RELATIONSHIP BETWEEN EXPOSURE TO MEDIA AND PSYCHOSOCIAL DEVELOPMENT AMONG ADOLESCENT SECONDARY SCHOOL STUDENTS IN WESTERN KENYA: THE MODERATING ROLE OF PARENTAL INVOLVEMENT

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A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Educational Psychology by Masinde Muliro University of Science and Technology

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DEDICATION

This doctoral thesis is affectionately dedicated to the cherished memory of my beloved parents, George Samuel Onyando and Nelly Achieng Onyando, and my late brother, Geoffrey Okoth, whose unwavering love and nurturing guidance have been the cornerstone of my journey. In addition, I dedicate this work to my precious treasures, Benjamin Ochieng, Maxwel Owino, and Nelly Achieng, who continue to inspire me daily. May this thesis serve as a beacon of inspiration, encouraging all of us to delve deeper into the realms of knowledge and discovery.

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ABSTRACT

The purpose of the study was to investigate the relationship between media exposure and psychosocial development, along with the moderating role of parental involvement, among adolescent students in Kakamega, Kisii, and Siaya Counties, Kenya. The objectives were: to assess the patterns of access to media, to find out the relationship between exposure to media and aggression, to establish the relationship between exposure to media and self-esteem, and to determine the role of parents in moderating the effect of media on psychosocial development among adolescent students in Kakamega, Kisii and Siaya Counties. This study was based on an eclectic model derived from Albert Bandura's Social Learning Theory, Leon Festinger's Social Comparison Theory, and the Psychosocial Development theory by Erick Erickson. Descriptive survey and correlational research designs were applied. The study population comprised 190,555 students, 190,555 parents and 2034 teachers. Using Krecjie and Morgan's sample size formula, a total sample size of 417 students was used in the study, as well as 56 parents and 48 teachers. The study sample was selected using stratified random sampling method. Data was collected using a questionnaire, interview schedule, focus group discussion guide and content analysis schedule, as well as the Adolescent Peer Relations Instrument and the Rosenberg Self-Esteem Scale. A pilot study was conducted involving 42 students, 8 parents, 8 teachers from Vihiga County, as well as 4 coders to assess the reliability of the instruments. The questionnaire yielded a Cronbach's Alpha coefficient of 0.87. Face validity was evaluated by a panel from the Department of Education Psychology, Masinde Muliro University of Science and Technology. Quantitative data was analyzed using descriptive statistics in form of frequency counts and percentages as well as Spearman's *rho* and ordinal regression analysis. Qualitative data was transcribed, put into various categories and reported in an ongoing process as themes and sub-themes emerged. Findings show that 38.4% of respondents used social media most frequently, with 31% spending over six hours daily, 34.6% primarily for entertainment, and 40.7% using it unsupervised by parents. Television showed the highest correlation with aggression ($r=0.211$, $p=0.000$) and the strongest predictive value ($r=0.218$, $p=0.001$). Mobile phones had the strongest correlation with self-esteem ($r=0.101$, $p=0.049$) but also the highest predictive power ($r=0.080$, $p=0.043$). Parents were minimally involved in their adolescents' use of mobile phones (16%) and social media (15%), but intervened more in their use of radio (40%) and television (29%). After accounting for parental involvement, the correlation between television exposure and aggression decreased slightly from 0.218 to 0.212, remaining statistically significant. Similarly, the negative correlation between mobile phone exposure and self-esteem increased from -0.080 ($p = 0.043$) to -0.098 ($p = 0.017$), with greater statistical significance. This study recommends that schools incorporate social media into teaching by developing curriculum-based programs on media literacy and training teachers to use platforms like YouTube and educational apps. Parents should be engaged through school-led seminars on guiding responsible media use at home. Media regulatory bodies must also enforce stricter content guidelines for adolescents, with schools and parents encouraged to report violations through established channels.

TABLE OF CONTENTS

PLAGIARISM STATEMENT ii
DECLARATION iii
DEDICATION iv
ACKNOWLEDGEMENT v
ABSTRACT vi
TABLE OF CONTENTS vii
LIST OF ABBREVIATIONS AND ACRONYMS xi
LIST OF TABLES xii
LIST OF FIGURES xiii
LIST OF APPENDICES xiv
CHAPTER ONE 1
1.0 INTRODUCTION 1
1.1 Overview 1
1.2 Background to the Study 1
1.3 Statement of the Problem 10
1.4 Purpose of the Study 12
1.4.1 Objectives of the Study 13
1.4.2 Research Questions 13
1.4.3 Hypotheses 13
1.5 Scope of the Study 14
1.6 Limitations of the Study 15
1.7 Assumptions of the Study 16
1.8 Significance of the Study 17
1.9 Theoretical Framework 18
1.9.1 Social Learning Theory (SLT) 19
1.9.2 Social Comparison Theory (SCT) 21
1.9.3 Psychosocial Development Theory (PDT) 23
1.9.4 The Eclectic Model 26
1.10 Conceptual Framework 28
1.11 Operational Definition of Terms 31
CHAPTER TWO 33
2.0 LITERATURE REVIEW 33
2.1 Introduction 33
2.2 The Media Technologies 33

2.3 Patterns of Media Exposure among Adolescents 41
2.4 Relationship between Exposure to Media and Aggression 48
2.5 Relationship between Exposure to Media and Self-Esteem 55
2.6 Role of Parents in Media Use among Students 61
2.7 Summary of Literature Review 67
CHAPTER THREE 70
3.0 RESEARCH METHODOLOGY 70
Introduction 70
Research Paradigm 70
Research Approach 72
Research Design 77
3.5 Variables of Study 78
Study Area 79
Study Population 84
3.8 Sampling Techniques and Sample Size 86
3.8.1 Sampling Techniques 86
3.8.2 Sample Size 88
3.9 Instruments for Data Collection 90
3.9.1 Questionnaire for Students 91
3.9.2 Interview Schedule for Parents 97
3.9.3 Focus Group Discussion Guide for Class Teachers 98
3.9.4 Content Analysis Schedule 99
3.10 Pilot Study 101
3.10.1 Validity of the Research Instruments 104
3.10.2 Reliability of the Research Instruments 107
3.11 Data Collection Procedures 110
3.12 Data Analysis 112
3.13 Ethical Considerations 114
CHAPTER FOUR 116
4.0 RESULTS AND DISCUSSION 116
Introduction 116
4.2 Response Rate 116
4.3 Demographic Analysis of Respondents 117
4.3.1 Demographics of Students 117
4.3.2 Demographics of Parents 120
4.3.3 Demographics of Teachers 121

4.3.4 Summary of Demographic Analysis of Respondents.....122
4.4 Patterns of Access to Media.....122
4.4.1 Type of Media Accessed.....123
4.4.2 Length of Exposure.....127
4.4.3 Context of Use.....130
4.4.4 Reason for Use.....133
4.4.5 Miscellaneous Media Access Patterns.....135
4.4.6 Summary of Patterns of Media Exposure.....136
4.5 Relationship between Exposure to Media and Aggression.....137
4.5.1 Exposure to Violent Media Content.....138
4.5.2 Imitation of Violent media Content.....142
4.5.3 Perception of Violent Media Content.....144
4.5.4 Aggressive Tendencies.....146
4.5.5 Relationship between Exposure to Media Violence and Aggression.....147
4.5.6 Summary of Relationship between Exposure to Media and Aggression..162
4.6 Relationship between Exposure to Media and Self Esteem.....164
4.6.1 Self Comparison with Media Characters.....165
4.6.2 Self-Perceived Inferiority in Comparison to Media Characters.....167
4.6.3 Self-Perceived Superiority to Media Characters.....168
4.6.4 Experience of Negative Comments from the Media.....170
4.6.5 Self Esteem.....171
4.6.6 Relationship between Exposure to Media and Self-Esteem.....172
4.6.7 Summary of Relationship between Exposure to Media and Self-esteem. 183
4.7 Role of Parents in Media Use among Students.....185
4.7.1 Media Co-use.....185
4.7.2 Enforcement of Rules.....187
4.7.3 Discussion of Media Content.....189
4.7.4 Monitoring of Media Use.....190
4.7.5 Moderating Role of Parental Involvement on the Relationship between access to Media and Aggression.....192
4.7.6 Moderating Role of Parental Involvement on the Relationship between access to Media and Self-esteem.....196
4.7.7 Summary of Role of Parents in Media.....200
CHAPTER FIVE.....203
5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....203
5.1 Introduction.....203
5.2 Summary of Findings.....203

5.2.1 Patterns of Access to Media.....203
5.2.2 Relationship between Exposure to Media and Aggression.....203
5.2.3 Relationship between Exposure to Media and Self-esteem.....204
5.2.4 Role of Parents in Media Use among Students.....205
5.3 Conclusions.....206
5.3.1 Patterns of Access to Media.....206
5.3.2 Relationship between Exposure to Media and Aggression.....207
5.3.3 Relationship between Exposure to Media and Self-esteem.....207
5.3.4 Role of Parents in Media Use among Students.....207
5.4 Recommendations.....208
5.5 Suggestions for Further Research.....211
REFERENCES.....213
APPENDICES.....254

LIST OF ABBREVIATIONS AND ACRONYMS

The following section gives a list of key abbreviations and acronyms used throughout the thesis.

AAP-	American Academy of Pediatrics
APRI-	Adolescent Peer Relations Instrument
CAK-	Communication Authority of Kenya
CBC-	Competency Based Curriculum
CEMASTEA-	Center for Mathematics, Science and Technology Education in Africa
DLP-	Digital Learning Program
ICT-	Information Communication and Technology
IERC-	Institutional Ethics Review Committee
IT-	Information Technology
KCSE-	Kenya Certificate of Secondary Education
KESSP-	Kenya Educational Sector Support Program
KFC-	Kenya Film Commission
KFCB	Kenya Films Classification Board
KICA-	Kenya Information and Communication Act
KICD-	Kenya Institute of Curriculum Development
KNBS-	Kenya National Bureau of Statistics
MCK-	Media Council of Kenya
PARB-Q-	Peer Aggression and Reactive Behavior Questionnaire
PCS-	Peer Conflict Scale
PECK-	Personal Experience Checklist
RSES-	Rosenberg Self- Esteem Scale
SCT-	Social Comparison Theory
SE-	Self-Esteem
SLT-	Social Learning Theory
SNS-	Social Networking Sites
SPPA-	Self-Perception Profile for Adolescents
SVEX-	Self- Report for Victimization and Exclusion
TSCS-	Tennessee Self-Concept Scale
UNESCO-	United Nations Educational, Scientific and Cultural Organization
UNICEF-	United Nations International Childrens' Educational Fund

LIST OF TABLES

Table 3. 1: *Enrolment for Form 2 and Form 3 Secondary School Students by Class in Kakamega, Kisii and Siaya Counties, Kenya*..... 85

Table 3. 2: *Distribution of Form 2 and Form 3 Secondary School Parents in Kakamega, Kisii and Siaya Counties, Kenya*.....85

Table 3. 3: *Distribution of Form 2 and Form 3 Secondary School Class Teachers in Kakamega, Kisii and Siaya Counties, Kenya*..... 86

Table 3. 4: *Sampling Frame Showing the Sample Size for Students, Parents and Teachers*.....90

Table 4. 1: *Distribution of Respondents (Students) by County and Category of School*……..117

Table 4. 2: *Distribution of Respondents (Students) by County and Level of Education*.....118

Table 4. 3: *Distribution of Respondents (Students) by Gender*.....118

Table 4. 4: *Demographics for Participants (Parents)*.....120

Table 4. 5: *Distribution Respondents (Parents) By County and School Category*.....120

Table 4. 6: *Demographics for Participants (Teachers)*.....121

Table 4. 7: *Parents' Responses on Frequently Accessed Form of Media*.....124

Table 4. 8: *Frequency of Private Media Use in Percentages*.....131

Table 4. 9: *Miscellaneous Media Access Patterns*.....135

Table 4. 10: *Frequency of Imitation of Violent Media Content*.....142

Table 4. 11: *Relationship between Exposure to Radio, Television, Mobile Phone, Social Media and Aggression*..... 151

Table 4. 12: *Regression Model Summary*.....156

Table 4. 13: *ANOVA*[b].....157

Table 4. 14: *Regression Coefficients*[a].....159

Table 4. 15: *Relationship Between Exposure to Radio, Television, Mobile Phone, Social Media and Self-esteem*.....175

Table 4. 16: *Regression Model Summary*.....180

Table 4. 17: *ANOVA*[b].....181

Table 4. 18: *Regression Coefficients*.....181

Table 4. 19: *Regression Model Summary*.....193

Table 4. 20: *ANOVA*[b].....194

Table 4. 21: *Regression Coefficients*.....195

Table 4. 22: *Regression Model Summary*.....197

Table 4. 23: *ANOVA*[a].....198

Table 4. 24: *Regression Coefficients*.....199

LIST OF FIGURES

Figure 1. 1: *Conceptual framework showing the relationship between the independent (exposure to media), dependent (psychosocial development) and moderating (parental involvement) variables*.....30

Figure 3. 1: *Illustration of Convergent Parallel Mixed Methods Design*……73

Figure 3. 2: *Illustration of Convergent Parallel Mixed Methods Design as Applied in the Current Study*.....76

Figure 4. 1: *Distribution of Respondents (Students) by Parental Status*……119

Figure 4. 2: *Media Access by Type*.....123

Figure 4. 3: *Media Usage: Daily Average of 6 Hours*.....127

Figure 4. 4: *Frequency of Private Media Use*.....130

Figure 4. 5: *Purpose for Media Use*.....134

Figure 4. 6: *Frequency of Experience of Violence on the Media*.....138

Figure 4. 7: *Incidences of Depiction of Violent Media Content in 3 Popular Television Shows*.....140

Figure 4. 8: *Frequent Imitation of Violence Across Different Media Platforms*.....143

Figure 4. 9: *Justification of Media Violence*.....145

Figure 4. 10: *Levels of Aggression*.....146

Figure 4. 11: *Respondents who Compared Themselves with Media Characters*.....165

Figure 4. 12: *Self-Perceived Inferiority Compared to Media Characters*.....167

Figure 4. 13: *Self-Perceived Superiority Compared to Media Characters*.....169

Figure 4. 14: *Respondents who Encountered Negative Comments from the Media*..170

Figure 4. 15: *Level of Self Esteem*.....172

Figure 4. 16: *Respondents whose Parents Co-viewed Media with Them*.....186

Figure 4. 17: *Respondents whose Parents Controlled their Media Use*.....188

Figure 4. 18: *Respondents who Discussed Media Content with their Parents*.....190

Figure 4. 19: *Respondents whose Parents Monitored their Media Use*.....191

LIST OF APPENDICES

Appendix A: Eclectic Model Illustrating the Combined Processes of Social Learning, Social Comparison and Identity Formation.....254

Appendix B: Map of Kenya Showing the Position of Kakamega County.....255

Appendix C: Map of Kenya Showing the Position of Kisii County.....256

Appendix D: Map of Kenya Showing the Position of Siaya County.....257

Appendix E: Illustration of Stratified Sampling Process Used to Select Students….258

Appendix F: Illustration of Stratified Sampling Process Used to Select Teachers....259

Appendix G: Questionnaire for Students.....260

Appendix H: Adolescents Peer Relations Instrument (APRI).....267

Appendix I: Rosenberg's Self-Assessment Scale (RSES).....269

Appendix J: Interview Schedule for Parents.....270

Appendix K: Focus Group Discussions Guide for Class Teachers.....271

Appendix L: Content Analysis Schedule.....272

Appendix M: Approval from School of Graduate Studies.....273

Appendix N: Permit form National Commission for Science, Technology and Innovation.....274

Appendix O: Permit from Ministry of Education State Department of Early Learning and Basic Education, Kakamega County.....275

Appendix P: Permit from Ministry of Interior and Coordination of National Government, Kakamega County.....276

Appendix Q: Permit from Ministry of Education State Department of Early Learning and Basic Education, Kisii County.....277

Appendix R: Permit from Ministry of Interior and Coordination of National Government, Kisii County.....278

Appendix S: Ministry of Education State Department of Early Learning and Basic Education, Siaya County.....279

Appendix T: Permit from Ministry of Interior and Co-ordination of National Government, Siaya County.....280

Appendix U: Consent Letter to Principals.....281

Appendix V: Histogram for Distribution of Level of Access to Radio.....282

Appendix W: Histogram for Distribution of Level of Access to Television.....283

Appendix X: Histogram for Distribution of Level of Access to Mobile Phone.....284

Appendix Y: Histogram for Distribution of Level of Access to Social Media.....285

Appendix Z: Histogram for Distribution of Levels of Aggression.....286

Appendix AA: Boxplot for Level of Access to Radio.....287
Appendix BB: Boxplot for Level of Access to Television.....288
Appendix CC: Boxplot for Level of Access to Mobile Phone.....289
Appendix DD: Boxplot for Level of Access to Social Media.....290
Appendix EE: Boxplot for Levels of Aggression.....291
Appendix FF: Scatterplot for Access to Radio by Level of Aggression.....292
Appendix GG: Scatterplot for Access to Television by Level of Aggression.....293
Appendix HH: Scatterplot for Access to Mobile Phone by Level of Aggression.....294
Appendix II: Scatterplot for Access to Social Media by Level of Aggression.....295
Appendix JJ: Correlation Coefficients for Access to Radio, Television, Mobile Phone, Social Media and Levels of Aggression.....296
Appendix KK: Histogram for Distribution of Levels of Self-esteem.....297
Appendix LL: Boxplot for Boxplot for Level of Self-esteem.....298
Appendix MM: Scatterplot for Access to Radio by Self-Esteem.....299
Appendix NN: Scatterplot for Access to Television by Self Esteem.....300
Appendix OO: Scatterplot for Access to Mobile Phone by Self Esteem.....301
Appendix PP: Scatterplot for Access to Social Media by Self Esteem.....302
Appendix QQ: Correlation Coefficients for Access to Radio, Television, Mobile Phone, Social Media and Levels of Self-esteem.....303

CHAPTER ONE

1.0 INTRODUCTION

1.1 Overview

In this chapter, the researcher provides a contextual overview of the study by summarizing the background, problem statement, purpose, objectives, hypotheses, scope, limitations, assumptions, and significance of the study. Additionally, the researcher outlines the theoretical and conceptual frameworks within the context of the study and provides an operational definition of key terms used throughout the thesis.

1.2 Background to the Study

The term ‘media’ is used variously to refer to technology that uses electronics or electromechanical energy to store information and deliver it to a recipient. It includes television (TV), radio, telephone, as well as the software and media applications that enable the access, retrieval, storage, transmission and manipulation of data. The world of electronic media is changing drastically, both qualitatively and quantitatively. New forms of media technologies are being invented daily. As Sear (2014) puts it, besides TV and radio which were, until the 1990s, the dominant media sources, there have emerged smart phones, video games and social networks. Similarly, there are video conferencing technologies that allow remote communication from different parts of the world, hence making the world a ‘global village’. All these are now part and parcel of the lives of the young generation and with their coming, a lot has changed in the experiences of the youth.

With the rapid spread and ease of access to media technology, the issue of youth and the media has become a growing global concern. With the ever-increasing multiplicity of

these technologies, the young generation has more avenues to observe, explore, play with and learn from digital media. This is happening at a very crucial time in their development; a time when the brain is remarkably supple and sensitive to experiences from the environment. For the adolescents, it is coming at a time when they are struggling to achieve self-identity, a process marked with a lot of adolescent experiments based on what they observe from the environment, including the media.

The discourse on children's media access and screen time underscores the complexity of this issue, especially given the absence of a universally defined limit. Research endeavors undertaken with the objective of determining how much media usage is excessive have failed to establish a specific numerical threshold. For instance, Burns and Gottschalk (2019) underscore the absence of a universally defined limit for children's media access. The 'Goldilocks Effect' underscores the advantages of moderate digital engagement for subjective well-being (Khouja et al., 2019) and social connection, cautioning against excessive or minimal use (Sittichai & Smith, 2020). The extent of excess is situation-dependent and varies with the activity. Nonetheless, precise numerical screen time restrictions remain uncertain due to inconclusive research.

The UK Royal College of Pediatrics and Child Health's evidence-based guidelines approach excessive screen time cautiously, given the lack of direct causal evidence, linking it to negative child health outcomes. These guidelines emphasize on online safety and appropriate content (Viner, Davie & Firth, 2019).

The World Health Organization (WHO) offers screen time guidelines for different age g roups. Although specific thresholds for adolescents aren't defined, the WHO underscore

s the importance of maintaining a balanced approach, emphasizing offline activities suc h as sleep, physical activity, social interactions, and academic engagement (WHO, 2020). The exact "too much" screen time can vary based on content quality and its impa ct on well-being. This requires collaborative efforts among parents, teachers, and health care professionals to determine appropriate limits for adolescents.

Therefore, of paramount importance is the need to direct attention towards measures that ensure wholesome development of the child, such as having adequate and regular sleep patterns and cultivating meaningful social interactions with family and peers. These are of more concern than adopting strict screen time limits, especially during the formative years.

Exposure of children to the media both at home and in school has been on a steady increase. World over, the United States of America (USA) takes the lead as far as technological innovation is concerned (Schäfer, 2018). A 2019 study by Pew Research Center, found out that 7 in 10 Americans use social media to connect with each other, engage with news content, share information and entertain themselves. The same study reports that YouTube and Facebook are the most widely used online platforms. Studies have also indicated that by the time the average American child completes high school, he will have viewed 500,000 TV commercials (Milani et al., 2015). At the same time, Wallace (2013) confirms that children under the age of 4 in USA spend over twice as much time watching TV as they do, reading books despite the fact that the latter is a very crucial source of stimulation for their cognitive development.

In Australia, most families have at least 3 TV sets and 53% of children aged between 2 and 7 have computers in their bedrooms, an arrangement which allows more access to the media even in the privacy of their bedrooms (Australian Institute of Famly Studies, 2023). The author goes on to report that 14% of children watch TV unsupervised. This is happening even at the expense of time that would have been spent on other important developmental activities.

A similar pattern can be seen in Italy where children get access to media devices at a very young age. For instance, a survey indicates that 20% of children begin using a smart phone within the first year of their life against the recommendations by WHO that children below the age of 1 should not have access to any form of media (WHO, 2020). Mostly this happens when mothers use their phones as pacifiers (Bozzoola et al., 2018). Additionally, 80% of children aged 3 to 5 have solo access to their mother's smart phones, which also violates recommendations by WHO that children between the age of 1 and 4 should have a maximum of 1 hour 'supervised' screen time (WHO, 2020).

Research conducted in both Ethiopia and South Africa has indicated a burgeoning concern regarding children's access to media and the possible effects such exposure may have on their developing minds. For instance, in Ethiopia it was determined that children within the age range of 6 to 15 years of age watched an average of 2.32 hours of television daily. A survey in South Africa revealed that while media forms a major part of the leisure environment for children aged 7 to 17, parental involvement and guidance was found to be minimal (Youth Research Unit, 2015). Consequently, children are exposed to a high degree of media violence, causing their desensitization to violence in real life.

With the introduction of new forms of media technologies, there have been varying opinions concerning its effect on the young minds. While some celebrate it for its educational benefits (O'reilly, 2020; Jarman et al, 2020), those opposed to it point out to its inappropriate content, including unsuitable sexual connotations, unfit language use and portrayal of unacceptable cultural beliefs and practices (Steinsbekk et al., 2021; Sengouul, 2017). As per a systematic review done by Vossen, Piotrowski and Valkenburg (2014), more than 30 studies have indicated that prosocial media content is likely to lead to prosocial behavior and vice versa.

The benefits of media have been affirmed by international research, which has demonstrated that educational programs benefit the child's knowledge and academic abilities right from early childhood, where according to Al-Kamel (2019), choice of program makes a considerable difference on the child's skills and knowledge when they enter school. Through these technologies, learning has been made easier, faster, simpler and more interesting. Besides this, media is important for the acculturation process since children get to increase their understanding of the world around them as well as acquire acceptable social behavior (Yau, Marder & O'Donohoe, 2020).

Despite this undoubted usefulness, other researchers have indicated that excessive and unrestricted media use can be detrimental to the course of development in the child. For instance, in his study on the effect of visual media on the social behavior of children, Sear (2014) concludes that children who spend more time on the internet may spend less time with family and friends, leading to loneliness and depression. Worth noting is that most media sources are a one-way communication. For instance, when a child uses

television, radio or the internet, it is the technology that speaks while the child merely listens or watches. This might not be an effective way of learning for children since children learn best through manipulating objects, experimenting and real interactions with objects within the environment. Therefore, in the end, their learning may be hampered. Similarly, Marks, De Foe & Collett (2020) avers that excessive use of the media can lead to attention problems, school difficulties, sleep and eating disorders, as well as obesity. The same author reports that the internet and cell phones can provide platforms for exposure to illegal and risky behavior.

Other risks associated with exposure to the media include increased insecurity particularly due to too much disclosure of personal information which may lead to account hacking and sometimes kidnapping; development of phobias from horror movies portraying fearful sites such as heights, monsters, darkness, huge water bodies and bad experiences with doctors; risky sexual behavior as a result of watching pornographic content (Vossen, Piotrowski & Valkenburg, 2014). Akram and Kumar (2018) also list down cyber bullying and addiction as potential risks.

Studies done in Kenya on media effects have revealed a similar dichotomy. To illustrate this, in a study by Ng'ethe (2014) on preschool children in Thogoto Location, focusing on the influence of TV viewing on children's social development, it was found that as children watched popular local programs like *Machachari* and *Daktari*, they aped the media characters in their actions, language and reasoning despite the inferior portrayals of human intellectual ability therein. The study pointed out, for instance, that children particularly enjoyed copying the *sheng'* spoken in TV programs, a trend that Rono (2014) found to interfere with the teaching and learning of English and Kiswahili. On

the other hand, in a case study entitled *Effects of Mass Media on the academic development of children in primary schools in Kenya: A Case of St. Alloys Junior Academy, Kenya*, Ocharo and Karani (2015) conclude that media can be beneficial to the overall development of the child as long as there is proper regulation. Lately there has been a lot of concern from parents with regard to the influence the media, particularly the internet and mobile phone, may have on the moral behavior of the youth. Incidences of teenage pregnancy, drinking sprees and violence being experienced are linked to lack of effective censorship of what is available to them from the internet.

The current study placed particular focus on media effects on the psychosocial development of adolescents due to the specific developmental characteristic of this stage. One key developmental aspect of adolescence, which is of importance to the current study is the inability to self-regulate (Debbarma & Umadevi, 2021). Cognitively, adolescents function at the formal operational stage of development, where they can reason about abstract concepts like justice, peace, morality, right and wrong. However, due to lack of experience, they often use primitive means in their decision making unlike the case in adults. Besides this, due to their other developmental need to attain autonomy, they are likely to go against expectations from significant adults, especially parents and teachers, and fall back to the advice of peers and sometimes media characters through blindly aping their behavior, including violent tendencies (Bickham, 2017).

Additionally, this stage of development is marked with social comparison behavior, where the child desires to develop competence in various skills at home and in school.

As Rollero (2015) puts it, through the media, users are able to observe characters who seem to represent the ideal standards in terms of physical appearance, intellectual ability, social class and other aspects of importance to this age group. It therefore provides avenues for comparison with media heroes and super characters in the form of celebrities, most of whom portray unrealistic standards of physical, social and financial status (Xiao, 2022). This can be very intimidating, making the adolescent feel inferior, hence affecting their self-perception, and eventually self- esteem negatively.

Studies have consistently established connection, between low self-esteem and bullying or violent behavior among teenagers (Choi & Park, 2021). When teenagers have low self-esteem they may feel compelled to assert control and seek approval through acts of bullying, school unrests and fights so as to boost their self-perception or deflect their insecurities onto others, hence elevating their self-esteem. Furthermore, adolescents with low self-esteem may engage in aggressive behavior, such as bullying, as a means to cope with their chronic frustration and negative emotions, temporarily relieving their pent-up tension (Lee, 2014), targeting and intimidating others (including fellow students and teachers) so as to protect themselves from vulnerability and avoid judgment, hence becoming the center of attention.

Among the government proposed developmental agendas for Africa and Kenya in particular, ICT is key. For instance, the first aspiration for the African Agenda 2063 is to see a prosperous Africa. One of the strategies here is to capitalize on the digital revolution to improve education for its citizens by ensuring that Science, Technology and Innovation is well ingrained into the curriculum (African Union Commission, 2015). In the same vein, the economic pillar of the Kenya Vision 2030 aims at

promoting ICT by laying a strong foundation for Science and Technology through the education system (GoK, 2007). Noteworthy, both agendas advocate for ICT integration in the school system not only as a means to learning but also as a curriculum content in itself. The likely end result is that ICT will continue to be a basic ingredient in the students' daily menu.

Kenya possesses a media landscape that is both varied and refined, characterized by a significant degree of freedom of expression. Nonetheless, the radio continues to be the most accessible medium, directly reaching over 85% of households across the nation. (Intermedia, 2020). Mobile phone access is also increasingly widespread. In support to this high access, Gigli and Marles (2013) report, that Kenyan children watch an average of 6 hours of television every day. This makes up 25% of their day and 50% of their wakeful hours. This in effect means that children in these households are likely to have access to the same media. Rural dwellers, Coastal and North Eastern Regions however have significantly lower access to most media and Information Communication and Technology (ICT) platforms.

Internet use is also fast growing in Kenya. According to Kemp (2020), there were 22.86 million internet users in Kenya by January 2020. This was an increase by 3.2 million (16%) between 2019 and 2020. In January 2020, internet penetration in Kenya stood at 43%. In a survey of 94 young people aged 10 to 21, 32% of children said they have an internet account. This was despite the developer's requirement that users should be at least 18 years of age. In the same survey, 15.82% of the respondents reported that they watch adult content while 5.31% engaged in online betting (Kemp, 2020).

Undoubtedly, therefore, the media continues to be an integral part of the young generation, hence an issue of concern to caregivers. The question that needs to be addressed is how to ensure a balance between the likely benefits and the likely harm of these technologies. As such, it is worth researching into to gain further insights into the patterns of access and the pathways through which it influences the developing mind. This study aimed to investigate the potential connection between media access and self-esteem and aggression among adolescent students in Kakamega, Kisii, and Siaya counties, with a particular focus on addressing the increasing incidences of student aggression in secondary schools in recent times. Additionally, the study explored the role of parental involvement in moderating the effects of media exposure on these psychosocial outcomes.

1.3 Statement of the Problem

In the context of Kakamega, Kisii and Siaya Counties, access to media technologies is notably high as indicated in census reports. These counties exhibit higher rates of household access to computers, mobile phones, radios and TV compared to their neighboring regions. For instance, household access to computer (3.2%), mobile phones (53.2%) and radio (81.8%) in Siaya is much higher than it is in the neighboring Busia County (Computer, 2.8%; mobile phone, 40.9%; radio, 75%), and Vihiga County (computer, 3.0%; mobile phone, 49.6%; radio, 79%) as reported by the Kenya National Bureau of Statistics [KNBS] (2019). Moreover, mobile phone and radio access in these counties surpass national averages. Such prevalence of media access among households may reasonably extend to adolescents within these areas (Cabello, Cabello and Claro, 2018).

Notably, the year 2018 witnessed a surge in student strikes within Kenyan secondary schools, with Nyanza Region, particularly Siaya and Kisii Counties, experiencing a considerable share of these incidents. These strikes led to closures and unrest across numerous schools. For instance, in term 2 of 2018, out of the 26 secondary schools in Nyanza region closed down indefinitely due to student unrest, 12 were from Siaya County (Omollo, 2018 July 18). This was followed by Kisii County which had 4 schools experiencing student unrest (Mutuku, 2021 November 3). In another report, there were 63 incidences of school unrests from 32 Counties countrywide, out of which the highest number of incidences were seen in Siaya (6), Kakamega (4), Nairobi (5), Nyeri (4) and Murang'a (4) as reported by Otenyo (2018 July 31).

Furthermore, 2021 marked instances of students engaging in physical aggression against peers and teachers. The Siaya County Education Office reported 7 cases of students aggression towards teachers and 9 cases of bullying among students (Siaya County Education Office, 2021). Similar incidents unfolded in Kisii County, where students attacked teachers in separate machete and knife incidents (Ayienda, 2021 January 12).

Research acknowledges the influential role of social media in disseminating information, including content that incites school unrest (Koross & Kosgei, 2016). In the aforementioned incidents of school aggression, concerns were raised that social media platforms like WhatsApp, Facebook, Twitter, and TikTok facilitated the spread of unrest among neighboring schools, driven by the desire to appear on mainstream media, thus what was then referred to as the 'Wall of Fame.

Umar and Idris (2018) found a strong correlation between social media use and psychosocial development. In their study, they concluded that students who followed celebrity characters on social media often developed a low self-worth since they often fell short of the supposed 'ideal' standards portrayed by the celebrities. In the same vein, social media provides an opportunity for cyber bullying which negatively affects both the perpetrator and the victim. According to Krahé (2021), individuals with low self-esteem are more likely to engage in aggression as a response to feelings of frustration, seeking to regain a sense of control or boost their self-worth.

Given these circumstances, a critical concern emerges: is there a correlation between the reported incidents of student aggression in Siaya, Kisii, and Kakamega Counties and the media content consumed by adolescent students in these areas? This study aims at examining the potential relationship between media exposure and aggressive behavior, as well as self-esteem among adolescents. By investigating the type, extent, and content of media accessed by these students, the study seeks to uncover any resultant effects on their psychosocial development, thus aggressive behavior and self-esteem. Furthermore, the research delves into the efficacy of parental involvement in mitigating the potentially adverse influences of media exposure on these adolescents

1.4 Purpose of the Study

The purpose of the study was to investigate the relationship between media exposure and psychosocial development, along with the moderating role of parental involvement, among adolescent students in Kakamega, Kisii, and Siaya Counties, Kenya.

1.4.1 Objectives of the Study

This study was guided by the following objectives:

i. To determine the patterns of access to media among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.
ii. To find out the relationship between exposure to media and aggression among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.
iii. To establish the relationship between exposure to media and self-esteem among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.
iv. To determine the role of parental involvement in moderating the effect of exposure to media on psychosocial development among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.

1.4.2 Research Questions

This study sought to find answers to the following questions:

i. What are the current patterns of access to media among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya?

1.4.3 Hypotheses

The study sought to test the following hypotheses:

H^0_1: There is no significant relationship between exposure to media and aggression among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.

H^0_2: There is no significant relationship between exposure to media and self-esteem among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya.

$H^0_{3:}$ Parental involvement does not moderate the relationship between media exposure and psychosocial development among adolescent students

1.5 Scope of the Study

This study was based in western part of Kenya, specifically, Kakamega, Kisii and Siaya Counties. The selection of these three counties as the study's focal points WAs attribute d to their distinctive attributes, indicative of pronounced media technology accessibility (KNBS, 2019) and a conspicuous prevalence of school violence incidents (Omollo, 2018 July 18; Mutuku, 2021 November 3; Otenyo, 2018 July 31). These counties have s hown higher access to various media technologies compared to neighboring regions and have also experienced a rise in student-led strikes and incidents of physical aggression t oward teachers and peers in recent years.

The study covered all the public and private secondary schools in the three counties. The unit of analysis was the student though data was specifically provided by adolescent secondary school students in form 2 and 3, class teachers of form 2 and 3, as well as parents of form 2 and 3. These levels were settled at on the grounds that they represent the mean ages (15-and 16-year-olds) of adolescence. Both the 8-4-4 system of education introduced in 1985 and the recently introduced Competency Based Curriculum (CBC) launched in Kenya in 2017, recommend that a child joins primary school at the age of 6 (Kenya Institute of Curriculum Development [KICD], 2018), it follows that between the ages of 14 to 17 (adolescence), the students will be in secondary school.

This study focused on the psychosocial development of the student. This was limited to the development of aggressive tendencies and self-esteem of the student. The development of aggression and low self-esteem were regarded as important components of psychosocial development especially during this stage of adolescence given that this is a crucial period of identity formation and social interaction. Adolescents often grapple with self-concept and self-worth, while peer relationships and social interactions can influence the manifestation of aggressive behavior (Adene, Adimora & Offodille, 2020). Additionally, these two aspects have had prominence in research on media effects (Johan and Khan, 2017; Turhan, 2017; Adachi and Wiloughby, 2016). There are also established theoretical underpinnings that explain how media affects the two aspects of development (Bandura, 1977; Festinger, 1954). Finally, the two aspects have measurable constructs that can be quantitatively measured using standard psychological assessment tools (Marsee et al, 2011; Rosenberg, 1965).

