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Moderating Effect of Gender and Socioeconomic Status on the Relationship Between Media Exposure and Violent Behaviour

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ABSTRACT

The problem of violence has become a serious impediment to societal progress. Violence among adolescents is on the rise in several nations, including Jordan. A review of current literature found that media exposure, particularly to violent movies, plays a key role in driving the prevalence of violence. This critical topic has received very little attention. Therefore, this research investigates further the consequences of violence in movies on Jordanian adolescents' violent behaviour (VB) by focusing on the moderating effects of gender and socioeconomic status (SES). Questionnaires were distributed to 350 secondary school students in Jerash, Jordan, and PLS-SEM was used to test the relationships between the variables. The findings revealed that media exposure directly affects VB among Jordanian adolescents, and it also revealed no moderation effect of gender and SES in the relationship between media exposure and VB among Jordanian adolescents. In addition, the present study included limitations and recommendations for future studies.

KEY WORDS

Adolescents. Gender. Media Exposure. Socioeconomic Status. Violent Behaviour.

1 Introduction

Violence has become a serious social issue in many countries.¹ Cases among adolescents show that the prevalence of violence within this age group is alarming, with harmful consequences and adverse effects on individuals and society.² The number of adolescents engaging in violence is increasing around the world.³ The United Nations Children’s Fund (UNICEF) revealed that violent adolescents pose a tremendous threat to community security and safety and a significant challenge to the future of communities. Understanding violence is crucial because it is one of the numerous behavioural changes occurring during the teenage years.⁴ Evidence-based studies have consistently revealed that adolescent violence and media exposure are related to each other. Although the cause of violence remains unclear, some studies suggest exposure to media violence is associated with adolescent violence.⁵

The current literature indicates a variety of antecedents to violence. Among these, media exposure, especially to violent movies, has significantly impacted VB. Violent movies are one of the most important means of entertainment for individuals, and, violent movies greatly influence the behaviour of adolescents.⁶ Adolescents spend an average of seven hours per day watching television and using entertainment media.⁷ Studies on violence and aggression have revealed a relationship between media exposure and VB and how this relationship affects the perpetration of VB and the attitudes of individuals.⁸ The media has the power to manipulate adolescents into developing antisocial behaviour and aggression.⁹ Media-stimulated violent emotion is a primary risk factor for violence among adolescents.¹⁰

Previous studies have found that boys are more aggressive than girls.¹¹ Also, low SES of adolescents predicts violence compared to adolescents with high SES.¹² Empirical studies measuring physical violence found that adolescent violence is affected by gender and SES. It is important to note that media violence, typically associated with boys and lower economic

¹ PEREDA, N., DÍAZ-FAES, D. A.: Family Violence Against Children in the Wake of COVID-19 Pandemic: A Review of Current Perspectives and Risk Factors. In *Child and Adolescent Psychiatry and Mental Health*, 2020, Vol. 14, No. 1, p. 1.

² UNICEF: *Hidden in Plain Sight: A Statistical Analysis of Violence Against Children*. [online]. [2023-04-09]. Available at: <<https://data.unicef.org/resources/hidden-in-plain-sight-a-statistical-analysis-of-violence-against-children/>>.

³ BERKOWITZ, R.: Students’ Physical Victimization in Schools: The Role of Gender, Grade Level, Socioeconomic Background and Ethnocultural Affiliation. In *Children and Youth Services Review*, 2020, Vol. 114, p. 105048.

⁴ UNICEF: *Hidden in Plain Sight: A Statistical Analysis of Violence Against Children*. [online]. [2023-04-09]. Available at: <<https://data.unicef.org/resources/hidden-in-plain-sight-a-statistical-analysis-of-violence-against-children/>>.

⁵ See: MILES-NOVELO, A., ANDERSON, C. A.: *Media Use and Violent Media Effects*. Ames, IA : Iowa State University, 2021.

⁶ KHAN, S. U. et al.: Cover the Violence: A Novel Deep-Learning-Based Approach Towards Violence-Detection in Movies. In *Applied Sciences*, 2019, Vol. 9, No. 22, p. 1.

⁷ See: RIDEOUT, V., ROBB, M. B.: *The Common Sense Census: Media Use by Tweens and Teens*. San Francisco, CA : Common Sense Media, 2019, p. 8.

⁸ BUSHMAN, B. J., ANDERSON, C. A.: Understanding Causality in the Effects of Media Violence. In *American Behavioral Scientist*, 2015, Vol. 59, No. 14, p. 1816.

⁹ MEEUS, A. et al.: Managing Positive and Negative Media Effects Among Adolescents: Parental Mediation Matters – But Not Always. In *Journal of Family Communication*, 2018, Vol. 18, No. 4, p. 270-271.

¹⁰ See: EISENBERG, S.: *The Effects of Media Violence on Adult Right Prefrontal Cortex Functioning*. [Dissertation Thesis]. Murfreesboro, TN : Middle Tennessee State University, 2015.

¹¹ BUSHMAN, B. J. et al.: Risk Factors for Youth Violence: Youth Violence Commission, International Society for Research on Aggression (ISRA). In *Aggressive Behavior*, 2018, Vol. 44, No. 4, p. 331.

¹² PONNAN, R. et al.: Shared Causal Theories About Film Violence and Violent Behaviour: Findings from Young Malaysian Indians. In *The Journal of the South East Asia Research Centre for Communication and Humanities*, 2018, Vol. 10, No. 1, p. 25.

status, predicts later violence. Gender and SES are key factors that moderate the relationship between media exposure and physical violence.¹³

Most Middle Eastern research has focused on the VB of the younger generation in Jordan and Arab countries.¹⁴ However, these studies have not examined the effect of media exposure on adolescent behaviour and on motivation to engage in VB. Scholars have focused on the significance of elaborating more on media exposure and its impact on VB¹⁵ because various media, including movies, present various violent content.¹⁶ Also, several experts have recommended investigating and looking into the impact of violent sequences in media on VB and assault.¹⁷ According to Bushman & Anderson, the issue of media violence's influence on VB is compelling but incomplete, and violent media must be investigated more in studies that aim to explain VB.¹⁸ In addition, a study indicated that gender and SES as moderating variables in relation to violence need further investigation. Moreover, much research has focused on adult and child violence (see, e.g. Karmaliani et al.¹⁹, Viero et al.²⁰), but the number of studies on adolescent violence is rather low (see, e.g. Shaffer et al.²¹).

