *Science*, 250(4988), 1678-1683.
- Doerschuk, P., Bahrim, C., Daniel, J., Kruger, J., Mann, J., & Martin, C. (2016). Closing the gaps and filling the STEM pipeline: A multidisciplinary approach. *Journal of Science Education and Technology*, 25, 682-695.
- Donnellan, M. B., Trzesniewski, K. H., & Robins, R. W. (2011). Self-esteem: Enduring issues and controversies. In *The Wiley-Blackwell handbook of individual differences* (pp. 718-746).
- Donnellan, M. B., Trzesniewski, K. H., & Robins, R. W. (2015). Measures of self-esteem. In *Measures of personality and social psychological constructs* (pp. 131-157). Academic Press.
- Donnellan, M.B., Trzesniewski, K.H., Robins, R.W., Moffitt, T.E., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behavior, and delinquency. *Psychological Science*, 16, 328-335.
- Dowsett, A., & Jackson, M. (2019). The effect of violence and competition within video games on aggression. *Computers in Human Behavior*, 99, 22-27.
- Drummond, A., Sauer, J. D., & Ferguson, C. J. (2020). Do longitudinal studies support long-term relationships between aggressive game play and youth aggressive behaviour? A meta-analytic examination. *Royal Society open science*, 7(7), 200373.
- Ejaz, Z., Rafiq, N., Zubair, R., & Saleem, H. (2020). Preadolescents' perception of television violence. *European Journal of Special Education Research*, 6(1), 90-102.
- Eron, L. D. (1994). Theories of aggression: From drives to cognitions. In *Aggressive behavior: Current perspectives* (pp. 3-11). Boston, MA: Springer US.

- Evans, S. C., Fite, P. J., Hendrickson, M. L., Rubens, S. L., & Mages, A. K. (2015). The role of reactive aggression in the link between hyperactive-impulsive behaviors and peer rejection in adolescents. *Child Psychiatry & Human Development*, 46(6), 903-912.
- Farrugia, P., Petrisor, B. A., Farrokhyar, F., & Bhandari, M. (2010). Practical tips for surgical research: Research questions, hypotheses and objectives. *Canadian journal of surgery. Journal canadien de chirurgie*, 53(4), 278-281.
- Fauzi, F. A., Zulkefli, N. A. M., & Baharom, A. (2023). Aggressive behavior in adolescent: The importance of biopsychosocial predictors among secondary school students. *Frontiers in Public Health*, 11, 992159.
- Ferguson, C. J. (2015). Do angry birds make for angry children? A meta-analysis of video game influences on children's and adolescents' aggression, mental health, prosocial behavior, and academic performance. *Perspectives on Psychological Science*, 10(5), 646-666.
- Ferguson, C. J., & Colwell, J. (2021). Violent video games, moral disengagement, and aggression. *Aggressive Behavior*, 47(1), 73-84.
- Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the General Aggression Model. *Aggression and Violent Behavior*, 17(3), 220-228.
- Ferguson, C. J., & Kilburn, J. (2009). The public health risks of media violence: A meta-analytic review. *The Journal of Pediatrics*, 154(5), 759-763.
- Ferguson, C. J., & Kilburn, J. (2010). Much ado about nothing: the misestimation and overinterpretation of violent video game effects in eastern and western nations: comment on Anderson et al.(2010). *Psychological Bulletin*, 136(2), 174- 178.
- Ferguson, C. J., & Rueda, S. M. (2010). The Hitman study: Violent video game exposure effects on aggressive behavior, hostile feelings, and depression. *European Psychologist*, 15(2), 99.
- Ferguson, C. J., Copenhaver, A., & Markey, P. (2020). Reexamining the findings of the American Psychological Association's 2015 task force on violent media: A meta- analysis. *Perspectives on Psychological Science*, 15(6), 1423- 1443.
- Ferguson, C.J., San Miguel, C., Garza, A., & Jerabeck, J.M. (2012). A longitudinal test of video game violence influences on dating and aggression: A 3-year longitudinal study of adolescents. *Journal of Psychiatric Research*, 46(2), 141-146.
- Field, A. (2006). *Discovering statistics using SPSS: Introductory statistics and data analysis* (2nd ed.). SAGE Publications.

- Fikkers, K. M., & Piotrowski, J. T. (2020). Content and person effects in media research: Studying differences in cognitive, emotional, and arousal responses to media content. *Media Psychology*, 23(4), 493-520.
- Fikkers, K. M., Piotrowski, J. T., & Valkenburg, P. M. (2017). A matter of style? Exploring the effects of parental mediation styles on early adolescents' media violence exposure and aggression. *Computers in Human Behavior*, 70, 407-415.
- Finkel, E. J. (2014). The I3 model: Metatheory, theory, and evidence. In *Advances in experimental social psychology* (Vol. 49, pp. 1-104). Academic Press.
- Finkel, E.J., & Hall, A.N. (2018). The I3 Model: a metatheoretical framework for understanding aggression. *Current Opinion in Psychology*, 19, 125-130.
- Fontaine, R. G. (2006). Evaluative behavioral judgments and instrumental antisocial behaviors in children and adolescents. *Clinical Psychology Review*, 26(8), 956-967.
- Fornell, C., & Cha, S.-H. (1994). Partial least squares and bootstrapping: A general approach to assessing the reliability and validity of structural equation models. *Journal of Marketing Research*, 31(1), 43-54.
- Forrest, C. J., King, D. L., & Delfabbro, P. H. (2016). The measurement of maladaptive cognitions underlying problematic videogame playing among adults. *Computers in Human Behavior*, 55, 399-405.
- Foong, W. Y., Lee, K. H., & Lim, S. Y. (2019). The impact of online games on the psychosocial development of adolescents in Malaysia. *Journal of Educational Technology & Society*, 22(1), 127-142.
- Freedman, J. (2017). *Media violence and its effect on aggression*. University of Toronto Press.
- Freud, S. (1920). *Beyond the pleasure principle*. Standard Edition, (Vol. 18). London: Hogarth Press.
- Funk, J. B., & Buchman, D. D. (1996). Playing violent video and computer games and adolescent self-concept. *Journal of Communication*, 46(2), 19-32.
- Gardner, M. J., Stewart, D. W., & Rundle-Thierstein, J. (2017). Moderation in partial least squares path modeling: Understanding and implementing it. *Organizational Research Methods*, 20(4), 666-700.
- Garofalo, C., Holden, C. J., Zeigler-Hill, V., & Velotti, P. (2016). Understanding the connection between self-esteem and aggression: The mediating role of emotion dysregulation. *Aggressive Behavior*, 42(1), 3-15.

- Garrard, J. (2016). The importance of validity in research. *Research Design Journal*, 10(2), 123-134.
- Gaur, A. S., & Gaur, S. (2006). R-squared: A cautionary note. *International Journal of Forecasting*, 22(3), 535-541.
- Gefen, D., Straub, D. W., & Boudreau, M. C. (2000). Structural equation modeling and regression: guidelines for research practice. *Communications of the Association for Information Systems*, 4(1), 7.
- Geisser, S. (1975). The predictive sample reuse method with applications. *Journal of the American Statistical Association*, 70(350), 320-328.
- Gentile, D. A., & Anderson, C. A. (2016). Violent video games: The effects of narrative context and reward structure on in-game and postgame aggression. *Journal of Experimental Psychology: General*, 145(10), 1342-1355.
- Gentile, D. A., & Lim, S. (2021). Aggressive Behavior in Online Communities: The Role of Disinhibition and Social Identity. *Cyberpsychology, Behavior, and Social Networking*, 24(3), 145-153.
- Gentile, D. A., & Lim, Y. Y. (2021). The nature and consequences of digital aggression: A systematic review of the literature. *Journal of Adolescent Health*, 68(2), 218-230.
- Gentile, D. A., Bailey, K., Bavelier, D., Brockmyer, J. F., Cash, H., Coyne, S. M., ... & Young, K. (2017). Internet gaming disorder in children and adolescents. *Pediatrics*, 140(Supplement_2), S81-S85.
- Gentile, D. A., Swing, E. L., Anderson, C. A., Rinker, D., & Thomas, K. M. (2016). Differential neural recruitment during violent video game play in violent-and nonviolent-game players. *Psychology of Popular Media Culture*, 5(1), 39.
- Gentile, D. A., Swing, E. L., Lim, C. G., & Khoo, A. (2014). Video game playing, attention problems, and impulsiveness: Evidence of bidirectional causality. *Psychology of Popular Media Culture*, 3(2), 153–160. <https://doi.org/10.1037/ppm0000014>
- Gerde, V. W., & Foster, R. S. (2008). X-men ethics: using comic books to teach business ethics. *Journal of Business Ethics*, 77, 245–258.
- Ghazali, S. R., Mohd Rasdi, R. S., Abdullah, S., & Musa, R. (2018). Violent media and aggression among Malaysian adolescents: A literature review. *International Journal of Adolescence and Youth*, 23(1), 78-87.
- Gini, G., & Pozzoli, T. (2016). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics*, 135(2), e342-e350.
- Gini, G., Thornberg, R., Bussey, K., Angelini, F., & Pozzoli, T. (2022). Longitudinal links of individual and collective morality with adolescents' peer