Additionally, media was limited to radio, television, mobile phone and social media. This selection was based on their prominent presence in existing research and their significant impact on adolescents' daily lives. These forms of media have been widely acknowledged for their distinct characteristics and widespread popularity among adolescents. Radio and TV represent traditional media forms (Han & Cheng, 2020), while mobile phones and social media platforms have recently gained immense popularity for communication and content consumption.

1.6 Limitations of the Study

The following were the foreseen limitations of this study:

i. Due to the criteria for inclusion, some of the students in form 2 and 3 may not be aged between 15 and 16. In order to overcome this challenge, the researcher used purposive sampling method to ensure that only students within the target age ranges were included in the study.

ii. The study depended on self-reports by respondents. Such data could not be independently verified and was therefore prone to misreporting. However, the researcher used triangulation, a method where data was collected from various categories of respondents so as to reduce the effect of errors in one particular category. Therefore, in this study, data was collected from 3 groups, thus students, teachers and parents. Similarly, the researcher used 4 different tools for data collection, thus questionnaires, interviews, focus group discussions and content analysis.

1.7 Assumptions of the Study

The study was carried out based on the following assumptions:

i. That adolescent students in Kakamega, Kisii and Siaya Counties had access to media technology, including radio, television, social media, and mobile phones.

ii. That media use by adolescent students have a measurable effect on their psychosocial development, specifically influencing levels of aggression and self-esteem.

iii. That potential confounding variables, such as socioeconomic status and personality traits, which may independently influence both media exposure and psychosocial development, were either controlled for or had minimal impact on the observed relationships.

1.8 Significance of the Study

This study was expected to make available data in the form of evidence of patterns of access to media among adolescent students, in terms of prevalence, type, content and context of access. Schools, colleges, and education authorities would gain insights into t he patterns of access to media among adolescent students. This information could guide the development of media literacy programs, tailored interventions, and educational stra tegies that address the challenges posed by excessive media consumption and its potenti al effects on students.

To parents, findings from the study could equip them with a better understanding of the media landscape their children navigate. They could also learn about effective strategies to promote responsible media use and to mitigate potential negative influences. This kn owledge could aid in fostering healthy media habits among adolescents and maintaining open communication about media choices. Additionally, the study was expected to provide insights into the effectiveness of existing parental strategies for ensuring media security and maximizing the benefits of media consumption for adolescents.

Regulatory bodies and policymakers could utilize the data from the study to inform the creation of policies and guidelines that promote media security and appropriate content for adolescent audiences. This could contribute to a safer and more enriching media env ironment for young individuals.

Scholars in the fields of education, psychology, media studies, and sociology could bene fit from the findings of the study by incorporating them into their research and advancin

g the collective understanding of the complex relationship between media exposure and adolescent development.

Youth-focused community organizations and NGOs could use the study's results to desi gn educational workshops, campaigns, and interventions aimed at enhancing media liter acy, promoting digital well-being, and fostering positive psychosocial outcomes among adolescents.

Additionally, to the adolescents themselves, the findings could empower them with knowledge about the potential impacts of media exposure on their psychosocial development. Armed with this awareness, they could make more informed decisions about their media consumption habits, potentially leading to healthier usage patterns and improved overall wellbeing.

Finally, insights from the study could also influence media content creators to design and produce materials that align with the developmental needs and sensitivities of adolescents. This could contribute to the creation of content that is educational, engaging and conducive to positive psychosocial development.

1.9 Theoretical Framework

This section describes the theoretical framework that was adopted in the study. A theoretical framework defines and explains relevant existing theories and models that would guide a study while identifying key constructs that were studied and what hypotheses were tested.

Over the years, a number of theories and models that attempt to explain media influence on child development have been proposed. These include Self-Discrepancy Theory (Higgins, 1987), The Message Interpretation Process Model (Austin, 2007), The Gender Identity Theory (Manus, 2009) and General Aggression Model (Anderson, DeWall, & Bushman, 2011) among others. However, the theories the researcher found to have the greatest relevance with regard to the subject of the current study and the literature reviewed were the Social Learning Theory (SLT) Bandura (1977), and The Social Comparison Theory (SCT) Festinger (1954). The theoretical basis for this study was therefore an eclectic model combining these two theories. Additionally, the researcher incorporated Erick Erickson's Psychosocial Theory of Development (Widic k, Parker & Knefelkamp, 1978) as the conceptual foundation for selecting adolescence as the focal age group in this study.

1.9.1 Social Learning Theory (SLT)

The philosophy underlying the social learning theory, propounded by Albert Bandura, is rooted in a blend of cognitive and behaviorist principles. Bandura acknowledges the role of cognitive processes in learning, while also emphasizing the importance of external factors and observational learning. He proposes that behavior is learned from the environment through the process of observational learning (Bandura, 1977). This is learning which occurs as a result of observing and imitating the behavior of models within one's environment. However, the individual actively engages in the processing and interpretation of information from their environment. As McLeod (2011) puts it, the models provide examples of behavior to observe and imitate such as gender appropriate behavior, pro-social and antisocial behavior. Some of the influential models within the child's environment include parents, teachers, friends, as well as screen characters.

Children pay attention to them and encode their behavior and at a later time they are likely to imitate it, whether or not it is deemed appropriate.

Bandura's theory has widely been used in studies on media violence (Nair & Thomas, 2012; Luolan, Chong, & Roslan, 2010). In his own experiments on the Bobo dolls, he concluded that through observational learning, watching violence can have both short-term and long-term effects on children's developing behavior. As Dittman (2014) suggests, when individuals are exposed to too much and frequent violence in the media, they are likely to adopt aggression as a possible and acceptable way of solving problems.

The social learning theory appropriately provides a theoretical framework for understanding the association between media exposure and aggression (Bower, 2019). Through the media, individuals may witness aggressive behaviors depicted by characters, celebrities, or peers. By observing these aggressive models, individuals learn and may imitate such behaviors. Bandura also suggests that individuals can learn through vicarious reinforcement (Vahedi, 2020), whereby they adjust their own behavior based on the observed consequences of others' actions. In the media, aggressive acts are often portrayed as leading to rewards such as fame, power, or conflict resolution. Consequently, individuals may perceive aggression as an effective strategy for achieving desired outcomes. Moreover, media models who engage in aggression may possess traits that individuals identify with or admire, thereby influencing their own aggressive tendencies.

In this study, the researcher assessed the relationship between exposure to media and the adolescent's psychosocial development. It assessed the various kinds of models provided in the media for their actions and traits, for instance, the presence of violent scripts, as well as standards of behavior portrayed, with the intention of evaluating how this impacted the child's view of the world and by extension, their psychosocial development. In view of this, the SLT was seen to provide a relevant basis for the study.

However, the researcher acknowledges one major weakness of SLT; that it portrays the learning process in the child as being too mechanical, without putting into consideration how the child processes what is observed from models. The child is viewed as a helpless imitator of what the environment presents to him devoid of any free-will. On the contrary, at adolescence, the individual is actively engaged in activities that would help them develop an identity. The SLT does not seem to acknowledge this. This necessitated the incorporation of a second theory, described in the next sub-section, in order to fill that gap.

1.9.2 Social Comparison Theory (SCT)

This theory was put forth by Leon Festinger in the year 1954. It suggests that individuals strive to ascertain their position relative to comparable peers in various domains, including knowledge, skill levels, and beliefs (Festinger (1954) as cited in (Boyd, 2014). Comparisons of this nature may arise either deliberately or inadvertently. Consequently, individuals perpetually engage in comparisons with others in numerous areas, including physical appeal, financial status, cognitive ability, and achievements, which ultimately influences their perception of social and personal value.

The theory delineates two categories of social comparisons: upward comparison, wherein individuals assess themselves against those who exhibit superior capabilities, and downward comparison, in which individuals evaluate themselves in relation to those who demonstrate lesser proficiency in a specific task (Boyd, 2014). The emotional outcome of a comparison is significantly shaped by whether one measures themselves against an individual deemed superior or inferior. It can result in affirmative feelings like elevated self-esteem, increased motivation, self-respect, and fulfillment, or it may evoke adverse emotions such as diminished self-esteem, envy, anger, and frustration.

It is important to highlight that the media offers opportunities for adolescents to compare themselves with individuals from diverse and distant backgrounds, going beyond their immediate environment. This can create greater pressure on them to conform to more unrealistic and idealized standards compared to comparisons made with individuals closer to their social circle, such as family and friends. Simultaneously, consistent comparisons with individuals perceived as more successful or better may result in a negative self-image for adolescents. Confirming this, Vondern and Kinnally (2012) state that male children who are frequently exposed to media images of the idealistic male physique may develop self-esteem problems and get involved in unhealthy weight gaining diets and steroid use. Similarly, girls with high exposure to mass media ideal body types may as well end up developing dissatisfaction with their body type and engage in excessive dieting and other harmful weight control practices.

The relevance of this theory in the current study lay in its ability to provide insights into the processes of social evaluation and identity formation, typical among adolescents.

Adolescents often engage in social comparisons with their peers to evaluate themselves and form their identity (Verduyn et al., 2020). When exposed to media, such as TV shows, movies, or social media platforms, they encounter portrayals of idealized lifestyles, body images, and social interactions among their peers. These media representations may influence their perceptions and aspirations, as they strive to meet societal standards and fit in with their peer group. This may lead them to emulate media characters they identify with, shaping their self-perception, self-esteem, and overall psychosocial development.

It is important to acknowledge that social learning theory and social comparison theory primarily concentrate on distinct mechanisms of behavior acquisition and self-evaluation, respectively. However, to achieve a more nuanced understanding of these mechanisms, it is essential to incorporate a theoretical framework that provides a developmental context. This necessitates the inclusion of Erik Erikson's psychosocial development theory, which has been discussed in the subsequent section. By integrating this theory, we can better contextualize how media influences adolescents' behavior and self-perception within the broader landscape of their psychosocial development.

1.9.3 Psychosocial Development Theory (PDT)

In 1959, Erik Erikson proposed the Psychosocial Developmental theory, which delineated a sequence of eight stages that individuals traverse throughout their lifespan. These stages are distinguished by unique developmental tasks and conflicts, as stated by Batra (2013). Notably, Erikson emphasized the significance of adolescence as a crucial stage where individuals encounter an identity crisis, involving the exploration and commitment to personal values, beliefs, and roles (Maree, 2022). Successful resolution

during this stage leads to the development of a robust and cohesive identity. Ego identity, achieved through the resolution of this crisis, is associated with the virtue of fidelity, while the inability to do so results in ego confusion and a sense of repudiation (Orenstein & Lewis, 2022). Developing a strong ego identity enables individuals to navigate social interactions with more confidence and reduces anxiety related to incongruent self-evaluations.

The adolescence period can be further categorized into three stages, thus, pre-adolescence (ages 10-13), middle adolescence (ages 14-17), and late adolescence (ages 18-21) as highlighted by Salmela-Aro, (2011). While all categories of adolescence may be influenced by media, middle adolescence (ages 14-17) is generally considered to be more susceptible to media influence compared to other categories of adolescence. The primary reason for this behavior among adolescents is their quest to establish their identity, beliefs, and position in society (Salmela-Aro, 2011). As part of this process, they engage in exploring different social groups, often referred to as 'adolescent experiments' by Erickson, and seek validation from their peers. Importantly, the media plays a crucial role in shaping their perceptions and expectations of themselves and others (Crone & Konijn, 2018) since adolescents may consider media figures as role models and attempt to imitate their appearances, behaviors, and lifestyles, thus allowing the media to influence their self-perception.

The significance of the media is heightened due to its ability to offer adolescent individuals an avenue for interaction with diverse characters. These characters exhibit a range of behavior patterns, encompassing both exemplary and problematic social skills like interpersonal aggression (Marciano et al, 2022). Moreover, the media serves as a

platform for cyberbullying to manifest in various forms (Zhu et al, 2021). When adolescents encounter such instances, particularly in the backdrop of their intense desire for peer acceptance, their self-perception is profoundly influenced.

According to Erikson's psychosocial theory, social interactions are considered vital during middle adolescence. Erikson highlights the significance of positive relationships with peers, mentors, and family members, which can provide essential support and guidance during the identity formation process (Miller & Lang, 2022). However, it is worth noting that media has become an integral component of contemporary social interactions (Wong, et al, 2021). During middle adolescence, individuals typically have greater access to diverse forms of media (Banati, Jones & Youssef, 2020), encompassing television, movies, music, social media, and the internet. This expanded access, coupled with increased independence and exposure to technology, prompts adolescents to dedicate more time to consuming media content. Consequently, the sheer volume and variety of media content consumed during this developmental stage significantly heighten the potential for media influence on shaping adolescents' attitudes, beliefs, and behaviors.

Erik Erikson's theory of psychosocial development serves as a relevant theoretical framework for investigating the relationship between exposure to media and psychosocial development among adolescent students. Specifically, within the context of middle adolescence (ages 14-17), Erikson's theory emphasizes the developmental tasks and conflicts associated with autonomy and identity formation. The theory highlights the influence of social interactions in achieving these tasks, positioning media as a significant component within these interactions. Furthermore, the adolescent

drive for autonomy may lead to heightened engagement with various media forms, increasing susceptibility to its impact. By exploring the effects of media exposure on psychosocial development, this study can provide valuable insights into the intricate interplay between media, identity formation, and autonomy during middle adolescence.

1.9.4 The Eclectic Model

This study adopted an eclectic model using a complementary approach in which all the three theories, thus, social learning theory, the social comparison theory and the psychosocial theory of development are seen to explain different aspects of the relationship between exposure to media and psychosocial development, see appendix A. To develop this model illustrating the interactions among the three theories, the resea rcher examined the overlapping constructs of each framework. The social learning theor y emphasizes the role of observational learning and modeling in shaping behaviors, sug gesting that adolescents may adopt aggressive tendencies through media portrayals. The social comparison theory complements this by highlighting how adolescents evaluate th emselves in relation to others, often influenced by media representations, which can affe ct their self-esteem. Meanwhile, Erikson's psychosocial development theory underscore s the importance of identity formation and autonomy during middle adolescence, framin g media as a critical context for social interactions and self-discovery. By integrating the se theories, the model illustrates how media exposure not only impacts self-esteem and aggression but also interacts with the developmental tasks of autonomy and identity. Th is multifaceted approach allows for a nuanced understanding of how adolescents naviga te their psychosocial landscape, positioning the model as a valuable tool for exploring th e intricate relationships between media consumption, self-perception, and behavioral o utcomes.

The model includes 6 components. The first is exposure to media. It is the overarching factor in the model, representing the exposure of adolescents to various forms of media, including radio, television, mobile phone and social media. The second is the media inputs. This component represents the information and stimuli that adolescents encounter while interacting with various forms of media. It includes idealized standards, aspirations, body images, lifestyles, and achievements depicted by media characters or representations.

The third component is social learning processes, which encompasses the concepts of observational learning and modeling as proposed in the social learning theory. It highlights how adolescents observe and imitate behaviors, attitudes, and values displayed by media characters or individuals within media content. Fourth is the social comparison processes which focusses on how adolescents engage in social comparisons, evaluating themselves in relation to media characters or peers. It encompasses concepts such as upward comparisons and downward comparisons. The fifth component is identity formation, a key developmental task of the fifth stage (adolescence) of development according to Erick Erickson's theory. This is characterized by adolescent experiments and the desire for validation. The sixth and final component is the psychosocial outcomes, which according to Erickson's theory, could result in ego identity or ego confusion. This component represents the impact of media exposure, in the context of identity formation through social learning and social comparison processes on adolescent psychosocial development (social interactions and self-perception).

1.10 Conceptual Framework

This section describes the conceptual framework for the study. A conceptual framework is a diagrammatic representation of the relationships between the main variables in a study as suggested from the literature reviewed and the theoretical framework. In this study, the independent variable was exposure to media which included radio, TV, mobile phone and social media. Focus was on specific aspects of access, thus, the prevalence of access by type, frequency of access, nature of content, context of use and purpose for which it is used.

The dependent variable in the study was psychosocial development. This incorporated both the psychological aspect and the social aspect. The psychological aspect centers on the student's self-esteem, while the social aspect relates to their ability to engage harmoniously within their social environment, which can contribute to the emergence of aggressive tendencies. Therefore, for the purpose of this study, psychosocial development was narrowed down to self-esteem and aggression.

Parental involvement was the moderating variable. A moderating variable is a factor that affects the strength or direction of the relationship between two other variables. In this study, parental involvement referred to various strategies that parents employ to actively engage with and regulate their children's media consumption. These strategies included discussing media content with their children, engaging in co-use of media, exerting control over the use of media, and monitoring their children's media use. As a moderating variable, parental involvement can influence the extent to which exposure to media impacts psychosocial development. It may mitigate any negative effects of media exposure through providing guidance, context, and mediation or it may

exacerbate the effects of media exposure if employed strategies are ineffective or inconsistent.

Overall, this study therefore sought to explore the relationship between exposure to media (IV) and self-esteem and aggression (DVs), and how parental involvement (MV) could act as a moderating factor. Figure 1 shows this conceptual framework in a flow chart for easy understanding.

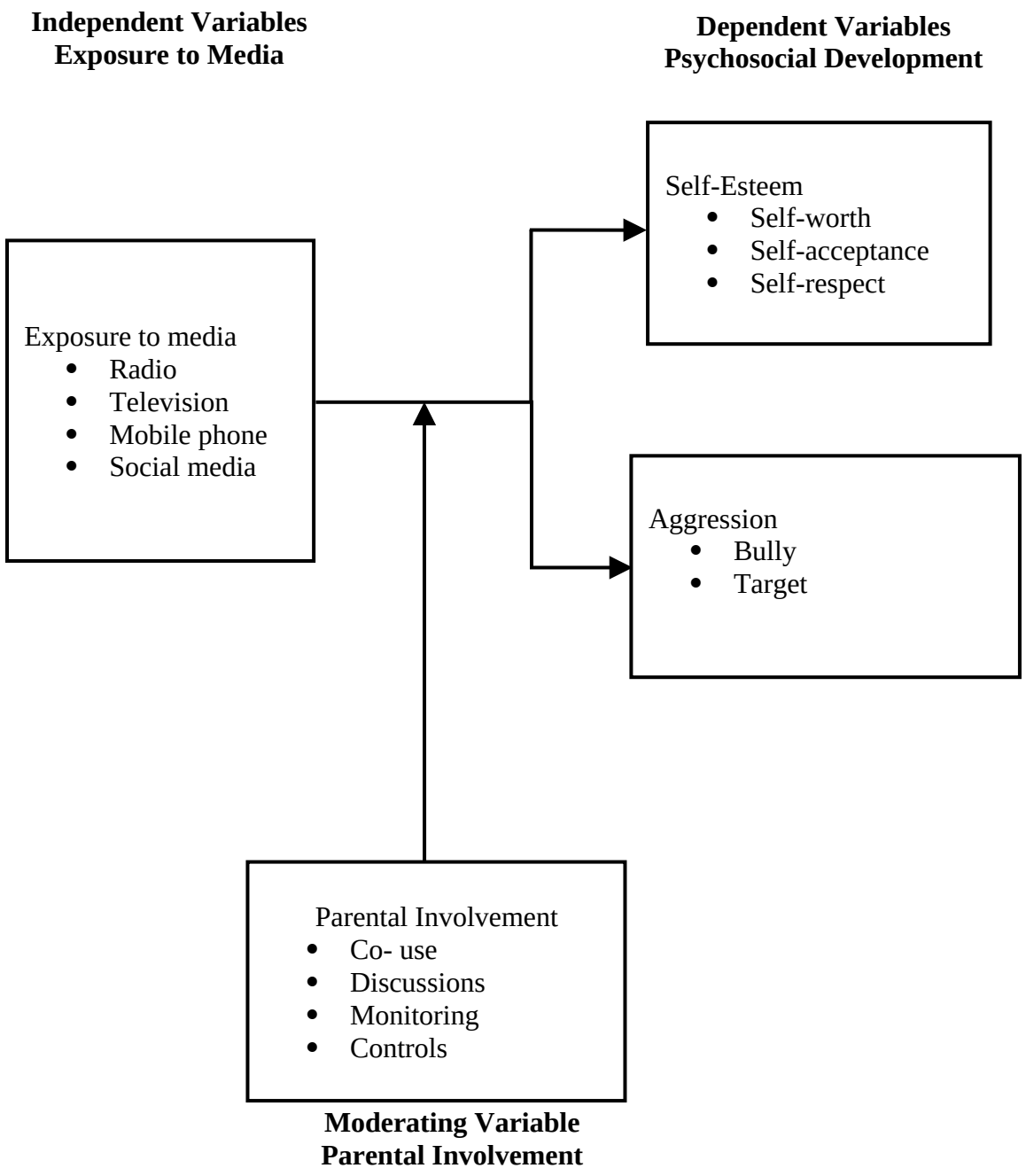

Figure 1. 1: *Conceptual framework showing the relationship between the independent (exposure to media), dependent (psychosocial development) and moderating (parental involvement) variables*

1.11 Operational Definition of Terms

This section provides a detailed explanation of the technical terms and measurements that were used in this study. This has been done with the aim of operationalizing the terms as they were used in the proposed study. The terms have been listed in alphabetical order for easy reference.

Acculturation refers to the process by which children acquire and adopt the beliefs and behaviors of a given cultural group as a result of exposure.

Adolescent generically refers to a human being between the ages of 13 to 19. In this study, it has been used to refer to secondary school students aged between 14 to 17 years.

Aggression refers to any behavior intended to harm or injure another person. In this study, it will refer to student behaviors intended to harm others or disrupt the school.

Media context refers to the situation or circumstances under which media consumption takes place. In this study, it was limited to being in the presence or in the absence of parental supervision or company.

Media exposure refers to the extent to which adolescents come in contact with or access various forms of media content. In the context of this study, it shall refer to patterns of access to media.

Media refers to the channels and platforms through which information, communication and entertainment are transmitted to a wide audience. In this study, it refers to data that is available through TV, radio, mobile phone and social media.

Media technology refers to appliances that use electronics or electromechanical energy for the end user to access the content. In this study, it was limited to common house hold media devices such as TV, radio and mobile phone as well as social media. This therefore excluded print media.

Parental involvement refers to the various strategies employed by a parent or guardian in controlling media use by their child. In this study it refers to co-use, discussion of media content, monitoring of media use and control of media access.

Patterns of access in this study pertain to the quantitative and qualitative aspects of how adolescents interact with media. This encompasses the frequency, duration, and types of media sources consumed, as well as the content and themes encountered. Furthermore, the contextual factors surrounding media usage, including solo or accompanied viewing, are also considered.

Psychosocial development refers to the interplay between two dimensions of development, thus, psychological processes and social interactions. This study specifically examined the aspects of self-esteem and aggression as indicators of psychological and social development, respectively.

School aggression refers to a range of violent behaviors within educational settings, encompassing bullying among students, instances of school strikes and acts of aggression directed towards teachers by students. It could be in the form of verbal, emotional of physical violence.

Self-esteem is operationally defined as an individual's comprehensive self-evaluation, encompassing their beliefs regarding personal value, self-acceptance, and self-respect. It involves the acknowledgment of strengths and weaknesses, as well as the cultivation of a sense of dignity and respect towards oneself.

Social media refers to any website that allows for social interaction, which includes sites such as Facebook, Twitter, Instagram, WhatsApp and Snapchat among others.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher gives a critic of literature related to the subject matter of the study. It begins with a conceptualization of the term “media technology” including highlights on existing relevant government regulatory policies related to children’s media environment. This is followed by an analysis of related literature according to the objectives of the study. It is therefore discussed under the following 5 sub-topics: media technologies, media exposure among students, media and aggression, media and self-esteem, role of parents in media use among students.

2.2 Media Technologies

The term "media," which can also be synonymous with "media technologies," is commonly employed to encompass a range of audiovisual formats, including television, radio, Compact Discs (CDs), Digital Video Discs (DVDs), video tapes, and other pre-recorded materials, among other examples. Farlex (2014) defines media technology as materials that hold data in any form or allows it to pass through them, including paper, transparencies, multipart forms, hard, floppy and optical discs, magnetic tape, wire, cable and fiber (Farlex, 2014). This implies that media is an intermediary in the transmission of data. Media is sometimes also referred to as mass media because it can be used to disseminate information to a large number of people without customization of the message hence being used for bulk communication. The technology through which this communication takes place varies greatly. Bliss (2014) outlines three main forms, thus, electronic media such as radio, film and TV, print media such as newspaper and magazines, as well as digital media which comprises both internet and mobile phones. On the other hand, Lietz (2011)

provides the three types of media based on the mode of transmission, thus, audio media like radio and recorded music, visual media like TV and video and finally, print media such as newspaper and magazines.

The term 'new media' emerged in the 21st century and is used to refer to all that is related to the internet and the interplay between technology, images and sound. It encompasses a wide variety of web-related communication technologies, such as blogs, wikis, online social networking, virtual worlds and other social media forms (Archan, 2011). He also notes that new media is not necessarily new but is instead a hybrid of other forms of media that have been there before into one new form which mainly uses computers, smart phones or tablets as a medium.

One of the most popular components of new media is the social media (SM). This form of media is distinguished by its potential for many-to-many communications (Jensen & Helles, 2011). It is an internet-based application which allows for creation of personalized profiles and virtual communities through which information can be shared. Kietzmann, Hermkens, McCarthy and Silvestre (2011) refer to it as 'web-based applications which provide functionality for sharing, relationships, group conversations and individualized profiles'. This therefore means that through social media, users are able to create personal pages from which they can have status updates, engage in instantaneous real-time communications and network with other users from all over the world, including those that they do not know in real life. Today there are a number of Social Networking Sites (SNS) which have global connections, including Facebook, Twitter, Instagram, Snapchat, WhatsApp and LinkedIn among others.

The media serves as a significant catalyst in the process of acculturation. Certainly, the United Nations (UN) Convention on the Rights of the Child mandates that state parties promote the mass media's role in disseminating information and materials that are socially and culturally advantageous for children (UNICEF, 1989). Furthermore, it advocates for the establishment of suitable guidelines aimed at safeguarding children from information and materials that could be detrimental to their well-being (United Nations, 1990). This highlights the significance of regulating media.

Across the globe, media regulations are established due to the prevailing understanding that the media possesses the capacity to exert profound and enduring effects on society. According to Okore (2014), media regulation encompasses the comprehensive process of oversight or direction through established rules and procedures, implemented by governmental and other political and administrative entities across various media activities.

Through this, the government ensures that the kind of media to which the public is exposed does not negatively impact the audience and public well-being at large. Different countries have developed policies that govern their media. According to Kublenz-Gabriel (2016), most have a classification system, consisting of a set of criteria, which places media items into one of a number of different categories, hence identifying the age-groups it is suitable for. As a result, we have categories such as children’s media, adult media and family media among other categories.

In Australia, there is a carefully selected criteria that ensures that the media released to the public has no negative influence on any aspect of well-being of the child such as the physical, emotional,

intellectual or moral development (Dristoll & Grealy, 2018). According to the Australian Youth Media Commission (AYMC), children aged between 11 and 13 are considered to have acquired adequate media experience and are therefore able to distinguish between their own experience and media experience, understand complex plots as well as decipher hidden media messages. Such children are also expected to have developed special preferences, hence become choosy about TV shows and movies (Austrian Board of Media Classification [ABMC], 2012). These abilities help in identifying media content that is suitable for that age group. In Canada too, there are rating systems which act as guidelines to parents. The Canadian Broadcasts Standards Council (CBSC) does this rating and parents use it in conjunction with the parental control chip found on most TV sets (Missio, 2015).

Most African countries have a similar image replicated, such as the regulatory framework for the media as outlined in the constitution of Ghana. This is through a number of regulatory bodies such as the National Media Commission of Ghana (NMCG) as well as the National Communications Authority of Ghana (NCAG). Among other responsibilities, these organizations are mandated to regulate content in the mass media (Atawura, 2017). The Nigerian Broadcasting and Communications Board (NBCB) does the same in Nigeria (Idachaba, 2018).

In Kenya, Section (e) of the Children's Act No. 29 of 2022 categorizes exposing a child to emotionally traumatic or age-inappropriate content, information, or photos as a form of child abuse (Kenya Gazette Supplement No. 119 (Acts No. 29), July 12, 2022). Besides, regulatory bodies such as The Media Council of Kenya (MCK), Communication Authority of Kenya (CAK), Editor's Guild, Broadcast Standards Committee (BSC) and Broadcasting Content Advisory Board

(BCAB) have put in place procedures to protect the public from media content that would be disturbing to both the individuals and the social structures (Otieno, 2017). For instance, MCK, which was established through the Media Act (2007) is mandated to oversee the regulation of media content through self-regulation (Jalang'o, 2018). Similarly, CAK, is charged with the responsibility of prescribing a program code that sets the standards for the time and manner of programs to be broadcast (Nyaata & Ndonye, 2016).

Apart from the above bodies, there are a number of legislations in Kenya that ensure that the media broadcast to the public is 'safe'. These include The Media Act of 2007, Constitution of Kenya (2010)-Fifth Schedule and Kenya Information and Communication Act (KICA) of 2013 among others. For instance, the Media Act (2007) outlines the code of conduct for the practice of journalism. It specifies that the media should avoid presenting acts of violence in a manner that glorifies such antisocial conduct (Media Act 2007, 2012). Besides this, KICA prescribes program coding, which ensures that all programs broadcast in Kenyan airwaves are coded and the coding is revised every two years (Media Act 2007, 2012). It also came up with the principle of watershed period which refers to the time between 5am and 10pm or such other time as may be prescribed by the authority, within which content intended for adult audience is not to be aired (Kenya Film Classification Board [KFCB],2018).

The Kenya Films Classification Board (KFCB) holds the responsibility of overseeing the creation, broadcasting, possession, distribution, and exhibition of films within the nation. This mandate aims to foster national values, culture, and morality, while also safeguarding children from content deemed unsuitable for their age (KFCB, 2018). KICA enhances the authority of KFCB to enforce

age limitations on audience access concerning content. This analysis encompasses six thematic domains: sexuality, obscenity, and nudity; criminality, violence, and behaviors that may be emulated; the occult and horror; substances such as drugs and alcohol that pose risks; religious matters and community dynamics; alongside the propagation of war, hate speech, and incitement to violence. These areas are assessed against specific age groups hence informing the classification into one of the following classes: General Exhibition (GE), Parental Guidance (PG), Moderate Impact (16), Strong Impact (18) and Extreme Impact (Restricted) (KFCB, 2018). The Kenya Information Communication Regulations of 2009 Section 24 stipulates that all programs broadcast between 5am and 10pm must be suitable for family consumption (Kenya Information and Communication Act 1998, 2012). This means that is must be rated GE, PG or 16. Media meant for GE includes content that can be viewed by the whole family. This includes children's media.

Children's media refers to media whose intended main audience is children (Dore et al., 2020). Common types include TV series, children's radio programs, children's magazines and books as well as video games. Such media is valued for its entertainment as well as educative value. Examples in Kenya include Know Zone, *Machachari*, Club *Kiboko*, Kids Unlimited and Jim Jam among others.

All these efforts to protect children from inappropriate media content are however not exquisite. As Cross (2017) puts it, movie ratings have become lenient over time hence allowing violent and sexually explicit content into films that are accessible to children. For instance, the movie 'Last Christmas' found on Netflix has been criticized for its sexual references, coarse language and violent content despite being rated PG by the Australian government (Meade, 2019 November 23).

Similarly, a study by the University of South Africa (UNISA) found that parents of children aged 7 to 9 as well as children aged 10 to 17 shared the opinion that the Films and Publications Board of South Africa classification system needed to be more restrictive so as to disallow classifiable content that included violence, sexual references and horror (University of South Africa [UNISA], 2015). Besides, sometimes the circumstances surrounding the child allow for access to media content that would otherwise not be permissible, a scenario that may have been created by the multiple channels of access, some of which are portable hence can be secretive.

Today, the Kenyan public is able to access a wide range of TV and radio stations. This is probably due to the introduction of digital television. According to Intermedia (2020), as at 2017, there were 337 local and 271 foreign TV channels airing in the country. Besides these, there were 37 online sites, 42 magazines, 44 newspapers, and 243 radio stations. Consequently, Kenya has experienced a notable expansion in content diversity, likely facilitated by the growing availability of smart phones and broadband internet across various regions. This enhanced accessibility has empowered the younger generation, who are often more knowledgeable and proficient in navigating media channels, sometimes surpassing their own parents' capabilities.

Media technology has been widely adopted in various aspects of a child's upbringing in Kenya, including its significant role in the socialization process within educational institutions. For instance, in the Kenya Educational Sector Support Program (KESSP) developed by the Ministry of Education in 2005, ICT featured as a priority area with the aim of mainstreaming it into the teaching and learning process (Mwadulo & Odoyo, 2020). This marked the journey towards integration of ICT into the education system. Later, the Digital Learning Program (DLP)initiated

by the Center for Mathematics, Science and Technology Education in Africa (CEMASTEA) in 2016 was also aimed at equipping teachers with skills that would enable them integrate the use of ICT in the classroom (United Nations Educational, Social and Cultural 0rganisation [UNESCO], 2012). More recently, Information Technology (IT) curriculum implementation in primary schools was one of the key development pillars for Vision 2030. In a bid to accomplish this, the then government initiated the laptop project aimed at providing a laptop for every primary school child (Banju, 2014). Presently, the recently introduced Competency Based Curriculum (CBC) by the Kenya Institute of Curriculum Development (KICD) has digital literacy as one of the core competency areas (Kenya Institute of Curriculum Development [KICD], 2017).

While the Ministry of Education (MoE) in Kenya strives to integrate information and communication technology (ICT) in educational institutions, it is important to acknowledge that the media, particularly the mobile phone, has presented both advantages and difficulties within schools. One notable challenge is the potential for exam malpractice, as leaked examination materials have circulated through social media platforms like WhatsApp. Consequently, the MoE has implemented policies to restrict students from accessing mobile phones, particularly during the period leading up to national examinations.

The projects discussed in the foregoing paragraphs (DLP, Laptop project, CBC) indicate that ICT is here to stay and will be in the lives of children for a very long time, both by chance and by intent. Although the efforts to incorporate ICT in schools is with the intention of providing quality education through improved service delivery, it is likely that if it goes unchecked, that may not be the only outcome of the process since studies have indicated that media technology can have both

positive and negative impact on human development [Ngethe (2014), Rono (2014) and Ocharo & Karani (2015)]. In this study, the researcher assessed what impact this media had on the psychosocial development of adolescent students. It specifically focused on radio, television, mobile phone and social media.

2.3 Patterns of Media Exposure among Adolescents

Media exposure can be characterized as the degree to which individuals in the audience have come across particular messages or media content (Slater, 2004, p.168). Slater's definition suggests that the mere interaction with or availability of media content occurs irrespective of the individual's engagement with that content (Vreese & Neijens, 2016). The variety of media available to children globally has expanded significantly, particularly with the advent of the current generation. In the past, children had the opportunity to engage with a variety of media, including books, newspapers, magazines, films, radio, tape recordings, and broadcast television. They are now able to access a multitude of cable television channels, an extensive array of videos and video games, as well as countless internet sites. Television remains a significant and esteemed medium for children, who are now engaging with its content through an increasing variety of platforms, including mobile devices and the websites of broadcasters (Ofcom, 2013). As we advance into the digital era, a significant number of children are gaining access to the internet via various digital devices. According to a report by the United Nations International Children's Education Fund (UNICEF) in 2017, one in three internet users is a child.

In contemporary society, social media has evolved into what Elmore, Seull, and Kupersmidt (2017) characterize as a 'super peer'. Indeed, Wilson (2014) observes that, throughout history, the United States has arrived at a juncture where the majority of children's social experiences are

increasingly devoid of direct, interpersonal interactions. Instead, children engage more frequently with electronic media devices, which have now become ubiquitous in the majority of households. Baker (2011) provides a compelling illustration, noting that the average American child dedicates approximately 28 hours each week to television viewing, alongside a daily engagement of at least one hour with video games or internet browsing. He additionally notes that computers and gaming consoles constitute 27% of the daily media consumption among children in American households. A further investigation, focused on evaluating children's preferred sources of entertainment, revealed that computers emerged as the most favored option (96%), surpassing tablets (88%) and smartphones (86%) for gaming activities (Fabio et al., 2017).