Consequently, the present study investigates how media exposure affects VB among Jordanian adolescents to bridge the current gap. Because the roles of gender and SES as moderators have also not been sufficiently studied, especially in non-Western literature, the present study also examines the moderating effect of gender and SES in the relationship between media exposure and VB among adolescents. The findings of this study enhance knowledge and understanding of the potential moderating roles that gender and SES might play in the relationship between media exposure and VB in the context of Jordanian adolescents.

2 Literature Review

2.1 Violent Behaviour

Most research defines violence as VB targeted at causing serious bodily harm, including injury and even death.²² This current study defines VB as bodily harm or injury among adolescents. Many families, adolescents, and children are affected by it. Child and adolescent violence are

¹³ CHOWHAN, J., STEWART, J. M.: Television and the Behaviour of Adolescents: Does Socio-Economic Status Moderate the Link? In *Social Science & Medicine*, 2007, Vol. 65, No. 7, p. 1325-1326. See also: NWAJIUBA, C. A. et al.: Gender as a Moderator of the Association Between Exposure to Violent Media Contents and Aggressive Behaviour in a Sample of Nigerian In-School Adolescents. In *Global Journal of Health Science*, 2019, Vol. 11, No. 14, p. 10.

¹⁴ ELGHOSAIN, T. et al.: Prevalence of Key Forms of Violence Against Adolescents in the Arab Region: A Systematic Review. In *Journal of Adolescent Health*, 2019, Vol. 64, No. 1, p. 8. See also: PRESLER-MARSHALL, E.: *Adolescent Boys in Jordan: The State of the Evidence*. [online]. [2023-04-20]. Available at: <<https://www.gage.odi.org/wp-content/uploads/2018/12/GAGE-Jordan-Boys-Report-WEB.pdf>>.

¹⁵ BUSHMAN, B. J. et al.: Risk Factors for Youth Violence: Youth Violence Commission, International Society for Research on Aggression (ISRA). In *Aggressive Behavior*, 2018, Vol. 44, No. 4, p. 333.

¹⁶ KHAN, S. U. et al.: Cover the Violence: A Novel Deep-Learning-Based Approach Towards Violence-Detection in Movies. In *Applied Sciences*, 2019, Vol. 9, No. 22, p. 1.

¹⁷ LINDO, J. M., SWENSEN, I. D., WADDELL, G. R.: Effects of Violent Media Content: Evidence from the Rise of the UFC. In *Journal of Health Economics*, 2022, Vol. 83, p. 19.

¹⁸ BUSHMAN, B. J., ANDERSON, C. A.: Understanding Causality in the Effects of Media Violence. In *American Behavioral Scientist*, 2015, Vol. 59, No. 14, p. 1818.

¹⁹ KARMALIANI, R. et al.: Right to Play's Intervention to Reduce Peer Violence Among Children in Public Schools in Pakistan: A Cluster-Randomized Controlled Trial. In *Global Health Action*, 2020, Vol. 13, No. 1, p. 1836604.

²⁰ VIERO, A. et al.: Violence Against Women in the Covid-19 Pandemic: A Review of the Literature and a Call for Shared Strategies to Tackle Health and Social Emergencies. In *Forensic Science International*, 2021, Vol. 319, p. 110650.

²¹ SHAFFER, C. S. et al.: Ten-Year Trends in Physical Dating Violence Victimization Among Adolescent Boys and Girls in British, Columbia, Canada. In *Journal of Interpersonal Violence*, 2021, Vol. 36, No. 9-10, p. 3947.

²² BUSHMAN, B. J., ANDERSON, C. A.: Understanding Causality in the Effects of Media Violence. In *American Behavioral Scientist*, 2015, Vol. 59, No. 14, p. 1808-1809.

a common and alarming problem and phenomenon with a slew of serious effects.²³ Deviant behaviours and violent activities peak throughout adolescence, with individuals growing more deviant during this age.²⁴ According to World Health Organization (WHO), violence is one of the leading causes of adolescent fatalities and the world's third leading cause of death among adolescents. In the WHO Regions of America's low- and middle-income countries, violent incidents account for around a third of all adolescent male fatalities. Worldwide, about one in every three adolescent females has been a victim of violence.²⁵ Furthermore, the proportion of adolescents engaging in VB is rising in the Arab world, particularly in Jordan.²⁶

As pointed out by Idris, youth violence and their participation in violent extremism have been recurring themes in Jordan over the past decade.²⁷ Violence in Jordanian society has reached an alarming level.²⁸ While studies on adolescent violence are among the most researched topics across cultures, more research is needed to better understand adolescent behaviour in Jordan and violence among adolescents is on the rise in Jordan.²⁹ School violence in Jordan is a serious issue that must be addressed.³⁰

2.2 Media Exposure and Violent Behaviour

Media exposure is the time people spend playing, listening or watching media materials. Young people widely consume all forms of media, especially those aged 8-18.³¹ In this case, movies have been widely recognized as one of the most popular forms of entertainment. Movies are a cheap source of entertainment and a strong instrument for exploiting the minds of viewers.³² Studies have revealed that adolescents prefer to watch movies with violent sequences.³³ Such media contain many scenes of violence and have been found to impact people's behaviour.³⁴ Therefore, the influence of the media on behaviours and actions should not be ignored.³⁵

²³ BERKOWITZ, R.: Students' Physical Victimization in Schools: The Role of Gender, Grade Level, Socioeconomic Background and Ethnocultural Affiliation. In *Children and Youth Services Review*, 2020, Vol. 114, p. 105048.