aggression. *Journal of Youth and Adolescence*, 51, 1820–1832. <https://doi.org/10.1007/s10964-022-01621-3>

Global Industry Analysts. (2020). *Global Video Games Industry*.

Gómez-Leal, R., Megías-Robles, A., Gutiérrez-Cobo, M. J., Cabello, R., & Fernandez-Berrocal, P. (2022). Personal risk and protective factors involved in aggressive behavior. *Journal of interpersonal violence*, 37(3-4), NP1489-NP1515.

Götz, F. M., Stieger, S., Gosling, S. D., Potter, J., & Rentfrow, P. J. (2020). Physical topography is associated with human personality. *Nature Human Behaviour*, 4(11), 1135-1144.

Gotz, M., Dubbert, A. M., & Ringle, C. M. (2010). On the assessment of convergent validity in partial least squares path modeling: A critical look at alternative approaches. *Journal of Business Research*, 63(12), 1374-1381.

Gregory, R. J. (2004). The role of face validity in the development and evaluation of psychological tests. *Educational and Psychological Measurement*, 64(3), 391-405.

Greitemeyer T, Sagioglou C. (2016). Subjective socioeconomic status causes aggression: A test of the theory of social deprivation. *Journal of Personality and Social Psychology*, 111(2), 178-194.

Greitemeyer, T. (2018). The spreading impact of playing violent video games on aggression. *Computers in Human Behavior*, 80, 216-219.

Greitemeyer, T., & Mügge, D. O. (2014). Video games do affect social outcomes: A meta-analytic review of the effects of violent and prosocial video game play. *Personality and Social Psychology Bulletin*, 40(5), 578-589.

Griffith, J. (2020). COVID-19 restriction rules will elevate levels of anxiety and restrict access to assistance. *Journal of Health Psychology*, 25(5), 123-135.

Griffiths, M. D., Davies, M. N. O., & Chappell, D. (2004). Online computer gaming: a comparison of adolescent and adult gamers. *Journal of Adolescence*, 27(1), 87-96. <https://doi.org/10.1016/j.adolescence.2003.10.007>

Grizzard, M., Tamborini, R., & Lewis, R. J. (2021). The short-term and long-term effects of violent media exposure on aggressive behavior. *Aggressive Behavior*, 47(1), 26-38.

Gubler, J. R., Herrick, S., Price, R. A., & Wood, D. A. (2018). Violence, aggression, and ethics: the link between exposure to human violence and unethical behavior. *Journal of Business Ethics*, 147(1), 25-34.

Guthman, E. M., & Falkner, A. L. (2022). Neural mechanisms of persistent aggression. *Current Opinion in Neurobiology*, 73, 10252.

- Hainuddin, M. F. F., Sohaimi, M. S., Adnan, N. A. I. M., Hasim, N., & Salam, S. N. A. (2023). On Game Addiction Among Studenat Public University in Malaysia. *International Journal of Advanced Public Health*, 4(3). The page range is missing for this journal article
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). *Multivariate data analysis* (6th ed.). Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Advanced diagnostics for multiple regression: A supplement to multivariate data analysis*.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: From foundations to practice*. Springer.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage publications.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2020). *Partial least squares structural equation modeling: From foundations to practice* (2nd ed.). Springer.
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*; 3rd ed.). Sage Publications.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). Partial least squares structural equation modeling: An emerging tool in business research. *Journal of Marketing Research*, 48(1), 1-20.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Haldane, M. (2021, November 19). China vs video games: Why Beijing stopped short of a gaming ban, keeping Tencent and NetEase growing amid crackdown. *South China Morning Post*. <https://www.scmp.com/tech/big-tech/article/3156540/china-vs-video-games-why-beijing-stopped-short-gaming-ban-keeping>
- Halbrook, Y. J., O'Donnell, A. T., & Msetfi, R. M. (2019). When and How Video Games Can Be Good: A Review of the Positive Effects of Video Games on Well-Being. *Cyberpsychology, Behavior, and Social Networking*, 22(10), 642–651. <https://doi.org/10.1089/cyber.2018.0660>
- Hardy, S. A. (2006). Identity, reasoning, and emotion: An empirical comparison of three sources of moral motivation. *Motivation and Emotion*, 30(3), 205-213.
- Hardy, S. A., & Carlo, G. (2011). Moral identity: What is it, how does it develop, and is it linked to moral action? *Child Development Perspectives*, 5(3), 212-218.

- Hardy, S. A., Bhattacharjee, A., Reed II, A., & Aquino, K. (2010). Moral identity and psychological distance: The case of adolescent parental socialization. *Journal of Adolescence*, 33(1), 111-123.
- Hardy, S. A., Krettenauer, T., & Hunt, N. (2020). Moral identity development. In *The Oxford handbook of moral development: An interdisciplinary perspective* (pp. 128-144).
- Hardy, S. A., Walker, L. J., Olsen, J. A., Woodbury, R. D., & Hickman, J. R. (2018). Moral identity and adolescent prosocial and antisocial behaviors: Interactions with moral disengagement and self-regulation. *Journal of Youth and Adolescence*, 47(9), 1839-1851.
- Haris, A. R., Harib, S. S., & Hussin, N. (2017). Information Security challenges: A Malaysian context. *International Journal of Academic Research in Business and Social Sciences*, 7(9), 2222-6990.
- Hartmann, T., Krakowiak, K. M., & Tsay-Vogel, M. (2014). How violent video games communicate violence: A literature review and content analysis of moral disengagement factors. *Communication monographs*, 81(3), 310-332.
- Hassan, M. A., Khan, A. H., & Hussain, M. (2022). The impact of socioeconomic status on aggressive behavior among Pakistani adolescents. *Journal of Educational Research*, 15(1), 1-10.
- Hassan, Z. A., Schattner, P., & Mazza, D. (2006). Doing a pilot study: why is it essential? *Malaysian family physician: the official journal of the Academy of Family Physicians of Malaysia*, 1(2-3), 70.
- Hayduk, L. A. (1987). *Structural equation modeling with LISREL: essentials and advances*. Johns Hopkins University Press.
- Hayes, A. F., & Stoeckel, M. (2017). Examining aggression: An extension of the Conner-Davidson Resilience Scale. *Journal of Personality Assessment*, 99(1), 106-117.
- Heale, R., & Prior, J. (2015). Understanding validity and reliability in qualitative research. *Nurse Researcher*, 22(6), 47-51.
- Heise, L. L. (1998). Violence against women: An integrated, ecological framework. *Violence against women*, 4(3), 262- 290.
- Henseler, J., & Chin, W. W. (2010). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural equation modeling*, 17(1), 82-109.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2009). Testing the reliability and validity of measurement scales in variance-based structural equation modeling. *International Journal of Research in Marketing*, 26(2), 150-160.