Recently, there has been a notable rise in children's access to media. An American survey conducted by Commonsensemedia in 2013 revealed that among families with children aged 8 years and younger, the ownership of tablet devices, such as the iPad, has experienced a remarkable five-fold increase, rising from 8% of all families in 2011 to 40% in 2013. Moreover, the proportion of children possessing access to various types of “smart” mobile devices within their households has surged from 52% to 75% over a mere span of two years (Commonsense media, 2013). This study revealed that the duration of device usage in a typical day has tripled, increasing from an average of 0.05 hours per day among children in 2011 to 0.15 hours per day in 2013. A recent investigation conducted by Elmquist and McLaughlin (2018) revealed that 73% of adolescents aged 14 to 17 in the United States possess smartphones. The findings indicate a significant increase in children's access to media via devices such as tablets and smartphones, prompting concerns regarding the potential implications of heightened exposure on their development and overall well-

being.

Nonetheless, a significant gap exists in access levels between children hailing from lower-income families and those from their higher-income counterparts. In the United States, 20% of children from lower-income households possess a tablet device at home, in contrast to 63% of their higher-income counterparts (Bickham, 2017). In a parallel observation, the digital realm exhibits an increasing gender disparity, with a notable 12% greater representation of men compared to women in online spaces. UNICEF (2017) notes that this disparity is most pronounced in low-income countries, where the online presence of men appears to surpass that of women. Livingstone et al. (2016) present a noteworthy contrast: while developing nations strive to enhance access to the digital realm, developed countries are increasingly preoccupied with strategies to navigate the overwhelming volume of digital content accessible to their youth.

In the United Kingdom (UK) a similar picture of excessive access unfolds. Baker (2011) carried out a study which found out that game consoles are present in 50% of all households. This study also found that children between the age of 8 and 18 spend an average of 5.29 hours daily on the media while those aged between 2 and 7 spend 3.34 hours daily. This translates to 22% and 13% of the day respectively. Among children aged between 2 and 18, 53% have televisions in their bedrooms while 16% have computers. It should be noted that with TV in their bedrooms, more time is likely to be spent on the screen, often at the expense of family social interactions and most likely without parental supervision. Additionally, in the UK, smart phones have replaced mobile phones a mong 5- to 15-year-olds (Ofcom, 2013) leading to a reduction in TVs and radios since the same con

tent can be accessed via the smart phones. According to UNESCO (2010), the ‘dense electronic bat h in which children are immersed daily’ is a scenario that is observed not only in the industrialized countries but increasingly in the developing world.

A study conducted in Canada reveals that a report from the United Nations Educational, Scientific and Cultural Organization (UNESCO) indicates that 93% of Canadian children aged 12 residing in electrified urban or rural areas have consistent access to television, engaging with it for an average of 3 hours daily. This represents a minimum increase of 50% compared to the duration allocated to various outdoor pursuits, such as academic assignments, social interactions with peers, and other domestic responsibilities (UNESCO, 2010). In consequence, influence from the media is likely to overshadow the influence from other experiences like social interactions with family and friends. This goes against recommendations from a study by Rubin and Bikowski (2015) which concluded that in order to achieve proper psychological development and general wellbeing of the child, it is important to ensure adequate social interactions among peers.

Studies in Asia have also indicated a similar widespread use of media among children. Vivek and Saranya (2012) concluded that children spend a large portion of their time on the media. For instance, in a study carried out by Ray and Jat (2010) it was found out that children in India view 2 hours of media per day while 74% are cellphone users.

In Africa, media access is far-flung among the young generation. For instance, in Nigeria, a large percentage of adolescents (96.7%) have access to mass media and use it as a source of information. However, Akokuwebe, Ukpabi, and Ejeh (2019) report that the kind of information sought from

the media varies; while the majority (89.3%) use it for lessons, a smaller percentage uses it for sports (13.3%), entertainment (12%), fashion (3.9%) and cultural information (7.3%). On the other hand, in South Africa, studies have indicated that the use of the cell phone is more widespread than the use of TV. Indeed, a previous survey in South Africa by NationMaster (2014) indicates that 59.2% of households have televisions while cell phones are with 96.14% of the population. This may in turn give a reflection of the level of access to these devices among young children within those households.

Studies in Africa have further found that differences in youth access to media varies by income levels. For example, in a comparative study on media access in Ghana, South Africa and Malawi, Porter et al., (2012) found significant variations in access between and within countries by levels of income. In this study, the researchers found the highest access in South Africa, followed by Ghana then Malawi. Other factors found in a different study are gender and network coverage (Amanda, Bolloroco, Dawkins, Koltio, & Phil, 2014).

Studies on access to media among Kenyan children remain scanty. However, according to Jordan, Bleakley, and Manganello (2010) media access predicts the amount of use. Therefore, without specifically pointing out to children as consumers, with statistics on media availability in households, it is possible to predict media use by children in the same households. A survey by the Kenya Film Commission (KFC) reports that by 2010, 59% Kenyans had access to TV and there was a high liking for local programming. It also reports that majority of Kenyans watched TV in the evening to late night with only 17.1% watching at other times (Kenya Film Commisssion [KFC], 2010). However, Intermedia (2020) singles out radio as the most widely available among media

and ICT platforms, reaching directly into more than 85% of adults' homes in the country. Fast spreading too is the mobile phone though this cannot be compared to the radio, which has a near-universal scope. On the other hand, other ICTs such as computers and MP3 players are available at home to only a tiny minority of Kenyans.

Worth noting is that the overall access to the media in Kenyan homes remains variable. Rural dwellers have significantly lower access to most media and ICT platforms than urban dwellers. This might partly be due to variations in poverty levels and access to electricity. Statistics also indicate that the Coast and North Eastern regions have much lower levels of access than other regions in the country (Intermedia, 2020). It should be noted too that mobile phone access may sometimes be short-lived since in some instances, the youth may own a phone at one time but later have to sell it in order to purchase other prioritized necessities of the moment. Also, in families where children are not allowed to own mobile phones, they may rely on borrowing from family and friends. This makes their access to the device fluctuate.

In Kakamega, Kisii and Siaya Counties, besides census reports which basically indicate media access in households, the researcher had not come across any study that specifically focused on the exposure of children to the media. Besides this, most previous studies in Kenya focused only on childhood (Katiba, 2020) or college going students (Chris, 2015). This created a gap in the literature the researcher came across in that very few studies had focused on the adolescent stage of development. Worth noting is that different media technologies will have different cost implications for the family; some technologies may be expensive hence only available to the higher income families. Besides this, the researcher also acknowledged the fact that children from varying

socioeconomic status were likely to use media technologies for different purposes, for instance, as Saeed, Qazi and Rahman (2016) suggest, high income families may use it majorly for entertainment while low-income families may use it for education purposes.

The preceding paragraphs have strongly suggested that the availability of media for children has dramatically expanded due to the emergence of digital technology, causing a surge in access to diverse forms of media including television, video games, and the internet. However, the highlighted studies fail to address any potential concerns associated with this increased access. While the American Psychological Association (APA) refrains from providing precise guidelines regarding the optimum duration for children's media engagement, it does advocate against teenagers prioritizing media consumption over crucial activities such as obtaining quality sleep, engaging in regular physical exercise, sharing family meals, or engaging in ‘unplugged’ leisure time (Lukasik et al. 2021).

The literature reviewed revealed a notable disparity in the focus of previous studies on the relationship between media exposure and psychosocial development. The majority of studies primarily concentrated on early childhood ages and late adolescence (college-age), as evidenced by research conducted by Ofcom (2013), Commonsense Media (2013), Baker (2011), Katiba (2020) and Chris (2015). However, a limited number of studies specifically centered on the adolescent age period, as highlighted by the work of Elmquist (2018). Furthermore, some studies grouped the entire childhood period from ages 2 to 18 together (Akokuwebe, Ukpapi & Ejeh, 2019).

The significance of adolescence as a critical phase with regard to media exposure needs to be acknowledged, given its association with the development of personal identity and the susceptibility to peer influence. Importantly, the nature of these media experiences may contribute to the peer pressure experienced by adolescents. Recognizing the limited existing research on media effects on this particular age group, the present study aims to investigate and fill this gap in the literature by specifically examining the impact of exposure to media on the psychosocial development of adolescents.

Furthermore, the current study discovered a research gap regarding media studies in Kakamega, Kisii, and Siaya County. The researcher did not come across any existing studies that directly examined media exposure in these counties. The available data on media exposure in the region is primarily derived from census reports, which predominantly employed ecological measures of potential exposure. This method focuses on the availability and accessibility of media sources in an individual's environment, serving as an indicator of potential media exposure without solely relying on individuals' self-reports (Shi & Nagler, 2020).

To address this research gap, the current study implemented a hybrid approach that combined both ecological measures of potential exposure and survey measures of self-reported exposure. The survey involved participants reporting their own media exposure through questionnaires or interviews. By incorporating both approaches, the researcher aimed to gather a more comprehensive understanding of media exposure in these specific counties.

2.4 Relationship between Exposure to Media and Aggression

Going by the works of psychologist Albert Bandura in the 1970's on social learning and the tendency of children to imitate their social environment, there has been a lot of concern about the portrayal of violence in the media. Children learn a lot from social partners, the earliest of whom include parents, siblings, peers and teachers. The media too is a very powerful agent of socialization since children acquire a lot of behavior and attitudes from their interactions with it.

Several studies investigating the impact of media violence, particularly on children, have highlighted a desensitizing effect and the potential association with aggression (Ray & Jat, 2010; Johan & Khan, 2017; Rosen, 2011; Turhan, 2017; Ruh & Werner, 2012). Consistent exposure to violent content has been linked to the development of violent behavior in consumers. Unrestricted and prolonged exposure to depictions of violence in media narratives can lead to a reduced sensitivity to the suffering of others, while simultaneously instilling fear of the surrounding world. Consequently, individuals may adopt a more aggressive demeanor as a self-defense mechanism against the perceived threats of their environment.

The above position has been supported by a review of literature on media effects by American based psychologists, which concluded that there were substantial documented findings to conclude that violent video games increased aggressive behavior, cognition and affect while at the same time decreasing empathy and pro-social behavior (Anderson et al., 2017). In the same vein, Glascock (2015) carried out an experimental study which found an increase in participants' verbal aggression several weeks after watching verbally aggressive television programming.

In a bid to determine the process involved in this relationship, Hofferth (2010) did a study among 6- to 12-year-old American children to determine the effect of home media on achievement and behavior in which she concluded that the media may be linked to behavior problems because of displacement of normal outdoor activities. A probable explanation would be that children who engage a lot with the media hardly have time to interact physically with peers and therefore are likely to delay in the acquisition of crucial social skills such as empathy and friendship formation. A related study done by Connor (2012) on 12-year-olds among Canadian children found that there is an average of 5 to 10 aggressive acts per hour on television. This study concluded that TV, video and video games expose children to high levels of violent images on a daily basis. In agreement with this, yet another study by Meyers et al., (2012) confirmed that a typical American child who watches about 2 hours of cartoon daily will be exposed to 10,000 violent incidents per year. Though TV dramas containing crime and violence are popular (Rosenberger & Callaran, 2011), of concern is that most representations of crime in the media do not effectively communicate that violence is unacceptable since characters who exhibit violence are never conclusively punished for their actions.

Video games, one of the latest ingredients into the media diet, involve some form of contest between the consumer and a virtual opponent, majority of whom portray violence in various forms, including actual shooting at the opponents (Wills, 2019). Though some games are rated Teens (T) and others Mature (M), there is no significant difference in the amount of violence depicted in the two categories (Xiao, 2023). It has been established by researchers that approximately 80% of video games incorporate elements of aggression within their strategic frameworks or objectives. Notably, intentional violence is present in 64% of games classified as Everyone (E), 98% of those

rated T, and an overwhelming 100% of games designated as M (Milani et al., 2015). It is important to recognize that the video game player engages actively in the violent acts, contrasting with the passive role of a viewer in television. This consequently provides him with the chance to engage in and ultimately internalize the aggressive cognitions and behaviors at an accelerated pace.

A study conducted in Canada to evaluate the longitudinal relationship between competitive video gaming and aggression revealed that Adachi and Wiloughby (2016) identified a positive correlation between engagement in competitive video games and aggressive behavior. This study revealed that a higher level of competition in games correlates with an increased likelihood of aggressive behavior, indicating that aggressive affect may serve as a mechanism by which competitive video games forecast aggression in players. In yet another similar study in Canada, violent video games were found to have a dehumanizing effect on the players (Greitemeyer & McLatchie, 2011). This could probably be because continual participation in the aggressive competition made the player begin to view the opponent as less human, hence less deserving of humane treatment.

Though violent media and aggression have a causative relationship, this does not mean that every person who consumes violent media will be aggressive. There are several moderators in this relationship. The question that arises therefore is whether it is the mere exposure to violent media that leads to development of aggressive tendencies in children. As if to respond to this question, Wilson (2014) did a study in the US on how exposure to screen media affects children's well-being and development. This study concluded that media influence on children depends more on the type

of content that children are exposed to rather than on the sheer amount of time they spend in front of the screen. In contrast, Prot and Anderson (2013) pointed out to frequency of exposure as a key factor from their study done in New York, which concluded that habitual exposure to violent media has long lasting desensitization to violence effect and development of aggressive personality and behavior.

Children of different age-groups are influenced differently by violent media. To illustrate this is a literature review done by Douglas (2011) who found that there is an association between violent media content and violent behavior especially among preadolescent and adolescent American children. On the other hand, he also found that among very young children, violent media scripts are associated with fear and anxiety. However, in another study, Wilson (2014) identified gender as one of the moderating factors. In this study, he concludes that children's susceptibility to media influence can vary according to their gender, how realistic they perceive the media to be, and how much they identify with characters and people on the screen. Worth noting is that children who experience violence both in their real worlds and on the media, may easily identify with the situations they see in the media, due to this overlap. As a result, they end up developing the belief that violence is the best way to resolve challenges they face in the real world just as they observe it in the media.

In agreement with the findings concerning gender differences, an earlier study by Kaneshiro and Zieve (2012) reported a gender descrepancy in the way children get attracted to media characters. This particular study concluded that aggressive male media heroes fascinate boys as early as at the age of 2 and went further to say that this is especially so among boys in high crime neighborhoods

and war zones. By contrast, girls tend to be more attracted to pop stars. A similar gender discrepancy has been observed by UNICEF (2017), according to whom girls are more likely to be upset by media violence than boys. Similar findings were replicated by Glascock (2015).

Studies have identified a variety of pathways from violent media exposure to development of aggressive tendencies. For instance, in a longitudinal study done in the US, Karin, Taylor, Luqtig and Patti (2016) identified perceived peer approval of aggression as a pathway through which individuals develop aggressive behaviour. In this study, the authors found that there was an indirect effect of media violence on individual's behavior via perceived peer approval of aggression on the media. On the other hand, in a study among Spanish teenagers, Espinosa and Clemente (2013) found a positive relationship between violent video game playing and antisocial behaviour, and further concluded that this comes from a deficit of social interaction. This is probably because the video game player may miss out on opportunities to interact with others in the real world, and as a result, his interpretation of the intentions, needs and desires of others in the real world is limited to what he perceives in the already biased violent media world.

Studies in India have also found a causal relationship between violent media and violent behavior in young people. As Ray and Jat (2010) put it, a 'virtual bad street' in which children can learn and acquire aggressive behavior is easily available in homes through the media. In this longitudinal study to assess the effects of electronic media on children, these authors found that there is a significant negative effect of exposure to violence on subsequent helping behavior among Indian children since such children develop aggressive behavior and ideation as well as get easily angered.

The study however points out that frequency of exposure determines how lasting this effect is likely to be, a position which concurs with that of another study by Prot and Anderson (2013).

A similar relationship has been found in studies done in Africa. For instance, in Nigeria, Akokuwebe, Ukpabi, and Ejeh (2019) concluded from their study that the media has negative impact on young minds and this includes exposure to violent activities. This study, which was based on the social learning theory, concluded that when children are exposed to violent activities in the media, they tend to develop more narcissistic, antisocial and aggressive tendencies.

In Kenya the mass media has coverd a lot of violence, especially domestic violence in its content. Hardly ever would a week pass by without some coverage on domestic violenece in TV news broadcasts. A glance at the headlines in one of the local news websites shows headlines such as ‘Fisherman killed by colleague over fishing space’ (Wandede, 2021 July 14), ‘Nairobi man arreste d after confessing to killing 12 children’ (Mwende, 2021 July 14), ‘Female cop suspected to have ki lled Nakuru police officer wanted for murder of another man in Kiambu’ (Kiage, 2021 July 6), ‘21 year old commits suicide and leaves her cheating husband this note’ (Callisto, 2021 July 13). Besides these, Television programs such as cartoons like Tom and Jerry, sporting events like Wrestling, and news broadcasts exhibit varying degrees of aggression. As Muchemi (2015) puts it, through the mass media, attitudes, perceptions and beliefs are transmitted. This therefore suggests that by covering such violence in the mass media, these attitudes are imbibed by the consumers of that media.

The researcher observed a significant geographic bias within the reviewed literature, particularly with the majority of studies predominantly conducted in Europe and America, as reflected in the works by Glascock (2015), Hofferth (2010), Connor (2012), and Adachi & Wiloughby (2016). However, there is a dearth of research conducted in other regions, particularly in Africa. This gap in the literature is particularly relevant given the increasing prevalence and impact of media technology in the continent, as noted by Solomon and Van (2020). Furthermore, within Kenya, the researcher noted that existing studies were primarily concentrated in the Central Region, thus, Nairobi (Njoroge, 2013), Kitui (Muinde, 2015), Kiambu (Ng'ethe, 2014) and Embu (Nyagah et al, 2015), with a majority of them focusing on university students. As a result, the researcher identified a specific gap in the lack of studies conducted in the western region of Kenya, which the current study intends to fill. This study aimed to address this local gap by basing itself in Western Kenya, specifically in Kakamega, Kisii, and Siaya Counties.

2.5 Relationship between Exposure to Media and Self-Esteem

Of great importance to the mental health of an individual is their self-esteem. This is the person's overall sense of self-worth or personal value. The Offline Psychology Dictionary defines body image as the idea that an individual has of what their body is like. It therefore refers to one's perception of their physical appearance, which includes the skin color, hair type, body shape and general physical attractiveness. It has been found that self-esteem correlates positively with a number of variables. For instance, Tiggerman and Polivy (2010) carried out a study among female students from Australia, which found that the self-esteem of an individual is greatly affected by their body image. This conclusion came from a quasi-experimental study in which they found that

social comparison on the basis of body image leads to more negative self-esteem outcomes than social comparison on the basis of intelligence.

The society today puts a lot of value on physical appearance (Kumar & Kumar, 2014) and according to Ofcom (2013), girls are the most affected since there is a lot of pressure on them to obtain and maintain a certain body type which is considered ideal, in order to be popular and attractive. Unfortunately, this imposes unrealistic expectations on the girls, leading to their objectification, an experience that makes them feel dehumanized, hence contributing to body dissatisfaction, low self-esteem and depression. Rollero (2015) says that objectification decreases well-being in both men and women though in women, it particularly negatively affects their self-esteem. Advertisements on the media do not lighten this burden already placed on the female gender but rather aggravate it by putting more emphasis on the value of physical appearance through its portrayal of the girls and women (Kite & Kite, 2020).

Worth noting is that peer approval and validation is key in influencing the self-esteem of adolescents. Therefore, the kind of comments or feedback they get from their peers determines their self-worth. Social media sites create platforms where each user has their own free space where they can post content. From here, they can create personalized profiles where they upload content such as photographs, audio files and video clips in real time (Elgersma, 2019). Besides this, they can engage in real time conversations with other users, majority of whom they have never met in real life. This means that through SNS, they can develop online communities form which they get peers reviews on key aspects of their personal life.

Globally, a number of studies, for instance, Mills, Shanner & Hogue (2017); Mason (2012); Gorman (2015); Levano & Palmer (2017) have been done on the effects of media on an individual's self-esteem and have found an association between advertising in the media and self-image. With the introduction and spread in use of Social Networking Sites (SNS), studied shifted focus from the traditional mass media to social media. Some of the popular social media sites for teenagers include Snapchat, Instagram, Twitter, WhatsApp, TikTok, Tumblr and Facebook (Elgersma, 2019).

Empirical investigations have established a correlation between media consumption and an individual's self-esteem. For instance, a cross-sectional study among 4th and 5th grade girls in Canada by Racine, Debate and Kelley (2011), and aimed at examining the relationship between media use during discretionary hours after school and psychological and psychical assets among preadolescent girls found that media use was negatively associated with self-esteem.

Similarly, another study in Britain found that social media use can be detrimental to self-esteem. In this later study, the authors noted that people who posted a lot about feelings, who vented on social media and who perceived low self-social ranking on social media were likely to experience low self-esteem (Berry, Emsley, Bucci & Lobban, 2018). In the same vein, Richards, Caldwell and Go (2015) did a literature review on studies on media effects among Australian children in which they concluded that most studies found out that the health impact of social media on children and young people was greatest on mental health, specifically, self esteem. More studies have had similar conclusions. For instance, Rounsellfen, et al., (2019) found that social media negatively influences self-esteem since through the social comparison it facilitates, individuals become more self-aware

and develop the pressure to modify their appearance in order to match that which is approved by the social media audience, hence leading to a low self-esteem, especially when achieving such modification seems unattainable.

Although most studies attribute this effect on comparison with media characters, an emerging trend of cyber bullying has also been identified as a possible pathway to low self-esteem by SNS users. Indeed, a report in *The York Dispatch* reported an incident of a 15-year-old in New York who committed suicide due to the bullying she received on the internet (Alexandersen, 2016). Sadly, this experience of emotional violence had made her lose any value on herself leading to the unfortunate decision. On the other hand, Monni and Sultana (2016) carried out a study on cyber bullying among 50 Bangladeshi teenage girls to assess the psychological impact of cyber bullying. In this study, 98% of respondents admitted to suffering extreme psychological hazards as a result of cyber bullying, hence the conclusion that cyber bullying negatively affects the victim's self-esteem.

Contrary results have been found from a number of US based studies which, adopting the social comparison theory, have found a negative correlation between media use and self-esteem (Vogel et al., 2014; Fernandez & Prichard, 2012). These studies found that upward comparison with media models is likely to lower self-esteem while downward comparison is likely to improve it. However, in a turn-about study, Sobol and Darke (2014), basing on the Fluid Compensation Theory, found that idealized models motivate improved performance due to the self-descrepancy induced by the upward comparison. This study found that exposure to media characters who performed better on certain dormains served to challenge the viewer to make improvements in their performance in their other dormains of strength. The result is that their self-esteem would improve given that they

found themselves doing better than the media models in other aspects. Similar positive findings were found by Gonzales and Hancock (2011) who wanted to test the effect of facebook exposure on self-esteem. They found that selective self-presentation on digital media positively influenced one's self image. This could be because viewing one's carefully crafted own facebook profile could lead to greater self-esteem since it improved one's relationship with self.

In China, studies have identified a number of moderating variables in the association between media use and self-esteem. One such study found family functioning and peer influence as a moderator (Luo, Yeung, & Li, 2019). In this study carried out among Chinese adolescents and aimed at investigating the relationship between media multitasking and self-esteem, the authors found that having strong peer influence can neutralise the effects of media use depending on the models and feedback one receives from peers. In the same vein, strong family ties and relationships can weaken media influence on self-esteem through family discussions on media content and one-on-one feedback received from significant members. Contrary to these findings is a survey done by Charoesukmongkol (2018) which found that peer groups that were high in in-group competition were likely to intensify the negative influence of media use on self-esteem just as is the case in families where parents often engaged in comparing children.

Yet another moderating factor identified in previous studies is perceived appearance pressure. This was found by Chen and Jackson (2012) in a study done among Chinese adolescents to assess the influence of gender and age-group on the impact media had on body satisfaction. They found that girls experienced more appearance pressure from the media than boys did. This was more in older adolescents aged 14 to 17 than younger ones aged 10 to 13.

In Scotland, a study by Ciel and Scot (2016) found the amount of time spent on the media as a mediating factor in this relationship. This study, carried out among Scottish teenagers, concluded that adolescents who used social media more experienced low self-esteem. This may be as a result of social media bullying which is also an addictive habit that social media users may copy from one another. The same study found that night-time use had more detrimental effects than day time use.

An online survey based in South Africa and aimed at examining the psychological effects of instagram use on young South African adults found that due to the upward social comparison facilitated by SNS use, young adults were motivated to improve their lives (Hene, 2015). This study therefore concluded that SNS use does not negativey impact the self-esteem of individuals.

In Kenya, the researcher did not come across any recent studies dealing with the main stream media. However, in a study carried out in Embu County by Nyagah, Nyagah, Asatsa and Mwania (2015), it was found that the use of social media has both a positive and negative impact on the self-esteem of teenage high school students. From this study, the researcher recommends the use of Guidance and Counselling in schools as a way to educate the youth on appropriate media use so as to avoid the negative impact.

Previous studies examined the relationship between exposure to media and self-esteem, considering various moderating factors such as family functioning and peer relations (Luo, Yeung & Li, 2019; Charoesukmongkol, 2018), gender (Ofcom, 2013; Rollero, 2015; Kite & Kite, 2020) and age (Chen & Jackson, 2012). Studies have also been done considering mediating factors such

as experiences of cyberbullying (Alexandersen, 2016; Monni & Sultana, 2016), peer feedback (Elgersma, 2019) and amount of time spent on media (Ciel & Scot, 2016). However, parental involvement as a moderating factor was largely overlooked. The few studies that did consider it (Isikoglu et al, 2019; Griffith, 2023) only had limited focus on parental perspectives, while ignoring the data collected from the actual adolescents themselves. This is significant considering that a substantial amount of media consumption, particularly among adolescents, occurs within the home environment (Coyne et al., 2014). To address this research gap, the present study aimed to investigate the relationship between media exposure and self-esteem among adolescent students, with parental involvement as the specific moderating variable. Additionally, the study emphasized the students themselves as the primary respondents.

2.6 Role of Parents in Media Use among Students

The typical setting for media use among children is the home (Coyne et al., 2014). As such, family members, especially parents play a very important role in the kind of relationship their children develop with the media. This has however been met with a lot of resistance since sometimes the youth see it as their right for instance to own a mobile phone (Amanda et al, 2014), hence making them rebel or device ways to secretly access the media without their parents' involvement. Although studies worldwide have found significant inconsistencies between parents' and children's reporting on parental monitoring on children's media use (Gentile et al., 2012), they agree on the importance of parental supervision of their own children's media use. For instance, Fabio et al. (2017) carried out a study on the association between risky health behaviors and having TV in the bedroom. This study concluded that much as the amount of time spent on TV viewing

was positively correlated with children's identification with TV characters and, in consequence, self-image, parental oversight appeared to moderate these outcomes.

Most governments have taken steps towards establishing good media control habits in the home by putting in place self-regulation and parental controls on most media gadgets like television and computers so as to help parents monitor and control what their children can access in the media. Through this, it has been possible to control the kind of content children watch. For instance, in Canada, Media Awareness Network provides resources to parents, teachers and community leaders as well as teenagers themselves to promote critical analysis of media content (UNESCO, 2010). Some of the resources include parental controls through which parents can sieve what kind of content their children are able to access.

Studies in the UK have had contradicting findings on parental role in children's media use. For instance, one survey found that majority of parents use a combination of involvement strategies to ensure their children's safety online. These include parental monitoring (84%), educating their children on media risks (78%) and rules on media use and access (82%). Besides these, parents also use filters and parental controls to manage online risks (Ofcom, 2013). As a result, most parents feel that their children are safer online. However, about half the parents confess that their children are more advanced in technology than they are which makes it challenging for them to have confidence in their ability to control their children's media use. However, Baker (2011) negates this through a study he carried out in the UK on media exposure among young children where he paints a picture of homes where children's access to media goes unchecked. He reports that 49% of

the children reported that they have no rules about television in their homes and only 19% watched television with their parents.

A similar scenario plays in the US where Blessed (2013) reveals a generational shift in parental attitudes towards the role of technology in the lives of young children. This study indicates that majority of American parents are largely unconcerned about their young children's media use. This laisez faire kind of parental attitude may be because today's parents grew up with technology as a central part of their lives and as a result, rather than fight it, they have embraced it as part of family life.

Despite the above studies which have contrary findings, there have been a number of studies that found parents to be playing a very crucial role in moderating media effects among their children. For instance, Gentile et al. (2012) did a study in the US that found that parental monitoring through co-viewing, control of access and active mediation was a major predictor of children's media use. Similarly, a 2017 survey by APA reported that 94% of parents make at least 1 activity to manage their children's technology usage during the school year (APA, 2019).

Concurring findings were found by Cabello, Cabello and Claro (2018) who went further in their findings and reported that lower parental media involvement was associated with a number of online risks. A number of other studies have had similar findings (Ray & Jat, 2010; Notten, Kamp & Konig, 2012; Rideout, Foeh & Roberts, 2010). One major shortcoming in these studies however was that they only focused on whether or not parental involvement was a crucial determinant without identifying the various strategies of parental involvement.

However, other researchers have further examined the significance of the specific strategy of parental involvement. Focus here is not on whether or not parents play a role, but on what specific strategy they applied in managing how their children interact with the media. While some parents may be more restrictive, thus putting in place measures that deny access to specific kinds of content or limit the time (both amount and frequency) of access, others are more active and would therefore engage more with the children through co-viewing, supervising, interpreting and modeling their own media use to their children. For instance, Lenhart et al. (2010) did a study among American teens which found that 50% of parents engage in restrictive mediation by putting a limit on their children's access to media content while 64% engage in active mediation by monitoring the content viewed by their children. Although both restrictive and active mediation have been found to impact children's media use, there is likely to be variations in the levels of impact.

In Netherlands, Piotrowski (2017) carried out a study which found a significant difference in media use, in terms of amount and content, between children whose parents tended to be involved through placing restrictions and those whose parents opted to be more active. Mendoza (2019) went further and found that active strategies were more effective mode of parental involvement as compared to restrictuve strategies. Another Dutch based study by Notten, Kamp and Konig (2012) found that significant differences exist between the involvement strategies employed by parents in families with different socioeconomic backgrounds. One possible explanation for this could be that parents from privileged backgrounds tend to have higher levels of education, which may make them more knowledgeable about modern trends in media technology. Moreover, they are likely to be more adept at using such technology themselves, allowing them to engage with their children through

activities like co-viewing and discussing media content. Similarly, families with higher socioeconomic status may have the means to purchase and bring technology into their homes. As a result, their children have readily available access to media within the home environment, where parental monitoring and supervision can be present. In contrast, children from lower socioeconomic backgrounds may have to seek out media elsewhere, potentially without the same level of parental oversight.

A survey based in Brazil further found that parents with a higher education level were more likely to be actively engaged and this was associated with positive online opportunities as opposed to parents with lower education who engaged their children less on media matters (Cabello, Cabello & Claro, 2018). One possible explanation for this is that when parents actively engage with their children in media-related activities, it fosters a positive and interactive relationship. This, in turn, leads to more collaborative decision-making regarding media consumption rather than coercive control. As a result, children are more receptive to parental guidance and recommendations.

In China, a study by Chen and Shi (2018) concluded that restrictive strategies were more effective in controling access while active strategies were more effective in reducing media related risks. Similar findings came from a study by Chen and Chng (2016). However, in this study, the reseachers found that although both restrictive and active mediation were effective in regulating media use, both strategies died out with time as the youth gained more self-regulation. The same study also found that restrictive strategies reduced faster than active strategies. A probable explanation could be that as children enter adolescence, they often strive for independence and autonomy, which can result in a desire to distance themselves from their families. In this context,

adolescents may resist parental attempts to regulate or control their media usage as they seek to assert their independence.

Some studies have gone further to look into the effectiveness of the various specific parental involvement strategies. As Piotrowski (2017) puts it, “not only is the type of parental involvement (restrictive or active) associated with different levels of media use, but the specific strategy is also differentially associated with media use”. This therefore implies that there are variations among children whose parents use different strategies. A number of strategies have been identified by previous researchers. These include modelling (Notten, Kamp & Konig, 2012), coviewing (Munni, 2010) and discussion of media content (Zack, 2010). Despite these strategies, there are a number of factors that work against their success. According to a cross-sectional study conducted by Davies and Gentile (2012) on media use within families, they found that peer influence significantly hindered parents' ability to effectively manage their preteen children's media usage. This could be attributed to the fact that preteens spend more time outside of their homes with their peers compared to younger children, who typically spend more time at home.

In Kenya, the government has put in place legislations that ensure that parents are supported ad guided on ways to regulate media use by their children. This is majorly through media classification whereby programs are accompanied with a tag indicating what kind of audience they are suitable for. For instance, programs classified as PG require that parental guidance is given to children who watch it (Kenya Information and Communication Act 1998, 2012). Contrarily, Gigli and Marles (2013) found in their study that a significant number of young people manage to avoid parental monitoring of their online activities by concealing their public social media profiles.

Additionally, some adolescents engage with media during late hours of the night when most family members are asleep, effectively evading parental oversight. This presents challenges for parents in effectively monitoring their children's online behavior.

The majority of the reviewed studies focused on the moderating role of parental involvement concerning children's media consumption. However, these studies primarily examined whether or not parental involvement existed (Gentile et al., 2021; Fabio et al., 2017) and whether or not it had a significant impact on their children's media habits (Ofcom, 2013; Baker, 2011; Blessed, 2013; APA, 2019). Although some studies attempted to explore the effectiveness of different modes of parental involvement, such as restrictive and active mediation (Piotrowski, 2017; Mendoza, 2019; Cabello, Cabello, & Claro, 2018), these studies were based in America and Europe. This limitation presents a key shortcoming of these studies in that there still remains a gap in the literature regarding the effectiveness of specific parental involvement strategies, more so as applied in African countries. In light of this, the present study aims to investigate whether parental involvement strategies, co-use, discussion, monitoring, and control, collectively, more effectively regulate the impact of media on aggression or self-esteem.

2.7 Summary of Literature Review

The existing literature reveals a notable research gap regarding the relationship between media exposure and psychosocial development, particularly during the adolescent phase. While a significant portion of studies has focused on early childhood and late adolescence, as evidenced by research from Ofcom (2013), Commonsense Media (2013), Baker (2011), Katiba (2020), and Chris (2015), there is limited specific research centered on the adolescent age period, as

highlighted by Elmquist (2018). Some studies have even grouped the entire childhood period from ages 2 to 18 together, as seen in the work of Akokuwebe, Ukpapi, and Ejeh (2019). Considering the significance of adolescence in personal identity development and susceptibility to peer influence, the lack of comprehensive research in this domain is evident. Addressing this gap, the present study aims to investigate the impact of media exposure on adolescent psychosocial development, thereby contributing to a more holistic understanding of this critical age group's experiences. Furthermore, the researcher identified a dearth of research on media exposure specifically in Kakamega, Kisii, and Siaya Counties, with existing data primarily relying on census reports that utilized ecological measures of potential exposure. To bridge this methodological gap, the researcher employed a hybrid approach by integrating ecological measures and survey measures of self-reported exposure.

The literature examination uncovered a significant geographical bias, with the majority of studies originating from Europe and America, represented by works such as Glascock (2015), Hofferth (2010), Connor (2012), and Adachi & Wiloughby (2016). However, a noticeable scarcity of research is evident in other regions, especially Africa, despite the escalating influence of media technology on the continent, as highlighted by Solomon and Van (2020). Notably, within Kenya, the researcher observed a concentration of studies in the Central Region, including Nairobi (Njoroge, 2013), Kitui (Muinde, 2015), Kiambu (Ng'ethe, 2014), and Embu (Nyagah et al., 2015), often focusing on university students. This study seeks to bridge this local gap by investigating Western Kenya, specifically Kakamega, Kisii, and Siaya Counties, unveiling a specific research void in the Western region that this study aims to address.

Previous research has explored the correlation between media exposure and self-esteem, taking into account various moderating factors such as family functioning and peer relations (Luo, Yeung & Li, 2019; Charoesukmongkol, 2018), gender (Ofcom, 2013; Rollero, 2015; Kite & Kite, 2020), and age (Chen & Jackson, 2012). Studies have also investigated mediating factors like experiences of cyberbullying (Alexandersen, 2016; Monni & Sultana, 2016), peer feedback (Elgersma, 2019), and time spent on media (Ciel & Scot, 2016). However, the role of parental involvement as a moderating factor has been largely neglected. Even the limited studies that did consider it (Isikoglu et al., 2019; Griffith, 2023) had a limited focus on parental perspectives and overlooked data from the adolescents themselves. This is notable since a considerable portion of media consumption, especially among adolescents, occurs within the home environment (Coyne et al., 2014). Addressing this research gap, the present study seeks to investigate the connection between media exposure and self-esteem among adolescent students, with a specific focus on parental involvement as the moderating variable. Moreover, the study emphasizes the significance of incorporating the adolescents' own insights as primary respondents, and including parents and teachers as other important stakeholders.