²⁴ MERRIN, G. J. et al.: Developmental Changes in Deviant and Violent Behaviors from Early to Late Adolescence: Associations with Parental Monitoring and Peer Deviance. In *Psychology of Violence*, 2019, Vol. 9, No. 2, p. 197.

²⁵ See: *Adolescent and Young Adult Health*. [online]. [2023-04-11]. Available at: <<https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>>.

²⁶ ELGHOSAIN, T. et al.: Prevalence of Key Forms of Violence Against Adolescents in the Arab Region: A Systematic Review. In *Journal of Adolescent Health*, 2019, Vol. 64, No. 1, p. 16.

²⁷ See also: IDRIS, I.: *Responding to Popular Protests in the MENA Region*. [online]. [2023-04-20]. Available at: <<https://gsdrc.org/publications/responding-to-popular-protests-in-the-mena-region/>>.

²⁸ See: PRESLER-MARSHALL, E.: *Adolescent Boys in Jordan: The State of the Evidence*. [online]. [2023-04-20]. Available at: <<https://www.gage.odi.org/wp-content/uploads/2018/12/GAGE-Jordan-Boys-Report-WEB.pdf>>.

²⁹ RAFFEE, L. A. et al.: Prevalence Estimates of Drug Addiction Among High-School Students and Its Association with Violence, and School Behaviors: A Cross-Sectional Study from Jordan. In *Annals of Medicine and Surgery*, 2021, Vol. 67, p. 102491.

³⁰ Ibidem.

³¹ See: RIDEOUT, V., ROBB, M. B.: *The Common Sense Census: Media Use by Tweens and Teens*. San Francisco, CA : Common Sense Media, 2019.

³² SAEED, N., REHMAN, T. U., USMANI, M. A.: Impact of Violence in Movies on Juvenile Delinquency. In *International Journal of Civic Engagement and Social Change (IJCESC)*, 2018, Vol. 5, No. 1, p. 56.

³³ Ibidem, p. 53.

³⁴ KAYA, Ş.: Gender and Violence: Rape as A Spectacle on Prime-Time Television. In *Social Science Information*, 2019, Vol. 58, No. 4, p. 697.

³⁵ VRABEC, N., POLIEVKOVÁ, P., MORAVČÍKOVÁ, M.: The Role of Media Literacy Development as a Part of Religious Education Curriculum. In *European Journal of Science and Theology*, 2013, Vol. 9, No. 5, p. 212.

Experiments have shown that adolescents exposed to media violence act aggressively and violently shortly after the exposure.³⁶ This exposure is particularly concerning for adolescents. Custers & Van Den Bulck argued that adolescents are sensitive to media messages as they transition from childhood to adulthood.³⁷ Empirical evidence on media violence and violence generally supports the idea that exposure to violent content portrayed by the media may impact the development of VB. For example, Aslam studied the impact of violent movies on adolescents as a catalyst for violence and delinquent behaviour and found a link between violent content and its impact on adolescents' minds.³⁸ Others have also found that violent media content is connected to harmful and adverse health outcomes such as interpersonal aggressiveness and violence.³⁹ Some argued that exposure to media violence contributes to high levels of VB.⁴⁰ The frequency with which adolescents watch violent media content was linked to increased physical violence over time.⁴¹

Simply put, the more exposed a viewer is to media violence, the more likely someone will participate in VB. The current study focuses on violent movies as a form of media exposure. The discussions presented above lead to the following hypothesis: *H1: Media exposure positively affects violent behaviour among Jordanian adolescents.*

2.3 The Moderating Role of Gender

Adolescents learn gender roles by observing males and females in their homes, then later through their peers and school. The media gives children and adolescents an “early window” on the bigger world as soon as they are old enough to be propped up in front of a television.⁴² Moreover, the response to violence among adolescents differs between males and females.⁴³ Gender is an essential variable in violence.⁴⁴

Males and females may experience the effects of violent media exposure differently, and boys and girls accept violence differently in their social settings.⁴⁵ Kanz said that because violence is more acceptable to men, and most violent heroes in media portrayals are male, its rewards are often more tempting. How the media presents violence and the roles of males in society all play a part in how violence affects males more than girls.⁴⁶ In addition, a study showed

³⁶ GENTILE, D. A., BUSHMAN, B. J.: Reassessing Media Violence Effects Using a Risk and Resilience Approach to Understanding Aggression. In *Psychology of Popular Media Culture*, 2012, Vol. 1, No. 3, p. 140.

³⁷ CUSTERS, K., VAN DEN BULCK, J.: The Association Between Soap Opera and Music Video Viewing and Fear of Crime in Adolescents: Exploring a Mediated Fear Model. In *Communication Research*, 2017, Vol. 44, No. 1, p. 110.

³⁸ ASLAM, S.: Bollywood Movies: A Contributing Factor Towards Juvenile Delinquency. In *International Journal of Research*, 2015, Vol. 2, No. 3, p. 504.

³⁹ ANDERSON, C. A., BUSHMAN, B. J.: Media Violence and the General Aggression Model. In *Journal of Social Issues*, 2018, Vol. 74, No. 2, p. 386-413.

⁴⁰ See: MILES-NOVELO, A., ANDERSON, C. A.: *Media Use and Violent Media Effects*. Ames, IA : Iowa State University, 2021.

⁴¹ GROVES, C., PROT, S., ANDERSON, C.: Violent Media Use and Violent Outcomes. In POTENZA, M. N., FAUST, K., FAUST, D. (eds.): *The Oxford Handbook of Digital Technologies and Mental Health*. Oxford : Oxford University Press, 2020, p. 205.

⁴² See: HUST, S. J., BROWN, J. D.: Gender, Media Use, and Effects. In CALVERT, S. L., WILSON, B. J. (eds.): *The Handbook of Children, Media, and Development*. New Jersey, NJ : Wiley & Sons, 2008, p. 98-120.

⁴³ RICHTER, L. M. et al.: A Longitudinal Perspective on Violence in the Lives of South African Children from the Birth to Twenty Plus Cohort Study in Johannesburg-Soweto. In *South African Medical Journal*, 2018, Vol. 108, No. 3, p. 181.