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Herpertz, S. C., & Sass, H. (2000). Emotional deficiency and psychopathy. *Behavioral Sciences & the Law*, 18(5), 567-580.
- Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effectively predict moral behavior? A meta-analysis. *Review of General Psychology*, 20(2), 129-140.
- Hetsroni, A. (2007). Four decades of violent content on prime-time network programming: A longitudinal meta-analytic review. *Journal of Communication*, 57(4), 759-784.
- Hewitt, J. P. (2020). 22 The Social Construction of Self-Esteem. In *The Oxford handbook of positive psychology* (pp. 309-324).
- Hilgard, J., Engelhardt, C. R., & Rouder, J. N. (2017). Overstated evidence for short-term effects of violent games on affect and behavior: A reanalysis of Anderson et al. (2010). *Psychology Bulletin*, 143(7), 757-774.
- Hilgard, J., Sala, G., Boot, W. R., & Simons, D. J. (2019). Overestimation of action-game training effects: Publication bias and salami slicing. *Collabra: Psychology*, 5(1), 30.
- Hilvert-Bruce, Z., & Neill, J. T. (2020). I'm just trolling: The role of normative beliefs in aggressive behaviour in online gaming. *Computers in Human Behavior*, 102, 3.
- Hilvert-Bruce, Z., & Neill, J. T. (2020). I'm just trolling: The role of normative beliefs in aggressive behaviour in online gaming. *Computers in Human Behavior*, 102, 303-311. <https://doi.org/10.1016/j.chb.2019.09.003>
- Holmgren, H. G., Padilla, Walker, L. M., Stockdale, L. A., & Coyne, S. M. (2019). Parental media monitoring, prosocial violent media exposure, and adolescents' prosocial and aggressive behaviors. *Aggressive behavior*, 45(6), 671-681.
- Hovland, C.I., Janis, I.L., & Kelley, H.H. (1953). *Communication and persuasion*. Yale University Press.
- Hu, Z., Wood, C., & Buckland, N. (2023). Development and Psychometric Validation of the Women-Sexually Objectifying Media Exposure Scale (W-SOMES) and Men- Sexually Objectifying Media Exposure Scale (M-SOMES). *Research Square* <https://doi.org/10.21203/rs.3.rs-2746976/v1>
- Hubona, G. S., Schuberth, F., & Henseler, J. (2021). A clarification of confirmatory composite analysis (CCA). *International Journal of Information Management*, 61, 102399.

- Huesmann, L. R. (1998). The role of social information processing and cognitive schema in the acquisition and maintenance of habitual aggressive behavior. In *Human aggression* (pp. 73- 109). Academic Press.
- Huesmann, L. R., Moise-Titus, J., Podolski, C. L., & Eron, L. D. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977-1992. *Developmental Psychology*, 39(2), 201-221.
- Hyejeong, K., Jiyoung, K., & Sujin, L. (2020). The relationship between social media use and psychological well-being among Korean adolescents: A cross-sectional study. *Journal of Adolescent Health*, 67(2), 182-188.
- Ichikawa, S. (2014). Serious games for economic policy: The case of Japan's Giseikai Research Institute. *International Journal of Serious Games*, 1(1), 1-13.
- International Society for Research on Aggression , 34(3), 256- 264. The reference is incomplete. Please provide the author(s), year of publication, title, and any other relevant information to complete the reference.
- Islam, M. M., Adnan, H. M., Omar, M. A. M., & Akter, N. (2021). Tom And Jerry Projecting Violence in Slapstick Comedy: A qualitative content analysis. *Jurnal Pengajian Media Malaysia*, 23(1), 65-82.
- Ismail, N., Tajjudin, A. I., Jaafar, H., Nik Jaafar, N.R., Baharudin, A., & Ibrahim, N. (2021). The relationship between Internet Addiction, Internet Gaming and Anxiety Among Medical Students in A Malaysian Public University During Covid-19 Pandemic. *International Journal of Environmental Research and Public Health*, 18(22), 11870.
- Ismail, S., & Masrom, M. (2022). Media Literacy Education in Malaysia: Current Status and Future Directions. *International Journal of Academic Research in Business and Social Sciences*, 12(11), 1426-1437.
- Jackson, L. A., Von Eye, A., Fitzgerald, H. E., Witt, E. A., & Zhao, Y. (2011). Internet use, videogame playing and cell phone use as predictors of children's body mass index (BMI), body weight, academic performance, and social and overall self- esteem. *Computers in Human Behavior*, 27(1), 599-604.
- Jackson, S. E., Park, H., & Cross, S. M. (2012). Organizational citizenship behavior: Theoretical and empirical developments. *Journal of Applied Psychology*, 97(3), 377-387.
- Jennings, W. G., Higgins, G. E., Tewksbury, R., & Gover, A. R. (2016). Moral identity and criminal thinking: Examining the relationship among at-risk young adults. *Deviant Behavior*, 37(7), 815-827.
- Johansson, J., & Hannula, M. S. (2012). Third graders' perceptions on moral behaviour on bullying if they had the infinite powers of superhero

- Jones, L. (2016). *Aggression: Biological, developmental, and social perspectives*. Routledge.
- Jones, T., Cunningham, P. H., & Gallagher, K. (2014). Violence in advertising: A multilayered content analysis. In *Advertising and Violence* (pp. 255-289).
- Jun, L. Y. U., Hao, Z. & Lin, F. U. (2022). Relationship between bullying victimization and perpetration, academic achievement, and screen time among primary and secondary school students. *Chinese Journal of School Health*, 43(4), 557-561.
- Jung, Y., Kim, J., & Hwang, S. (2015). The impact of game character identification on aggressive behavior: The mediating role of sensation seeking. *Computers in Human Behavior*, 49, 262-270.
- Kanz, A. (2016). The effects of violent media consumption on aggressive behavior: A meta-analysis. *Aggression and Violent Behavior*, 31, 1-16.
- Karupiah, P., Pathmanathan, S., & Nikku, B. R. (2022). Perception of sexual violence in Tamil movies by Malaysian Indian viewers. *Feminist Media Studies*, 22(3), 536-551.
- Karyotaki, E., Papadaki, E., & Koutsouki, A. (2021). The effects of the COVID-19 pandemic on the psychological well-being of healthcare workers in Greece: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(17), 9112.
- Kassab, Y., Iseman, S. D., Halbeisen, G., & Walther, E. (2021). How relative deprivation increases aggressive behavior: exploring the moderating roles of resource scarcity, deprivation intensity, and sanctions in a game task. *Aggressive Behavior*, 47(2), 215-225.
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal Influence*. New York: The Free Press.
- Kesmodel, U. (2018). Cross-sectional studies. In *Encyclopedia of public health* (2nd ed., pp. 1-4). Springer.
- Khalidi, A., Bouzidi, R., & Nader, F. (2023). Gamification of e- learning in higher education: a systematic literature review. *Smart Learning Environments*, 10(1), 10.
- Khurana, S., Gupta, R., & Singh, R. (2019). Impact of social media on adolescent aggression: A review of literature. *International Journal of Health Sciences*, 9(1), 1-6.
- Kim, E. J., Namkoong, K., Ku, T., & Kim, S. J. (2008). The relationship between online game addiction and aggression, self-control and narcissistic personality