The majority of the examined studies have predominantly focused on the moderating influence of parental involvement in relation to children's media consumption. However, these studies primarily investigated the presence or absence of parental involvement (Gentile et al., 2021; Fabio et al., 2017) and its potential impact on children's media habits (Ofcom, 2013; Baker, 2011; Blessed, 2013; APA, 2019). While certain studies attempted to assess the effectiveness of distinct modes of parental involvement, including restrictive and active mediation (Piotrowski, 2017; Mendoza, 2019; Cabello, Cabello, & Claro, 2018), these investigations were centered in America

and Europe. This geographical limitation highlights a notable gap in the literature concerning the efficacy of specific parental involvement strategies, particularly as applied within African countries. In light of this, the present study aims to investigate whether parental involvement strategies, co-use, discussion, monitoring, and control, collectively, more effectively regulate the impact of media on aggression or self-esteem.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research paradigm, research design, study area, study population, sampling techniques and sample size. It also presents the instrumentation, pilot study, validity and reliability of the research tools, data collection procedures, data analysis as well as ethical considerations which the researcher applied in the study.

3.2 Research Paradigm

A research paradigm encompasses the foundational principles, theories, and methods that shape a researcher's approach to a study (Kekeya, 2019). It provides a framework for conceptualizing and investigating research questions, guiding the selection of research methods, and interpreting research findings. The paradigm establishes the philosophical and methodological underpinnings of the study, shaping its overall design and rigor (Yong, Maizaitulaidawati & Kamarudin, 2021).

In the Social Sciences, research paradigms encompass various approaches and frameworks used to study social phenomena. Positivism prioritizes scientific methods and objective observation for quantitative data analysis and generalization (Barr, 2022). Interpretivism emphasizes the subjective meanings individuals attribute to their social experiences, employing qualitative methods such as interviews and observations. Critical theory aims to unveil power dynamics and social inequalities, challenging existing structures and advocating for change via critical analysis (Yong, Maizaitulaidawati & Kamarudin, 2021). Pragmatism integrates positivist and interpretivist elements, promoting a flexible and problem-oriented research approach that combines qualitative and quantitative methods to comprehensively understand social phenomena. These paradigms offer researchers distinct perspectives and methodologies to navigate the intricate nature of the social world.

This study adopted a pragmatic research paradigm to comprehensively explore the relationship between exposure to media and the psychosocial development of adolescents. Pragmatism originated from the contributions of prominent scholars such as Peirce, James, Mead, and Dewey (Cherryholmes, 1992). The philosophy underlying pragmatism as a research paradigm prioritizes the practicality and utility of knowledge. It emphasizes the integration of theory and practice, advocating for the selection of methods and approaches that effectively solve real-world problems and address specific research inquiries. It emphasizes the practical implications, efficacy, and resolutions to issues by employing diverse methodologies to extract knowledge pertaining to the problem at hand (Kelly & Cordeiro, 2020).

Pragmatism was chosen due to its versatility and holistic approach, allowing for the integration of quantitative and qualitative methods (Kaushik & Walsh, 2019). This combination enabled a thorough examination of the research objectives by considering both objective measures of media exposure and the subjective experiences and interpretations of adolescents. Quantitative data facilitated empirical evidence and statistical analysis, offering insights into overall patterns and generalizability (Kankam, 2019). To capture nuanced experiences, perceptions, and interpretations, qualitative methods such as interviews and focus groups were employed (Wolff et al., 2019).

Overall, the adoption of a pragmatic worldview in this study was driven by the necessity to incorporate both qualitative and quantitative methods to examine the diverse contexts and individual experiences of students in relation to media exposure. This approach aimed to yield theoretically sound and practically applicable insights applicable in real-world settings.

3.3 Research Approach

A research design encompasses the strategic framework utilized by researchers to conduct a study, incorporating components such as research questions, data collection methods, participant selection, data analysis techniques, and time frame (Indu & Vidhukumar, 2019). It provides a structured approach to gathering and analyzing data, ensuring the reliability and validity of the study findings. Research designs fall within three types of inquiries; thus, qualitative, quantitative, and mixed methods approach.

The current study adopted the mixed method approach, which incorporates both qualitative and quantitative methods in a single study to obtain a richer understanding of the research

phenomenon. It combines the strengths of each method, enabling the researcher to gather detailed qualitative data for contextual insights and numerical data for examining patterns and relationships. By triangulating findings, the researcher enhances the quality and depth of the study.

More specifically, this study adopted the convergent parallel research design as proposed by Cresw ell and Creswell (2018), which entails the simultaneous and equal implementation of quantitative and qualitative elements during the same stage of the research process, followed by an analysis of each component separately and integration of the findings to generate a comprehensive interpretation of the results. This variant of mixed methods was preferred because it offers efficiency in data collection, a comprehensive understanding of the research problem, triangulation of data, balancing of strengths and weaknesses of methods, and increased validity and reliability, see Figure 2.

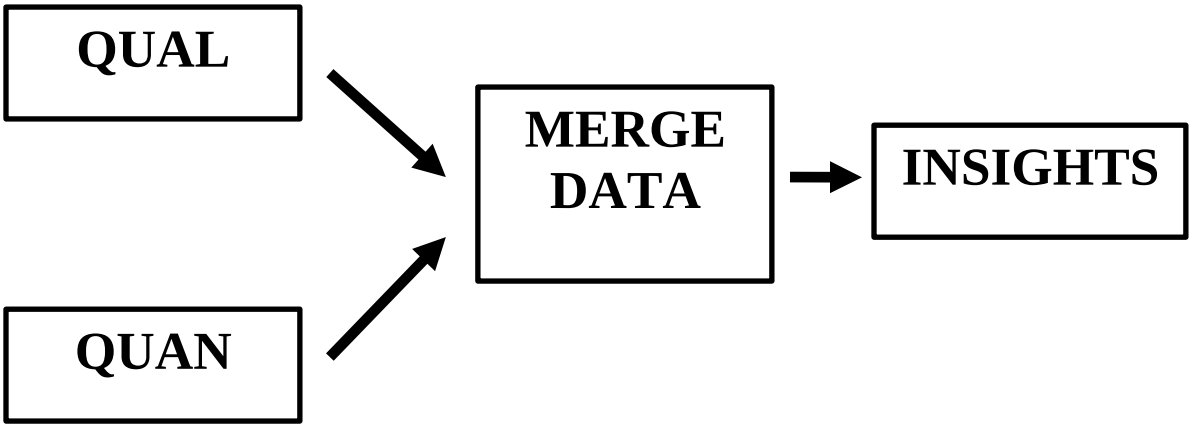

Figure 3. 1: *Illustration of Convergent Parallel Mixed Methods Design*

Source: Creswell & Plano-Clark (2011)

The adoption of a mixed method approach in this study was justified based on the recognition that solely relying on quantitative or qualitative methods would be insufficient to fully explore the research objectives (Dawadi, Shrestha & Giri, 2021). Quantitative methods were deemed appropriate for investigating exposure patterns and the relationship between media exposure and aggression and self-esteem in adolescent students. In contrast, qualitative data was deemed more suitable for gaining insights into the perspectives of parents and teachers on the same issue, as well as getting objective information about the portrayal of violence content in the most favorite TV show identified by respondents. Therefore, by employing a mixed method design, a comprehensive understanding beyond the limitations of either approach alone could be achieved. This data was collected simultaneously though from different groups and sources.

Quantitative data was collected from students using questionnaires. The questionnaires captured information such as the frequency, duration, and context of exposure to various forms of media, as well as levels of aggression, self-esteem, and parental involvement strategies. The quantitative data were subjected to separate analyses, including descriptive statistical analysis and Spearman's *rho* correlation analysis. The choice of Spearman's *rho* correlation analysis was based on the fact that both the independent and dependent variables were measured using Likert scales, which produce ordinal data. Spearman's *rho* is appropriate for analyzing the strength and direction of relationships between ranked variables, without requiring the assumptions of normality or linearity.

Qualitative data was collected from parents using in-depth interviews, from teachers using focus group discussions and from the most favorite TV show identified by respondents using content analysis schedule. The interviews aimed to obtain parental perspectives on involvement strategies

employed by parents pertaining to their children's exposure to media, enabling an exploration of their beliefs, behaviors, and practices in monitoring, guiding, and supporting media usage. The focus group discussions with teachers aimed to capture their observations and expertise viewpoints regarding the impact of media exposure on students' psychosocial development, revealing broader themes and patterns. Additionally, the content analysis schedules assessed the levels of portrayal of violent content in the respondents' favorite television show. This data was separately coded and analyzed for emerging themes.

Upon separate analysis of the quantitative and qualitative data, the findings were integrated and interpreted collectively. This involved comparing the findings for congruence, disparity, complementarity, or expansion. For instance, the identified parental involvement strategies reported by students were compared to similar findings obtained from parents. These would then inform the inferences made thereof. Figure 3 gives a diagrammatic representation of the mixed method approach as was applied in this study.

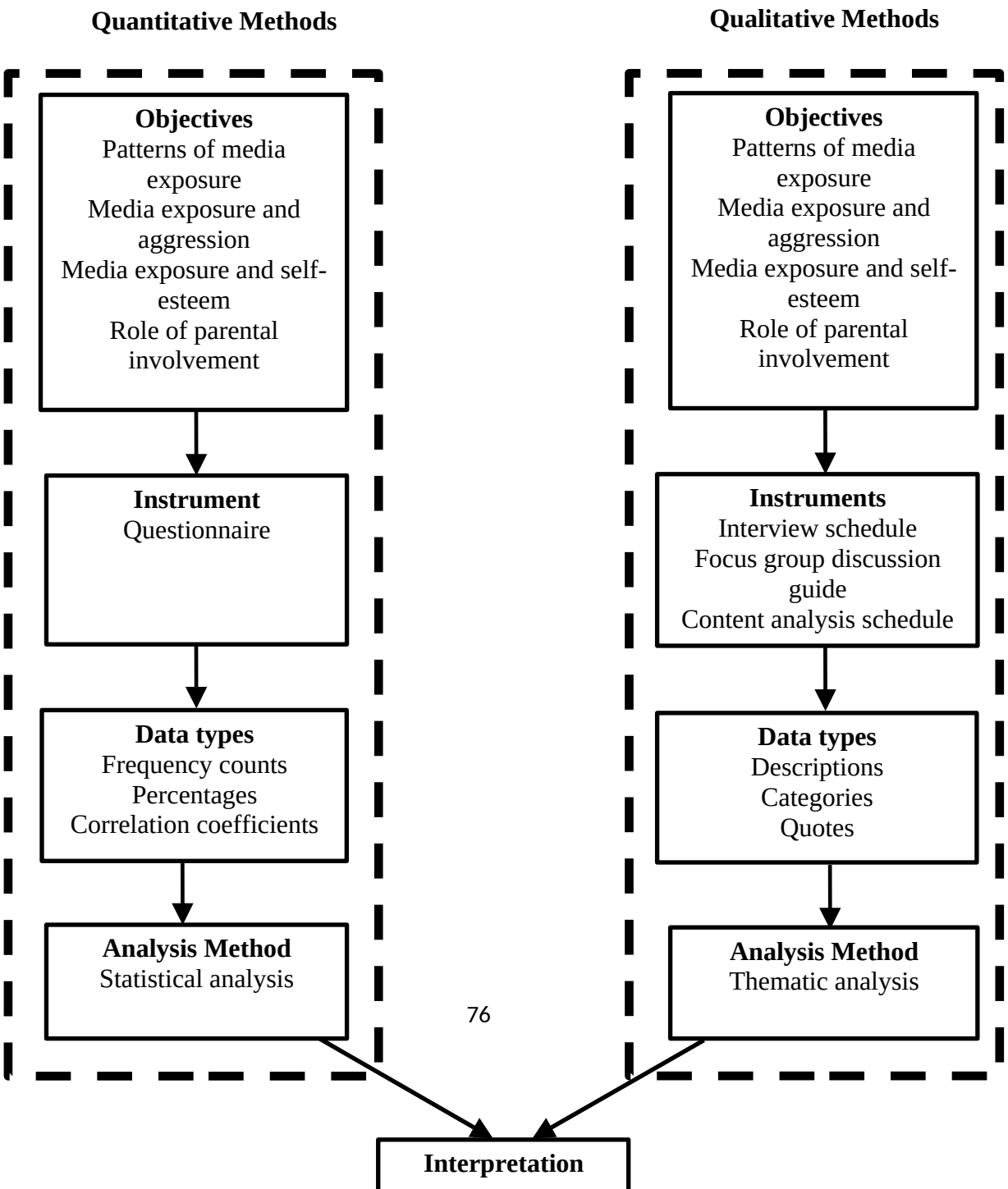
Quantitative Methods
Objectives
Patterns of media exposure
Media exposure and aggression
Media exposure and self-esteem
Role of parental involvement
Instrument
Questionnaire
Data types
Frequency counts
Percentages
Correlation coefficients
Analysis Method
Statistical analysis
Qualitative Methods
Objectives
Patterns of media exposure
Media exposure and aggression
Media exposure and self-esteem
Role of parental involvement
Instruments
Interview schedule
Focus group discussion guide
Content analysis schedule
Data types
Descriptions
Categories
Quotes
Analysis Method
Thematic analysis
Interpretation

Figure 3. 2: *Illustration of Convergent Parallel Mixed Methods Design as Applied in the Current Study*

3.4 Research Design

The current study adopted both descriptive survey and correlational research designs. Descriptive survey research design is used when describing specific behavior as it occurs in the environment without influencing it in any way. Through it, the researcher can gather facts and characteristics of a particular individual or group of individuals, as a way of describing the occurrence of a given trait (Sharma, 2019). In this study, the researcher described the nature of media consumption among students in terms of content, type, context, purpose and length of time of exposure without any manipulation of variables, hence the appropriateness of this design. The advantage of this design is its effectiveness in analyzing non-quantified data. However, it is not helpful in analyzing cause-effect relationships among variables in a study. For this reason, this study additionally employed correlational research design.

Correlational design applies in studies where the researcher seeks to explore the relationship between variables and predict scores on one variable from scores of another from the same group of subjects (Crawford, 2014). To do this, the researcher needed to find out whether there is a similarity between the two sets of scores for the dependent and the independent variables or not.

After such an analysis, it is possible to predict the scores in one set from the scores in the other (Akinlua, 2019). In this study, the researcher investigated the connection between students' exposure to media and their psychosocial development. The specific focus was on determining whether there was any relationship between media exposure and aggression on one hand, and self-esteem on the other, among the students, and if so, to what extent that relationship could be used to predict the students' behavior with regard to aggression. To achieve this, the researcher adopted a correlational research design, which was considered to be the most suitable approach for the purpose of this study.

3.5 Variables of the Study

An independent variable is one whose variation is not dependent on that of another. In this study, the independent variable was exposure to media. Nagler (2017) defines exposure to media as the extent to which individuals have encountered specific messages or content from the media. In this study, the term "media" was limited to radio, television, mobile phones, and social media platforms. Global estimates of media usage among children recommend the use of self-reported frequency and duration of time spent on the media (Vandewater & Lee, 2009). These estimates have been used by several organizations, including the American Psychological Association (Hawkey, 2019) and the World Health Organization (World Health Organization, 2020). Of interest in this study is the patterns of access to media. More specifically, the aspects measured included the frequency of access, the amount of time spent engaging with the media, the specific content consumed from the media, and the context in which the media was used. This variable was primarily measured using the ordinal scale.

The dependent variable in a study refers to the variable whose value depends on that of another. The dependent variable in this study focused on psychosocial development, which encompasses the interplay between individual psychological and social factors. More specifically, the study focused on the psychosocial dimensions of self-esteem and aggression, assessing them using established measurement instruments. Aggression was evaluated using the Adolescents Peer Relations Instrument (APRI), which captures both victimization and bullying. Self-esteem was measured using Rosenberg's Self-Esteem Scale (RSES), which encompasses aspects of self-worth, self-acceptance, and self-respect. Therefore, aggression was assessed in terms of bullying and victimization, while self-esteem was evaluated in terms of self-worth, self-acceptance, and self-respect. Both the APRI and RSES used the ordinal scale.

A moderating variable is a third variable that influences the strength or direction of the relationship between an independent variable and a dependent variable. In the present study, the moderating variable examined was the level of parental involvement in their children's media interaction, specifically focusing on two modes of involvement: restrictive, involving control and monitoring of media access, and active, encompassing discussions about media content and shared media use between the parent and child. This too was measured in the ordinal scale.

3.6 Study Area

The study was conducted in Kakamega, Kisii and Siaya Counties, which are part of the 10 counties that constitute Western Kenya, formerly Nyanza and Western Provinces. Kakamega County is found in the Western part of Kenya, see appendix B. It lies between latitude 0^0 16’ 57.8316’ North and 34’ 45’ 6.7068 East and covers an area of approximately 3050km^2. It borders 7 counties; thus,

Vihiga, Busia, Siaya, Bungoma, Trans Nzoia, Uasin Gishu and Nandi Counties (KNBS, 2015a). Major towns in the county include Kakamega, Mumias, Malava, Butere and Lumakanda. Administratively, it is divided into 12 sub-counties (County Government of Kakamega, 2018). According to the 2019 Population and Housing Census, the population of Kakamega County was 1,867,579 out of whom 897,133 were males and 970,406 were females (KNBS, 2019).

About 18% of the households within Kakamega County have access to electricity. According to County Government of Kakamega (2018), Kakamega town has access to fiber optic cable for internet connectivity and there are approximately 94 cyber cafes in the county. Major ICT companies in Kenya like Safaricom, Telkom and Access Kenya are currently setting presence in the town. Likewise, major media companies like Nation Media, Standard Group, Media Max and Royal Media for TV and radio stations are accessible from Kakamega. Masinde Muliro University of Science and Technology, located in Kakamega Town also has MMUST FM radio station.

The population in Kakamega town is predominantly from the Luhya community though there are other communities settled in the urban areas. Majority of the population are Christians though there is also a fairly large fraction of Muslims especially in Mumias sub-county (KNBS, 2015a). Major economic activity practiced is farming, particularly large-scale farming of sugarcane, maize beans and sweet potatoes. The poverty index in the county is ranked 26th among other counties in Kenya with a poverty index of 49.2. (KNBS, 2014). Major tourist attractions in the county include Kakamega Forest, Malava Forest, the Crying Stone at Ilesi and the Dog Market at Lubao. There are also unique cultural activities like bull fighting and cock fighting.

There are 412 public and 25 private secondary schools in Kakamega County. For tertiary institutions, there is one public university in the county, Masinde Muliro University of Science and Technology (County Government of Kakamega, 2018). Besides this, there are also a number of technical and vocational institutes as well as teacher training colleges and youth polytechnics.

Kisii County lies between latitude 0^0 40' 38.4' South, and longitude 34^0 34' 46^0 61' East, see appendix C, and covers an area of 1,317km^2. Major towns in the county include Kisii town, Suneka, Ogembo, Tabaka and Keroka (County Government of Kisii, 2018). The county is administratively divided into 11 sub-counties. The population of Kisii County is projected to be 1,494,429 in 2022, out of whom 713,913 would be males while 780,516 would be females.

There are major mobile phone providers in the county, thus, Safaricom, Airtel, and Telkom. Household access to electricity stands at 29.5%. According to KNBS (2015b), Kisii County has 338 public and 23 private secondary schools Kisii University is located at the heart of Kisii town. There are also a number of technical training institutes and youth polytechnics within the county. Literacy is relatively high in the county, estimated at 89.5% (County Government of Kisii, 2018).

Majority of the population in Kisii County comes from the Abagusii community and practice Christianity. Major economic activity in the county is subsistence farming. Kisii County is particularly known for banana farming. Besides this there is mining of soapstone at Tabaka. The poverty index of Kisii County is 51.4 according to the Kenya National Bureau of Statistics (Kenya Open Data, 2014).

Siaya County is found in the Western part of the country, see appendix D. It covers an area of 2,530km^2 land surface and 1,005km^2 water surface, and lies between latitude 0^0 26'South to 0^0 18' North and longitude 38^0 58' East to $34^0$33' West (County Government of Siaya, 2017). The county is bordered by Busia County to the North West, Vihiga and Kakamega Counties to the North East, Kisumu County to the South East and Homa-Bay County across the Winam Gulf to the South. Administratively, Siaya County is divided into 6 sub-counties, namely, Alego Usonga, Gem, Ugenya, Bondo, Rarieda and Ugunja. These are further sub-divided into 30 wards. There are several major towns concentrated along the major Kisumu Busia highway and around the shores of Lake Victoria. These include Siaya Township, Bondo, Yala, Ugunja, Usenge, and Sega. There are a few hills found in the county including Mbaga, Regea, Odiado, Akala and Nyambare hills.

The famous *Kit Mikayi*, translated from the Luo language to mean 'the stone of the first wife', in the neighboring Kisumu County is one of the tourist attractions in the region. Other tourist attractions include Lake Kanyaboli, Ndanu falls, Yala Swamp and Nyangoma Village. Rivers Nzoia and Yala traverse the county and enter Lake Victoria through the Yala Swamp.

According to the 2019 census report, the population in Siaya County as at August, 2019 was 993,183 out of whom 471,669 were male, 521496 were female and 18 were classified as intersex (KNBS, 2019). This population is distributed into 250,698 households. According to GOK & KNBS (2010), 4% of all housing units in Siaya County use electricity as the main source of lighting. Most parts of Siaya County access up to 4g+ network coverage (Nperf, 2019).

The population in Siaya County is predominantly Luo and is more concentrated in the rural areas. According to the 2009 census, out of the then population of 832,304, 11% fell under the age bracket of 11 to 14 out of whom 51% were male and 49% were female. Poverty levels in the county stand at 38% (Population Action International, 2016.). Statistics indicate that 64% of the population has only primary school level education, 16 % have secondary school level and above while 20% have no formal education (KNBS& Society for International Development, 2013). However, according to the Kenya National Bureau of Statistics- Kenya (2014), literacy levels for 15- to 24-year-olds are between 97 to 100%.

The region is predominated by a farming community that engages in small scale farming. The major crop grown is maize. Most of the farming is done for domestic rather than for commercial use. Other economic activities include small scale trade, particularly the sale of fish from the beach town of Usenge, and the sale of other items from the neighboring border County of Busia. A fairly big number of youths in the county engage in *bodaboda* business, some having dropped out of school. The poverty index in the county is 38.2% (Otieno, 2014).

Majority of the habitants (96.6%) are Christians. Although there are mosques in Siaya and Yala towns, a very small proportion of the population (0.8%) subscribe to that faith. The remaining 2.9% fall under other religions (City Population, 2019). According to a survey by Kenya Open Data (2014), the major ICT mode in use within the county is radio since 82% of the population has access to radio services, 53% have access to mobile phones, 25% have access to television and 3% to computer.

There are a number of institutions of higher learning. These include Jaramogi Oginga Odinga University of Science and technology (JOOUST) and Bondo Teachers Training College in Bondo, Siaya Institute of Technology and Siaya Medical Center in Siaya Town and Ugenya Teacher Training College (UTTC) in Ugenya among others.

3.7 Study Population

The study focused on in-school adolescent students in Kakamega, Kisii and Siaya Counties, Kenya. The reason for focusing on in-school adolescents in the study was that the controlled environment of schools minimized confounding variables, ensuring a clearer understanding of media's influence. Additionally, with a consistent routine, media exposure among this population is likely to occur within an almost comparable context. Also, this ensured that there was an accessible participant pool, which facilitated easier recruitment. Finally, it was easier to effectively ensure ethical oversight within the school setting, hence safeguarding participants' rights

Given that the 3 counties are predominantly rural, majority of schools found in the counties are situated in rural settings. However, a few schools are densely distributed within and around the few towns. The study population was drawn from both public and private secondary schools. Both categories of schools were considered because much as social class has been found to influence choice between private and public school (Reeves, 2013), and to determine access to media (Yates & Lockley, 2018), in the study, social class was not considered as a variable. Data was collected from students, class teachers and parents.

The students consisted of adolescent secondary school students aged between 14 and 17, who were expected to be between form 1 and form 4. This study however concentrated on the median ages of 15 and 16 as being representative. Therefore, the study only included those in middle secondary school, specifically, form 2 and form 3 since these classes typically had students within that age bracket of 15 and 16. This gave a total population of 190,555 students. The distribution was as shown in Table 3.1.

Table 3. 1: *Enrolment for Form 2 and Form 3 Secondary School Students by Class in Kakamega, Kisii and Siaya Counties, Kenya*

Grade	Kakamega			Kisii			Siaya			Grand Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Form 2	15,941	20,589	36,530	15,564	18,794	34,358	14,205	11,753	25,958	96,846
Form 3	14,240	17,723	31,963	15,876	18,134	34,010	9,060	18,676	27,736	93,709
Total	30,181	38,312	68,493	31,440	36,928	68,368	23,265	30,429	53,694	190,555

Source: KNBS 2015a; KNBS 2015b; Siaya County Education Office, 2021

The population of parents was drawn from all parents of form 2 and form 3 students in Kakamega, Kisii and Siaya Counties. Parents of students who were part of the student population of the study, were also part of the parent population of the study. The researcher opted to pick one parent for each student to take care of incidences of single parents. In the absence of both parents, the guardian would be part of this population. Table 3.2 gives a summary of the distribution of parents' population for the study.

Table 3. 2: *Distribution of Form 2 and Form 3 Secondary School Parents in Kakamega, Kisii and Siaya Counties, Kenya*

Class	Kakamega	Kisii	Siaya	Total
Form 2	36,530	34,358	25,958	96,846

Form 3	31,963	34,010	27,736	93,709
Total	68,493	68,368	53,694	190,555

Source: KNBS 2015a; KNBS 2015b; Siaya County Education Office, 2021

For the teachers, the population was drawn from all the secondary schools in the 3 counties of Kakamega, Kisii and Siaya. Each school contributed two class teachers, one assigned to Form 2 and the other to Form 3. In schools with multiple streams, priority was given to the lead class teacher if one was present. If a lead teacher was not available, a simple random sampling method was utilized to choose one class teacher, specifically using a casting lots technique for the random selection. The reason for picking on the class teacher or the lead class teacher was that they exercise greater oversight over the students and are therefore at a better position to give more representative insights about them than the subject teachers. This gave a total of 2034 class teachers. The distribution of this population is as shown in Table 3.3.

Table 3. 3: *Distribution of Form 2 and Form 3 Secondary School Class Teachers in Kakamega, Kisii and Siaya Counties, Kenya*

Class	Kakamega	Kisii	Siaya	Total
Form 2	460	432	279	1,171
Form 3	356	310	197	863
Total	816	742	476	2034

Source: KNBS 2015a; KNBS 2015b; Siaya County Education Office, 2021

3.8 Sampling Techniques and Sample Size

This section describes the sampling techniques that were used in selecting the sample for the current study as well as the sample size used.

3.8.1 Sampling Techniques

In this study, stratified random sampling techniques were used to select the sample of students. Stratified sampling is a statistical technique that involves dividing a population into distinct subgroups, or strata, based on specific stable characteristics. Samples are then randomly selected from each stratum, proportionally to their representation in the population (Mohsin, 2016). This method improves the precision and accuracy of estimating population parameters by accounting for variability between subgroups.

The decision to employ the stratified random sampling technique was motivated by the presence of a population dispersed across three counties that hold differing socioeconomic statuses, which are of significance for the study. Furthermore, varying experiences among students pertaining to their interactions with the media were anticipated across different categories of schools. Thus, it was imperative to ensure the inclusion of all school categories in the sample to comprehensively capture the breadth of perspectives and experiences within the population.

Therefore, the students were divided into 3 strata depending on the county they came from, thus, Kakamega, Kisii, and Siaya. Each stratum was further divided into 4 substrata depending on whether the students were from a national school, extra-county school, county school or sub-county school. This gave a total of 12 sub-strata. Finally, simple random sampling was used to select a sample from each sub-stratum to form the larger sample for the study. The size of the sample from each individual substratum was based on the proportions of the population of that substratum within the larger population of the study, see appendix E.

As for the parents, following the selection of 417 students for the study, a simple random sampling method was further used to select 56 students whose parents would be included in the sample. Therefore, from each of these 56 students, one parent was selected. To ensure fair representation and minimize potential researcher bias, a randomized process was employed to determine whether the male or female parent was selected from each student. This involved using a random number generator with a threshold of 0.5, where any number above this threshold indicated selection of the female parent, and any number below indicated selection of the male parent. This systematic approach upheld objectivity and impartiality, adhering to the principles of random sampling and mitigating researcher influence.

Finally, for the teachers, stratified random sampling method was used. Just as was with the students, the population of teachers was divided into 3 strata based on the county, then further into 12 sub-strata based on the school category. Finally simple random sampling was used to select 4 teachers from each substratum to form the final sample of teachers for the study, see Appendix F.

3.8.2 Sample Size

From the specified student population of 190,555 individuals, a sample size of 417 was determined using the sampling size formula devised by Krejcie and Morgan. This formula is renowned for its applicability in establishing an appropriate sample size, considering a 95% confidence level and a 5% margin of error (Krejcie & Morgan, 1970). By adhering to these parameters, a sample size table was constructed, yielding the aforementioned sample size of 417 for the student population. This meticulous approach ensures the attainment of statistically sound results by meticulously aligning the sample size with the designated confidence level and margin of error.

A sample of 56 parents was selected based on considerations of achieving sufficient data saturation and diversity of perspectives. Quantitative methods use statistical formulas to determine sample size, while qualitative research prioritizes depth of understanding and richness of information rather than statistical representativeness (Hennink & Kaiser, 2022). Overall, in qualitative research, the focus is on the quality of data rather than quantity, as a smaller sample size that is rich in information and diversity leads to more insightful and meaningful findings compared to a larger, less focused sample.

Data saturation is the point in qualitative research where new data or information no longer provides additional insights or themes, indicating a sufficient level of understanding (Buckley, 2022). Sample size based on data saturation therefore ensures capturing a full range of perspectives and themes without collecting unnecessary data (Hennink, Kaiser & Weber, 2019). To achieve data saturation, data was gathered through a process of iterative data collection and analysis. This involved collecting and analyzing data initially, then using the insights gained from this analysis to determine the need for and shape the direction of further data collection. As this cycle continued, the researcher kept refining the data collection tool to ensure data saturation. The data collection process came to an end when it was determined that a saturation point had been reached. This point signified that no additional fresh insights were emerging from the continuous analysis being conducted.

On the other hand, the diversity of perspectives is crucial in qualitative research to explore the nuances of participants' experiences, opinions, and viewpoints (Hendren et al., 2023). This

approach facilitates transferability of results to similar contexts. To achieve diversity of perspective a sample of parents was selected using stratified sampling techniques. The characteristic of interest was the school category. The category of school, which encompassed national, extra county, county, and sub-county schools, played a crucial role in the study as it provided insights into the varying educational environments and resources that adolescents are exposed to. To ensure fair representation of all school categories, a stratified sampling method was employed. This involved dividing the population into subgroups based on the category of school and randomly selecting participants from each group. The utilization of this method aimed to capture a wide range of perspectives and experiences across different school categories.

Finally, 48 teachers were selected to be part of the sample of the study. This process used stratified sampling method. The teacher population was divided into three distinct groups based on counties, and further divided into 12 subgroups based on school categories. From each subgroup, a number of teachers, proportional to the number from the county as represented in the total population was randomly selected, giving a total of 48 teachers.

Therefore, out of a population of 190,555 students, 190,555 parents and 2,034 teachers, a sample of 417 student, 56 parents and 48 teachers was derived. Table 3.4 gives a summary of the population and sample size for each category of respondents.

Table 3. 4: *Sampling Frame Showing the Sample Size for Students, Parents and Teachers*

Category	Population	Sample
Students	190,555	417
Parents	190,555	56
Teachers	2,034	48

Total	329,144	521

Source: Researcher

3.9 Instruments for Data Collection

Data was collected using questionnaire, interviews, focus group discussions and content analysis. The primary instrument for data collection was the questionnaire while the supplementary instruments were the interviews, focus group discussions and content analysis. The underlying theoretical framework was compared to the literature reviewed and the two were synthesized to identify specific elements that were included in the instruments for data collection. The instruments thus developed were expected to yield both qualitative and quantitative data.

3.9.1 Questionnaire for Students

Various scientific methods have previously been used to conduct a prevalence analysis of media exposure among adolescents, including surveys (Dibben et al., 2023), time use diaries (Barthorpeet al, 2020), media diaries (Ng et al, 2023), and technological tracking methods (Barr et al., 2020). In this study, the survey method was used, where a questionnaire was administered as the primary tool for data collection. In media studies, questionnaires have been widely employed as a predominant research instrument, as demonstrated by the investigations conducted by Dibben et al. (2023), and Al-Qaysi, Mohamad-Nordin, & Al-Emran (2020. The prevalence of questionnaires in this field could be attributed to their effectiveness, the potential for standardization, cost-efficiency, and their ability to ensure respondent anonymity and privacy.

In this study, a questionnaire was administered to students to collect self-reported data on the frequency, duration, and types of media consumed, as well as purpose for which it was consumed.

The information obtained through these measures allowed the researcher to quantify and analyze the patterns of access to media, particularly among this population, which was the first objective in this study. It contained 25 questions out of which 24 were close ended while 1 was open ended. The 25 questions were divided into 5 sections and were either in the form of a Likert scale or multiple-choice items, see appendix G.

Section A requested for the demographic information of the respondent, which included the gender, class, age, parental status and school category. These were multiple choice type questions where the respondent was expected to only give one response.

Section B of this questionnaire was titled 'Media Exposure'. Shi and Nagler (2020) suggest three approaches to measurement of media exposure, thus, survey measures of self-reported exposure, ecological measures of potential exposure and a hybrid approach which is a combination of the two. This section employed a hybrid approach, combining both survey measures of self-reported exposure and ecological measures of potential exposure. According to Claes and Naijens (2016), survey measures of self-reported exposure depended on the ability of the respondents to recall to some level, their interaction with media. On the other hand, ecological measures of potential exposure utilize a range of data sources, including census reports, media market data, geospatial data, and surveys/interviews with key informants, to assess the availability and accessibility of media sources within specific populations or geographic areas (Weeks & Lane, 2020).

In this section, respondents were required to give information concerning their access to the media in the previous 6 months. A period of 6 months was seen to be appropriate because it was long

enough to observe changes in the student, short enough to control for external factors as well as to avoid forgetfulness in the respondents. Also, this period was consistent with previous studies (Andreassen et al., 2016 and Ferguson et al., 2014).

The questionnaire required respondent to identify the type of media they were able to access, the frequency of access, the daily average amount of time they spent on media devices, the context of use and the purposes for which they used the media. Moreover, participants provided information regarding ownership of media devices, ease of internet access, the presence of a television in their bedrooms, and whether the television was consistently on within their households. They also gave information on their most favorite social networking site and TV show. The later would later be analyzed for content assessment

In Section C, titled 'Media and Aggression', participants were asked to report the frequency of their access to violence in the media and their personal perception of the violence depicted. They were also asked about the frequency with which they imitated the violent behaviors they observed. Lastly, the researcher utilized pre-existing scales, as explained in Section 3.9.1.1, to assess the levels of aggression among the participants.

Section D, titled 'Media and Self-Esteem,' focused on gathering information regarding the frequency of self-comparison behavior with media figures, how the respondents evaluated themselves in comparison to these figures, and their experiences with negative comments from the media. The final questions in this section used established scales to assess the self-esteem of the participants, as discussed in Section 3.9.1.2.

Section E required information concerning parental involvement. The respondent was expected to identify what type of involvement strategies their parents employed, if any, and how frequently it was done. Expected responses were on a 4-point Likert scale.

3.9.1.1 Aggression Assessment Scale

A number of instruments have previously been developed for measuring aggression. These include the Peer Aggression and Reactive Behavior Questionnaire- PARB-Q (Gremigni, Damarcio, & Borsa, 2013), The Self-Report for Victimization and Exclusion-SVEX (Buhs, McGinley & Toland, 2010), The Personal Experience Checklist- PECK (Hunt, Peters & Rapee, 2012), The Adolescent Peer Relations Instrument- APRI (Marsh et al., 2011) and the Peer Conflict Scale-PCS (Marsee et al., 2011).