⁴⁴ KUTYWAYO, A. et al.: Experiences of Violence Among Female and Male Grade Eight Learners: Baseline Findings from the Girls Achieve Power (GAP Year) Trial Across Three South African Townships. In *Gates Open Research*, 2022, Vol. 5, No. 89, p. 3.

⁴⁵ KANZ, K. M.: Mediated and Moderated Effects of Violent Media Consumption on Youth Violence. In *European Journal of Criminology*, 2016, Vol. 13, No. 2, p. 154.

⁴⁶ Ibidem.

that male adolescents who are exposed to violent content in the media become more violent than girls.⁴⁷ A longitudinal study on exposure to violent media content indicated that males are more affected than females. The males become more violent.⁴⁸ That is, gender moderates the relationship between media exposure and VB.⁴⁹ However, some studies showed that gender does not play a moderating role in the relationship between media exposure and violence.⁵⁰

When males see violent movies, their likelihood of engaging in VB increases dramatically. Men can be much more violent after watching violent movies, showing that gender predicts student violence.⁵¹ Such evidence from previous studies clearly explains how media exposure impacts viewers, although the magnitude of the influence varies by gender. For example, media outlets frequently feature scenes of violence in which males are depicted as heroes and are more violent than females. As a result, exposing adolescents to such experiences may encourage violence in males more than in females. The question arises of whether gender plays a moderating role considering these different portrayals. Thus, the following hypothesis is posited: *H2: Gender moderates the relationship between media exposure and violent behaviour.*

2.4 The Moderating Role of Socioeconomic Status

SES is a primary risk factor for the consequences of negative childhood and adolescent development.⁵² Previous studies have shown the importance of families' social and economic situations in increasing interpersonal violence.⁵³ Adolescents living in neighbourhoods with moderate to high poverty levels and low incomes are more likely to be violently abused.⁵⁴

The effect of violent media content on VB of adolescents varies based on the social and economic status of families.⁵⁵ According to Ponnann et al., the link between movie violence and actual violence is widely associated with younger and less-educated people than those from lower socioeconomic backgrounds.⁵⁶ Media and movie violence may have a more significant

⁴⁷ TOLBERT, A. N., DROGOS, K. L.: Tweens' Wishful Identification and Parasocial Relationships with YouTubers. In *Frontiers in Psychology*, 2019, Vol. 10, p. 2781.

⁴⁸ COYNE, S. M., STOCKDALE, L.: Growing Up with Grand Theft Auto: A 10-Year Study of Longitudinal Growth of Violent Video Game Play in Adolescents. In *Cyberpsychology, Behavior, and Social Networking*, 2021, Vol. 24, No. 1, p. 3-4.

⁴⁹ NWAJIUBA, C. A. et al.: Gender as a Moderator of the Association Between Exposure to Violent Media Contents and Aggressive Behaviour in a Sample of Nigerian In-School Adolescents. In *Global Journal of Health Science*, 2019, Vol. 11, No. 14, p. 12. See also: VERHEIJEN, G. P. et al.: Friendly Fire: Longitudinal Effects of Exposure to Violent Video Games on Aggressive Behavior in Adolescent Friendship Dyads. In *Aggressive Behavior*, 2018, Vol. 44, No. 3, p. 264.

⁵⁰ TENG, Z. et al.: A Longitudinal Study of Link Between Exposure to Violent Video Games and Aggression in Chinese Adolescents: The Mediating Role of Moral Disengagement. In *Developmental Psychology*, 2019, Vol. 55, No. 1, p. 192.

⁵¹ QIAN, Z., ZHANG, D. J.: The Effects of Viewing Violent Movie via Computer on Aggressiveness Among College Students. In *Computers in Human Behavior*, 2014, Vol. 35, p. 323.

⁵² DEVENISH, B., HOOLEY, M., MELLOR, D.: The Pathways Between Socioeconomic Status and Adolescent Outcomes: A Systematic Review. In *American Journal of Community Psychology*, 2017, Vol. 59, No. 2, p. 1.

⁵³ CHIGIJI, H. et al.: Risk Factors and Health Consequences of Physical and Emotional Violence Against Children in Zimbabwe: A Nationally Representative Survey. In *BMJ Global Health*, 2018, Vol. 3, No. 3, p. 540; See also: COMPANY-CÓRDOBA, R. et al.: Mental Health, Quality of Life and Violence Exposure in Low-Socioeconomic Status Children and Adolescents of Guatemala. In *International Journal of Environmental Research and Public Health*, 2020, Vol. 17, No. 20, p. 7620.

⁵⁴ GIBSON, C. L., FAGAN, A. A., ANTLE, K.: Avoiding Violent Victimization Among Youths in Urban Neighborhoods: The Importance of Street Efficacy. In *American Journal of Public Health*, 2014, Vol. 104, No. 2, p. 159.

⁵⁵ RAJASAKRAN, T. et al.: Aggressor Games: Of Violent Video Games and Aggression Among Higher-Income Group Schoolchildren in Malaysia. In *Science, Technology and Society*, 2014, Vol. 19, No. 3, p. 383.