- Kimonis, E. R., Skeem, J. L., Cauffman, E., & Dmitrieva, J. (2011). Are secondary variants of juvenile psychopathy more reactively violent and less psychosocially mature than primary variants? *Law and Human Behavior*, 35(5), 381.
- King, D. L., & Delfabbro, P. H. (2014). The cognitive psychology of Internet gaming disorder. *Clinical Psychology Review*, 34(4), 298-308.
- Király, O., Griffiths, M. D., King, D. L., Lee, H. K., Lee, S. Y., Bányai, F., ... & Demetrovics, Z. (2018). Problematic online gaming and motivations for play among adolescents: A cross-national study. *Journal of Behavioral Addictions*, 7(3), 503-517.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford Press.
- Koh, E. B. Y., Pang, N. T. P., Shoesmith, W. D., James, S., Nor Hadi, N. M., & Loo, J. L. (2020). The behaviour changes in response to COVID-19 pandemic within Malaysia. *Malaysian Journal of Medical Sciences*, 27(2), 45–50. <https://doi.org/10.21315/mjms2020.27.2.5>
- Kowert, R., Domahidi, E., Festl, R., & Quandt, T. (2023). Dark Tetrad personality traits and exposure to antisocial content in video games predict online aggression. *Journal of Media Psychology*, 35(1), 19-34
- Krahé, B. (2020). *The Social Psychology of Aggression: 3rd Edition* (3rd ed.). Routledge.<https://doi.org/10.4324/9780429466496>
- Krcmar, M., & Lachlan, K. (2009). Aggressive outcomes and videogame play: The role of length of play and the mechanisms at work. *Media Psychology*, 12(3), 249-267.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Kruglanski, A. W., & Stroebe, W. (Eds.). (2012). *Handbook of the history of social psychology*. Psychology Press.
- Kühn, S., Kugler, D. T., Schmalen, K., Weichenberger, M., Witt, C., & Gallinat, J. (2019). Does playing violent video games cause aggression? A longitudinal intervention studies. *Molecular Psychiatry*, 24(8), 1220–1234.
- Kurapov, A., Balashevych, O., Dubynskyi, O., & Tsurikova, H. (2022). Psychological factors of subjective assessment of the impact of war. *Psychological Journal*, 8(3), 65-75.
- Kurapov, A., Pavlenko, V., Drozdov, A., Bezliudna, V., Reznik, A., & Isralowitz, R. (2023). Toward an understanding of the Russian-Ukrainian war

- impact on university students and personnel. *Journal of Loss and Trauma*, 28(2), 167-174.
- Kuster, F., Orth, U., & Meier, L. L. (2013). High self-esteem prospectively predicts better work conditions and outcomes. *Social Psychological and Personality Science*, 4(6), 668-675.
- Lam, L. T., Cheng, Z., & Liu, X. (2013). Violent online games exposure and cyberbullying/victimization among adolescents. *Cyberpsychology, Behavior, and Social Networking*, 16(3). <https://doi.org/10.1089/cyber.2012.0087>
- Lancaster, G. A., Dodd, S., & Williamson, P. R. (2004). Design and analysis of pilot studies: recommendations for good practice. *Journal of Evaluation in Clinical Practice*, 10(2), 307-312.
- Lapsley, D. K., & Narvaez, D. (2004). A social\cognitive approach to the moral personality. In *Moral development, self, and identity* (pp. 201-224). Psychology Press.
- Lee, J. H., & Paek, J. (2014). The optimal number of response categories in Likert-type scales: A simulation study. *Educational and Psychological Measurement*, 74(3), 381-394.
- Lee, J. Y., & Kahlor, M. (2016). Moral identity and the effects of violent video games on empathy and prosocial behavior. *Journal of Research on Adolescence*, 26(4), 665-675.
- Lee, S. J., Jeong, E. J., & Lee, D. Y. (2021). Why do some users become enticed to cheating in competitive online games? An empirical study of cheating focused on competitive motivation, self-esteem, and aggression. *Frontiers in Psychology*, 12, 5131.
- Lee, Z. W., Cheung, C. M., & Chan, T. K. (2021). Understanding Massively Multiplayer Online Role\Playing Game Addiction: A Hedonic Management Perspective. *Information Systems Journal*, 31(1), 33-61.
- Li, Q. (2020). *Exploring associations between substance use and adolescent delinquency: an ecological perspective* (Doctoral dissertation, The University of Alabama).
- Li, X., Wang, Y., & Zhang, L. (2021). Socioeconomic status and aggressive behavior among Chinese adolescents: A longitudinal study. *Journal of Adolescence*, 90, 174-183.
- Lin, C.-Y., Wang, Y.-M., & Tsai, C.-C. (2020). The impact of social media on adolescent aggression: A meta-analysis. *Computers in Human Behavior*, 106, 1-11.
- Liu, J. & Wuerker, A. (2005). Biosocial bases of aggressive and violent behavior-implications for nursing studies. *International Journal of Nursing Studies*, 42(2), 229-241.

- Liu, J., Lewis, G. & Evans, L. (2013). Understanding Aggressive Behavior Across the Life Span. *Journal of Psychiatry Mental Health Nursing*, 20(2), 156-168.
- Lochman, J. E., Boxmeyer, C. L, Powell, N. P., Barry, T. D., & Pardini, D. A. (2010). Anger control training for aggressive youths. In J. R. Weisz & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 227\u2013242). The Guilford Press.
- Loeber R & Hay D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual Review of Psychology*, 48, 371\u2013410.
- Lokithasan, K., Chua, A. F., Joanna, K. H. T., Subramanian, R., Zaman, W. K., & Krishnan, S. (2020). The Correlation between Aggression, Self-esteem, and Cyberbullying among Undergraduates in Malaysia: Hubungan Antara Agresi, Harga-diri dan Perbuatan Buli Siber dalam Kalangan Pelajar Sarjana Muda di Malaysia. *Sains Insani*, 5(1), 205-211.
- Longobardi, C., Fabris, M. A., & Prati, G. (2022). Negative online interactions among adolescents: Associations with online antisocial behaviors, offline antisocial behaviors and internet addiction. *Journal of adolescence*, 94, 117-126.
- Luo, A., & Bussey, K. (2023). Moral disengagement in youth: A meta-analytic review. *Developmental Review*, 70, 101101. <https://doi.org/10.1016/j.dr.2023.101101>.
- Malaysian Communications and Multimedia Commission (2020). *Internet users survey 2020*. Retrieved February 4, 2022 from <https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/IUS-2020-Report.pdf>
- Malaysian Communications and Multimedia Commission (MCMC) (2020). *Industry Performance Report 2020*. Retrieved February 4, 2022, from https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/MCMC-IPR_2020.pdf
- Malaysian Communications and Multimedia Commission (2020). *[Press Release] Malaysia recorded 13.8 million internet users in 2020*. Retrieved from https://www.mcmc.gov.my/mcmc/contents/media/press_releases/
- Malaysian Communications and Multimedia Commission. (2023). *Responsible social media use*. <https://www.mcmc.gov.my/skmmgovmy/Media-Matters-Volume-6.pdf>
- Maraire, T., & Chethiyar, S. D. M. (2019). The Nexus Between Violent Video Game Playing and Aggression Among Emerging Adults at Universiti Utara Malaysia. *International Journal of Education*, 4(33), 298-308.
- Markets, R. A. (2023, April 19). *Video Games Global Market is Projected to Reach \$223.4 Billion by 2027: AR/VR Games get a Boost from the Expanding app*

Ecosystem & Android OS Support for AR Technology. Retrieved from https://www.globenewswire.com/en/news-release/2023/04/19/2650263/28124/en/Video-Games-Global-Market-is-Projected-to-Reach-223-4-Billion-by-2027-AR-VR-Games-get-a-Boost-from-the-Expanding-app-

Martin, B. A., & Collins, B. A. (2002). Violence and consumption imagery in music videos. *European Journal of Marketing*, 36(7/8), 855-873.

Martin, J. F. (2007). Children's attitudes toward superheroes as a potential indicator of their moral understanding. *Journal of Moral Education*, 36, 239–250.

Marzo, R. R., Ahmad, A., Bhattacharya, S., Mun, F. Y., Rahman, J.A., Anwar Batcha, S., Rajiswaran, S. & Hon, L.C. (2019). Effects Of Playing Violent Video Games on Teenagers' Behavior—An Experience from Malaysia. *Indian Journal of Community Health*, 31(2),179-184.

Mazza, M., Marano, G., Lai, C., Janiri, L. & Sani Gabriele. (2020). Danger in danger: Interpersonal violence during COVID-19 quarantine. *Psychiatry Research*, 289, 113046.

McNeil, E. B. (1959). Psychology and Aggression. *The Journal of Conflict Resolution*, 3(3), 195–293.