This study used the Adolescent Peer Relations Instrument (APRI) to measure aggression. Although the other scales pass the validity and reliability test (Kendal, Nelson, Burns & Schonert-Relchi, 2017), they were not appropriate for this study given their target age-group and the specific constructs they measured. For instance, PECK is applicable for 8-year-olds and measures only victimization, leaving out perpetuation of aggression (Kendal, Nelson, Burns & Schonert-Relchi, 2017). However, the APRI is applicable to both preadolescent and adolescent samples. In this study, interest was on the perpetuation of aggression among adolescents, which APRI aptly measures (Finger et al, 2008), hence its choice as the preferred instrument. This scale is described in detail in the subsequent paragraphs.

The APRI, developed by Parada in 2000 measures global aggression, thus, physical, verbal and social aggression among individuals, both as victims and perpetuators (Finger et al., 2008). It is in the form of 36 test items on a 6-point Likert scale. The items are divided into 6 sections, each measuring a specific dimension of aggression, thus verbal, social and physical aggression, see appendix H. Out of the 6 sections, three measure victimization while the other three measure perpetuation. In this study, the researcher was interested in measuring aggression as perpetuators, hence the relevance of this scale.

This scale was however adopted to suit the study. To this end, the wording in the instrument was assessed for unfamiliar words and statements, so as to replace these with simpler and more familiar words. Additionally, some items were merged or dropped off since they tested the same construct. With this done, the final tool had been made more straight-forward, shorter and more familiar to the specific respondents in this study, hence having higher chances of soliciting 100% responses. Therefore, for purposes of this study, the tool only had 6 items divided into 2 sections with 3 items each (Appendix G). The first section sought to measure the level of aggression demonstrated by the respondent as a perpetrator, with possible scores ranging from 3 to 18. A score of 3 indicated 'No Aggression' and a score of 18 signified 'Extreme Aggression'. The second section aimed to assess the level of aggression experienced by the respondent as a victim, with scores ranging from 3 to 18. A score of 3 indicated 'No Aggression' and a score of 18 implied 'Extreme Aggression'.

3.9.1.2 Self Esteem Assessment Scale

A number of self-esteem scales have been developed by various scholars in the past. Examples include the Tennessee Self-Concept Scale (TSCS) which has 76 items (Pauldine, Warren & Swails,

2020), the Self-Esteem Inventory (SEI) which is a 50-item scale (Chasanah, Mulawarman & Murtadho, 2020), the Self-Perception Profile for Adolescents (SPPA) which contains 30 items (Vedøy et al, 2020), and the Rosenberg Self-Esteem Scale (RSES) which contains 10 items (Butler & Gasson, 2005). All of these measurement scales are appropriate for adolescent participants. However, with the exception of the RSES, they are excessively lengthy and potentially burdensome to complete. Consequently, the RSES was selected as the instrument of choice for this study.

The RSES was developed by Morris Rosenberg (Rosenberg, 1965). It measures specific aspects of self-esteem, thus, self-worth, self-acceptance and self-respect (DeFreese & Nissley, 2020). This is a widely used self-report instrument that measures global self-esteem for all age-groups. The scale has been tested for reliability and validity in various settings and has been reported to have high ratings in reliability. For instance, Yaacob and Bhy (2006) did a validation study on it which found it to have an acceptable reliability coefficient (α=.80). This scale is in the form of 10 statements pertaining to self-worth, self-acceptance and self-respect, rated on a 4-point Likert scale, see appendix I. It has been applied on a range of samples including adolescent students (Argawal, 2020), adult women (Roelen & Taylor, 2020), and civil servants (Kun et al, 2020).

For purposes of this study, this scale was adopted to suit adolescent secondary school students. To address this concern, statements that were perceived as ambiguous or lacking clarity, particularly within the context of this study's target population, were refined to enhance precision. For instance, item 7 which originally reads “I feel I am a person of worth just as much as other people” was instead rephrased to “I am worthy”. However, the number of items still remained 10 (Appendix I).

The self-esteem rating was categorized into three levels, thus, low, moderate, and high, based on a range of scores from 10 to 40. A score of 10 represented low levels of self-esteem, while a score of 40 indicated high levels of self-esteem.

3.9.2 Interview Schedule for Parents

The interview schedule encompassed nine open-ended questions, designed to gather qualitative data regarding the patterns of media accessibility among adolescent students and the extent of parental involvement in their children's media consumption. This qualitative data served as a valuable supplement to the quantitative data obtained from the students' self-reported questionnaires, specifically pertaining to their personal media usage and the degree of parental engagement in this regard.

The participants were requested to provide their demographic details, including gender, age, and educational attainment level. Subsequently, they were asked to divulge information regarding their adolescent children's behavior pertaining to media usage, in addition to their own level of involvement in their children's media consumption. Furthermore, they were prompted to offer their opinions on whether parents were adequately fulfilling their responsibilities in this domain and suggest potential measures to enhance parental engagement in their children's media use (Appendix J).

The interviewing method utilized in this study encompassed both face-to-face and telephone-based approaches. Telephone interviews were chosen as a means of accommodating parents who faced challenges with physical accessibility. This approach facilitated data collection from remote

locations, providing geographical flexibility and overcoming potential logistical barriers. Additionally, telephone interviews offered the benefit of anonymity and privacy for participants, thereby potentially facilitating greater openness and honesty in their responses.

In addition, the researcher employed self-administered questionnaires and WhatsApp chats for interviews. Printed questionnaires allowed parents to respond at their convenience, offering flexibility and reducing scheduling conflicts. This method encouraged thoughtful responses by eliminating the pressure of immediate answers. WhatsApp interviews, on the other hand, enabled real-time interaction, facilitating follow-up questions and clarifications. This approach was particularly effective for tech-savvy parents, providing convenience and accessibility. Both methods enhanced response rates, minimized logistical challenges, and contributed to the depth and quality of the data collected.

3.9.3 Focus Group Discussion Guide for Class Teachers

There were 6 focus groups comprising 8 teachers each, selected from a variety of school categories, thus national school, extra-county school, county school and sub-county school. These groups held a 25-minute discussion. The outcomes of the focus group discussions provided qualitative data that aligned with the study's themes, theoretical framework, and relevant literature. The discussions centered on the types of media commonly accessed by students, the purposes for which students utilized the media, and the potential influence these interactions had on their psychological and social well-being. This data served as a valuable supplement to the information derived from the students' questionnaires. Discussions were also centered on suggestions on ways in which parents and teachers could improve on their efforts to regulate the students’ media behavior.

These discussions were conducted using a blended approach, which combined both face-to-face and virtual meetings. This approach allowed for flexibility in participation, accommodating participants who may have faced geographical or logistical challenges in attending physical meetings. The face-to-face discussions provided an opportunity for rich, in-depth exchanges and non-verbal cues, while the virtual meetings facilitated broader and diverse participation by eliminating geographical barriers. Appendix K contains a list of prompt questions that guided the discussions.

3.9.4 Content Analysis Schedule

Over the years, researchers have used a number of methods to measure violence on television. These include content analysis, surveys, questionnaires, program ratings and parental guidance systems as well as experimental studies. In this study, content analysis was employed. This is a method which helps the researcher determine the presence or absence of certain content in a given text (Luo, 2019; Allen, 2017)), in this study referring to a video clip.

In this study, it was used to gather qualitative data from the most favorite TV shows identified by the students. A 10-minute episode from each of the top 3 most favorite shows identified by the participants was prerecorded on a set date and an analysis of the content done. Deliberate considerations were made regarding the duration of the video clip, the selection of a specific day and TV show, as well as the methodology employed to assess violent content.

The decision to limit the video clip duration to 10 minutes was made in order to strike a practical balance and ensure the inclusion of a representative sample of content. Research suggests that shorter clips are more effective in maintaining participant engagement and attention during analysis (Lassoff, 2023). Additionally, considering the constraints of participant attention spans and available research time, a 10-minute duration was deemed appropriate for efficiently capturing pertinent elements of the content, including any potentially violent scenes.

The decision on which specific television program to select for recording the video clip was guided by multiple considerations. In order to maximize ecological validity and mirror the actual media consumption patterns of the target population, a highly popular and widely watched television show was chosen based on the input provided by participants. This selection was made to ensure that the content of the video clip resonated with the preferences of the participants, thereby increasing the likelihood of obtaining an accurate portrayal of their media consumption habits.

A systematic analysis of the video clips was done to assess the frequency and types of violent acts depicted. Prior to the analysis, clear definitions and coding categories were established to accurately identify and categorize different forms of violence, such as verbal, physical, and relational violence. The researchers also observed the purposes for which violence was employed by the characters and the consequences of the violence, as well as whether the violence was overt or concealed within the content. This methodical approach allowed for objective measurement and assessment of the portrayed violence.

All these were rated on a four-point Likert scale ranging from none to extreme, see appendix L. When a show had a score of none, this signified that no violent acts were depicted. A moderate score indicated the presence of violence, but it was not particularly graphic or severe. A score of strong implied that violence was present and quite graphic and intense. An extreme score indicated that violence was present and highly graphic and intense. The researcher also examined the most dominant themes in the favorite TV shows as identified by students. This was determined from the words and actions of characters. Finally, the researcher assessed for the availability of parental controls in such programs.

3.10 Pilot Study

A pilot study is a small-scale preliminary study carried out with the aim of assessing feasibility, duration, financial implications and any likely eventualities that may adversely affect the study, with the aim of improving the study design before fully implementing the whole study. Through a pilot study, the researcher was able to test the proposed instruments and identify potential practical challenges in the proposed procedures, hence adjusting them accordingly to ensure successful implementation of the actual study. Also, the researcher is able to ascertain the validity and reliability of the research tools (Junyong, 2017) hence improving on the quality and efficiency of the main study. With this objective in mind, a preliminary study was conducted on the tools used in the study before the main implementation. This pilot study was designed to closely mimic the intended protocols of the main study.

In accordance with Connelly's (2008) recommendation, a pilot study was conducted on a subset of the student population, comprising one-tenth of the sample. This equated to 42 students, who were

carefully selected to ensure they were distinct from the actual study participants. To achieve this, students were recruited from four secondary schools in Vihiga County, encompassing a national school, an extra-county school, a county school, and a sub-county school. The choice of Vihiga County was deliberate as it aligns geographically with the main study area in western Kenya. Moreover, Vihiga County shares similarities with Kakamega, Kisii, and Siaya in terms of the variables under investigation, such as media accessibility and student unrest incidences (Nation Africa, 2021 January 18; Omondi, 2016; Odenyo, 2018, August 27).

The initial questionnaire was administered to this sample and feedback was sought to identify any unclear or ambiguous items. This was supplemented by engaging in one-on-one interviews with a small subset of the sample to understand how they interpreted and responded to each item. The insights so gathered were used to adjust the items to be clearer and straight forward. The data was also used to test for reliability.

Similarly, for the pilot interviews with parents, a sample was selected from Vihiga County. Given that the final sample size for data collection could not be ascertained at this stage of the study, focus was on ensuring that there was adequate representation of the diverse demographics within the main study population. Therefore, 8 participants were selected, including 2 parents from each of the four school categories, with equal representation from Form 2 and Form 3. These parents were distinct from the participants in the main study. After conducting the mock interviews, a feedback session was conducted to gather insights on the clarity, appropriateness, and flow of the interview questions. Participants were specifically asked to identify any unclear or challenging questions and to suggest any additional questions that may enhance data collection. The feedback obtained was

carefully considered in order to refine and adjust the interview schedule, ensuring the relevance and comprehensiveness of the questions.

The pilot focus group discussion was conducted in Vihiga County, involving a single focus group comprising of eight teachers. To ensure a well-rounded representation, careful consideration was given to selecting participants from each of the four school categories (national, extra-county, county, and sub-county) as well as from Form 2 and Form 3. This deliberate selection aimed to gather diverse perspectives from teachers with varying levels of teaching experience and from different school categories. The discussion was observed to assess its progression and identify any challenges in effectively guiding the conversation. Furthermore, feedback was sought from participants to evaluate the clarity and efficacy of the discussion guide, its ability to foster meaningful discussions, and to identify areas where modifications might be required. This iterative process ensured that the main study would yield valuable and reliable data.

Finally, for the content analysis schedule, a pilot coding phase was organized to ensure the accuracy and consistency of the coding process. To facilitate this, a comprehensive coding manual was first developed and a team of 4 research assistants was then briefed and trained on the coding manual to familiarize themselves with the criteria for identifying and categorizing different types of violence. After identifying the TV show to be analyzed in the main study, 2, 10-minute video clips were prerecorded on 2 different similar shows, to be used for the pilot coding. Then, a collaborative coding session was conducted on the first video clip, during which the coders collectively coded the video clip. This facilitated open discussions, clarification of any ambiguities, and addressing potential discrepancies in the coding process.

Subsequently, the coders independently coded the second pre-recorded sample clip and the coded data was subjected to statistical analysis for interrater reliability. Various statistical measures have been employed to evaluate interrater reliability, including Cohen's Kappa (κ) as cited by Sun (2011), the Intraclass Correlation Coefficient (ICC) as discussed by Koo and Li (2016), and Fleiss' Kappa (κf) as mentioned by Randolph (2005). This pilot coding aimed at evaluating the interrater reliability for coders assessing the presence of violent content in a video clip on an ordinal scale. Therefore, the most suitable statistic was the weighted kappa. This was because the weighted kappa considered the ordinal nature of the data, enabling the assignment of different weights to varying levels of disagreement (Ben-David, 2008). Given the range of violence levels that could be present in the video clip, accurately capturing the extent of disagreement was essential. Therefore, by incorporating weightings, the weighted kappa coefficient provided a more accurate measure of the agreement between the coders.

3.10.1 Validity of the Research Instruments

Validity of a research instrument refers to the extent to which the instrument yields data that is relevant to what the researcher actually intends to study. There are various forms of validity such as construct validity, face validity, content validity and criterion validity. Construct validity refers to the ability of a test to accurately measure a specific concept of interest such as intelligence, personality, or aptitude. Face validity refers to the extent to which the test content appears suitable at the surface level. On the other hand, content validity is the extent to which the test comprehensively covers all the aspects of the construct it is intended to measure (Middleton, 2020).

3.10.1.1 Construct Validity of Research instruments

Construct validity is essential to ensure that the measurements used in a study accurately capture the theoretical concepts under investigation (Bhandari, 2023). In this study meticulous efforts were taken to establish construct validity across all the 4 data collection instruments: the student questionnaire, parent interviews, teacher focus group discussions, as well as the content analysis schedule. An extensive literature review was conducted to identify established scales and conceptualization of the key constructs of the current study. To this end, previous related studies were reviewed to gather information on how media exposure, aggression, self-esteem, and media violence, were conceptualized and measured.

For instance, standard scales that had previously been used to measure aggression (The Aggresson peer Relations Instrument) and self-esteem (Rosenberg's Self-esteem Scale) were identified and reviewed for suitability in the current study, and incorporated into the instruments. The Rosenberg's Self-esteem Scale has previously been tested in various populations such as adult population (Kielkiewicz, Mathúna & McLaughlin, 2020), university students (Billa et al., 2023) and adolescents (Li et al., 2019), and found to have satisfactory construct validity, just as the Adolescent Peer Relations Instrument (Salimi, 2019). Additionally, global estimates of media use, such as time estimate questions, that have been recommended for measuring media exposure were adopted within the instruments.

3.10.1.2 Face Validity of Research Instruments

Face validity is the simplest form of validity and refers to whether, on the surface, the measurement instrument appears to be assessing what it claims to assess (Allen, Robson & Iliescu, 2023). It involves assessing whether the items "look like" they measure the intended construct. While face validity does not provide a rigorous assessment of the instrument's accuracy, it is important for initial participant perceptions and buy-in (Hassan, 2023a). It can be evaluated through informal methods, such as asking participants if the items seem relevant and appropriate.

In order to assure face validity, the development of the instruments for the current study was informed by a two-step process that combined a literature review and input from target participants. Firstly, a comprehensive literature review was conducted to gain a thorough understanding of how prior studies had defined and assessed the key concepts relevant to the current research, namely media exposure, self-esteem, and aggression. This literature review provided valuable insights that guided the development of the initial items for the four instruments. Secondly, a pilot study was undertaken with a limited participant pool comprising of 42 students for questionnaire administration, 8 parents for interview purposes, 8 teachers for engaging in focus group discussions, and 4 coders responsible for the content analysis schedule. Concomitantly, cognitive interviews were executed to assess participants' comprehension of the individual items and their perception regarding the items' relevance. Taking into account their feedback, modifications were subsequently implemented to improve the final research tools employed in the study, thereby enhancing their clarity and pertinence.

3.10.1.3 Content Validity of Research Instruments

Content validity refers to the extent to which the instruments exhaustively cover all essential elements of the constructs under study while eliminating the unnecessary (Taherdoost, 2016). Before developing the instruments, a thorough review of existing literature and relevant theoretical frameworks was conducted to identify the key dimensions and constructs to be measured. This literature review enabled the development of a comprehensive pool of potential items. Then, all the 4 instruments underwent an extensive evaluation by experts affiliated with the Department of Educational Psychology at Masinde Muliro University of Science and Technology. This review process aimed to identify any missing constructs that should have been incorporated and assess the necessity of the included constructs. The feedback provided by the experts was instrumental in refining the instruments, culminating in the development of the final version employed for the study. Additionally, aspects related to readability, language clarity, and proper formatting were taken into account to ensure the instruments were user-friendly.

3.10.2 Reliability of the Research Instruments

Reliability in research refers to the consistency of measure of an instrument. It is the extent to which an instrument will yield similar results if it is administered to the same sample at different times (Haele & Twycross, 2015). There are several types of reliability, such as test-retest, internal reliability, parallel forms reliability and interrater reliability (Middletown, 2023). In this study, test-retest and inter-rater reliability were used. Internal reliability was seen not to be applicable because while this reliability measures the degree to which items measuring the same construct are interrelated (Gossett-Webb, 2022), the current study aimed at capturing diverse aspects of exposure to media (access, duration, purpose, context) and psychosocial development (self-esteem

and aggression). Therefore, it used multidimensional measures and so the items were intentionally designed to assess different dimensions of the constructs. On the other hand, using parallel forms reliability, which assesses the consistency of measurement instruments by comparing the results from two different but equivalent versions of the same instrument (Hassan, 2023b), was also seen as not suitable because developing equivalent forms of the instruments would be resource-intensive and time-consuming.

3.10.2.1 Test-Retest Reliability

This type of reliability examines the consistency of measurements over time. It assesses whether the same results will be obtained if the same measure is administered to the same individuals on two separate occasions under similar conditions. Test-retest method was used to assess the stability of the questionnaire for students. The instrument was administered twice on the same sample of 42 participants. This was done in two intervals which were 2 weeks apart in the month of September, 2022. A Chronbach's Alpha score of 0.87 for the questionnaire was obtained, indicating a high level of reliability for the instrument based on the proposal by Allen and Bennet (2010), that a coefficient of greater than or equal to 0.7 was acceptable. This meant that the items within the instrument were effectively measuring the same underlying construct. Therefore, the instrument had a high reliability.

3.10.2.2 Inter-Rater Reliability

This refers to the degree of agreement or consistency among different raters or coders when assessing the same individuals, objects, or phenomena. It is often used in research where subjective judgments or observations are involved. In the current study, inter-rater reliability was used for the

interviews with parents, focus group discussion with teachers and the content analysis schedule, involving 4 research assistants. Before commencing the inter-rater reliability assessment, all four research assistants underwent comprehensive training sessions to familiarize themselves with the coding manual for the 3 instruments in terms of content and coding criteria. This aimed to establish a common understanding of how to interpret and code the responses.

Then the 4 coders individually analyzed and coded a collection of prerecorded and transcribed interviews and focus group discussions with parents and teachers. Additionally, a sample video clip was included in the analysis. Each coder independently examined the script content and utilized predetermined coding categories and criteria to assess the themes pertaining to media exposure and psychosocial development. After coding, the coders' individual coding results were compared to determine the level of agreement. Any discrepancies or variations in coding decisions were noted and discussed. Additionally, inter-rater reliability was quantified using the Weighted Kappa statistic. Weighted Kappa was chosen as the interrater reliability statistic due to the ordinal nature of the data derived. It accounts for the level of agreement while considering the degree of disagreement. The Kappa coefficient ranges from -1 to 1, where higher values indicate stronger agreement beyond chance.

The assessment of interrater reliability for the interview schedule with parents yielded a weighted kappa coefficient of 0.7, indicating a substantial level of agreement among the coders in interpreting and coding the parent interview data. Likewise, the focus group discussion with teachers demonstrated a strong interrater reliability, obtaining a weighted kappa coefficient of 0.68, signifying a substantial level of agreement in coding the derived themes and content.

Furthermore, the content analysis schedule achieved an impressive weighted kappa coefficient of 0.82, indicating a substantial to almost perfect level of agreement in coding the predefined categories and criteria. These results highlight the robust and dependable nature of the coding process applied in the parent interviews, focus group discussions, and content analysis.

3.11 Data Collection Procedures

Before the data was collected, authority was first sought from Masinde Muliro University of Science and Technology Institutional Ethics Review Committee (MMUST-IERC), see Appendix M, and the National Council of Science, Technology and Innovation (NACOSTI), see Appendix N. Permission was then sought from the office of the County Director of Education (CDE) and the County Commissioner in Kakamega (Appendix O and Appendix P), Kisii (Appendix Q and Appendix R) and Siaya (Appendix S and Appendix T) Counties.

Then a consent note describing the study and requesting for approval from the heads of schools, as gate keepers, to collect data from students was sent to the 18 secondary school principals of the schools where data was collected. It described the purpose of the study and the type of involvement required from the respondents, as well as their rights, such as the right to confidentiality, see appendix U. This was followed up with a phone call to arrange for the first contact. Upon getting the principals' approvals, a member of staff was nominated from each participating school to be the contact person to help with administration of the instruments. All research assistants were then trained before being engaged. Finally, the questionnaire, interview schedule and focus group discussion guides were administered concurrently during the months of October and November, 2022.

To ensure inclusivity and maximize participant engagement, a combination of face-to-face and virtual data collection methods were effectively incorporated into the study (Lobe, Morgan & Hoff man, 2020). This decision was guided by strategic considerations aimed at expanding participant reach and accommodating diverse preferences. By offering virtual options, the study transcended geographical and technological constraints, enabling the involvement of participants who may have otherwise been excluded (Archibald, 2019). Furthermore, the integration of face-to-face interactions acknowledged the value of personal connections, fostering rapport and trust in sensitive discussions. This hybrid approach not only optimized data quantity and quality, with virtual methods facilitating efficient data collection and face-to-face interactions capturing subtle cues and immediate interactions, but also accounted for the varying needs and preferences of participants.

Therefore, the administration of the student questionnaire employed a face-to-face mode, facilitating direct interaction between the researcher and participants in a physical setting. Precautions were taken to schedule these meetings in a manner that minimized any disruptions to other school curriculum activities. In a few instances, questionnaires were alternatively distributed to designated contacts within the schools and later collected. The interviews conducted with parents primarily utilized a virtual mode, employing online platforms such as chats, Google Meet, and phone calls. This approach was chosen strategically due to the participants being located outside of the school environment. The use of virtual interviews provided flexibility and convenience, enabling participants to comfortably share their insights from their respective homes or workplaces. Finally, the focus group discussions conducted with teachers employed a hybrid of

face-to-face and virtual modes. To accommodate participants from different schools, specific schools were selected based on their proximity and access to virtual conferencing facilities to serve as meeting hosts and then participants who had the advantage of being physically close attended the discussions in person, while others participated remotely via Google Meet.

3.12 Data Analysis

Data was analyzed using SPSS statistical package version 26. Both descriptive and inferential statistics were used. Descriptive statistics is usually used when the researcher wants to summarize and describe data in a more meaningful manner for easy interpretation. In this study, this was done in the form of percentages, frequency counts and means. For instance, the researcher needed to analyze different dimensions of media access in which case frequency counts were useful. On the other hand, in order to determine the portion of students who had access to specific types of media, percentages were useful. This data was then presented in tables and graphs.

Inferential statistics is used when the researcher wants to make inferences or predictions on larger populations using data obtained from a smaller sample. In this study, the researcher used a small sample of the students, parents and teachers in the 3 counties to predict the relationship between exposure to media and psychosocial development of students. Specifically, the researcher used Spearman's *rho* to determine the relationship between exposure to media and psychosocial development specifically, self-esteem and aggression. Spearman's *rho* correlation was selected as the statistical method of choice in this study due to its ability to assess the magnitude and direction of the relationship between two variables that are measured on an ordinal or ranked scale.

Therefore, to assess the presence or absence of a significant relationship between exposure to media and aggression, the ordinal data was analyzed using Spearman's *rho* correlation coefficient in SPSS version 26. The null hypothesis was formulated and subsequently tested by conducting a statistical analysis in SPSS. The output from SPSS provided the relevant statistics required for hypothesis testing, including the Spearman's *rho* correlation coefficient value and the corresponding p-value. These statistical measures were used to determine the significance of the relationship between variables, thereby either supporting or rejecting the initial hypothesis.

Once this had been established, further analysis was done using ordinal regression analysis to estimate the coefficients of the independent variables, indicating how they influence the odds of moving from one category to a higher or lower category of the ordinal outcome variable. Ordinal regression analysis, also known as ordinal logistic regression analysis, is a statistical method used to analyze the relationship between one or more independent variables and an ordinal dependent variable (Williams & Quiroz, 2020). In this study, both the independent variables, exposure to media (access to radio, TV, mobile phone and social media) and the dependent variables, psychosocial development (aggression and self-esteem) were in ordinal scale, hence the suitability of ordinal regression analysis.

Qualitative data was transcribed, put into various categories, themes and sub-themes as they emerged, and then reported. To this end, the data, comprising interviews, focus group discussions, and video clips, was transcribed and transformed into written form. To make sense of the data, it was then analyzed by identifying common patterns, themes, and sub-themes that emerged from the transcriptions. These categories were broad in nature, such as violence and parental involvement.

Upon further analysis, the researcher delved deeper into the data to uncover more specific sub-themes within the initial categories. For instance, sub-themes within violence could include physical violence, verbal violence, and relational violence, while sub-themes within parental involvement could encompass parental controls, co-use, discussions, and monitoring. The identified themes and sub-themes were carefully documented, and the research findings were reported by providing written summaries or by including relevant excerpts from the qualitative data. This approach enabled the researcher to present a comprehensive analysis of the qualitative data and to extract meaningful insights from it.

3.13 Ethical Considerations

All data collected in this study was handled according to the Kenya Data Protection Act of 2019 (Data Protection Act 2019, 2019). For instance, personal information was treated as confidential and handled in such a way that it could not easily be traced to the participants' identity. Participants were not required to provide any personal identification information when filling in the questionnaires.

During piloting where test-retest method required the same participants to fill in the questionnaires more than once, they were apportioned coded names for the purpose of identifying them in the subsequent visits. During transcription of the audio data, the real names of the participants were substituted with pseudo names.

All hard copy data gathered from this study was kept under lock and key in a safe. Electronic data was encrypted and the passwords were only in the custody of the lead researcher and were not

shared with any other third party. All the data collected was only used for the purpose of this study and will be retained for 3 years after the study has been concluded after which it will be destroyed.

All research assistants were trained in ethical standards, accuracy of data collection, confidentiality, and relevant research applications prior to any engagement. The researcher maintained objectivity in data collection and ensured that participation was voluntary. Before involving the students, the researcher obtained signed consent from principals (see appendix U), as the primary participants were below the age of consent. They were assisted to understand the purpose of the study, the participants' roles and rights, potential risks, and possible benefits. The researcher also explained the safeguards put in place to protect the participants from any risks. For instance, the data sought from respondents was related to socioeconomic status, single parenthood, and parenting styles, which might make the participants uncomfortable. To allay any concerns, they were assured of confidentiality in handling this information. The researcher also obtained express permission from participants who participated in the focus group discussions and interviews to include direct quotes of their contributions in the report, while still maintaining anonymity.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Introduction

This chapter entails an analysis and discussion of the data in line with the predetermined objectives. It presents the outcomes of the analysis and provides a comprehensive discussion of the findings. The first section provides a demographic evaluation of the respondents of the study.

4.2 Response Rate

The researcher received back 387 out of the 417 questionnaires sent out, resulting in a response rate of approximately 93%. Considered in terms of adequacy, this response rate was regarded as quite high. Generally, a response rate of 60% or higher is deemed acceptable in survey research (Holtom, et al., 2022; Hendra & Hill, 2019; Al Khalaf et al., 2022). With a response rate of 93%, the study surpassed this benchmark, indicating a robust level of participation and engagement from the participants. This high response rate indicates a strong willingness by stakeholders to contribute to the study and suggests that the findings from the collected data were likely to be representative of the target population.

The high response rate was attributed to factors such as the study's topic relevance and interest to participants, the inclusive involvement of multiple stakeholders, effective communication and explanation of the study's purpose and benefits, as well as implementation of strategies to minimize respondent burden and enhance convenience. Besides this, the researcher ensured appropriate timing of data collection sessions to ensure participants did not have any other conflicting activities.

4.3 Demographic Analysis of Respondents

This section provides an overview of the response rate and the demographic characteristics of the respondents in the study, including information such as gender, age, education level, school category, parental status, marital status, teaching experience and subjects taught as applicable.

4.3.1 Demographics of Students

A total of 387 respondents successfully participated in the study. They were spread in 18 secondary schools located in the counties of Kakamega, Kisii and Siaya. Table 4.1 provides the breakdown of these respondents by county and school category.

Table 4. 1: *Distribution of Respondents (Students) by County and Category of School*

County	National	Extra-County	County	Sub-County	Total
Kakamega	4	9	17	121	149 (36%)
Kisii	4	9	17	119	147 (36%)
Siaya	4	8	12	93	117 (28%)
Total	12 (3%)	26 (6%)	46 (11%)	333 (80%)	417 (100%)

The number of respondents per school category was proportional to their distribution in the study population. Therefore, majority (80%) were from sub-county schools, followed by county school (11%), extra-county schools (6%) and national schools (3%).

Respondents were asked to indicate their class, whether form 2 or form 3. Table 4.2 shows their distribution by county and class.

Table 4. 2: *Distribution of Respondents (Students) by County and Class*

County	Form 2	Form 3	Total
Kakamega	75	65	140 (36%)
Kisii	70	71	141 (36%)
Siaya	51	55	106 (28%)
Total	196 (51%)	191 (49%)	387 (100%)

The number of respondents per county corresponded with the respective populations within those counties, with 36% from Kakamega County, 36% from Kisii County, and 28% from Siaya County. Additionally, 51% of the respondents were in form 2, whereas the remaining 49% were in form 3.

The respondents were requested to specify their gender and age. The request for age was intended to ascertain that they qualified for inclusion in the study by being within the age range of 14 to 17. Findings indicated that 3 out the 387 respondents were outside this age bracket and were therefore excluded from further analysis. Distribution of qualified respondents by gender was as illustrated in Table 4.3.

Table 4. 3: *Distribution of Respondents (Students) by Gender*

Class	Male	Female	Total
Form 2	96	99	195 (51%)
Form 3	94	95	189 (49%)
Total	190 (49%)	194 (51%)	384

The results showed that 49% of the respondents were male and 51% were female. This gender distribution in the sample (49% male, 51% female) was consistent with the gender composition of the study population at large.

In this study, the researcher hypothesized that family dynamics might influence the children's media consumption habits. To this end, an analysis of the parental status of the respondents was conducted, with the results displayed in Figure 4.1.

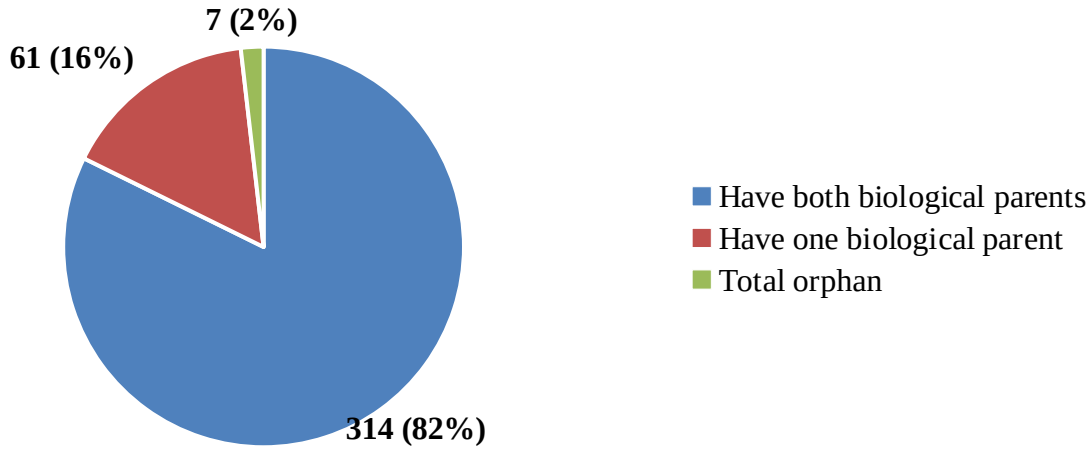

Figure 4. 1: *Distribution of Respondents (Students) by Parental Status*

The findings indicate that a significant proportion of the respondents (82%) were raised by both biological parents, while a smaller percentage had a single parent (16%), and a minority were bereft of both parents (2%). Therefore, a significant proportion of the respondents were raised in households with both biological parents, implying that they may have experienced a more secure domestic environment compared to those who were either raised by a single parent or were bereft of parental care. The stability of a home environment may have implications for the way in which children engage with media and their psychosocial growth. This is because a stable home environment can create a more nurturing and supportive atmosphere, which allows parents to provide guidance.

4.3.2 Demographics of Parents

With regard to parents who participated in the study, demographic details of interest included the gender, age, as well as the current class of the child for whom the parent was participating in the study. This information is as summarized in Table 4.4.

Table 4. 4: *Demographics for Participants (Parents)*

Education Level	Number	Gender		Average Age
		M	F	
Form 2	32 (57%)	11	21	38
Form 3	24 (43%)	17	7	41

A total of 56 parents, representing all three counties of Kakamega, Kisii and Siaya, participated in the focus group discussion. Out of these, 57% were parents form 2 and 43% were parents of form 3. Furthermore, 50% were male and 50% were female. The average age of the parents was 39.5. The distribution of these respondents by county and school category was as indicated in Table 4.5.

Table 4. 5: *Distribution Respondents (Parents) By County and School Category*

County	National	Extra-County	County	Sub-County	Total
Kakamega	3	6	8	5	22 (39%)
Kisii	3	9	5	3	20 (36%)
Siaya	3	4	3	4	14 (25%)
Total	9 (16%)	19 (34%)	16 (29%)	12 (21%)	56 (100%)

Majority of parent respondents were from extra-county schools (34%) followed by county schools 929%), sub-county schools (21%) and national schools (16%).

4.3.3 Demographics of Teachers

Gathering information regarding the age, teaching experience, gender, and teaching subjects of teachers participating in the focus group discussion was essential in order to gain an understanding of how these characteristics may influence their perspectives and opinions in regards to the use of media by students. Younger teachers may be more open to technology than older ones. The teaching subjects of the teachers can also play a role, with those teaching more technical subjects being more receptive to technology than those teaching more creative subjects. It was therefore important to consider this data when selecting participants in the focus group discussion with teachers. Therefore, data was collected on the age, gender, teaching experience, class taught and academic qualification of teachers who were engaged in the focus group discussion. Details are as summarized in Table 4.6.

Table 4. 6: *Demographics for Participants (Teachers)*

Class	**Number**	**Gender**		**Average Age (Years)**	**Average Teaching Experience (Years)**
		M	F		
Form 2	24	12	12	36	13.7
Form 3	24	12	12	34	7

There was a total of 48 teacher respondents equally distributed in form 2 and form 3 and equally split across gender. Their average age was 35 and the average teaching experience was 10.4 years. All these were graduate teachers drawn from secondary schools in the three counties of Kakamega, Kisii and Siaya.

4.3.4 Summary of Demographic Analysis of Respondents

The students who participated in this study came from three counties in Kenya: Kakamega (36%), Kisii (36%), and Siaya (28%), see Table 4.1. Of these respondents, 51% were in form 2 and 49% were in form 3, (Table 4.2). Additionally, 49% of the students were male and 51% female (Table 4.3). Furthermore, 82% of these respondents had both biological parents, while 16% were raised by a single parent and 2% were total orphans (Figure 4.1). Additionally, 82% of these respondents had both biological parents while 16% and 2% were from single parent families and total orphans respectively. Lastly on this category of respondents, 5% had fathers and 7% had mothers who had had no formal education.