⁵⁶ PONNAN, R. et al.: Shared Causal Theories About Film Violence and Violent Behaviour: Findings from Young Malaysian Indians. In *The Journal of the South East Asia Research Centre for Communication and Humanities*, 2018, Vol. 10, No. 1, p. 45.

impact on VB among adolescents with low SES or high SES.⁵⁷ Decamp and Ferguson found that families' economic or financial position and socioeconomic backgrounds appear to have a bigger influence in predicting the risk of violence than media exposure.⁵⁸ Chowhan & Stewart indicated that SES plays a moderating role in the relationship between violent content in media and VB.⁵⁹ Yet, in contrast, the correlation between SES and television viewing habits cannot fully explain the relationship between violent content in media and violence of adolescents.⁶⁰

Based on the preceding, the current research looks at the impact of SES on the relationship between media exposure and VB. For example, when an adolescent who lives in a disadvantaged neighbourhood marked by behavioural issues and a lack of discipline is exposed to violent movie content, they are more likely to engage in violent acts. For this study, SES is defined as the income of the family. As an essential part of SES, family income may influence the VB of adolescents. As a result, the following hypothesis is posited: *H3: Socioeconomic status moderates the relationship between media exposure and violent behaviour.*

2.5 Social Learning Theory

Bandura's theory has so far been empirically investigated in previous research since it was presented in the 1960s.⁶¹ In addition, the social learning theory is suitable to determine real events and learned behaviours of an individual from the social context at different phases of life.⁶²

This study uses Social Learning Theory to explain the association between media exposure and VB. This theory describes the social and behavioural approach that stresses the interplay of environmental, behavioural, and cognitive factors in influencing the behaviour of humans.⁶³ The theory can best explain how media violence can cause aggressiveness and violence among viewers.⁶⁴ As per this theory, individuals learn by direct experience and from others' modelling behaviour, which might happen through the media. As a result, proponents of the media effects, such as Huesmann, argued that media violence has both short- and long-term consequences.⁶⁵ Observational learning can lead viewers to replicate what they see on television.⁶⁶ Attention, retention, reproduction, and motivation are the four phases of behavioural learning that predict the association between watching violent acts on television and acting aggressively.⁶⁷

⁵⁷ SALEEM, N. et al.: Violent Movies and Criminal Behavior of Delinquents. In *Pakistan Journal of Social Sciences (PJSS)*, 2013, Vol. 33, No. 2, p. 251.

⁵⁸ DECAMP, W., FERGUSON, C. J.: The Impact of Degree of Exposure to Violent Video Games, Family Background, and Other Factors on Youth Violence. In *Journal of Youth and Adolescence*, 2017, Vol. 46, No. 2, p. 397.

⁵⁹ CHOWHAN, J., STEWART, J. M.: Television and the Behaviour of Adolescents: Does Socio-Economic Status Moderate the Link? In *Social Science & Medicine*, 2007, Vol. 65, No. 7, p. 1334.

⁶⁰ HUESMANN, L. R. et al.: Longitudinal Relations Between Children's Exposure to TV Violence and Their Aggressive and Violent Behavior in Young Adulthood: 1977 – 1992. In *Developmental Psychology*, 2003, Vol. 39, No. 2, p. 216.

⁶¹ GIBSON, S. K.: Social Learning (Cognitive) Theory and Implications for Human Resource Development. In *Advances in Developing Human Resources*, 2004, Vol. 6, No. 2, p. 196.

⁶² Ibidem.

⁶³ See: BANDURA, A., WALTERS, R. H.: *Social Learning Theory*. New Jersey, NJ : Prentice Hall, 1977.

⁶⁴ See also: CANTOR, J.: *Media Violence Effects and Interventions: The Roles of Communication and Emotion*. Oxfordshire : Routledge, 2003.

⁶⁵ HUESMANN, L. R.: The Impact of Electronic Media Violence: Scientific Theory and Research. In *Journal of Adolescent Health*, 2007, Vol. 41, No. 6, p. 7-8.

⁶⁶ See: DAUTRICH, K., YALOF, D.: *American Government: Historical, Popular, and Global Perspectives, Brief Version*. Toronto : Nelson Education, 2011.

⁶⁷ See also: DAINTON, M., ZELLEY, E. D.: *Applying Communication Theory for Professional Life: A Practical Introduction*. Los Angeles, London, New Delhi, Singapore, Washington DC, Melbourne : SAGE Publications, 2017.

Social learning theory indicates that media violence leads to social learning of VB of individuals by observing VB in media such as violent films. Based on previous discussions that showed that this expectation explains the phenomenon of violence comprehensively and accurately, the current study used the theory to measure the effect of media exposure on adolescents' VB. The discussions presented above enabled the construction of the framework for the study. See Figure 1.

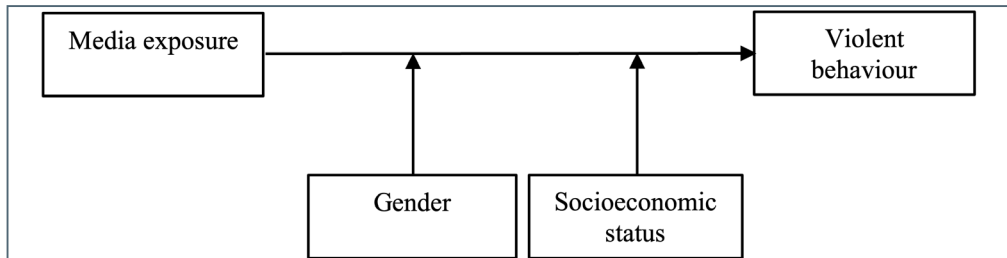


FIGURE 1: Conceptual framework for research

Source: own processing, 2023

3 Methodology

3.1 Population of the Study

The current research only focused on secondary schools in the Jordanian province of Jerash. Only public schools were chosen because public schools are known for having many students and a high percentage of student violence. The study focused on 20 high schools that witnessed the most cases of violence out of 55 high schools, therefore the study used a stratified sampling technique to ensure equal representation from each school. Six hundred and twenty-one students with disciplinary problems were recognized in 55 high schools in Jerash, ranging in age from 12 to 18. An adequate sample size for the current research is 234.⁶⁸ Nonetheless, the researchers distributed 350 questionnaires to assure an adequate response rate. Surveys were randomly distributed between January and February of 2021. Of the 350 questionnaires distributed, 283 questionnaires were usable, representing an effective response rate of 70.8%.

3.2 Instrumentation

The questionnaire consisted of Section A, which captured the respondents' demographic information, followed by Section B, which used a modified version of the 12-item tool that Straus et al. developed to measure the VB construct. This set of components was chosen because it has a high-reliability coefficient ($=.86$).⁶⁹ Next, Section C used the modified version of the 9-item instrument that Den Hamer et al. developed for measuring media exposure, which focuses on violent movies. This set of measurements was chosen because it has a high-reliability coefficient ($=.84$).⁷⁰ A 5-point Likert-type scale was used for Sections B and C, with answers ranging from 1 = strongly agree to 5 = strongly disagree.