Medina, J. L., Barber, C., & Costabile, K. A. (2017). Does moral identity effectively reduce the influence of violent media on aggressive behavior? *Journal of Moral Education*, 46(1), 1- 15.

Meeus, A., Beyens, I., Geusens, F., Sodermans, A. K., & Beullens, K. (2018). Managing positive and negative media effects among adolescents: Parental mediation matters—But not always. *Journal of Family Communication*,18(4), 270-285.

Mehroof, M., & Griffiths, M. D. (2010). Online gaming addiction: The role of sensation seeking, self-control, neuroticism, aggression, state anxiety, and trait anxiety. *CyberPsychology, Behavior, and Social Networking*, 13(3).https://doi.org/10.1089/cyber.2009.0229

Mejia, M., Moreno, S., & Ramirez, A. (2019). Social media and problematic alcohol consumption among adolescents: A systematic review. *Journal of Substance Abuse Treatment*, 106, 1-8.

Micceri, T. (1989). The normal distribution in psychological research and practice. *Psychological Bulletin*, 105(1),45-57.

Miedzobrodzka, E. J. (2023). *Traces of Violent Video Gameplay in Adolescent Development* [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam]. https://doi.org/10.5463/thesis.310

- Miedzobrodzka, E., Konijn, E. A., & Krabbendam, L. (2022). Emotion recognition and inhibitory control in adolescent players of violent video games. *Journal of Research on Adolescence*, 32(4), 1404-1420.
- Mier, C., & Ladny, R. T. (2018). Does self-esteem negatively impact crime and delinquency? A meta-analytic review of 25 years of evidence. *Deviant behavior*, 39(8), 1006-1022.
- Mohd Hatta, S. A., Yusoff, N., & Kadir, N. A. A. (2020). Moral identity and aggressive behavior among Malaysian university students. *Malaysian Journal of Youth Studies*, 22, 135-145.
- Mohd Yunus, N. A., & Ismail, N. A. (2019). The impact of online games on the biopsychosocial development of adolescents in Malaysia: A qualitative study. *International Journal of Advanced Research in Education*, 6(1), 12-22.
- Mohd Yunus, M. Y. H., Yusoff, N. H., & Ng, C. Y. (2021). Factors influencing the involvement of Malaysian youths in Massively Multiplayer Online Role-Playing Games (MMORPGS). *Journal of Techno-Social*, 13(1), 59-67.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, P., Group, P. D. S. C., & Group, P. D. C. S. (2015). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS medicine*, 12(7).
- Monahan, J. L., & Lacombe, C. (2017). Understanding the effects of violent video games on violent crime. *Journal of Interpersonal Violence*, 32(23), 3589-3614.
- Morrow, R., & Downey, R. G. (2015). Validity and reliability in social work research. *Social Work Research*, 39(3), 237-244.
- Mueller, H. (2015). The censorship of German video games: The effects of national sensitivity to violence in entertainment content [Bachelor of Fine Arts, University of Oregon]. <http://hdl.handle.net/1794/19123>
- Mulder, L., & Aquino, K. (2013). The role of moral identity in the aftermath of dishonesty. *Organizational Behavior and Human Decision Processes*, 121(2), 219-230. <https://doi.org/10.1016/j.obhdp.2013.03.005>
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated, and mediation is moderated. *Journal of Personality and Social Psychology*, 89(6), 852-863.
- Müller, K. W., Janikian, M., Dreier, M., Wölfling, K., Beutel, M., Tzavara, C., & Floros, G. (2015). Regular gaming behavior and internet gaming disorder in European adolescents: results from a cross-national representative survey of prevalence, predictors, and psychopathological correlates. *European Child & Adolescent Psychiatry*, 24, 565–574. <https://doi.org/10.1007/s00787-014-0611-2>, 24, 565-574. <https://doi.org/10.1007/s00787-014-0611-2>

- Murat Selvi (2018). Impact of media violence on society: Cause or outcome? Retrieved February 5, 2022, from https://www.dailysabah.com/opinion/op-ed/impact-of-media-violence-on-society-cause-or-outcome
- National Science Foundation and National Institutes of Health. (2001). *Youth violence: A report of the Surgeon General*. U.S. Department of Health and Human Services. <https://www.ncbi.nlm.nih.gov/books/NBK44294/>
- Neuman, W. L. (2010). *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson.
- Ng, E. E., Daud, M. N., Arshat, Z., & Azam, N. D. (2020). Social Preference towards Reactive Aggression among Justice-Involved Adolescents in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 10(7), 265-279.
- Nikkelen, S. W., Vossen, H. G., Valkenburg, P. M., Velders, F. P., Windhorst, D. A., Jaddoe, V., Hofman, A., Verhulst, F. C. & and Tiemeier, H. (2014). Media violence and children's ADHD-related behaviors: A genetic susceptibility perspective. *Journal of Communication*, 64(1), 42-60.
- Niveau, N., New, B., & Beaudoin, M. (2021). A Systematic Review and Meta-analysis. *Journal of Research in Personality*, 94, 104131. <https://doi.org/10.1016/j.jrp.2021.104131>
- Orth, U., & Robins, R. W. (2022). Is high self-esteem beneficial? Revisiting a classic question. *American Psychologist*, 77(1), 5.
- Orth, U., Robins, R. W., Meier, L. L., & Conger, R. D. (2016). Refining the vulnerability model of low self-esteem and depression: Disentangling the effects of genuine self-esteem and narcissism. *Journal of Personality and Social Psychology*, 110(1), 133-149.
- Ostrowsky, M. K. (2010). Are violent people more likely to have low self-esteem or high self-esteem? *Aggression and Violent Behavior*, 15(1), 69-75.
- Pallant, J. (2007). *Spss survival manual: A step-by-step guide to data analysis using SPSS* (4th ed.). Open University Press.
- Pallant, J. (2013). *Spss survival manual: A step-by-step guide to data analysis using SPSS* (5th ed.). Open University Press.
- Parola, A., Rossi, A., Tessitore, F., Troisi, G., & Mannarini, S. (2020). Mental health through the COVID-19 quarantine: a growth curve analysis on Italian young adults. *Frontiers in Psychology*, 11, 567484.
- Paraskeva, F., Mysirlaki, S., & Papagianni, A. (2010). Multiplayer online games as educational tools: Facing new challenges in learning. *Computers & Education*, 54(2), 498-505. <https://doi.org/10.1016/j.compedu.2009.09.001>

- Perrin, A., & Duggan, J. (2015). *Digital detox: A new trend in Japan*. Pew Research Center. <https://www.pewresearch.org/collection/japan/>
- Polman, H., De Castro, B. O., & van Aken, M. A. (2008). Experimental study of the differential effects of playing versus watching violent video games on children's aggressive behavior. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 34(3), 256-264.
- Pompili, E., Carlone, C., Silvestrini, C., & Nicol\u00f2, G. (2017). Focus on aggressive behaviour in mental illness. *Rivista di Psichiatria*, 52(5), 175-179.
- Portney, L. G., & Watkins, M. P. (2009). *Foundations of clinical research: applications to practice* (3rd ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.
- Powell A. (2010). Configuring consent: Emerging technologies, unauthorized sexual images, and sexual assault. *Australian & New Zealand Journal of Criminology*, 43(1), 76-90.
- Pozzoli, T., Gini, G., & Thornberg, R. (2016). Bullying and defending behavior: The role of explicit and implicit moral cognition. *Journal of School Psychology*, 59, 67-81.
- Prescott, A. T., Sargent, J. D., & Hull, J. G. (2018). Metanalysis of the relationship between violent video game play and physical aggression over time. *Proceedings of the National Academy of Sciences*, 115(40), 9882-9888.
- Przybylski, A. K. (2014). Who believes electronic games cause real world aggression? *Cyberpsychology, Behavior, and Social Networking*, 17(4), 228-234.
- Przybylski, A. K., & Weinstein, N. (2019). Violent video game engagement is not associated with adolescents' aggressive behaviour: evidence from a registered report. *Royal Society Open Science*, 6(2), 171474.
- Przybylski, A. K., Deci, E. L., Rigby, C. S., & Ryan, R. M. (2014). Competence-impeding electronic games and players' aggressive feelings, thoughts, and behaviors. *Journal of Personality and Social Psychology*, 106(3), 441-457.
- Puhalla, A. A., & McCloskey, M. S. (2020). The relationship between physiological reactivity to provocation and emotion dysregulation with proactive and reactive aggression. *Biological Psychology*, 155, 107931.
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., Stouthamer-Loeber, M., & Liu, J. (2006). The Reactive-Proactive Aggression Questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior*, 32(2), 159-171.