As for the parents who participated in the interviews, there were 56 parents drawn from Kakamega, Kisii, and Siaya Counties. They comprised 28 males and 28 females with an average age of 39.5, see Table 4.4. Additionally, 16% were from national schools, 34% from extra-county schools, 29% from county schools and 21% from sub-county schools, see Table 4.5.

The last category of respondents comprised 48 teachers who participated in the focus group discussion. Out of these, 24 (50%) were class teachers of form 2 and 24 (50%) were class teachers of form 3. Additionally, 24 (50%) were males and 24 (50%) were females. The average age and teaching experience was 35 years and 10.4 years respectively (Table 4.6).

4.4 Patterns of Access to Media

The first objective was to determine the patterns of exposure to media among adolescent secondry school students in Kakamega, Kisii and Siaya counties, Kenya. In this objective, focus was on

identifying the type of media most frequently used, the duration of time spent on the media, the contexts in which media was consumed, as well as the reasons for use. Data was therefore analyzed in terms of the type of media, length of exposure, context of use and reasons for use.

4.4.1 Type of Media Accessed

Respondents were asked to indicate the forms of media they had had access to in the previous 6 months. This close-ended question provided four possible options: radio, television, mobile phone, and social media. Out of these, each respondent was expected to place a tick against all forms of media they had interacted with in the previous 6 months, therefore allowing them to place a tick on more than one options. Therefore, the total number of responses was 486. These responses were analyzed using frequencies, and the results are presented in Figure 4.2.

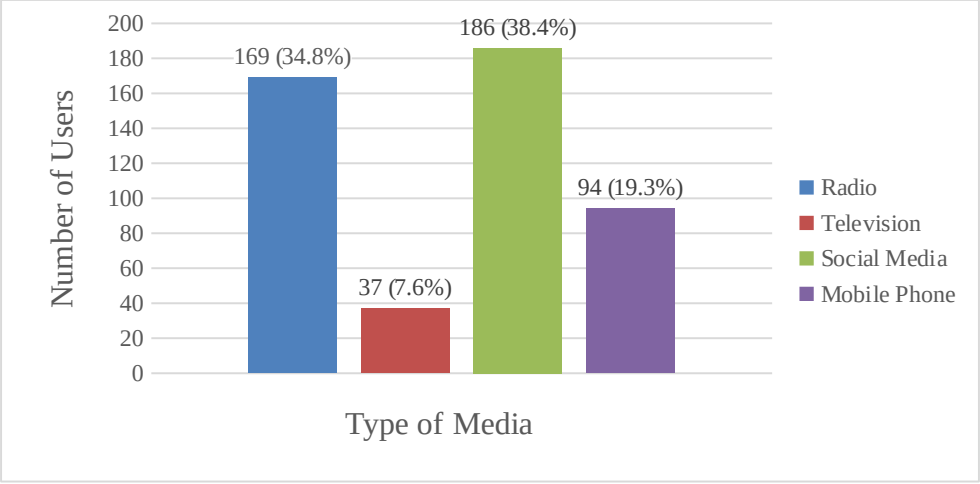

Figure 4. 2: *Media Access by Type*

Note: Respondents who accessed different forms of media in the past 6 months

Of the 486 responses, 186 (38.3%) indicated access to social media, 169 (34.8%) access to radio, 94 (19.3%) access to mobile phones, and 37 (7.6%) access to television. Therefore, social media was the most widely used form of media, followed by radio, mobile phone and television respectively.

These findings were in agreement with findings from the interviews with parents. Table 4.7 gives a visual summary of the themes identified with regard to type of media accessed.

Table 4. 7: *Parents' Responses on Frequently Accessed Form of Media*

Theme (Form of media)	**Frequency of Mentions (N)**	**Percentage (%)**
T1 (Radio)	37	27%
T2 (Television)	26	19%
T3 (Mobile Phone)	22	16%
T4 (Social Media)	39	28%
T5 (Other)	14	10%
Total	138	100%

The thematic analysis of the focus group discussion data revealed that the predominant form of media accessed by students was social media, garnering the highest frequency of mentions. Radio and television were also significant themes identified in the data. Comparatively, the theme of mobile phone usage obtained fewer references, while other, unspecified forms of media were mentioned the least.

These findings underscore the prominence of social media as a preferred medium among the respondents, followed by traditional media sources like radio and television. The less pronounced focus on mobile phones and unidentified media sources suggests a lower significance attributed to

these platforms. This prevalent usage could be attributed to the convenience of accessing social media through various devices such as mobile phones, smart televisions, and computers. Notably, some students even resorted to cyber cafés outside their homes or school to engage with social media platforms. In line with participant perspectives, one participant in the focus group discussion stated:

> Interestingly, these children can even access cybercafe's in the estate or town and they can be running Facebook accounts and TikTok even without us the teachers or their parents knowing. They can even be having a mobile phone and nobody, except their friends knows!
>
> Quoted on 23rd October, 2022 in School X during a Focus Group Discussion

The above words were spoken by a form two female class teachers during an FGD in response to the question as to whether parents were able to control what their children did on the media. It suggests that children have the ability to independently access and utilize social media platforms without the knowledge or supervision of teachers or parents. This implies that children are increasingly self-reliant in navigating digital spaces and may have a level of online autonomy that adults may not always be aware of, hence the need for teachers and parents to be more proactive in understanding and monitoring children's media usage, as well as fostering digital literacy skills and responsibility online.

These findings align with prior research indicating a high prevalence of social media usage among young individuals (Anderson & Jiang, 2018; Ndlela & Mulwo, 2017). For instance, Anderson and Jiang's study revealed that 95% of teenagers possess smartphones, with around 45% stating their constant online engagement. Similarly, a local survey conducted in Kenya targeting individuals aged 10 to 21 illustrated that 32% of respondents possessed a social media account, despite the age

restriction set by the service provider (Kemp, 2020). Additionally, a similar study conducted by Rosen et al. (2019) demonstrates that access to social media among children has surpassed that of television, largely due to the prevalence of technology in the lives of young people.

The findings indicate that social media remains the preferred form of media among the respondents, while traditional media sources such as radio and television still maintain a significant presence in their media consumption patterns. This shift in media consumption habits among younger generations, away from public forms of media such as radio and television, towards more personalized and interactive formats, such as social media and streaming services suggests an emerging preference for private and individualized media experiences, wherein children are increasingly engaging with media on their own terms and in their own spaces, thus reflecting the changing nature of media consumption in which individuals are increasingly in control of when and how they access and consume media. This is even more significant for the age groups of adolescence when children tend to seek more autonomy.

The widespread usage of social media can be attributed to the accessibility and convenience of accessing these platforms through various devices such as mobile phones, smart televisions, and computers. The mention of accessing social media from cyber cafés outside of home or school indicates a potential gap in supervision and restriction of usage. Additionally, the presence of individuals below the designated age limit accessing social media platforms raises concerns regarding online safety and effectiveness of regulatory measures.

An additional rationale behind the preference for social media among young individuals may be attributed to its interactive nature, which enables them to actively engage with their peers, share content, and express themselves, often within private or exclusive online communities and in real time. This platform offers a sense of comfort for exploring new interests and establishing meaningful connections with other users. In contrast, television is primarily a passive medium that lacks the same level of active involvement and interactivity.

4.4.2 Length of Exposure

The researcher was interested in estimating the amount of time devoted to each form of media. Therefore, respondents were further asked to indicate the average daily amount of time they spent on the different forms of media in the previous 6 months. The question offered response options in terms of hours, thus 0 hour, 1-2 hours, 3-4 hours, 5-6 hours and finally above 6 hours. Figure 4.3 shows the percentage of respondents who used various forms of media for an average daily of 6 hours.

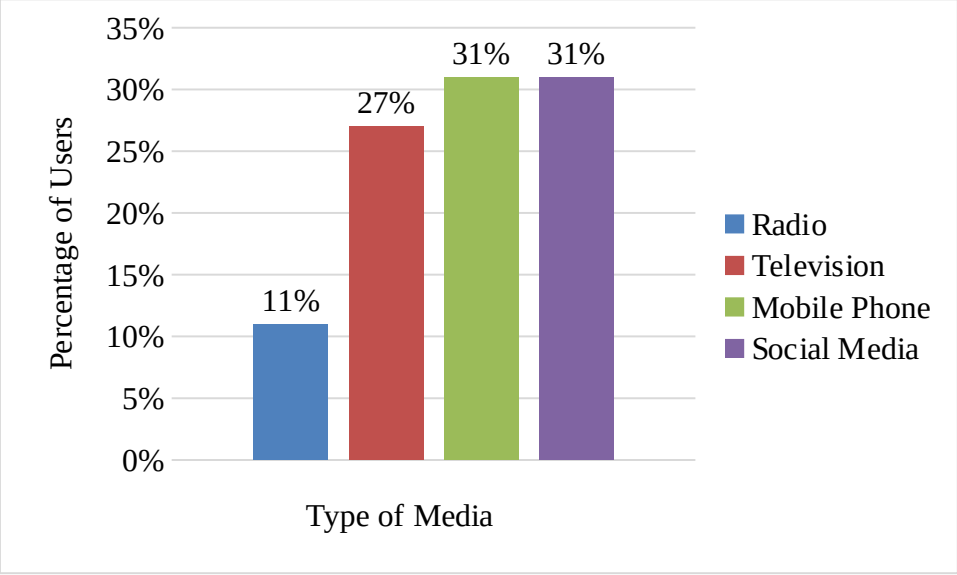

Figure 4. 3: *Media Usage: Daily Average of 6 Hours*

For respondents who reported spending more than six hours on media, the majority reported spending that time on social media (31%) and mobile phone (31%), followed by television (27%) and radio (11%). Hence, the respondents devoted the highest average daily time to social media and mobile phone usage, indicating these media forms as the ones they spent the most considerable amount of time on.

The high average daily duration of social media and mobile phone usage among the adolescent respondents raises concerns regarding the potential imbalance between these activities and other important tasks in their lives. As adolescents, they have a range of competing activities that require attention, including academic responsibilities, physical exercise, social interactions, family engagements, and personal development.

Although the World Health Organization (WHO) does not quantify the threshold for amount of time spent on the media by adolescents, it recognizes the significance of maintaining a healthy balance between screen time and other activities for adolescents to ensure their overall well-being (World Health Organization, 2020). Excessive engagement with social media and mobile phones may lead to a lack of sufficient time dedicated to these crucial domains, potentially hindering academic performance, physical health, interpersonal relationships, and overall development. Therefore, it is essential to be cognizant of the need for a balanced approach in adolescents' media consumption habits and encourage the allocation of adequate time to various activities that contribute to their holistic growth and well-being.

This concern was raised during the interviews with parents, who felt that sometimes their adolescent children ‘forgot’ to do other important activities, including doing homework and preparing their meals because they were on social media. To further illustrate, one participant expre ssed:

> It is frustrating that I came to discover that my daughter was my friend in Facebook. I didn’t even know that she had a Facebook account. No wonder every time I get home she first asks for my phone and sometimes I find she has slept with it in her hand!
>
> Quoted on 23rd October, 2022 in School Y during an interview

The quote highlights the common occurrence of excessive screen time among adolescents, suggesting a potential lack of balance between their digital engagement and other activities. This aligns with the World Health Organization's stance on maintaining a healthy equilibrium between screen time and other aspects of adolescents' lives to foster overall well-being.

One major factor possibly contributing to this challenge could be the increasing availability and accessibility of digital devices. Children today have access to smartphones, tablets, and computers, which provide them with a wide range of digital media options at their fingertips. This flexibility and immediacy of digital media have revolutionized the way children consume and engage with media, creating a shift from traditional scheduled television programming to an on-demand and personalized media experience (Bhavsar, 2018). It is no wonder that traditional television outlets are compelled to adapt and compete with the digital media landscape by providing live streaming and interactive content, to stay relevant. According to Mason, Krutka & Stoddard (2018), the emergence of new media dynamics poses significant challenges, consequently prompting a reconsideration of the role played by media literacy, especially for the young generations.

4.4.3 Context of Use

Children can derive valuable benefits from their interaction with media, whether it be through independent engagement or shared experiences with their parents. When children engage with media independently, it aids in fostering their autonomy, cultivating their interests, and honing their decision-making skills. On the other hand, when media usage is a shared experience with parents, it provides opportunities for meaningful conversations, guidance, and support from adults, which in turn help children develop critical thinking abilities and enhance their media literacy skills (Hwang et al., 2017).

To find out the respondents' co-use or lack of it, of various forms of media with the parents, respondents who used various forms of media were asked to indicate how frequently they utilized them in the absence of their parents. Their responses were rated on a 3-point Likert scale ranging from never to always. Results are presented in Figure 4.4.

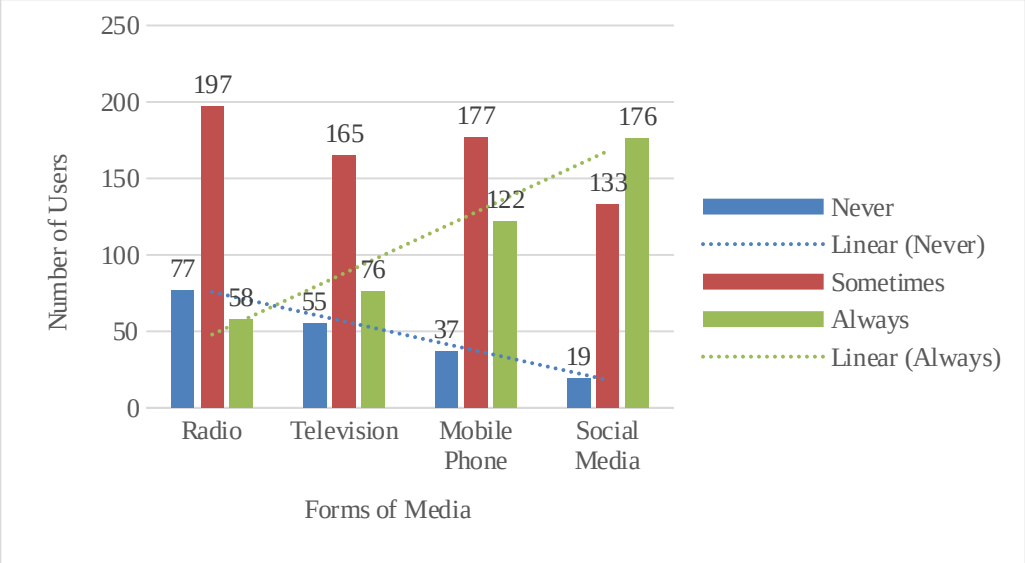

Figure 4. 4: *Frequency of Private Media Use*

From the figure, there is a clear pattern in the responses with regard to respondents who always and those who never used media away from parents. There was a steady decrease in number of respondents who never used media away from parents from radio, television, mobile phone and social media. An opposite pattern was observed with regard to respondents who always used media away from parents where there was a steady increase from radio, television, mobile phone and social media. Therefore, there was a clear pattern observed with regard to the usage of media away from parents, where the number of respondents who never utilized radio, television, mobile phone and social media decreased steadily, while those who always used such media increased steadily. This can better be illustrated using percentages as shown in Table 4.8.

Table 4. 8: *Frequency of Private Media Use in Percentages*

Frequency	**Radio**	**Television**	**Mobile Phone**	**Social Media**	**Total**
Always (N=432)	13.4%	17.6%	28.3%	40.7%	100%
Sometimes (N=188)	29.3%	24.6%	26.3%	19.8%	100%
Never (N=672)	40.9%	29.3%	19.7%	10.1%	100%

The number of responses that implied the respondents always used media away from parents were 432, out of whom 40.7% used social media, 28.2% used mobile phones, 17.6% used TV and 13.4% used radio. On the other hand, the number of responses indicating that respondents never used media away from parents was 188, out of whom 40.9% used radio, 29.3% used TV, 19.7% used mobile phone and 10.1% used social media.

The findings reveal distinct usage patterns of media away from parents among respondents. It is evident that a significant proportion of respondents consistently engage with social media when not in the presence of their parents, followed by mobile phones, television, and radio. Conversely, those who never use media away from parents show a contrasting pattern, with radio taking

precedence, followed by television, mobile phones, and social media. These insights emphasize the preference for social media and mobile phones in private media consumption settings, possibly due to their personalized nature and accessibility. Moreover, the prominence of traditional media like radio and television among those who abstain from media use away from parents suggests a potential inclination towards shared and communal media experiences.

Parents who were interviewed gave similar sentiments. One parent expressed his experience as follows:

> "My son is always on his phone whenever he's in his room or with his sister. It is like he does not even notice us in the house. He is always chatting on Tik Tok or watching videos. He will only come to the living room to watch TV when we are about to have supper. Also when the radio is playing loud music in the house, he will comment and sing along loudly too."
>
> Quoted on 26th October, 2022in School W during an interview

This quote demonstrates the allure of individualized digital engagement, which might foster a sens e of detachment from immediate surroundings among adolescents. The limited interaction with sha red media experiences like TV in the living room, primarily during mealtime, suggests a possible p reference for isolated content consumption over communal activities. Worth noting too is that the r esponse to the radio's loud music appears to be more of an inclination to engage with auditory stimu li than with the social environment.

These findings reveal that among parents who did not engage in co-use of media with their children, social media and mobile phone usage were the least likely to be shared. In contrast, a greater proportion of parents reported sharing radio and television time with their children.

In agreement, the focus group discussions with teachers revealed that, while many students overuse media without proper supervision, particularly when at home during school breaks, on the contrary, while in school, students are typically given access to media under the supervision of an ICT teacher for a period of not more than 80 minutes every week. Furthermore, entertainment masters oversee students watching news for a restricted period of 30 minutes daily. This sheds light on the distinct duality in the way students engage with media. While outside the school environment, the propensity for students to excessively use media, especially during breaks, without effective supervision is evident. However, within the school setting, a controlled approach is observed, with limited and supervised access to media resources. The delineation of time limits for both general media access and specific activities like news consumption indicates a structured approach to balancing media exposure

Of importance to note is that while social media and mobile phone use are private, these forms of media have the potential to expose the adolescents to cultures and habits that are different from those that their immediate environment provides. The private nature of use makes it more difficult for parents to control than television and radio, which have parental controls and can be monitored for content and amount of time used.

4.4.4 Reason for Use

In order to gain a more comprehensive understanding of the motivations and interests behind media use by adolescents, it was essential for the researcher to identify the various reasons why adolescents engage with the media. As Dore and Dynia (2020) put it, by understanding the reasons why media is utilized, it is possible to assess which media platforms are employed for educational,

recreational, and social purposes; this knowledge can then be used to create effective interventions that mitigate any potential adverse effects. Therefore, respondents who used various forms of media were asked to indicate the most common purpose for which they used them. Findings are as indicated in Figure 4.5.

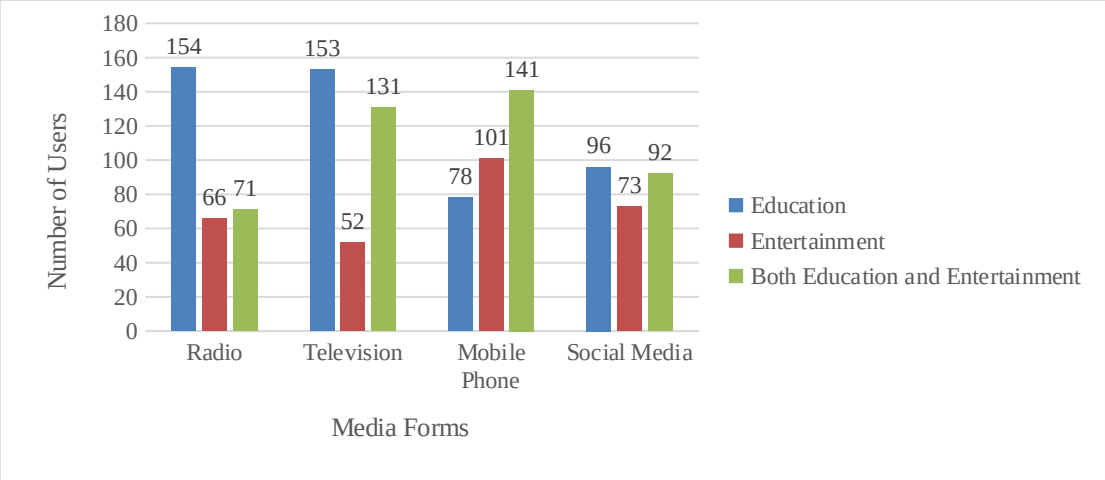

Figure 4. 5: *Purpose for Media Use*

Findings indicate that among the responses indicating the reason for use of media to be for education purposes, the highest proportions used radio and TV (32% and 31.8% respectively, N=481). On the other hand, social media and mobile phone were the most popular media used for entertainment (34.6% and 25% respectively, N=292).

Further analysis from focus group discussions with teachers revealed that students commonly utilize media devices, such as computers, radios, and mobile phones, for a variety of purposes including academic pursuits, recreational activities, communication with peers, and downloading music. Specifically, computers are predominantly used for reading and accessing academic

content, especially during computer classes or when specific educational materials are made available. Radios are used to facilitate audio-based learning, with teachers often organizing lessons that align with the school syllabus and broadcasting them for students to listen to during class. Mobile phones, on the other hand, are primarily used for communication through platforms like WhatsApp, particularly during school holidays. Additionally, students frequently engage in entertainment activities, such as watching videos on platforms like TikTok and YouTube, as well as downloading music for leisure purposes.

It is noteworthy that the Kenya Institute of Curriculum Development, broadcasts educational series over the radio, through which they cover topics taught in the school curriculum. This may explain the high proportion of respondents who reported using the radio and television for educational purposes (Oloo and Mutsotso, 2019).

4.4.5 Miscellaneous Media Access Patterns

Further analysis uncovered individual media consumption habits among respondents. Results showed that 40% owned a personal mobile phone, 38% had easy access to the internet, 8% had a television in their bedroom, and 34% reported having the television in their house always on, see Table 4.9.

Table 4. 9: *Miscellaneous Media Access Patterns*

Description of Pattern	Yes	No
Owned a personal mobile phone	40%	60%
Has easy access to the internet	38%	62%
Has a television in the bedroom	8%	92%
Television in the house is always on	34%	66%

These findings are consistent with those from a case study conducted by Pori School of Technology and Economics in Finland, which discovered that the majority (60%) of children between the ages of nine and twelve have their own cellular phone (Oksman and Rautiainen, 2017). However, the findings do not agree with a study in Australia which indicated that it was common for households to possess multiple televisions and for children between the ages of 2 and 7 to own computers in their bedrooms, granting them unrestricted access to the media within their own space (Brachant & Moore, 2010). Additionally, the most commonly used social media sites were WhatsApp, Facebook, and TikTok. It is also worth noting that the age limit for TikTok is 12 years (TikTok, 2020) and this was the 3rd most favorite social media site identified by the respondents in this study.

4.4.6 Summary of Patterns of Media Exposure

Over the past six months, social media was the most frequently used media platform, followed by radio, mobile phone and television (38.3%, 34.8%, 19.3% and 7.6% respectively, N = 486), see Figure 4.2. Of those who reported spending more than six hours on media, the majority devoted their time to social media and mobile phone activities, while television and radio followed closely behind (31%, 31%, 27% and 11% respectively, N = 178), see Figure 4.3 and Table 4.7.

Among respondents who always used media away from parents (N=432), the highest proportion (40.7%) used social media followed by mobile phone (29%). On the other hand, for respondents who never used media away from parents (N=188), the highest proportions, 40.9% used radio and 29.3% used TV, see Figure 4.4 and Table 4.8.

Findings indicate that among the responses indicating the reason for use of media to be for education purposes, the highest proportions used radio and TV (32% and 31.8% respectively, N=481). On the other hand, mobile phone and social media were the most popular media used for entertainment (34.6% and 25% respectively, N=292), see Figure 4.5.

Additionally, findings indicated that 40% of students owned their own mobile phones, 38% had easy access to internet, 8% had a television in their bedroom and 34% had the television in their house on throughout, see Table 4.9.

Further analysis from focus group discussions with teachers found that among the students, computers are mainly used for accessing academic content, radios aid audio-based learning by broadcasting lessons aligned with the school syllabus, and mobile phones are primarily used for communication through platforms like WhatsApp. Students also engage in entertainment activities like watching videos on TikTok and YouTube, and downloading music for leisure purposes..

In conclusion, the primary goal of this first objective of study was fulfilled as the patterns of access to media by adolescents were successfully identified. A detailed dataset was gathered in order to analyze the various types of media used, the frequency of use, the purpose of the media, and the context in which it was consumed.

4.5 Relationship between Exposure to Media and Aggression

The second objective of this study was to find out the relationship between exposure to media and aggression among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya. This

objective aimed to investigate the correlation between the adolescent students' exposure to violent media content and their expression of aggression. Of interest was the frequency of exposure to violent content, the frequency of imitation of violent content, the respondent's opinion about the violent actions observed in the media, and their personal experiences of violence. Subsequently, the respondents' personal expression of aggression was correlated with the frequency of exposure to media content.

4.5.1 Exposure to Violent Media Content

In order to assess the frequency of exposure to violent media content, respondents who had had access to media were asked to indicate how often they had experienced or observed any form of violence on the media within the previous 6 months. Their responses were analyzed on a 3-point Likert scale ranging from never to frequently and findings are as indicated in Figure 4.6.

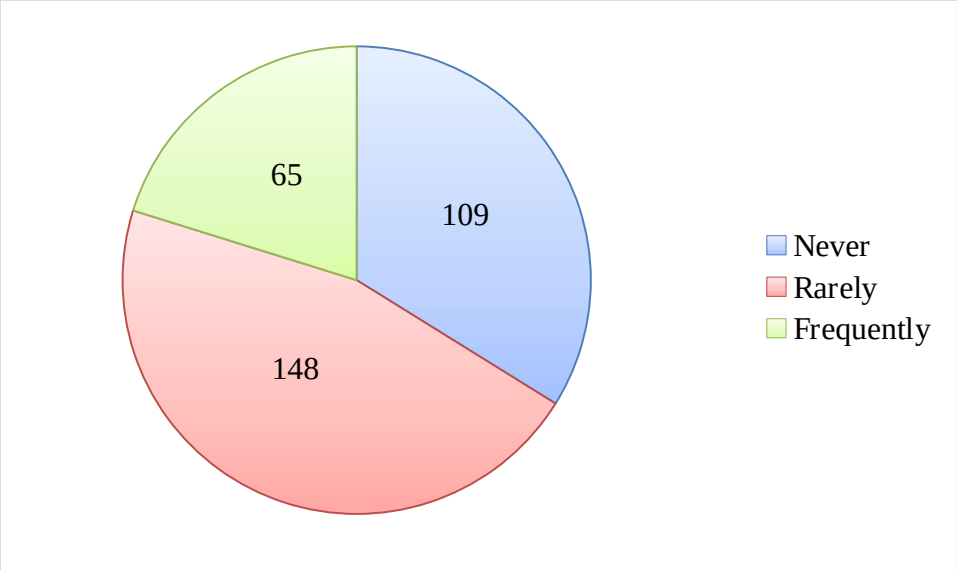

Figure 4. 6: *Frequency of Experience of Violence on the Media*

Findings indicate that the largest proportion (46%) of respondents ‘rarely’ observed or experienced any form of violence on the media and only 20% had ‘always’ observed or experienced violence on the media. Further analysis indicated that of these 20% who were frequently exposed to violence in the media, the largest proportion (59%) experienced it on television while the least (11%) experienced it on radio.

Data from the content analysis of the respondents' most-liked television shows, further revealed that all the top three programs had frequent depictions of violence. The top three favorite TV shows identified by respondents were *Sultana* on Citizen TV (62%), followed by *Thapki* on Zee World Africa (26%) and *World Wrestling Entertainment (WWE)* on SuperSport (12%). In *Sultana,* there is moderate depiction of violence in the form of verbal abuse, physical abuse and emotional abuse. For instance, we see physical violence when Sultana’s father beats her for refusing to marry a man of his choice. We also see Sultana’s brother verbally and psychologically abusing her, telling her she was worthless and that her opinions did not matter. He tells Sultana, "You are nothing but a weak and worthless creature, deserving of every ounce of pain I inflict upon you." This also indicates relational violence since Sultana is getting this kind of treatment because she is a woman.

In the TV show Thapki, different forms of violence are portrayed. For example, Thapki is a victim of physical violence when she narrowly escapes an acid attack. Relational violence is demonstrated through Thapki's isolation, particularly when Dhruv's mother, Vasundhara, disapproves of Thapki due to her stutter. Additionally, the show highlights other forms of violence like blackmail, threats, and verbal insults. To a larger extent, the physical violence is overtly portrayed and is often motivated by rivalry and the need to ‘protect’ the family status.

World Wrestling Entertainment (WWE) is predominantly violent, depicting physical combat, simulated fighting, high-risk maneuvers, and scripted storylines involving physical altercations and confrontations. The thematic analysis of these data is as summarized in Figure 4.7.

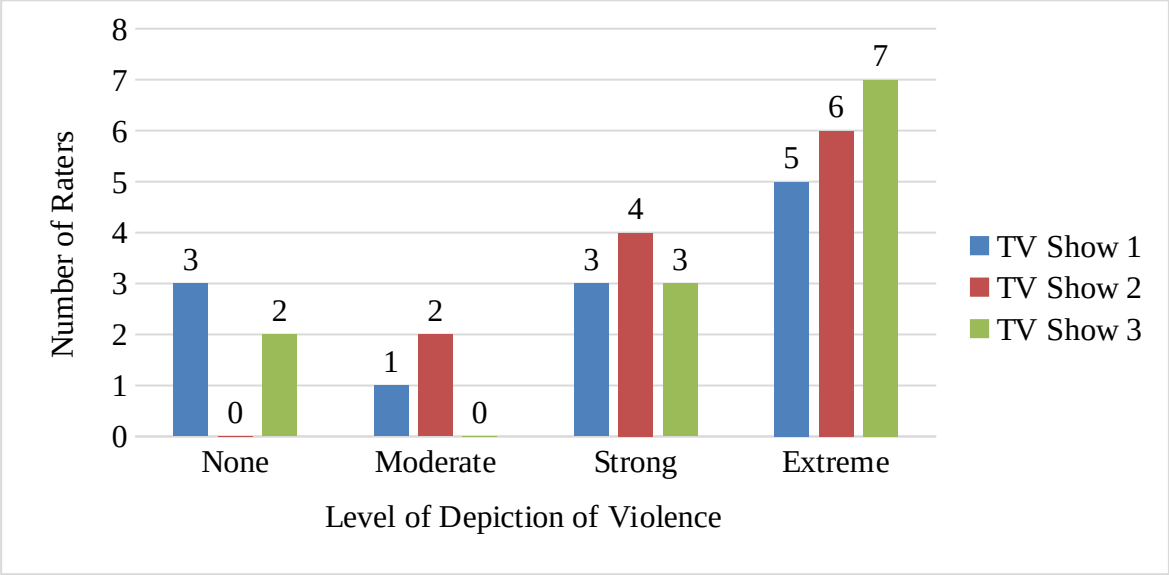

Figure 4. 7: *Incidences of Depiction of Violent Media Content in 3 Popular Television Shows*

The results revealed that among the incidents of violence noted in the three most popular shows, a significant portion, specifically 50%, were categorized as extreme (42% from Sultana, 50% from Thapki, and 58% from Wrestling). This contrasts with the self-reported responses from the questionnaires, where only 20% of the respondents admitted to personally experiencing extreme media violence.

These conflicting results could be due to perceptual biases, wherein participants have subjective interpretations of what qualifies as violence. Desensitization may contribute to this, as it normalizes violent acts in the eyes of the participants. Furthermore, the inconsistencies might be

influenced by inaccurate self-reporting, possibly influenced by biases such as social desirability, where respondents downplay their consumption of violent media to align with societal expectations of consuming non-violent content.

To overcome the aforementioned discrepancy, triangulation was employed to provide a more comprehensive understanding of the situation. Focus group discussions involving teachers were conducted, unveiling valuable insights that corroborated the discrepancy. These discussions revealed that students did, in fact, engage extensively with violent media content, which had observable effects, such as an upsurge in school fights and occurrences of bullying. Furthermore, it was observed that some students even adopted the names of renowned wrestlers, such as 'Bull', 'The Hammer', 'Hardy' and 'Dusty', indicative of the influence and impact of violent media on their behavior and social interactions within the school. Additionally, the teachers indicated that in some cases students would project this in their scripts whereby when writing class essays or participating in class, violent plots would be noted.

A verbatim report from one teacher was as follows:

> "On many occasions when I am marking compositions I see a lot of violence in the stories they write. And the names of characters and storyline match what we see on TV".
>
> Quoted on 6th November, 2023 in School R during a focus groups discussion

In support of this, a previous study by Anderson et al. (2017) showed that approximately 20% of youth are exposed to violence in the media on a daily basis. This study, done across seven countries further revealed the numerous forms of violence portrayed in the media, which included bullying, peer-directed aggression, intimate partner violence, and homicide. In some cases, the perpetrators of these violent acts were portrayed as heroes, hence justifying them.

4.5.2 Imitation of Violent media Content

According to Bandura (1977), observational learning occurs through modeling whereby through observing an individual's behavior and the consequences of that behavior, students can then imitate, or model, the behavior whenever they needed to achieve similar results. Therefore, in this study, in order to obtain information regarding the potential consequences of media consumption, respondents were further asked to indicate how often they imitated the violent acts they saw in the media. Responses were given on a 3-point Likert scale ranging from always to never and results of this analysis are summarized in Table 4.10.

Table 4. 10: *Frequency of Imitation of Violent Media Content*

Frequency of Imitation	Always	Sometimes	Never
Percentage of Students	11%	37%	52%

Results indicated that a majority (52%) of respondents never emulated the violent behavior they encountered in the media, while a minority (11%) always did. Further analysis indicated that those who always did imitate the violence generally acted out what they saw on their mobile phones (34%) or television (30%), with smaller proportions following the violence they saw or heard on social media and radio (21% and 15% respectively). This is summarized in Figure 4.8.

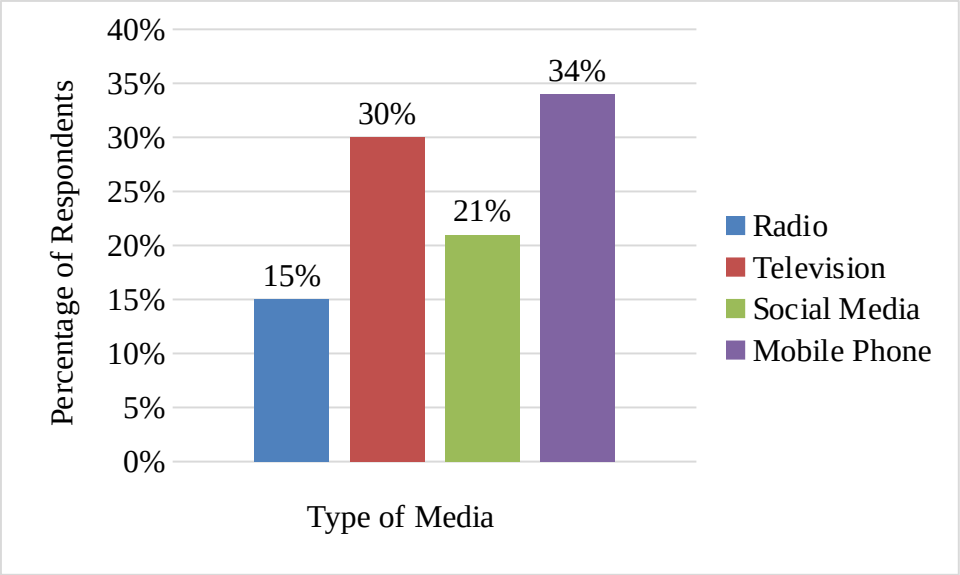

Figure 4. 8: *Frequent Imitation of Violence Across Different Media Platforms*

Note: Percentage of respondents who always imitated the violence they saw on the media

These results indicate that the majority of respondents who imitated violent behavior from the media tended to do so based on what they had seen on their mobile phones (34%) or on television (30%). This suggests that visual mediums, such as phones and television, are more likely to influence students to imitate violent behavior than auditory mediums, such as radio. This has an important implication, that parents and guardians need to be aware of the content their children are exposed to and the potential to imitate violent behavior observed. It is important to create a safe and healthy digital landscape for children and young people, with appropriate parental controls and guidance on responsible media use.