⁶⁸ KREJCIE, R. V., MORGAN, D. W.: Determining Sample Size for Research Activities. In *Educational and Psychological Measurement*, 1970, Vol. 30, No. 3, p. 608.

⁶⁹ STRAUS, M. A. et al.: The Revised Conflict Tactics Scales (CTS2) Development and Preliminary Psychometric Data. In *Journal of Family Issues*, 1996, Vol. 17, No. 3, p. 297.

⁷⁰ DEN HAMER, A., KONIJN, E. A., KEIJER, M. G.: Cyberbullying Behavior and Adolescents' Use of Media with Antisocial Content: A Cyclic Process Model. In *Cyberpsychology, Behavior, and Social Networking*, 2014, Vol. 17, No. 2, p. 77.

4 Results

4.1 Descriptive Analysis

Table 1 provides the means and standard deviations of the variables under study using SPSS version 26. The mean for VB was 2.11, and the SD was 0.758. The mean for media exposure was 1.94, and the SD was 0.665.

Constructs	Mean	Sta. Deviation
Violent behaviour	2.1193	.75805
Media exposure	1.9453	.66592

TABLE 1: Showing results of descriptive statistics of constructs

Source: own processing, 2023

4.2 Measurement Model

Analysing the measurement model is crucial in structural equation modelling.⁷¹ Additionally, it aids in establishing the internal consistency of the study variables, facilitating the pathway for the Structural Model analysis. So, the study of the measurement model is also a part of the current research as shown in Figure 2. The convergent validity of the research variables was first assessed. It initially questioned the converging validity of media exposure and VB, as shown in Table 2. All values of Factor Loading and the Extracted Average Variance were higher than the threshold value of 0.05. Cronbach's alpha value for VB was 0.915, and for Media Exposure, it was 0.876. The Composite Reliability value for VB was 0.929, and for Media Exposure, it was 0.901. Results from Cronbach's alpha and Composite Reliability remained over the threshold value of 0.7. Furthermore, the Average Values Extracted from the variance were 0.523 for VB and 0.507 for Media Exposure. See Table 2.

Constructs	Items	Loadings	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
Violent Behaviour	VB1	0.838	0.915	0.929	0.523
	VB10	0.713			
	VB11	0.667			
	VB12	0.664			
	VB2	0.641			
	VB3	0.731			
	VB4	0.712			
	VB5	0.797			
	VB6	0.792			
	VB7	0.816			
	VB8	0.684			
	VB9	0.577			

⁷¹ See: AWANG, Z.: Validating the Measurement Model: CFA. In AWANG, Z. (ed.): *SEM Made Simple*. Selangor : MPWS Rich Publishing, 2015.

Media Exposure	ME1	0.861	0.876	0.901	0.507
	ME2	0.767			
	ME3	0.693			
	ME4	0.613			
	ME5	0.835			
	ME6	0.752			
	ME7	0.624			
	ME8	0.532			
	ME9	0.668			

TABLE 2: Showing results of convergent validity
 Source: own processing, 2023

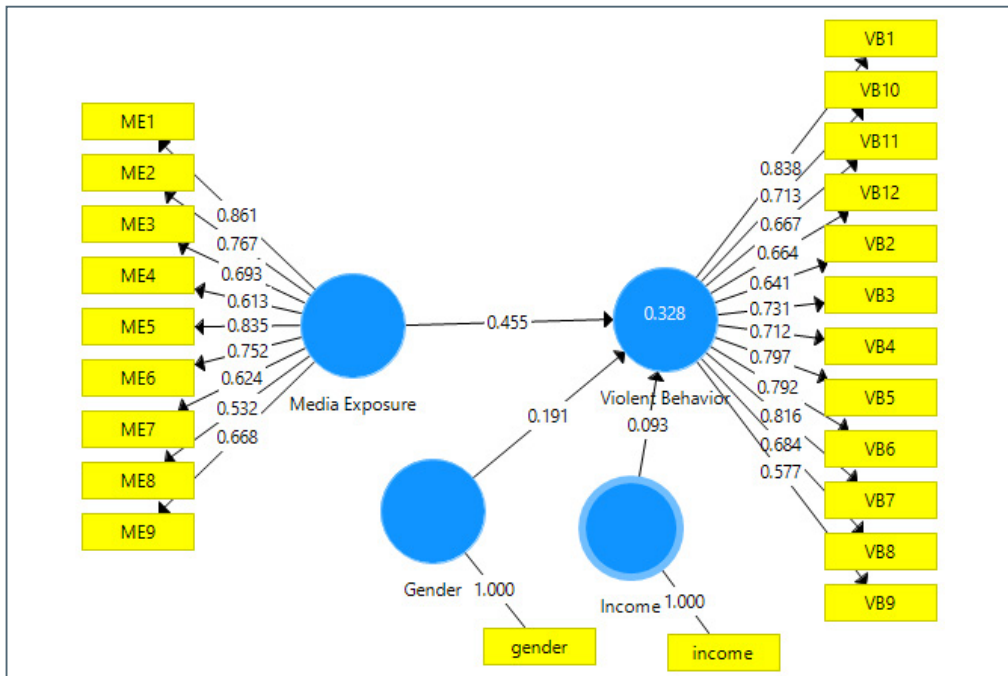


FIGURE 2: Measurement model
 Source: own processing, 2023

This study performed an R² analysis of the latent variables to examine the influence of independent variables on the dependent variables. R² aids in determining the predictive ability of dependent variables and the degree to which independent variables contribute to variance in the dependent variables.⁷² The latent variables R² analysis showed that media exposure, gender, and SES (family income) contribute 0.328. As seen in Table 3, the value of 0.328 indicates that all the latent variables have a fairly good predictive potential.