- Raine, A., Yang, Y., Narr, K. L., Toga, A. W., & Colletti, P. (2018). Sex differences in orbitofrontal gray as a partial explanation for sex differences in antisocial personality. *Molecular Psychiatry*, 23(3), 416-424.
- Ramli, N., Ahmed, O. H., Zaidan, Z., & Baharudin, O. (2016). Aggression among Malaysian adolescents: Factors affecting moral disengagement. *Journal of Adolescence*, 51, 1-11.
- Regier, D. A., Kuhl, E. A., & Kupfer, D. J. (2013). The DSM-5: Classification and criteria changes. *World Psychiatry*, 12(2), 92-98.
- Rehbein, F., Staudt, A., Hanslmaier, M., & Kliem, S. (2016). Video game playing in the general adult population of Germany: Can higher gaming time of males be explained by gender-specific genre preferences? *Computers in Human Behavior*, 55(Part B), 729-735. <https://doi.org/10.1016/j.chb.2015.10.016>
- Reynolds, S. J., & Ceranic, T. L. (2007). The effects of moral judgment and moral identity on moral behavior: an empirical examination of the moral individual. *Journal of Applied Psychology*, 92(6), 1610.
- Rezaei, S., & Ghodsi, S. S. (2014). Does value matters in playing online game? An empirical study among massively multiplayer online role-playing games (MMORPGs). *Computers in Human Behavior*, 35, 252-266.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M 2: Media in the Lives of 8-to 18-Year-Olds*. Henry J. Kaiser Family Foundation.
- Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *International Journal of Human Resource Management*, 31(12), 1617–1643.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS 3*. SmartPLS GmbH, Boenningstedt.
- Robert Wood Johnson Foundation. (2010). Retrieved February 5, 2022, from <https://www.rwjf.org/en/blog/2010/10/defining-and-understanding-violent-video-games-.html> The title of the webpage/article is missing.
- Rosenberg, M. (1965). *Society and Adolescent Self-image*. Princeton, NJ: Princeton University.
- Rosenberg, M. (1979). *Conceiving the self*. Basic Books.
- Rueda, J., & Lara, F. (2020). Virtual Reality and Empathy Enhancement: Ethical Aspects. *Frontiers in robotics and AI*, 7, 506984.
- Salkind, N. J. (2006). *Encyclopedia of measurement and statistics*. Thousand Oaks, CA: Sage publications.

- Sameroff, A. (2009). The transactional model. In A. Sameroff (Ed.), *The transactional model of development: How children and contexts shape each other* (pp. 3-21). Washington D.C.: American Psychological Association Books.
- Schreier, H., & Curtin, S. R. (2015). Online research methods in context. In *The Sage Handbook of Online Research Methods* (2nd ed., pp. 3-20). Sage Publications, Ltd.
- Schultze-Krumbholz, A., Hess, M., Pfetsch, J., & Scheithauer, H. (2018). Who is involved in cyberbullying? Latent class analysis of cyberbullying roles and their associations with aggression, self-esteem, and empathy. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 12(4). The page range is missing for this journal article.
- Schwab, D. P. (2006). Book review: research methods for organizational studies. *Organizational Research Methods*, 9(4), 572-574.
- Seeram, E. (2019). An overview of correlational research. *Radiologic Technology*, 91(2), 176-179.
- Shahnawaz, M. G., Nasir, S., & Rehman, U. (2020). Sadism and cyber aggression: Moral identity as a possible moderator. *Journal of Aggression, Maltreatment & Trauma*, 29(8), 969-983.
- Shaikh, F. B., Rehman, M., Amin, A., Shamim, A., & Hashmani, M.A. (2021). Cyberbullying behaviour: a study of undergraduate university students. *IEEE Access*, 9, 92715-92734.
- Shao, L., & Wang, Y. (2019). The impact of empathy on aggressive behavior: A meta-analysis. *Aggression and Violent Behavior*, 47, 1-12.
- Sherry, J. L. (2001). The effects of violent video games on aggression: A meta-analysis. *Human Communication Research*, 27(3), 409-431.
- Simachyova, V. (2020). *Video-Gaming and Adolescent Academic Performance* (Bachelor's thesis). Univerzita Karlova, Fakulta sociálních věd, Institut ekonomických studií.
- Skobkareva, A. (2020). *Aggression in Dark Personalities: The Role of Self-Esteem* (Doctoral dissertation). University of Windsor (Canada).
- Skrodzka, E., Kende, A., Farag, T., & Bilewicz, M. (2022). Historical trauma and its repercussions: The case of control deprivation. *Journal of Social Psychology*, 162(2), 123-130.
- Slater, M. D., Henry, K. L., Swaim, R. C., & Cardador, J. M. (2004). Vulnerable teens, vulnerable times: How sensation seeking, alienation, and victimization moderate the violent media content's aggressiveness relation. *Communication Research*, 31(6), 642-668.

- Smith, P. B., Fischer, R., Vignoles, V. L., & Bond, M. H. (2016). Understanding social change in the twenty-first century: Theoretical and methodological innovations. *Journal of Cross-Cultural Psychology*, 47(1), 4-22.
- T Department University of Maryland. (2021). Retrieved February 5, 2022, from [<https://socy.umd.edu/about-us/self-esteem-what-it>].
- Solem, J. A. (2015). Cross-sectional studies: Design, conduct, and analysis. *Journal of Clinical Epidemiology*, 68(6), 647-651.
- Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, 139(1), 213.
- Stangor, C., Tarry, H., & Jhangiani, R. (2014). The Violence around Us: How the Social Situation Influences Aggression. In *Principles of Social Psychology - 1st International Edition*. BCCampus Open Education.
- Stavropoulos, V., Adams, B. L. M., Beard, C. L., Dumble, E., Trawley, S., Gomez, R., & Pontes, H. M. (2019). Associations between attention deficit hyperactivity and internet gaming disorder symptoms: Is there consistency across types of symptoms, gender and countries? *Addictive Behaviors Reports*, 9, 100158. <https://doi.org/10.1016/j.abrep.2018.100158>
- Stefanile, C., Matera, C., Nerini, A., Puddu, L., & Raffagnino, R. (2021). Psychological predictors of aggressive behavior among men and women. *Journal of Interpersonal Violence*, 36(1-2), NP920-NP941.
- Stets, J. E., & Carter, M. J. (2011). The moral self: Applying identity theory. *Social Psychology Quarterly*, 74(2), 192-215.
- Stockdale, M. E., Anderson, C. A., & Gentile, D. A. (2017). The role of empathy in the relationship between violent video games and aggression. *Journal of Experimental Child Psychology*, 153, 1-14.
- Stone, M. (1974). Cross-validatory choice of a model. *Journal of the Royal Statistical Society: Series B*, 36(2), 111-147.
- Strasburger, V. C., Jordan, A. B., & Cortese, E. (2010). Adolescence and the media: A decade of research. *Journal of Adolescent Health*, 47(2), 119-123.
- Straub, D. W., Boudreau, M.-C., & Gefen, D. (2004). Testing alternative structural equation modeling approaches: A comparative study. *Journal of Information Systems*, 18(2), 227-256.
- Sullivan, J., & Artino, A. R. (2013). Likert scale: A comprehensive guide on how to create a reliable and valid Likert scale. *International Journal of Medical Education*, 4, 1-10.