A related study done by Halkitis (2019) delineates the various ways that individuals can be aggressive towards other people through the use of mobile phones, such as harassing, threatening, insulting, cyberbullying, online harassment, sending unwelcome messages or calls, exclusion or

inclusion in conversations, sexting, stalking, and the dissemination of private or embarrassing information without the victim's knowledge or consent. However, in another study by Şengönül (2017), exposure to violent media was linked to increased aggressive thoughts and behavior, heightened physiological activation, and a tendency to imitate the depicted behaviors. Whether or not such observational learning had lasting repercussions was contingent upon the observed consequences of the behaviors being mimicked. Therefore, the mere exposure to media only points to a risk factor but not necessarily an express possibility of imbibing aggressive tendencies.

4.5.3 Perception of Violent Media Content

The researcher also found it necessary to ascertain respondents' perception of the violent acts they observe in the media, including whether they perceived the actions as justified or not. This information helped shed light on the underlying motivations behind the imitations, such as genuine endorsement or potential misinterpretation of the portrayed actions. Additionally, it allowed for an examination of respondents' level of empathy towards victims and the potential presence of desensitization to violence (Anderson et al, 2017).

Therefore, respondents were asked to rate the frequency with which they believed the aggressive behavior displayed by media characters was justified. Their responses were given on a 3-point Likert scale from ‘Never’ to ‘Always’. Results are as summarized in Figure 4.9.

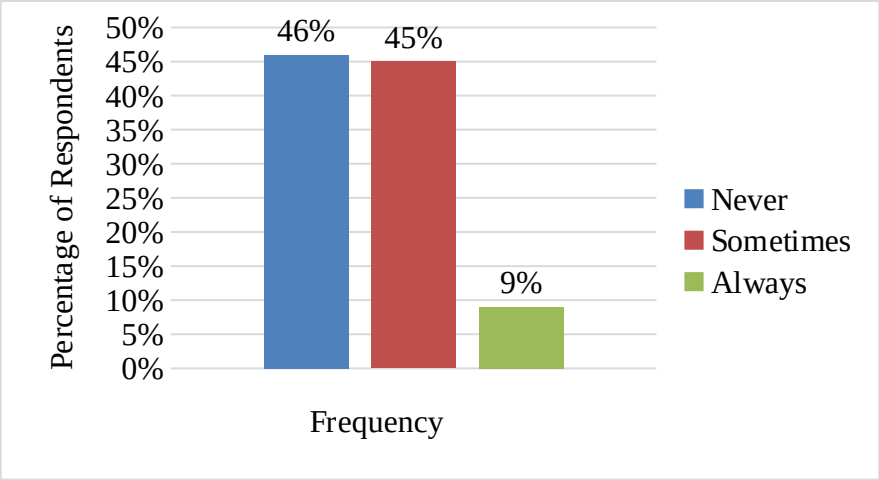

Figure 4. 9: *Justification of Media Violence*

As indicated, 46% of respondents stated that they believed violent media characters were never justified in their actions, while 45% reported that they believed those characters were sometimes justified. However, 9% reported that they believed they were always justified.

These findings suggest that there is a considerable amount of disagreement among this population on the issue of whether or not violent media characters are ever justified in their actions. While nearly half of respondents stated that they believed such characters were never justified, a nearly equal number believed that they were at least sometimes justified. The diversity in beliefs regarding the justification of violent media characters can be attributed to variations in moral frameworks, individual perspectives, cultural influences, and personal values. These differences may arise from a combination of influences from home, school, and peers that shape individuals' beliefs and attitudes towards violence in the media.

4.5.4 Aggressive Tendencies

In this study, the Adolescent Peer Relations Instrument (APRI) developed by Parada (2000) was used to measure the aggressive tendencies of the respondents. This instrument evaluated the level of aggression both as perpetrators and victims, with results provided on a 6-point Likert scale ranging from none to extreme aggression. Figure 4.10 shows the different levels of aggression and the corresponding percentage of respondents.

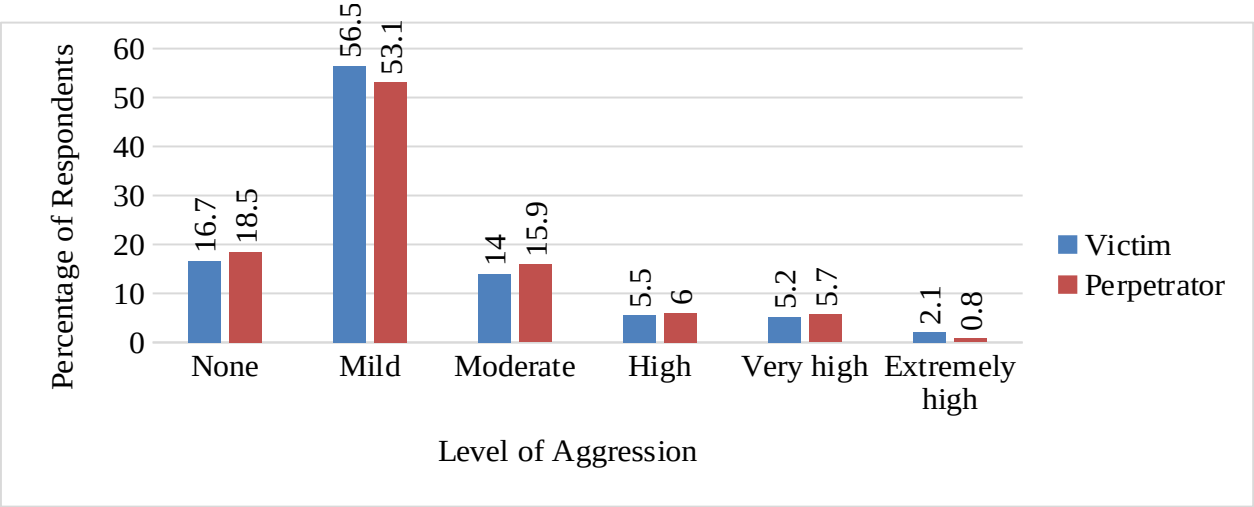

Figure 4. 10: *Levels of Aggression*

The responses for both perpetrators and victims of aggression were approximately equal across the different levels of aggression, with most respondents reporting mild levels of aggression either as victims (53.1%) or as perpetrators (56.5%). However, a smaller proportion of respondents reported between high to extreme aggression either as victims (12.8%) or as perpetrators (12.5%).

This supports a study by Festl et al. (2013), which found that over half of respondents exhibited certain problematic aspects of their personalities and social lives, such as violence, as a result of problematic gaming behavior. This was indicative of a larger problem with students' aggression that needs to be addressed. It was therefore important to find out the possible underlying causative factors. Therefore, in this study, further analysis was done to assess the possibility of a link between these aggressive tendencies and exposure to media as discussed in the subsequent sections.

4.5.5 Relationship between Exposure to Media Violence and Aggression

To examine the relationship between exposure to media and aggression, a Spearman's *rho* correlation analysis was conducted. Spearman's *rho* correlation is suitable for assessing the association between two variables measured on an ordinal or ranked scale. In this study, the independent variable was level of exposure to media (radio, television, mobile phone, and social media) and the dependent variable was level of aggression.

Before conducting the correlation analysis, certain statistical diagnostics were performed. Firstly, the measurement scales of both exposure to media and aggression were confirmed to be ordinal, ensuring compatibility with the selected correlation method. Additionally, any missing data or outliers were checked and addressed to ensure the integrity of the analysis. Assumptions related to the Spearman's *rho* correlation, such as the absence of a linear relationship and the assumption of monotonicity, were evaluated to ensure their fulfillment. These preliminary diagnostics were vital in ensuring the reliability and validity of the data before proceeding with the actual correlation

analysis, establishing a robust foundation for interpreting the relationship between exposure to media and aggression.

4.5.5.1 Measurement Scale Confirmation

To ensure the appropriateness of the analysis, both the independent variable, exposure to media, and the dependent variable, aggression, were confirmed to be measured on an ordinal scale. Exposure to media was assessed by considering the amount of time individuals spent on various media platforms, including radio, TV, mobile phones, and social media. This measurement was obtained using a 5-point Likert scale, allowing respondents to indicate their usage levels on a scale ranging from low to high. On the other hand, aggression was measured using the Adolescent Peer Relations Instrument, which utilizes a 3-point Likert scale to evaluate the aggression levels of respondents. Both variables were categorized within ordinal scales, providing the foundation for conducting a Spearman's *rho* correlation analysis to examine the relationship between exposure to media and aggression.

The utilization of an ordinal measurement scale made the data eligible for analysis using Spearman's *rho* correlation. Spearman's *rho* correlation is a non-parametric method that does not make assumptions regarding a particular data distribution (Xiao, Esteves & Rong, 2015). Consequently, it permits the exploration of associations between variables without relying on measurements at the interval level. By concentrating on the relative ranking or order of values rather than their specific magnitudes, Spearman's *rho* correlation accommodates the intrinsic characteristics of ordinal scale measurements.

4.5.5.2 Test for Normality

Since the data was ordinal, hence non-parametric, the preferred method for determining normality was through visual inspection. This entailed plotting the data on a histogram to examine the shape of the distribution. If the data appeared to have a normal-shaped distribution, with a bell-curve, then it would be considered normal. Therefore, a histogram was generated for each of the five variables (level of access to radio, level of access to television, level of access to mobile phone, level of access to social media and level of aggression), see appendices V, W, X, Y and Z respectively, and it was determined that the data set did not follow a normal distribution pattern. Therefore, on these grounds, the data did not qualify for a Pearson's Product Moment Correlation analysis, hence the choice of a Spearmen's Rank Order Correlation analysis, which does not assume that the underlying distribution follows a normal pattern.

4.5.5.3 Test for Outliers

A boxplot was generated to identify any outliers within the five data sets (level of access to radio, level of access to television, level of access to mobile phone, level of access to social media and level of aggression), see appendix AA, BB, CC, DD and EE respectively. No outliers were found in the data for level of access to television (appendix BB) and social media (appendix DD). However, outliers were present in the data sets for level of access to radio (appendix AA), mobile phone (appendix CC), and level of aggression (appendix EE). However, these outliers were legitimate values because they were within the range for the specific variables. For instance, for the variable 'level of exposure to mobile phone', case number 333 with the value 3, was identified as an outlier (Appendix CC), yet it was within the range (1 to 3) provided for that variable. The same observation was realized with all the other outliers and therefore they were all included in the

analysis. Besides this, having outliers meant that the best correlation test to use was Spearman's *rho* since it is less sensitive to outliers compared to Pearson's correlation, as it uses ranks instead of actual values, which reduces the impact of extreme observations on the correlation coefficient (Makowski et al., 2020; de Raadt, 2021)).

4.5.5.4 Test for Monotonicity

To determine whether there was a monotonic relationship between level of exposure to radio, level of exposure to TV, level of exposure to a mobile phone, level of exposure to social media, and levels of aggression, four separate scatterplots were developed (Appendix FF, GG, HH and II). In each plot, the level of exposure to media was plotted on the x-axis and the levels of aggression on the y-axis.

Based on visual inspection of the scatterplots, no clear pattern or direction was observed in any of the scatterplots, indicating that no monotonic relationship existed between the variables. However, Spearman's *rho* correlation analysis was employed to assess the relationship between the variables, as it does not demand strict adherence to the condition of monotonicity, as elaborated by Laerd Statistics (2021).

4.5.5.5 Correlation Analysis

Using SPSS, a simple correlation was done to determine the presence of a relationship between level of exposure to radio, level of exposure to television, level of exposure to mobile phone and

level of exposure to social media on the one hand, and level of aggression on the other, see appendix JJ. Table 4.11 shows the simplified correlation matrix thereby derived.

Table 4. 11: *Relationship between Exposure to Radio, Television, Mobile Phone, Social Media and Aggression*

		1	2	3	4	5
Radio (1)	Correlation- coefficient	1.000				
	Sig. (2-tailed)					
Television (2)	Correlation- coefficient	.147**	1.000			
	Sig. (2-tailed)	.004				
Mobile Phone (3)	Correlation- coefficient	.132**	.452**	1.000		
	Sig. (2-tailed)	.010	.000			
Social Media (4)	Correlation- coefficient	.112*	.307**	.615**	1.000	
	Sig. (2-tailed)	.028	.000	.000		
Aggression (5)	Correlation- coefficient	-.058	.211**	.154**	.137**	1.000
	Sig. (2-tailed)	.256	.000	.002	.007	

** Correlation significant at the 0.01 level (2-tailed)
* Correlation significant at the 0.05 level (2-tailed)

In this objective, the null hypothesis stated that there was no significant relationship between level of exposure to media (radio, television, mobile phone and social media) and level of aggression among secondary school adolescent students in Kakamega, Kisii and Siaya Counties while the alternative hypothesis stated that there was a significant relationship between exposure to media (radio, television, mobile phone and social media) and aggression among adolescent students in Kakamega, Kisii and Siaya Counties. The subsequent sections discuss which of these hypotheses were accepted or rejected.

4.5.5.5.1 Correlation between Level of Exposure to Radio and Level of Aggression

The Spearman's *rho* correlation coefficient between level of exposure to radio and level of aggression among the respondents was -0.058, with a significance level of 0.256 at a p-value of 0.05. The significance level of 0.256 is larger than the p-value of 0.05. Therefore this relationship

is not statistically significant. Since the findings indicated that there was no significant relationship between exposure to radio and aggression, the null hypothesis was accepted. This means that even though exposure to radio may influence aggression in some cases, the data did not indicate that it did consistently across all subjects. Therefore, it can be concluded that level of exposure to radio does not have a significant role in level of aggression among these respondents.

Additionally, the Spearman's *rho* correlation coefficient between level of exposure to radio and level of aggression was -0.058. This indicated a very weak negative correlation between the two variables. The negative correlation means that as one variable increases, the other on decreases. For instance, in this case, increased levels of exposure to radio were associated with decreased levels of aggression. However, this association is minimal since it is only at 0.058.

Similarly, most of the parents who participated in interviews reported that radio had little popularity among their children, and thus they saw no link between access to radio and any aggression exhibited by their children. In addition, focus group discussions with teachers revealed that radio did not pose a threat to the students' character in terms of developing aggressive tendencies.

The study found no supporting evidence for a link between levels of exposure to radio and levels of aggression, highlighting the complexity of this relationship. The findings suggest that aggression is influenced by multiple factors, and if radio exposure does play a role, it may be subtle or dependent on the context. Additionally, the study does not rule out the possibility that levels of exposure to radio could affect levels of aggression in certain situations or populations, indicating a need for

further research to explore this relationship's nuances. Future studies could examine variables like age, gender, or content of radio programming to understand their role in mediating or moderating this relationship. Overall, these findings imply that interventions or policies targeting aggression reduction may need to focus on factors other than radio exposure, and identifying those factors warrant further investigation.

These findings differ from a systematic review conducted by Khatib et al. (2018), which found a significant correlation between levels of exposure to electronic media, including radio, and sexual aggression among children and adolescents. This previous study further highlighted the influence of context of exposure, timing, duration, and sociodemographic characteristics on the impact of media consumption.

4.5.5.5.2 Correlation between Levels of Exposure to Television and Levels of Aggression

The Spearman's *rho* correlation coefficient of 0.211 between levels of exposure to television and aggression with a significance level of 0.000 at 0.05 p-value indicated a weak but statistically significant relationship. The significance level of 0.000 at 0.05 p-value rejects the null hypothesis and supports the alternative hypothesis that there is a significant relationship between exposure to television and aggression among adolescent students.

Additionally, a correlation of 0.211 indicates that there was a weak positive correlation between levels of exposure to television and levels of aggression among the respondents. This means that as the levels of exposure to television increased, levels of aggression among the respondents increased too, albeit weakly. Therefore, the more the respondents are exposed to television, the more likely they are to be aggressive.

In support to these findings, a similar study conducted in the United States found a strong correlation between exposure to television screen and aggression, as well as a predictive relationship between the two variables (Moon & Lee, 2020). Furthermore, studies conducted in laboratory settings have consistently demonstrated that exposure to violent media content (including television, film, video games, and the internet) leads to an increase in aggressive cognitions, irritability, physiological arousal, hostile appraisals, aggressive behavior, and a decrease in one's sensitivity to violence and prosocial behavior, as well as decreased empathy (Anderson et al, 2017).

4.5.5.5.3 Correlation between Levels of Exposure to Mobile Phone and Levels of Aggression

The Spearman's *rho* correlation analysis between exposure to mobile phone and aggression gave a correlation coefficient of 0.154 with a significance level of 0.002 at p value of 0.05. This suggests a weak but significant positive relationship between the two variables. The significance level of 0.002 indicates that the correlation is statistically meaningful and significant at a p-value of 0.05. This suggests that the relationship between exposure to mobile phone and aggression is statistically significant, hence we reject the null hypothesis. However, the correlation, though significant is weak. This means that an increase in mobile phone use is associated with a small increase in aggression among the respondents.

In agreement, a meta-analysis of prospective studies by Prescott, Sargent and Hull (2018) examined the association between mobile phone video gaming and physical aggression. The results showed that the exposure to mobile phone gaming was associated with aggression (with a

beta coefficient of 0.113, 95%). This suggests that the relationship between mobile phone video gaming and physical aggression is relatively small, but statistically significant. However, it is important to note that this does not necessarily mean that mobile phones cause aggression, but rather that there is a relationship between the two that is worth exploring further.

4.5.5.5.4 Correlation between Levels of Exposure to Social Media and Levels of Aggression

The Spearman's *rho* correlation coefficient between exposure to social media and aggression was 0.137 with a significance level of 0.007 at 0.05 p-value. This indicated that there was a statistically significant relationship between the two variables. The null hypothesis, which stated that there is no significant relationship between the two variables, was therefore rejected. This result also indicates that there is a weak positive correlation between exposure to social media and aggression. This means that as exposure to social media increases, aggression is likely to increase as well, however, this is only a weak correlation. The significance level of 0.007 at 0.05 p-value indicates that the correlation is statistically significant, meaning that it is unlikely to be due to chance.

These findings agree with a previous study by Rösner, Winter and Krämer (2016), which revealed that when people are exposed to rude or impolite comments on social media, it can lead to a rise in hostile thoughts. This earlier study that was looking at the effect of negative online comments against an individual on their cognition also suggested that the effects of such negative comments can be long-lasting and that even after the initial exposure to it, individuals may continue to experience a heightened level of hostility and negativity towards others in their physical environment.

4.5.5.5.5 Regression Analysis for the Relationship between Levels of Exposure to Media and Levels of Aggression

An ordinal regression analysis was conducted to further investigate the nature of relationship between the independent variables (levels of exposure to radio, levels of exposure to television, levels of exposure to mobile phone and levels of exposure to social media) and the dependent variable (levels of aggression). This analysis was intended to determine the relative contribution of each independent variable to the overall outcome. It would be helpful in understanding which independent variable had the greatest influence on the dependent variable by evaluating the individual impact of each independent variable. Besides this, the analysis would give the overall strength of all the independent variables (levels of exposure to radio, levels of exposure to television, levels of exposure to mobile phone and levels of exposure to social media) on the dependent variable (levels of aggression). The regression model derived is as indicated in Table 4.12.

Table 4. 12: *Regression Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.253[a]	.064	.054	1.077

a. Predictors: (Constant), On average, how much time per day do you spend on the social media?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, On average, how much time per day do you spend on the mobile phone?

The R value (0.253) represents the correlation coefficient between the predicted values of the dependent variable and the actual observed values. In this case, it suggests a relatively weak positive correlation between the predicted and observed values.

The closer the R value is to 1, the stronger the correlation (Gogtay & Thatte, 2017). The R-squared value of 0.064 indicates that only 6.4% of the variation in the dependent variable can be explained

by this model. This means that the independent variables (level of exposure to radio, level of exposure to television, level of exposure to mobile phone and level of exposure to social media) explain only a small portion (6.4%) of the variation in the dependent variable (level of aggression). This indicates that the model is likely not a good fit.

The Adjusted R-squared value of 0.054 is even lower, indicating that there is not much predictive power in this model since only 5.4% of the variation in the dependent variable is explained after adjusting for the number of predictors in the model for instance by testing different combinations of predictors to determine which ones have the greatest impact on the dependent variable (Mai, 2018).

The standard error of the estimate is a measure of the average deviation between the observed values and the values predicted by the model (McAuliffe, 2015). Lower values of the standard error indicate that the model's predictions are closer to the actual data points. In this case, the standard error is 1.077, indicating that on average, the model is off by 1.077 units when predicting the dependent variable, hence a reasonably good fit for the data. Therefore, the predictions from the model are relatively accurate.

The ANOVA table derived was as indicated in Table 4.13.

Table 4. 13: *ANOVA*[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30.128	4	7.532	6.490	.000[a]
	Residual	439.831	379	1.161		
	Total	469.959	383			

	3

a. Predictors: (Constant), On average, how much time per day do you spend on the social media?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, On average, how much time per day do you spend on the mobile phone? b. Dependent Variable: In the past 6 months, to what level have you been a perpetuator of violence against fellow students?

This ANOVA analysis shows that there is a statistically significant difference between the regression model and the residual, with an F-value of 6.490 and a significance level of .000. The F-value of 6.490 is greater than the critical value at the given significance level of .000 (p=0.05), indicating that there is a statistically significant difference between the regression model and the residual. In other words, the predictors in the model (Level of exposure to access to radio, level of exposure to TV, level of exposure to mobile phone and level of exposure to social media) collectively have an impact on the dependent variable (Level of aggression), and this relationship is not a random one because the levels of exposure to the various forms of media is able to explain a significant portion of the variation in levels of aggression among the respondents.

However, the residual sum of squares (439.831) indicates that there is still some unexplained variance in the data. The regression model therefore does not explain all the variability in the data, and there is some additional variation (the residual) that is not accounted for, meaning that there are other factors or sources of variation in aggression that are not accounted for by the variables in this model. This suggest that there could be additional explanatory variables or factors such as increased exposure to violent content, a decrease in quality family time, or a decrease in physical activity, all of which can lead to increased aggression.

The regression coefficients derived are as indicated in Table 4.14.

Table 4. 14: *Regression Coefficients*[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.845	.167		11.075	.000
	Access to radio	-.120	.053	-.115	-2.247	.025
	Access to television	.218	.054	.229	4.028	.000
	Access to mobile phone	.002	.059	.003	.038	.970
	Access to social media	.038	.051	.049	.739	.461

a. Dependent Variable: Level of perpetuation of aggression

The constant in this model is 1.845, meaning that when all the independent variables (level of access to radio, level of access to television, level of access to mobile phone and level of access to social media) are equal to zero, the predicted value of the dependent variable (level of aggression) is 1.845.

The variable "levels of access to radio" in the regression model exhibits a significant negative association with the dependent variable (levels of aggression). This is evident from the negative unstandardized coefficient (B) of -0.120, signifying that for each unit increase in levels of access to radio, there is a corresponding decrease in levels of aggression by approximately 0.120 units. Furthermore, the standardized coefficient (Beta) of -0.115 underscores this relationship, suggesting that levels of access to radio exerts a relatively modest adverse impact on levels of aggression when measured in standard deviation units. In essence, these findings indicate that greater access to radio is linked to reduced levels of aggression, implying that exposure to radio may serve as a mitigating factor associated with decreased levels of aggression, as supported by its statistically significant p-value of 0.025.

Additionally, the variable "level of access to television" within the regression model demonstrated a highly significant positive association with levels of aggression. This is evident from the positive unstandardized coefficient (B) of 0.218, indicating that with each one-unit increment in levels of access to television, there is a corresponding increase in levels of aggression by approximately 0.218 units. Furthermore, the standardized coefficient (Beta) of 0.229 confirms this relationship, signifying that access to television exerts a relatively moderate positive impact when measured in standard deviation units. These findings suggest that heightened access to television is closely linked to elevated levels of the dependent variable, implying that television exposure may serve as an influential factor associated with increased levels of aggression, as supported by its remarkably low p-value of 0.000.

Furthermore, the variable "levels of access to mobile phone" within the regression model revealed a non-significant relationship with the dependent variable (levels of aggression), as indicated by its substantially large p-value of 0.970. This is further supported by the minimal unstandardized coefficient (B) of 0.002, suggesting that for every one-unit increase in access to a mobile phone, the dependent variable experiences an exceedingly modest increase of approximately 0.002 units. Likewise, the standardized coefficient (Beta) of 0.003 corroborates the notion that access to a mobile phone exerts an exceptionally minimal positive influence when evaluated in standard deviation units. In essence, these results imply that access to a mobile phone does not emerge as a statistically significant contributor to the variability of the dependent variable, underscoring its limited explanatory power in the context of the phenomenon under examination.

Similarly, the variable "levels of access to social media" within the regression model exhibited a non-significant relationship with the dependent variable (levels of aggression), as indicated by its

relatively large p-value of 0.461. Despite a modest unstandardized coefficient (B) of 0.038, implying that for each one-unit increase in levels of access to social media, there is a slight positive effect on levels of aggression, the standardized coefficient (Beta) of 0.049 highlights this effect as minor when assessed in standard deviation units. In essence, these results suggest that levels of access to social media does not emerge as a statistically significant contributor to the variability of levels of aggression in the current model.

From the regression coefficient results, the regression equation derived was as indicated in equation 1.

Equation 1:

where, y is aggression, x_1 is exposure to radio, x_2 is exposure to television, x_3 is exposure to mobile phone and x_4 is exposure to social media

This means that levels of aggression decreased by 0.120 units for every unit increase in levels of access to radio and increased by 0.218 units for every unit increase in levels of access to television. However, there was a very small effect of levels of access to mobile phone and levels of access to social media on levels of aggression, with a unit increase of each of these increasing levels of aggression by 0.002 and 0.038 units respectively.

Further to the above, the focus group discussions with teachers indicated that the impact of media violence on learners can be far-reaching and detrimental. It was noted that students commonly inherited nicknames from famous wrestlers and movie characters like ‘Rambo’, ‘Triple H’ and ‘Kane’ who were well known for their prowess in physical combat. The most common

manifestation of media violence at school was an increase in aggression, often leading to fights in schools.

Additionally, teachers noted that students' identification with media characters was reflected in their own character development, as they often sought to emulate these fictional figures. However, this emulation sometimes led to behavior that was deemed inappropriate or undesirable. To illustrate the gravity of this phenomenon, an extreme case was reported by one teacher, who recounted an incident in their school where a student made a suicide attempt apparently influenced by a story from a soap opera she has watched.

4.5.6 Summary of Relationship between Exposure to Media and Aggression

The majority of respondents (80%) stated that they rarely or never observed violence in the media, while the rest (20%) reported seeing it frequently, see Figure 4.6. Of these 20%, a significant portion (59%) encountered it on television, while the smallest portion (11%) encountered it on the radio. Findings also indicated that the 3 most favorite TV shows identified by respondents rated between strongly and extremely depicting violence (Figure 4.7). Out of those who witnessed violence in the media, almost half (48%) reported emulating the violence they had seen at least sometimes (Table 4.10), with the major sources of viewed violence being mobile phone (34%) and television (30%), see Figure 4.8. Additionally, slightly more than half (54%) believed that media characters who were violent were justified in their actions at least sometimes, see Figure 4.9. Furthermore, more than half of the respondents (56.5%) reported having been on the receiving end of mild aggressive behavior from other students, while a slightly lower percentage (53.1%) admitted to having been mildly aggressive towards other students, see Figure 4.10.

Findings from correlation analysis indicate that there was a slight positive significant connection between levels of access to television ($r = 0.211$, $N=384$, $p < 0.05$), levels of access to mobile phones ($r = 0.154$, $N=384$, $p < 0.05$), levels of access to social media ($r = 0.137$, $N=384$, $p < 0.05$), and levels of aggression, so the null hypothesis was rejected for these three forms of media, see Table 4.11. This suggests that an increase in levels of access to television, levels of access to mobile phone and levels of access to social media is associated with an increase in levels of aggression.

Conversely, there was an insignificant negative connection between levels of access to radio and levels of aggression ($r = -0.058$, $N=384$, $p > 0.05$), see Table 4.11, and so the null hypothesis was accepted for this form of media. This suggests that an increase in levels of access to radio is associated with a decrease in levels of aggression, however, this relationship is not meaningful in any way.

The results of the regression analysis showed that there was a statistically significant negative association between levels of access to radio and levels of aggression, with a coefficient of -0.120 ($SE = 0.053$, $p < 0.05$). There is also a statistically significant positive association between levels of access to television and levels of aggression, with a coefficient of 0.218 ($SE = 0.054$, $p < 0.05$). The use of mobile phones and social media, however, were not found to be significantly associated with perpetuation of aggression, with coefficients of 0.002 ($SE = 0.59$, $p > 0.05$) and 0.038 ($SE = 0.051$, $p > 0.05$), respectively, see Table 4.14. The order of prediction from strongest to weakest association to levels of aggression was as follows: levels of access to television, levels of access to

radio, levels of access to social media and levels of access to mobile phone, with levels of access to television having the strongest positive association with levels of aggression, and levels of access to radio having the strongest negative association with levels of aggression.

From the point of view of teachers, media violence was reported to have far-reaching and detrimental impact on students. It could lead to an increase in aggression, imitation of characters seen in the media, nightmares, suicidal tendencies, and a loss of virtues such as empathy.

Overall, this second objective was largely successful in determining the relationship between adolescent students' exposure to media and aggression. Data collected allowed for an evaluation of exposure to aggressive content, imitation of aggressive media behavior, perception on aggressive acts on the media, levels of aggression among students, and the associations between and predictive power of various forms of media and aggression.

4.6 Relationship between Exposure to Media and Self Esteem

The third objective of the study was to establish the relationship between level of exposure to media and level of self-esteem among adolescent secondary school students in Kakamega, Kisii and Siaya Counties of Kenya. By this, the study investigated the respondents' media habits, such as the content they viewed and the messages that content passed about their personal characteristics, such as physical appearance, gender, school, or family, as well as how they compared themselves to media personalities. The self-esteem of the respondents was also assessed and then correlated with their level of exposure to media.

4.6.1 Self Comparison with Media Characters

According to the social comparison theory, people seek to know where they stand in comparison to similar others (Boyd, 2014). Therefore in this study, in order to uncover potential mediators or mechanisms through which media exposure affects self-esteem, respondents were asked to indicate how often they compared themselves with characters they observed on the media. Their responses were presented on a 3-point Likert scale ranging from never to always, and the findings are as indicated in Figure 4.11.

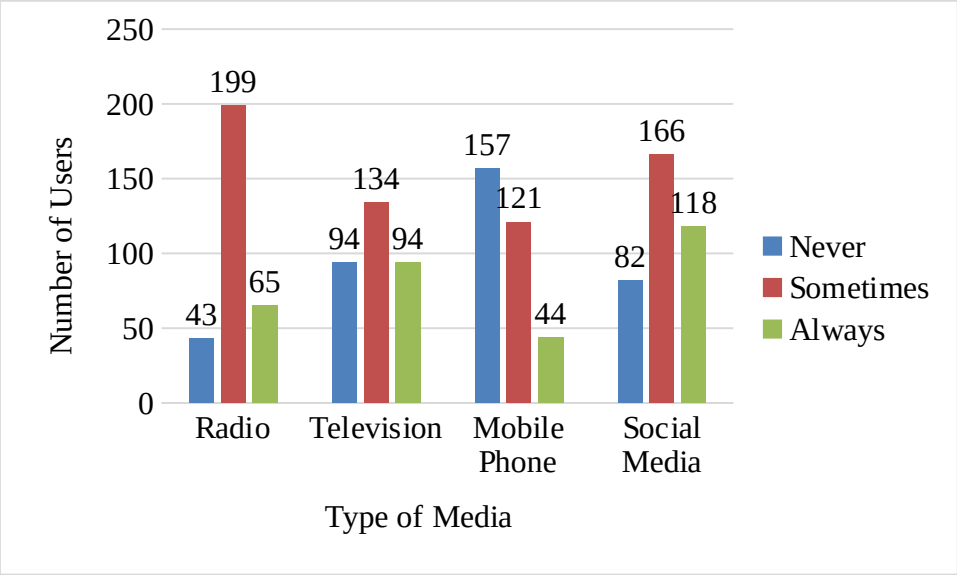

Figure 4. 11: *Respondents who Compared Themselves with Media Characters*

The results showed that 321 respondents, (representing 24% of all the respondents) indicated that they "always" compared themselves to characters from various types of media. Among these respondents, (118) 36.8% mentioned comparing themselves to characters on social media, 94 (29.3%) to characters on television, 65 (20.2%) to characters on radio, and 44 (13.7%) to characters on mobile phones.

This was corroborated by the teachers, who generally agreed that a substantial number of students engaged in self-comparison with media characters. This would mostly manifest in nick names they gave themselves and fellow students. In some cases, students even included their nicknames when writing their official names during examinations or on their school exercise books. A teacher mentioned a student who self-identified in a book as 'Mary Yvonne (Sultana)'. This behavior could be attributed to the student's admiration for the character's qualities or a simple affinity for the character's name.

These findings therefore demonstrate that media outlets such as television, radio, and social media are key points of comparison for this population. This is of particular concern, as these outlets sometimes propagate subjective and often unrealistic standards of beauty, success, and behavior, (Mills, Shannon and Hogue, 2017) which consumers may use to measure themselves against. Such comparison can lead to lowered self-esteem, disturbingly altered body image, and compromised mental health (Kwon, 2020).

A study conducted among seventh and eighth graders yielded similar results, indicating that media exposure can detrimentally affect body image (Eyal & Te’eni-Harari, 2013). Nevertheless, this adverse effect is not straightforward; rather, it is shaped by various factors such as the development of parasocial relationships with beloved characters, the drive to compare oneself to these characters, and the resulting disparity between one's actual and ideal body shape.

4.6.2 Self-Perceived Inferiority in Comparison to Media Characters

According to a study by Rodgers & Rousseau 2022), media consumption shapes individuals' self-identity and self-worth by offering role models or ideals for comparison. Therefore, in the current study, the researcher was interested in determining how the respondents felt about themselves compared to the characters they observed in the media. They were asked to indicate how often they felt that they were inferior to the media characters they observed. Findings are as indicated in Figure 4.12.

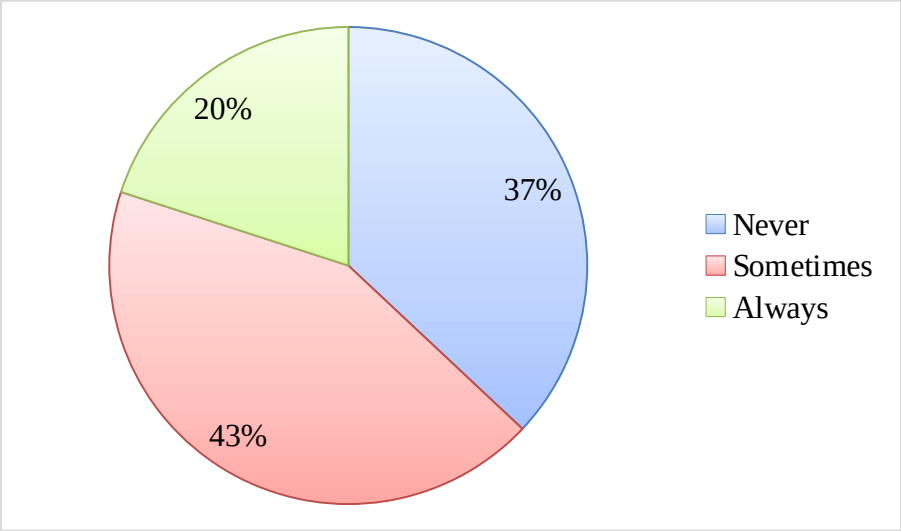

Figure 4. 12: *Self-Perceived Inferiority Compared to Media Characters*

Results show that 37% of the respondents mentioned that they ‘never’ felt they were inferior to media characters when making comparisons. On the other hand, 43% reported occasionally experiencing such a sense of inferiority, and 20% stated that they consistently perceived themselves as inferior to media characters when making these comparisons. These findings

therefore suggest that a large majority of respondents (63%) have experienced a comparison in which they perceived themselves as inferior to media characters, at least sometimes.