	R square	Effect size
Violent behaviour	0.328	Substantial

TABLE 3: Showing results of coefficient of determination
 Source: own processing, 2023

⁷² See: DUFOUR, J. M.: *Coefficients of Determination*. Montreal : McGill University, 2011.

4.3 Hypotheses Results

As indicated in Table 4, the results of bootstrapping PLS-SEM suggest that media exposure and VB had a positive and significant relationship ($b = 0.349$, $t = 9.064$, $p = 0.05$). As a result, Hypothesis 1 was supported, suggesting that media exposure affects VB among adolescents.

Standard bootstrap results							
Relationship	Std. beta	Std. Error	t-values	p-values	5.00%	95.00%	Decision
ME -> VB	0.455	0.051	8.882	0.000	0.292	0.396	Supported

TABLE 4: Showing results of direct relationship

Source: own processing, 2023

Hypothesis 2 and 3 were tested using the PLS-SEM bootstrap technique. For hypothesis 2, the analysis demonstrates that the interaction effect ($= 0.05$) was insignificant, with a t-value of 0.148, as reported in Table 5. Therefore, the gender moderating impact on the relationship between media exposure and VB was statistically insignificant ($\beta = -0.031$, $t = 0.571$, $p > 0.05$). As a result, Hypothesis 2 was unsupported. For hypothesis 3, the analysis demonstrated that the interaction effect ($= 0.05$) was insignificant, with a t-value of 0.135. As a result, the SES moderating impact on the relationship between media exposure and VB was statistically significant ($\beta = 0.094$, $t = 1.506$, $p > 0.05$). As a result, Hypothesis 3 is not supported.

Confidence intervals							
Relationships	Std. Beta	Std. Error	t-values	p-values	5.00%	95.00%	Decision
ME*Gender -> VB	-0.031	0.054	0.571	0.568	-0.133	0.077	Not Supported
ME*Income -> VB	0.094	0.063	1.506	0.132	-0.021	0.222	Not Supported

TABLE 5: Showing results of moderating relationships

Source: own processing, 2023

5 Discussion

Exposure to media, particularly violent content, allows adolescents to see realistic depictions of physical combat and violent conduct. As a result, adolescents have an easier time learning about violent actions. The more violence media adolescents are exposed to, the more likely they mimic and adopt various VB. Many other studies looked at the influence of violent media and movies on individuals and society. Media exposure has been connected to a rise in violence.⁷³ Media is a major means of entertainment in people's lives.⁷⁴

The findings demonstrate that media exposure has a significant, positive, and medium link with VB. It suggests that the more adolescents are exposed to media, the more violent their behaviour will become. The findings demonstrate that adolescent exposure to violent media, such as violent movies, significantly predicts increased VB. This finding is consistent with Kaya, Ponnann et al.'s description of media exposure. Media violence is one of the causal factors of

⁷³ BUSHMAN, B. J. et al.: Risk Factors for Youth Violence: Youth Violence Commission, International Society for Research on Aggression (ISRA). In *Aggressive Behavior*, 2018, Vol. 44, No. 4, p. 333. See also: PROT, S. et al.: Understanding Media Violence Effects. In MILLER, A. G. (ed.): *The Social Psychology of Good and Evil*. Guilford : The Guilford Press, 2016, p. 124-125.

⁷⁴ GONDEKOVÁ, V.: Persuasive-Communication and Manipulative-Communication Concepts in Television Programme of the Reality TV Genre. In *Media Literacy and Academic Research*, 2018, Vol. 1, No. 2, p. 52.

school violence and real-life violence.⁷⁵ However, the established result does not align with some studies that discovered no discernible impact of the media on VB.⁷⁶

Contrary to predictions, the present study found no moderation between gender and VB among adolescents. This result is consistent with a study that revealed that gender did not moderate the relationship between violent media content and VB.⁷⁷ However, this finding contradicts past studies in which multiple researchers have shown that gender moderates the relationship between media exposure and violence.⁷⁸ Prior research has shown that gender is related to VB. Several reasons may exist for this contradiction for instance, examining media exposure in different social contexts. Moreover, gender was examined as a moderator and aggressive behaviour in relation to school⁷⁹, whilst Toplu-Demirtaş & Fincham examined gender as a moderator and dating violence.⁸⁰

Second, as Browne & Hamilton-Giachritsis noted in their meta-analyses, “*video and computer games had substantial short-term effects on arousal, thoughts, and emotions, increasing the likelihood of aggressive or fearful behaviour in younger children, especially in boys*”.⁸¹ However, they also said the evidence became “*inconsistent when considering older children*”.⁸² Perhaps, the lack of an association in this study has to do with the age of the children investigated. Last, the lack of a significant association in the current study may have to do with the Arab-Islamic context of Jordan.

Furthermore, contrary to expectations, the present study found no evidence of SES as a moderator, making the findings contradictory to earlier research, perhaps because the current study mainly comprised low-income families. Several studies have shown that socioeconomic position can influence VB.⁸³ In prior investigations, SES was also a moderator between media exposure and violence.⁸⁴ However, Pabayo et al.’s study was conducted in a low-income black neighbourhood in Boston with a long history of racial conflicts.⁸⁵ Sariaslan et al.’s study was

⁷⁵ KAYA, Ş.: Gender and Violence: Rape as a Spectacle on Prime-Time Television. In *Social Science Information*, 2019, Vol. 58, No. 4, p. 681. See also: PONNAN, R. et al.: Shared Causal Theories About Film Violence and Violent Behaviour: Findings from Young Malaysian Indians. In *The Journal of the South East Asia Research Centre for Communication and Humanities*, 2018, Vol. 10, No. 1, p. 25.

⁷⁶ See: FREEDMAN, J.: *Media Violence and Its Effect on Aggression*. Toronto : University of Toronto Press, 2017. See also: LINDO, J. M., SWENSEN, I. D., WADDELL, G. R.: Effects of Violent Media Content: Evidence from the Rise of the UFC. In *Journal of Health Economics*, 2022, Vol. 83, p. 19.