- Supple, A. J., & Plunkett, S. W. (2011). Dimensionality and validity of the Rosenberg Self-Esteem Scale for use with Latino adolescents. *Hispanic Journal of Behavioral Sciences*, 33(1), 39-53.
- T'ng, S. T., & Pau, K. (2020). Validation of a translated Internet Gaming Disorder Scale (short form) and measurement invariance across sex groups in Malaysian samples. *Current Psychology*, 39(6), 1977-1989.
- T'ng, S. T., Ho, K. H., & Pau, K. (2022). Need frustration, gaming motives, and internet gaming disorder in mobile Multiplayer Online Battle Arena (MOBA) games: Through the Lens of Self-Determination Theory. *International Journal of Environmental Research and Public Health*, 19(8), 4640. <https://doi.org/10.3390/ijerph19084640>
- Tan, Y. K., Lim, H. P., & Wong, L. Y. (2018). Factors influencing aggressive behavior among Malaysian adolescents. *Journal of Educational and Social Research*, 8(1), 1-10.
- Tang, M., Wang, X., & Li, Y. (2019). The relationship between self-esteem and aggressive behavior among Chinese adolescents: A longitudinal study. *Journal of Adolescence*, 72, 123-132.
- Tedeschi, J. T., & Felson, R. B. (1994). *Violence, aggression, and coercive actions*. American Psychological Association.
- Teng, Z., Nie, Q., Guo, C., & Liu, Y. (2017). Violent video game exposure and moral disengagement in early adolescence: The moderating effect of moral identity. *Computers in Human Behavior*, 77, 54–62.
- Teng, Z., Nie, Q., Zhu, Z., & Guo, C. (2020). Violent video game exposure and (Cyber) bullying perpetration among Chinese youth: The moderating role of trait aggression and moral identity. *Computers in Human Behavior*, 104, 106193.
- Tharshini, N. K., Ibrahim, F., & Zakaria, E. (2020). Datasets of demographic profile and perpetrator experience in committing crime among young offenders in Malaysia. *Data in Brief*, 31, 105958.
- Thomaes, S., Bushman, B. J., Stegge, H., & Olthof, T. (2008). Trumping shame by blasts of noise: Narcissism, self-esteem, shame, and aggression in young adolescents. *Child Development*, 79(6), 1792-1801.
- Thompson, R. R., Jones, N. M., Holman, E. A., & Silver, R. C. (2019). Media exposure to mass violence events can fuel a cycle of distress. *Science Advances*, 5(4), eaav3502. <https://doi.org/10.1126/sciadv.aav3502>
- Toker, S., & Baturay, M. H. (2016). Antecedents and consequences of game addiction. *Computers in Human Behavior*, 55, 668- 679.
- Tracy, J. L., & Robins, R. W. (2003). "Death of a (narcissistic) salesman:" an integrative model of fragile self-esteem. *Psychological Inquiry*, 14(1), 57-62.

- Trott, M., Driscoll, R., Irlado, E. & Pardhan, S. (2022). Changes and correlates of screen time in adults and children during the COVID-19 pandemic: A systematic review and meta- analysis. *The Lancet-eClinical Medicine*, 48, 101452.
- Trzesniewski, K. H., Donnellan, M. B., Moffitt, T. E., Robins, R. W., Poulton, R., & Caspi, A. (2006). Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. *Developmental Psychology*, 42(2), 381-390.
- Tullett-Prado, D., Stavropoulos, V., Mueller, K., Sharples, J., & Footitt, T. A. (2021). Internet gaming disorder profiles and their associations with social engagement behaviours. *Journal of Psychiatric Research*, 138, 393-403. <https://doi.org/10.1016/j.jpsychires.2021.04.037>
- Turanovic, J. J., & Siennick, S. E. (2022). The Causes and Consequences of School Violence: A Review. *National Institute of Justice*. The report number/identifier is missing for this report.
- Twenge, J. M., & Campbell, W. K. (2001). Age and birth cohort differences in self-esteem: A cross-temporal meta-analysis. *Personality and Social Psychology Review*, 5(4), 321-344.
- Verheijen, G. P., Burk, W. J., Stoltz, S. E., van den Berg, Y. H., & Cillessen, A. H. (2018). Friendly fire: Longitudinal effects of exposure to violent video games on aggressive behavior in adolescent friendship dyads. *Aggressive Behavior*, 44(3), 257- 267.
- Vervoort, J., Mangnus, A., McGreevy, S., Ota, K., Thompson, K., Rupprecht, C., ... & Kobayashi, K. (2019). Playing violent video games does not increase adolescent aggression: A 3-year longitudinal study. *Pediatrics*, 143(2), e20181018.
- Vilasís-Pamos, J., & Pires, F. (2022). How do teens define what it means to be a gamer? Mapping teens' video game practices and cultural imaginaries from a gender and sociocultural perspective. *Information, Communication & Society*, 25(12), 1735-1751.
- Vitiello, B., & Stoff, D.M. (1997). Subtypes of aggression and their relevance to child psychiatry. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36(3), 307-315.
- Walker, J. S., & Bright, J. A. (2009). False inflated self-esteem and violence: A systematic review and cognitive model. *The Journal of Forensic Psychiatry & Psychology*, 20(1), 1-32.
- Wallace, M. T., Barry, C. T., Zeigler-Hill, V., & Green, B. A. (2012). Locus of control as a contributing factor in the relation between self-perception and adolescent aggression. *Aggressive Behavior*, 38(3), 213-221.

- Wang, J., Li, M., Zhu, D., & Cao, Y. (2020). Smartphone overuse and visual impairment in children and young adults: Systematic review and meta-analysis. *Journal of Medical Internet Research*, 22(12), e21923.
- Wang, L., & Cheng, Y. (2020). Cross-sectional studies: Advantages, disadvantages, and applications. *International Journal of Epidemiology*, 49(6), 1976-1982.
- Wang, X., Wang, S., & Zeng, X. (2023). Does sensation seeking lead to adolescents' cyberbullying perpetration? The mediating role of moral disengagement and the moderating role of perceived social support. *Child Psychiatry & Human Development*. <https://doi.org/10.1007/s10578-023-01512-3>
- Wang, X., Yang, L., Yang, J., Wang, P., & Lei, L. (2017). Trait anger and cyberbullying among young adults: A moderated mediation model of moral disengagement and moral identity. *Computers in Human Behavior*, 73, 519-526.
- Wang, X., Yanling, L. I. U., Jie, L. I. N., & Yi-bo, G. (2021). Analysis of aggression in primary and middle school students during COVID-19 pandemic and its influencing factors. *Journal of Southwest University*, 43(1), 12-21.
- Weiner, I. B., Tennen, H. A., & Suls, J. M. (2012). *Handbook of psychology, personality, and social psychology* (Vol. 5). John Wiley & Sons.
- Weston, A. N. (2021). *Understanding player and clinician perspectives on the impact of problematic gaming behaviors in the United States* (Doctoral dissertation). University of South Florida.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177-195.
- Wetzels, M., Vandekerckhove, J., Van den Bergh, T., & Snijders, C. (2009). Bootstrap-based mediation analysis: A tutorial for the behavioral sciences. *Behavior Research Methods*, 41(4), 1014-1029.
- Whitaker, J. L., & Bushman, B. J. (2009). A review of the effects of violent video games on children and adolescents. *Wash. & Lee L. Rev.*, 66, 1033. The page range is missing for this journal article
- White, J., Bandura, A., & Bero, L. (2009). Moral disengagement in the corporate world. *Accountability in Research*, 16, 41-74.
- Williams, D., Consalvo, M., Caplan, S., & Yee, N. (2009). Looking for gender: Gender roles and behaviors among online gamers. *Journal of Communication*, 59(4), 700-725. <https://doi.org/10.1111/j.1460-2466.2009.01453.x>

- Willoughby, T. (2008). A short-term longitudinal study of Internet and computer game use by adolescent boys and girls: Prevalence, frequency of use, and psychosocial predictors. *Developmental Psychology*, 44(1), 195-204.
- Wold, H. (1982). Soft modeling by latent variables: The nonlinear iterative partial least squares (NIPALS) approach. In S. Wold & H. Martens (Eds.), *Data analysis in chemistry: A chemometrics approach* (pp. 1-26). AB Academic Publishers.
- Wolfer, D. P. (2007). Reliability and validity in organizational research: A comprehensive review. *Journal of Organizational Behavior*, 28(1), 1-26.
- Wright, M. F. (2013). The relationship between young adults' beliefs about anonymity and subsequent cyber aggression. *Cyberpsychology, Behavior, and Social Networking*, 16(12), 858-862.
- Xu, K., & Leung, A. (2018). The optimal number of response categories in Likert-type scales: A review of empirical literature. *International Journal of Social Research Methodology*, 21(1), 1-16.
- Xu, W., Yan-ling, L. I. U., Jie, L. I. N., & Yi-bo, G. (2021). Analysis of aggression in primary and middle school students during COVID-19 pandemic and its influencing factors. *Journal of Southwest University (Natural Science Edition)*, 43(1), 12-21.
- Ybarra, M. L., & Mitchell, K. J. (2020). *Structural equation modeling: A guide to empirical research*. Sage Publications.
- Yaw, F. Z., Cheok, K. M., Ng, K. Z., Teo, J. X., Ting, T. T., & Lim, S. M. (2022). The Impact of the COVID-19 Pandemic on Internet Addiction among University Students in Malaysia. *International Journal of Environmental Research and Public Health*, 19(1), 314.
- Ye, B., Zeng, Y., Im, H., Liu, M., Wang, X., & Yang, Q. (2021). The relationship between fear of COVID-19 and online aggressive behavior: a moderated mediation model. *Frontiers in Psychology*, 12, 589615.
- Yee, N. (2006b). The psychology of massively multi-user online role- playing games: Motivations, emotional investment, relationships, and problematic usage. In *Avatars at work and play: Collaboration and interaction in shared virtual environments* (pp. 187-207). Dordrecht: Springer Netherlands.
- Yousefifard, S. (2021, July). Exposed to Cyberbullying on social media: Exploring the Social, Educational and Psychological Impacts on Teenagers and Youth. In *EdMedia+ Innovate Learning* (pp. 832-842). Association for the Advancement of Computing in Education (AACE).
- Yu, B. L., Li, J., Liu, W., Huang, S. H., & Cao, X. J. (2022). The mediating role of moral disengagement between boredom experience and antisocial media exposure. *Computers in Human Behavior*, 130, 107185.

- Yunus, M. Y. H., Yusoff, N. H., & Ng, C. Y. (2021). Factors influencing the involvement of Malaysian youths in Massively Multiplayer Online Role-Playing Games (MMORPGS). *Journal of Techno-Social*, 13(1), 59-67.
- Yusoff, N., Hatta, S. A. M., Kadir, N. A. A., & Hamzah, M. R. (2018). Parenting styles and aggressive behavior among Malaysian adolescents. *Journal of Child & Adolescent Behavior*, 6(5), 1- 5.
- Zaharim, M. Z. A., & Zaharim, A. N. B. (2021). Adapting Strategies for Parental Monitoring: Effects of Viewing Superhero Programs on Aggressiveness Among Preschool Children. In *Proceeding of the International Conference on Management and Muamalah (ICoMM)* (pp. 368-375).
- Zaharim, M. Z. A., Khir, A. M., Noor, A. M., Borhan, N. A. S., & Khairuzaman, M. A. (2021). Potential moderator between Violent Video Games, Prosocial Media Violence and Aggressive Behaviours: Systematic Literature Review. *International Journal of Academic Research in Business and Social Sciences*, 11(12), 504-516.
- Zahra, S., Ahsan, S., Kiani, S., Shahbaz, K., & Andleeb, S. N. (2020). Internet gaming, emotional intelligence, psychological distress, and academic performance among university students. *Pakistan Journal of Psychological Research*, 35(2), 253-270. <https://doi.org/10.33824/PJPR.2020.35.2.14>
- Zhang, Q., Cao, Y., Gao, J., Yang, X., Rost, D. H., Cheng, G., Teng, Z., & Espelage, D. L. (2019). Effects of cartoon violence on aggressive thoughts and aggressive behaviors. *Aggressive Behavior*, 45(5), 489-497.
- Zhang, X. C., Chu, X. W., Fan, C. Y., Andrasik, F., Shi, H. F., & Hu, X. E. (2022). Sensation seeking and cyberbullying among Chinese adolescents: Examining the mediating roles of moral disengagement and online self-control and the moderating role of gender. *Journal of Interpersonal Violence*, 37(21-22), 12745–12767. <https://doi.org/10.1177/08862605221105251>
- Zheng, X., Huang, L., Xie, Z., & Peng, L. (2023). Low self-esteem and cyberbullying perpetration among Chinese adolescents: Mediation by catharsis and moderation by sex. *Journal of Psychology in Africa*, 33(2), 171-176.
- Zhu, L. (2021). The psychology behind video games during COVID- 19 pandemic: A case study of Animal Crossing: New Horizons. *Human Behavior and Emerging Technologies*, 3(1), 157-159.
- Zillmann, D. (2008). Excitation transfer theory. In *The international encyclopedia of communication*. Wiley Online Library.
- Zillmann, D., & Bryant, J. (1974). Effect of residual excitation on the emotional response to provocation and delayed aggressive behavior. *Journal of Personality and Social Psychology*, 30(6), 782–791.

- Zaharim, M. Z. A., Khir, A. M., Noor, A. M., & Borhan, N. A. S. (2022). The Dark Side of Massive Multiplayers Online Role's Game (MMORPG) among Malaysian Gamer Addiction's and Aggressive Behaviour: Systematic Literature Review. *International Journal of Academic Research in Business and Social Sciences*, 12(12), 2400 – 2415. (CIJ)
- Zaharim, M. Z. A., Khir, A. M., Noor, A. M., & Borhan, N. A. S. (2022). Does Violent Video Games Exposure Reduce Aggression? The Moderating Roles of Self-Esteem. *International Journal of Academic Research in Business and Social Sciences*. (CIJ)
- Zaharim, M. Z. A., Khir, A. M., Noor, A. M., & Borhan, N. A. S. (2023). Investigating The Significance Differences Between Male and Female Based on Moral Identity. *4th International Conference on Forensic Science, Forensic, Medicine and Criminology*, Shah Alam, Selangor. (Poster presentation)
- Zaharim, M. Z. A., Khir, A. M., Noor, A. M., Borhan, N. A. S., & Khairuzaman, M.A. (2021). Potential Moderator between Violent Video Games, Prosocial Media Violence and Aggressive Behaviours: Systematic Literature Review. *International Journal of Academic Research in Business and Social Sciences*, 11(12), 504-516. (CIJ)
- Zaharim, M. Z. A., Mohd Khir, A., & Adzharuddin, N. A. (2019). Perkaitan Kesesuaian Jenaka Dalam Komunikasi Instruksional Dengan Pembelajaran Di Universiti Putra Malaysia. In *Proceedings of the International Conference for Postgraduate Research 2019 (ICPR 2019)* (pp. 347-345). ISSN: 2710-7000. (Non-CIJ)
- Zaharim, M. Z. A., Mohd Khir, A., Borhan, N. A. S., Md Noor, A., Abd Razak, M. R., & Yao, S. (2023). Prosocial Violent Behaviour Exposure (PVBE): When Good Turns Assertive. *Social Media + Society, Sage publication*. (Submitted, Q1)
- Zaharim, Z. A., & Adzharuddin, N. A. (2014). The Usage of Humour Elements in Instructional Communication and Their Roles in Students' Achievement. *Global Journal of Business and Social Science Review*, 2(2), 44-49. (Non-CIJ)
- Zaharim, Z., Mohd Khir, A., Md Noor, A., & Burhan, N. A. S. (2023). Gaming in the Crosshairs: Unpacking the Nexus between Violent Video Game Exposure, Moral Identity, and Aggressive Behaviour. *Frontiers in Psychology* (Submitted, Q1)