⁷⁷ TENG, Z. et al.: A Longitudinal Study of Link Between Exposure to Violent Video Games and Aggression in Chinese Adolescents: The Mediating Role of Moral Disengagement. In *Developmental Psychology*, 2019, Vol. 55, No. 1, p. 192.

⁷⁸ BROWNE, K. D., HAMILTON-GIACHRITSIS, C.: The Influence of Violent Media on Children and Adolescents: A Public-Health Approach. In *The Lancet*, 2005, Vol. 365, No. 9460, p. 708. See also: KANZ, K. M.: Mediated and Moderated Effects of Violent Media Consumption on Youth Violence. In *European Journal of Criminology*, 2016, Vol. 13, No. 2, p. 165.

⁷⁹ ALIZAMAR, A. et al.: Differences in Aggressive Behavior of Male and Female Students Using Rasch Stacking. In *International Journal of Research in Counseling and Education*, 2018, Vol. 3, No. 1, p. 22.

⁸⁰ TOPLU-DEMIRTAŞ, E., FINCHAM, F. D.: I Don’t Have Power, and I Want More: Psychological, Physical, and Sexual Dating Violence Perpetration Among College Students. In *Journal of Interpersonal Violence*, 2022, Vol. 37, No. 13-14, p. 21.

⁸¹ BROWNE, K. D., HAMILTON-GIACHRITSIS, C.: The Influence of Violent Media on Children and Adolescents: A Public-Health Approach. In *The Lancet*, 2005, Vol. 365, No. 9460, p. 702.

⁸² Ibidem.

⁸³ PABAYO, R., MOLNAR, B. E., KAWACHI, I.: The Role of Neighborhood Income Inequality in Adolescent Aggression and Violence. In *Journal of Adolescent Health*, 2014, Vol. 55, No. 4, p. 1. See also: SARIASLAN, A. et al.: Childhood Family Income, Adolescent Violent Criminality and Substance Misuse: Quasi-Experimental Total Population Study. In *The British Journal of Psychiatry*, 2014, Vol. 205, No. 4, p. 289.

⁸⁴ PONNAN, R. et al.: Shared Causal Theories About Film Violence and Violent Behaviour: Findings from Young Malaysian Indians. In *The Journal of the South East Asia Research Centre for Communication and Humanities*, 2018, Vol. 10, No. 1, p. 25.

⁸⁵ PABAYO, R., MOLNAR, B. E., KAWACHI, I.: The Role of Neighborhood Income Inequality in Adolescent Aggression and Violence. In *Journal of Adolescent Health*, 2014, Vol. 55, No. 4, p. 5-6.

conducted in Sweden⁸⁶, Berkowitz's study was conducted among ethnocultural affiliations, i.e., Arabs and Jews in Israel⁸⁷, whilst Ponnann et al.'s study was conducted among young Malaysian Indians.⁸⁸ Saleem et al.'s study was conducted among juvenile delinquents in Pakistan.⁸⁹ These studies were conducted in the context of different ethnic-cultural backgrounds and used various methods, including interviews and surveys entailing different age groups and databases, which may have led to the different results from the current study.

6 Implications

The findings of this study contribute to new empirical evidence in the literature on violent movies and media exposure in the following ways. First, very few studies focused on adolescents by looking at the relationship between media exposure and VB in a developing Arabic-Islamic country like Jordan. Second, the respondents of this study consist of males and females from various groups and ages, implying that their actions may be applied to a broad spectrum of Jordanian adolescents. The results of the current study also have practical implications. This study could help parents, the government, and law enforcement become more aware of how the media and violent movies contribute to adolescents' VB. The study's findings may enhance decision-makers' awareness and help them design solutions to address the stated problems and, as a result, successfully reduce VB among adolescents.

7 Limitations

This study has several limitations. First, although this study discovered a correlation between media exposure (violent movies) and VB in real life, correlation does not necessarily imply causation. Second, longitudinal studies must establish if this association persists over time. Third, due to cost and time constraints, this study only looked at schools in one governate of Jordan (Jerash). Consequently, generalizing the results to all Jordanian adolescents and other countries should be treated with caution. Fourth, this study used a sample of students with reported disciplinary problems, and a comparative study with those who did not have these issues would be helpful.

8 Conclusion

The study's results showed that media exposure impacts VB among adolescents and that gender and SES have no moderate effect on the relationship between media exposure and VB. Despite extensive research on media violence, this study contributes to a better understanding of the most crucial factors contributing to increased violence among adolescents, particularly in Jordan. The current study has found beneficial ways to describe violent movies' influence

⁸⁶ SARIASLAN, A. et al.: Childhood Family Income, Adolescent Violent Criminality and Substance Misuse: Quasi-Experimental Total Population Study. In *The British Journal of Psychiatry*, 2014, Vol. 205, No. 4, p. 286.

⁸⁷ BERKOWITZ, R.: Students' Physical Victimization in Schools: The Role of Gender, Grade Level, Socioeconomic Background and Ethnocultural Affiliation. In *Children and Youth Services Review*, 2020, Vol. 114, p. 105051.

⁸⁸ PONNAN, R. et al.: Shared Causal Theories About Film Violence and Violent Behaviour: Findings from Young Malaysian Indians. In *The Journal of the South East Asia Research Centre for Communication and Humanities*, 2018, Vol. 10, No. 1, p. 36.

⁸⁹ SALEEM, N. et al.: Violent Movies and Criminal Behavior of Delinquents. In *Pakistan Journal of Social Sciences (PJSS)*, 2013, Vol. 33, No. 2, p. 246-247.

on adolescent VB. Future studies could look at adolescents in other countries, particularly the Arab world, which share Jordan's cultural norms. A bigger sample size and representation of adolescents from other countries would help produce more generalizable findings. Future studies on media violence and VB should explore a longitudinal approach or mixed-method to offer more comprehensive and complete results on VB. Researchers could utilize qualitative approaches like interviews to gain a more in-depth explanation of a specific issue in VB and more information and knowledge about the causes and motivations contributing to VB.

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