These results align with a previous qualitative study conducted in the United States, where participants, including 23 adolescents diagnosed with depression, revealed that engaging in negative media use, such as making self-deprecating comparisons with others, was a prevalent behavior (Radovic et al., 2017). However, it's worth noting that the earlier study had a specific focus on social media, in contrast to the present one, which encompassed four different forms of media: radio, television, mobile phones, and social media.

These findings are significant because typically, media characters represent an idealized version of a given identity (Bozsik et al., 2018), leading to a sense of inferiority among those who compare themselves to these characters. It is therefore important to consider the potential impact of these comparisons on individuals, both in the short-term and the long-term. For example, such comparisons may lead to an increase in feelings of dissatisfaction and self-criticism, which can have a negative effect on self-esteem and overall wellbeing. Therefore, if they become a regular occurrence, such comparisons may lead to long-term negative psychological consequences.

4.6.3 Self-Perceived Superiority to Media Characters

Respondents were further asked to indicate how often they felt that they were superior to the media characters they observed on the media. Their responses are as summarized in Figure 4.13.

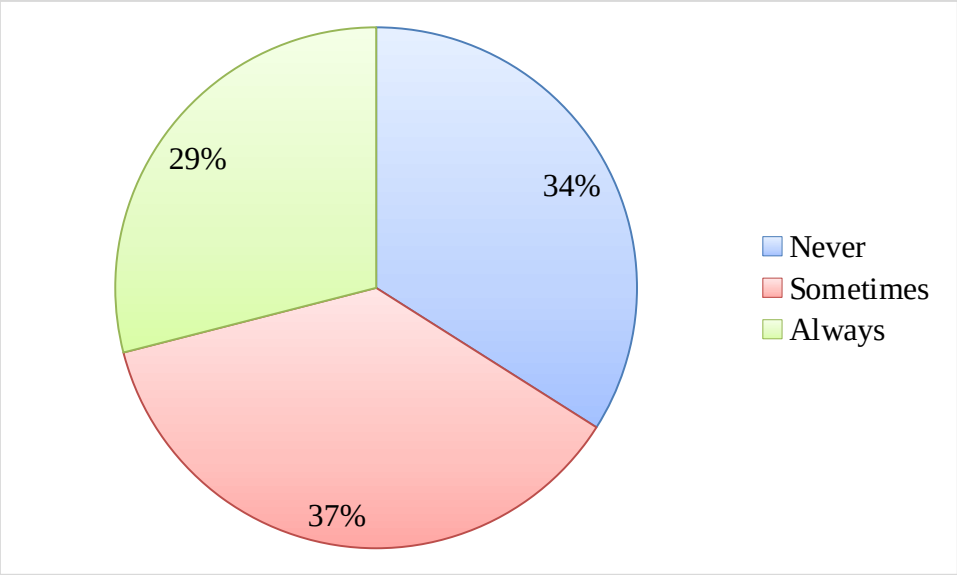

Figure 4. 13: *Self-Perceived Superiority Compared to Media Characters*

It was noted that 34% of the respondents declared that they 'never' felt superior to the media characters they observed, 37% stated that they occasionally felt superior to media characters, and 29% reported feeling superior to media characters all the time. These findings suggest that a large majority (71%) of respondents did not regularly experience feelings of superiority towards media characters.

Media characters are sometimes seen as role models or ideals, and when viewers are exposed to characters who do not measure up to these expectations, they (viewers) may feel a sense of superiority (Vries et al. 2018). It is important to note, however, that the respondents who felt superior to media characters all the time may have experienced an extreme reaction to the characters they observed. This could be due to a variety of factors, including the respondent's own life circumstances or the way in which the characters are portrayed on the media. Overall, these

findings suggest that respondents have a range of feelings towards media characters, and do not always feel superior to them.

4.6.4 Experience of Negative Comments from the Media

As per the National Center for Education Statistics' annual report in 2021, it is well-documented that negative feedback, cyberbullying, and online harassment can significantly impact the self-esteem of young individuals, leading to manifestations of diminished self-worth, depressive symptoms, and heightened anxiety (National Center for Education Statistics, 2021). Consequently, this study aimed to investigate the prevalence of such encounters among respondents by assessing the frequency of instances in which they had been subjected to unfavorable commentary pertaining to various aspects, including their physical appearance, family, school, or gender, originating from media sources within the preceding six months. Their responses are summarized in Figure 4.14.

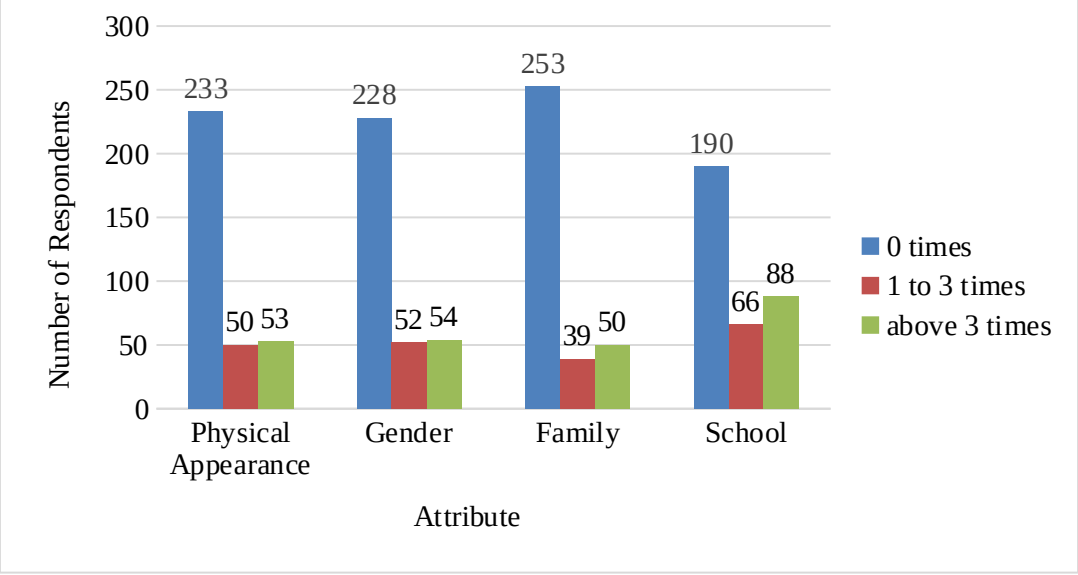

Figure 4. 14: *Respondents who Encountered Negative Comments from the Media*

Results indicate that with regard to all the 4 aspects of interest, majority of the respondents did not encounter any negative commentary from the media, thus physical appearance 233 (66%), gender 228 (68%), family 253 (74%) or school 190 (55%). However, at least a quarter of respondents received negative comments from the media about each of these attributes of interest in this study, thus physical appearance 103 (31%), gender 106 (32%), family 89 (26%) or school 154 (45%) at least once in the previous 6 months. The attribute that most commonly received negative comments was their school, followed by their gender, physical appearance and family.

These findings relate with a review conducted by Keles, McCrae and Grealish (2020), which concluded that teenagers were frequently exposed to negative comments about their personal attributes from the media. The same study further suggested that such exposure was associated with higher levels of psychological distress among adolescents.

4.6.5 Self Esteem

The Rosenberg Self-Esteem Scale (RSES) was used to measure the current self-esteem of the respondents, which was categorized into three levels: low, average, and high. Findings were as presented in Figure 4.15.

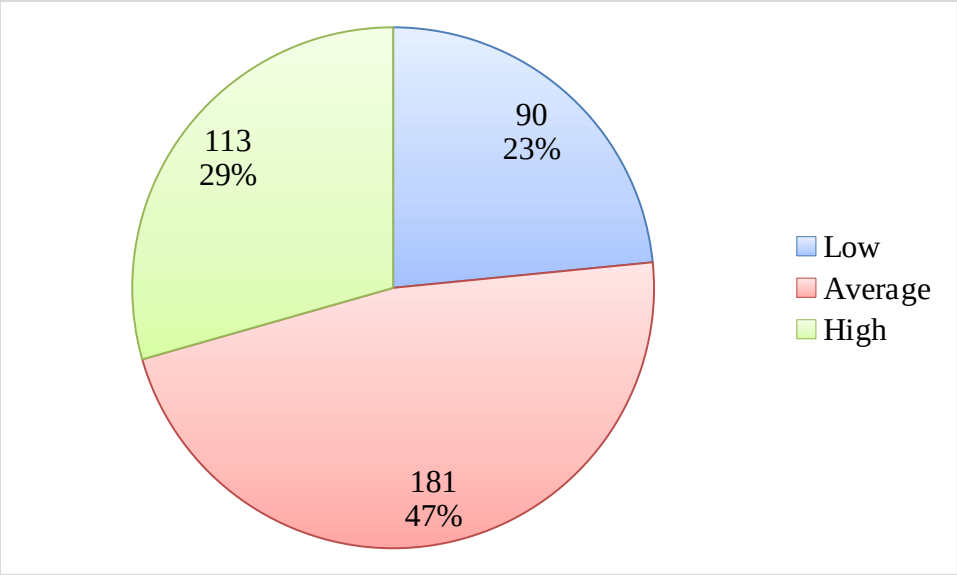

Figure 4. 15: *Level of Self Esteem*

Findings show that 24% of respondents had a low self-esteem, 29% had an average self-esteem, and 47% had a high self-esteem. This indicated that the majority of respondents (71%) had a positive opinion of themselves, with almost half (47%) reporting a high self-esteem. However, 29% still had a low opinion of themselves.

4.6.6 Relationship between Exposure to Media and Self-Esteem

A correlation analysis was conducted using SPSS to determine whether there was a relationship between the amount of time spent on various forms of media in the past 6 months and the self-esteem scores of respondents. There were 5 variables to be correlated, thus level of access to radio, level of access to television, level of access to mobile phone and level of access to social media on the one hand, and level of self-esteem on the other. Before carrying out the correlation, a series of statistical tests were done to test for suitability of the data.

4.6.6.1 Measurement Scale Confirmation

To ensure the suitability of the analysis, the researcher confirmed that both the independent variable, "exposure to media," and the dependent variable, "self-esteem," were measured using ordinal scales. Exposure to media was assessed by considering the time individuals spent on various media platforms, including radio, TV, mobile phones, and social media. This measurement utilized a 5-point Likert scale, allowing respondents to express their usage levels on a scale ranging from low to high. In contrast, self-esteem was evaluated using Rosenberg's self-esteem Scale, which employs a 3-point Likert scale to gauge an individual's self-esteem levels. Both variables were categorized within ordinal scales, providing the necessary basis for conducting an appropriate Spearman's *rho* correlation analysis aimed at exploring the relationship between exposure to media and self-esteem.

4.6.6.2 Test for Normality

Given that the data was non-parametric, a visual inspection of the data sets was conducted to determine its normality through the creation of histograms for the data for level of access to radio (Appendix V), level of access to television (Appendix W), level of access to mobile phone (Appendix X) and level of access to social media (Appendix Y) and levels of self-esteem (Appendix KK). This revealed that the data did not follow a normal distribution pattern for any of the five variables. Therefore, the researcher opted for a Spearman's *rho* Correlation analysis.

4.6.6.3 Test for Outliers

A boxplot was generated for the five variables (level of exposure to radio, level of exposure to television, level of exposure to mobile phone, level of exposure to social media and levels of self-

esteem) in order to identify outliers, see appendix AA, BB, CC, DD and LL respectively. There were no outliers in the data sets for level of access to television, level of access to social media and level of self-esteem, see appendix BB, DD and LL respectively. However, there were outliers in the data set for level of access to radio and level of access to mobile phone, see appendix AA and CC respectively. The three outliers identified in the data were however within the range of the respective variables. Therefore, they were included in the analysis and Spearman's *rho* correlation test was identified as the best test to assess the correlation between the variables.

4.6.6.4 Test for Monotonicity

To investigate whether there existed a consistent and ordered relationship between the degree of access to radio, television, mobile phones, and social media, in comparison to the levels of self-esteem, four distinct scatterplots were created. These scatterplots, documented in appendix MM, NN, OO, and PP, each depicted the degree of media exposure on the horizontal x-axis and the corresponding levels of self-esteem on the vertical y-axis.

Even though the scatterplots did not show any monotonic behavior between the variables (appendix MM, NN, OO and PP), a Spearman's *rho* correlation analysis was still used to determine the relationship between them. This is because Spearman's *rho* correlation does not require monotonicity as a strict requirement (Laerd Statistics, 2021).

4.6.6.5 Correlation Analysis

A Spearman's *rho* correlation was conducted using SPSS to examine the relationship between level of access to radio, level of access to television, level of access to mobile phone and level of access to social media on the one hand, and self-esteem on the other (Appendix QQ). The results of

the analysis are summarized in Table 4.15, which shows the correlation matrix of the variables being examined.

Table 4. 15: *Relationship Between Exposure to Radio, Television, Mobile Phone, Social Media and Self-esteem*

		1	2	3	4	5
Radio (1)	Correlation- coefficient	1.000				
	Sig. (2-tailed)					
Television (2)	Correlation- coefficient	.147**	1.000			
	Sig. (2-tailed)	.004				
Mobile Phone (3)	Correlation- coefficient	.132**	.452**	1.000		
	Sig. (2-tailed)	.010	.000			
Social Media (4)	Correlation- coefficient	.112*	.307**	.615**	1.000	
	Sig. (2-tailed)	.028	.000	.000		
Self-esteem (5)	Correlation- coefficient	-.066	-.035	.101*	-.064	1.000
	Sig. (2-tailed)	.195	.495	.049	.214	

** Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

The null hypothesis suggests that there is no correlation between the amount of exposure adolescent students in Kakamega, Kisii and Siaya Counties have to media and their level of self-esteem, while the alternative hypothesis posits that there is a significant relationship between the two variables.

4.6.6.5.1 Correlation between Exposure to Radio and Self-esteem

The Spearman's *rho* correlation coefficient between level of access to radio and level of self-esteem among the respondents was found to be -0.066, with a significance level of 0.195. This indicated that there was no significant relationship between the two variables, as the significance level was

above the accepted 0.05 p-value. Therefore, the null hypothesis (there is no significant relationship between exposure to radio and self-esteem among adolescent students) was accepted.

Additionally, the Spearman's *rho* correlation coefficient of -0.066 indicated a weak negative relationship between level of access to radio and level of self-esteem. This suggested that as level of access to radio increased, level of self-esteem decreased, however, this relationship is not substantial enough to be considered statistically meaningful. Worth noting is that the researcher never came across any previous studies looking at the relationship between access to this specific type of media (radio) and self-esteem.

These findings imply that the more an adolescent is exposed to radio, the more likely they are to experience a decline in their own self esteem. Probably, this is due to a variety of factors, such as negative comparison to what is heard from the radio. Though this relationship is weak and not statistically significant, it is still important to consider the potential implications. For instance, it may be beneficial to limit access to radio and create positive media content for adolescents, as well as to develop programs that focus on building self-esteem.

4.6.6.5.2 Correlation between Exposure to Television and Self-esteem

The correlation coefficient for this analysis was found to be -0.035, with a significance level of 0.495 at the 0.05 p-value. This suggests that there was no significant relationship between the two variables, which supports the null hypothesis that there is no significant relationship between level of access to television and level of self-esteem among the respondents. Therefore, the null

hypothesis was accepted. This indicates that access to television did not significantly impact self-esteem among adolescent students.

Additionally, A Spearman's *rho* correlation coefficient of -0.035 indicated a very weak negative relationship between level of access to television and level of self-esteem. This meant that as access to television increased, level of self-esteem decreased, but only very slightly. It is important to note that the correlation coefficient is very low and therefore the strength of the relationship is minor; this suggests that other factors may be driving self-esteem more significantly than television viewing.

These findings are similar to those of a study conducted among Arab inhabitants of Abu Dhabi, United Arab Emirates, which found binge TV-watching as being associated with depression and low self-esteem (Ahmed, 2022). Additionally, a systematic review of the effects of screentime on children and young people's wellbeing revealed weak yet significant correlations between excessive screentime and lower self-esteem (Stiglic & Viner, 2019).

These findings imply that although TV watching does not directly cause lower self-esteem, it can contribute to it. The amount of time spent watching TV can be a factor in lowering self-esteem, as too much time spent watching TV can lead to feelings of isolation, disconnection, and boredom (Ahmed, 2022). Additionally, the type of TV content people watch can make a difference in their self-esteem. For example, watching TV shows that are overly critical or promote negative body image can lead to lower self-esteem.

4.6.6.5.3 Correlation between Exposure to Mobile Phone and Self-esteem

Interpreting the Spearman's *rho* correlation results, we see that the correlation coefficient of 0.101 is significant at the p-value of 0.049, which is lower than the alpha value of 0.05. This indicates that there was a significant relationship between level of access to mobile phone and level of self-esteem among the respondents. This supports the alternative hypothesis, which states that there is a significant relationship between exposure to mobile phone and self-esteem among adolescent students, therefore, we reject the null hypothesis. Furthermore, the Spearman's *rho* correlation coefficient of 0.101 suggested a weak positive correlation between exposure to mobile phone and self-esteem. Therefore, as exposure to mobile phone increases, self-esteem increases too, albeit slightly.

The results obtained in this study diverge from those of a related systematic review done by Busch and McCarthy (2021), and centered on the subject of problematic smartphone use. The previous review indicates that emotional well-being concerns, including instances of diminished self-esteem, anxiety, poor sleep habits and occurrences of depression, are the most commonly recognized outcomes associated with problematic smartphone use.

The increased self-esteem associated with mobile phone use, as found in the current study, may be due to the sense of social empowerment and control that users experience when utilizing the device. It is therefore possible that this relationship is a result of the many ways in which mobile phones can be used to enhance social connections and relationships.

4.6.6.5.4 Correlation between Exposure to Social Media and Self-esteem

Interpretation of the Spearman's *rho* correlation results shows that there is no significant relationship between exposure to social media and self-esteem among adolescent students. The correlation coefficient obtained was -0.064, which is very low, indicating the low level of correlation between the two variables. Furthermore, the significance level obtained was 0.214, which is much higher than the p-value of 0.05 meaning that the results are not statistically significant, and therefore the null hypothesis can be accepted.

Furthermore, the results indicate a negative Spearman's *rho* correlation coefficient of -0.064. This indicates that there is a weak, negative correlation between the two variables, meaning that as exposure to social media increases, self-esteem decreases. This suggests that there may be a small, but noticeable negative relationship between access to social media on self-esteem.

In a related study, the examination of the short-term and long-term consequences of utilizing social networking sites for social comparison revealed that regular Facebook use is correlated with greater depressive tendencies and lower self-esteem (Ozimek and Bierhoff, 2020). A similar finding was unearthed by Buglass et. al. (2017) in another investigation, which further postulated that the dread of exclusion served to moderate the association between augmented utilization of Social Networking Sites and diminished self-esteem.

4.6.6.5.5 Regression Analysis for the Relationship Between Exposure to Media and Self-Esteem

An ordinal regression analysis was conducted to evaluate the relationship between the independent variables (exposure to radio, television, mobile phone and social media) and the dependent variable (self-esteem). This analysis was intended to evaluate the strength of the relationship between levels of access to various forms of media (radio, television, mobile phone and social media) and level of self-esteem. The results were used to determine which of the different media forms had the strongest impact on self-esteem. The regression model is as presented in Table 4.16.

Table 4. 16: *Regression Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.124[a]	.015	.005	.723

a. Predictors: (Constant), On average, how much time per day do you spend on the social media?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, On average, how much time per day do you spend on the mobile phone?

From the results, the R value is 0.124, indicating a weak relationship between the independent variable and the dependent variables. This means that exposure to radio, TV, mobile phone, and social media have a very limited effect on self-esteem. The R Square value of 0.015 means that only 1.5% of the variation in self-esteem can be explained by the model. Furthermore, the Adjusted R Square is even lower, at 0.005, which indicates that only 0.5% of the variance in the dependent variable is explained by the independent variables, even when there are many independent variables in the model indicating that the model is not a good fit. This indicates that these media sources have a very minimal influence on self-esteem.

However, the standard error of estimate of 0.723 indicates that the model is not perfect but a fairly good fit for the data. There is a possibility that other factors not included in the model may be influencing self-esteem.

The ANOVA results are as indicated in Table 4.17.

Table 4. 17: *ANOVA*[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.099	4	.775	1.481	.207[a]
	Residual	198.273	379	.523		
	Total	201.372	383			

a. Predictors: (Constant), On average, how much time per day do you spend on the social media?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, On average, how much time per day do you spend on the mobile phone? b. Dependent Variable: What is your level of self-esteem?

The ANOVA output table indicates that there is no statistically significant effect of exposure to radio, television, mobile phone and social media on self-esteem (Sig. = 0.207).

Table 4.18 shows the regression coefficients.

Table 4. 18: *Regression Coefficients*

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.175	.112		19.450	.000
	Access to radio	.004	.036	.005	.100	.921
	Access to television	.024	.036	.039	.660	.509
	Access to mobile phone	-.080	.039	-.146	-2.032	.043
	Access to social media	.007	.034	.014	.203	.834

Dependent Variable: Level of self-esteem

This table shows the regression coefficients of the four independent variables (access to radio, access to television, access to mobile phone, and access to social media) in predicting the level of self-esteem. The constant (2.175) indicates that when access to radio, access to television, access to mobile phone, and access to social media are all equal to zero, the predicted level of self-esteem is 2.175.

The unstandardized coefficients indicate that access to radio, television, and social media are not significantly related to self-esteem. However, access to mobile phones is associated with a significant decrease in self-esteem. Specifically, for every unit increase in access to radio, television and social media, the predicted level of self-esteem increases by 0.004, 0.024 and 0.007, respectively. However, this increase was insignificant. Additionally, for every unit increase in access to mobile phone, the predicted level of self-esteem significantly reduced by 0.080.

Overall, this suggests that radio, television and social media have a positive effect on self-esteem, which is however insignificant meaning that the change could have happened just by chance. On the other hand, mobile phone has a negative effect which is statistically significant. Additionally, the results indicate that mobile phone had the highest effect on self-esteem, followed by television, social media, and radio.

From the regression coefficient results, the regression equation derived was as in equation 2.

Equation 2: $$y = 2.175 + 0.004_{x_1} + 0.024_{x_2} - 0.080_{x_3} + 0.007_{x_4}$$

where, y is self-esteem, x_1 is exposure to radio, x_2 is exposure to television, x_3 is exposure to mobile phone and x_4 is exposure to social media

The intercept of 2.175 indicates the predicted value of self-esteem when all of the predictor variables are equal to 0. The equation states that for a given value of y, increasing radio usage by 1 unit will increase y by 0.004, increasing television usage by 1 unit will increase y by 0.024, decreasing mobile phone usage by 1 unit will decrease y by 0.08, and increasing social media usage by 1 unit will increase y by 0.007.

From the opinions from teachers, frequent media use by students was generally seen to lead to negative attitudes, a tendency to believe all that is watched, and greater vulnerability to being exploited sexually by adults. Additionally, it caused them to become addicted to pornographic material, led to isolation, and impaired their reasoning. Furthermore, students experienced poor interactions with peers, difficulty with anger management, and a tendency to imitate the immoral behaviors seen in the media.

4.6.7 Summary of Relationship between Exposure to Media and Self-esteem

In summary, results show that among respondents who compared themselves to characters in the media, 36.8% compared themselves to social media characters, 29.3% to television characters, 20.2% to radio characters and 13.7% to mobile phone characters, see Figure 4.11. These findings also suggest that a large majority of respondents (63%) have experienced a comparison in which they perceived themselves as inferior to media characters at least sometimes, see Figure 4.12. These findings also suggest that a majority (71%) of respondents did not regularly experience feelings of superiority towards media characters, see Figure 4.13. Additionally, at least 25% of respondents said they received negative comments about themselves from the media, with the attribute receiving the highest number of negative comments being their school, see Figure 4.14.

Furthermore, the results show that a reasonable portion of respondents have a positive opinion of themselves, with 47% reporting a high self-esteem. However, over half, 53% have average to low self-esteem, see Figure 4.15.

Findings from correlation analysis indicate that there was a slight negative insignificant connection between exposure to radio ($r = -0.066$, $N=384$, $p > 0.05$), television ($r = -0.035$, $N=384$, $p > 0.05$), and social media ($r = -0.064$, $N=384$, $p > 0.05$), and self-esteem, so the null hypothesis was accepted for these three forms of media. However, there was a positive significant connection between access to mobile phone and self-esteem ($r = 0.101$, $N=384$, $p < 0.05$), see Table 4.14.

Also, from the regression analysis, there was a slight, insignificant positive association between exposure to radio ($r = 0.004$, $N=384$, $p > 0.05$), television ($r = 0.024$, $N=384$, $p > 0.05$), and social media ($r = 0.007$, $N=384$, $p > 0.05$), and an individual's self-esteem; however, a slight but significant correlation was observed between exposure to mobile phones and self-esteem ($r = -0.080$, $N=384$, $p < 0.05$), see Table 4.18. Therefore, the null hypothesis was accepted for radio, mobile phone and social media, but rejected for mobile phone. The order of prediction from strongest to weakest association with self-esteem is as follows: mobile phone use, TV use, social media use and radio use, with TV use having the strongest positive association with aggression and mobile phone use having the strongest negative association with aggression.

Teachers who participated in the study held the perception that frequent media use among students had adverse effects, including addiction, social isolation, compromised critical thinking abilities,

challenges in managing anger, increased susceptibility to exploitation, a tendency to unquestioningly believe everything they see, and imitation of unethical behaviors.

Overall, this third objective was largely successful in elucidating the relationship between adolescent students' media exposure and self-esteem. Data collected enabled an assessment of prevalence of self-evaluation in comparison to media characters, self-perception in comparison with media characters, current levels of self-esteem, association between media experience and self-esteem, as well as the predictive capacities of experience with various forms of media on self-esteem.

4.7 Role of Parents in Media Use among Students

The fourth objective was to determine the role of parental involvement in moderating media effects on psychosocial development among adolescent secondary school students in Kakamega, Kisii and Siaya Counties of Kenya. The focus was to assess how parental involvement mitigates the effects of media exposure (independent variable) on adolescent psychosocial development (dependent variable. Respondents were asked to report what strategies, if any, their parents use to get involved in their media use and how often these strategies were employed. Results were recorded on a 3-point Likert scale ranging from never to always. The findings from these questions are discussed in the subsequent sections.

4.7.1 Media Co-use

Respondents were asked to indicate how often they interacted with various forms of media alongside their parents. This included activities such as watching TV together, listening to the radio

together, sharing a social media account, or using the same mobile phone. Findings are presented in Figure 4.16.

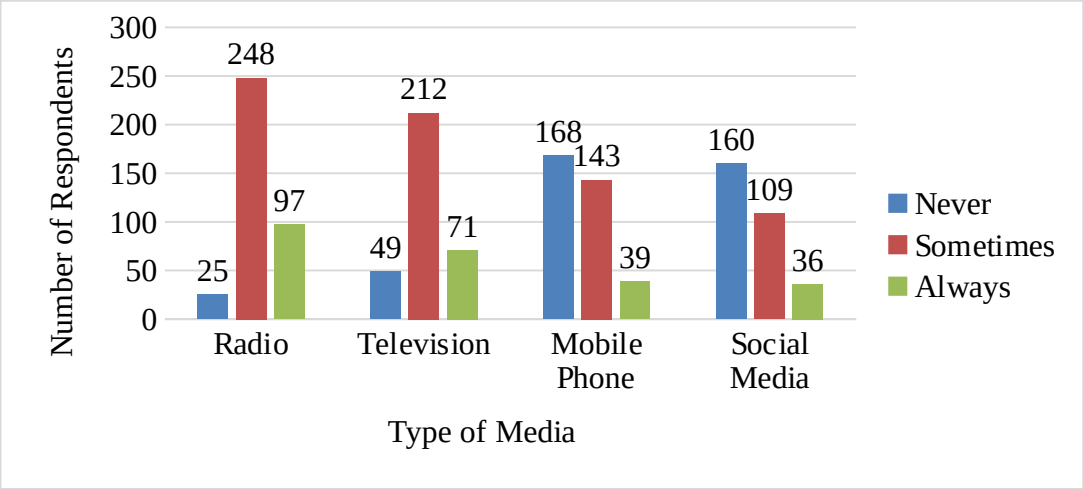

Figure 4. 16: *Respondents whose Parents Co-viewed Media with Them*

For those who used the radio (N=370), the majority of respondents, 93% (345) reported that they had shared radio sessions with their parents at least occasionally. The remaining 7% (25) reported that they never listened to the radio with their parents. This agrees with findings from the interviews with parents where majority of the parents said they shared radio listening sessions with their children. However, this was done in a passive manner whereby the radio would be playing in the background as the whole family went about their other businesses.

A similar picture is seen among the television users (N =332), where 283 (85%) of users watched TV with their parents at least occasionally, while the remaining 49 (15%) never did. This too was corroborated by findings from the interviews with parents with a similar explanation, that more

often than not the radio or television would be left on during the day to play in the background as the household went on with their daily activities.

However, for mobile phone and social media users (N =350, N = 305 respectively), there was a drastic drop in this pattern. The findings indicated that only 52% of mobile phone users and 49% of social media users always shared these platforms with their parents. This is indicative of the widening generational gap between parents and their teenage children occasioned by advancement in technology. As Drouin et al. (2020) puts it, as these technologies become increasingly commonplace, the divide between parents and their children has grown, leading to a lower likelihood of the two sharing these platforms.

Indeed, parents who participated in the interviews reported their preferred social media sites as Facebook, while on the other hand, majority of the students indicated TikTok as their favorite social media platform. Additionally, parents may be less experienced with mobile phones and social media, reducing their incentive to share these communication tools with their children (Drouin et al., 2020). Worth noting too is that the younger generations are likely to value the privacy and autonomy associated with owning a personal account, further contributing to this gap.

4.7.2 Enforcement of Rules

Respondents were asked to indicate how often their parents enforced rules and/or used passwords to control how much they were allowed to access the various forms of media. These rules included enforcing parental controls where applicable, restricting how much time they were allowed to

watch television or listen to radio, and restricting the software applications and games they were allowed to access on their mobile phone. Their responses were as summarized in Figure 4.17.

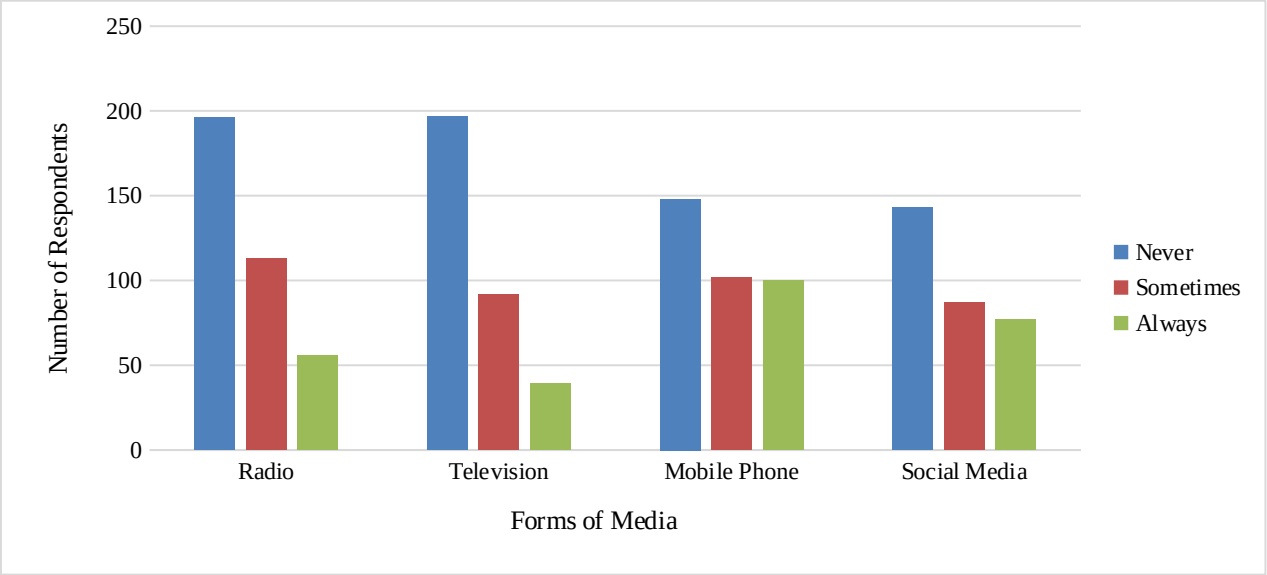

Figure 4. 17: *Respondents whose Parents Controlled their Media Use*

Findings indicate that the highest portions of parents never enforced any rules on the students' use of any of the media gadgets under discussion, thus radio (53.7%, N=365), television (60.1%, N=328), mobile phone (42.3%, N=350) and social media (46.6%, N=307). This however was contradicted by findings from the interviews with parents where most interviewees reported having enforced rules upon their children's access to the media. Most parents reported that they used parental guidance on television. Others had rules for when the television or radio should be on or off. Some parents also reported that they only allowed their children to use mobile phones during the school holiday and at specific times of the day. The parents noted that the students did not typically respond positively to these measures, which occasionally led to conflicts between the

parents and the students. On some occasions, the students would find ways of accessing the various forms of media outside the seemingly controlled home environment.

The findings present a notable contradiction between the quantitative data from students and the qualitative data from parents regarding their enforcement of rules on their children's media gadget use. While the questionnaire suggests that a significant portion of parents did not enforce such rules, the interviews indicate that most parents claimed to have rules in place. This contradiction highlights the complexity of parental control over media usage among adolescents and suggests that there may be a disconnect between stated intentions and actual enforcement. It may also suggest that adolescent children have developed methods of accessing media that effectively bypass parental involvement, leaving little to no opportunity for parents to monitor or intervene.

In a related study conducted in Australia, findings indicate that the majority (82%) of parents had rules in place for their children's media use and access (Ofcom, 2013), which was in contrast to the findings from the current study.

4.7.3 Discussion of Media Content

Respondents were further asked to indicate how often their parents discussed media content with them. This was expected to be in the form of discussing the actions observed on television, discussing social media trending posts and discussing lessons gathered from television and radio shows. Their responses have been summarized in Figure 4.18.

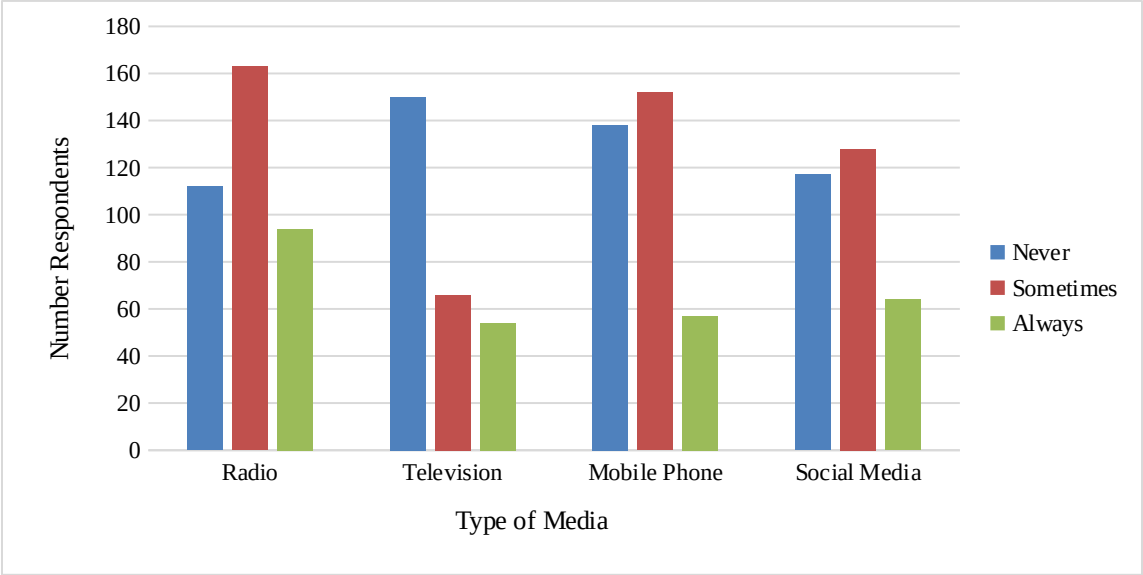

Figure 4. 18: *Respondents who Discussed Media Content with their Parents*

From the findings, it was noted that for the majority of respondents, their parents either never discussed media content with them or only did so occasionally (Radio 75%, N=369; TV 80%, N=270; mobile phone 84%, N=347; social media 83%, N=309). This agreed with reports by parents who participated in the interviews. There was a general consensus that most of the children interacted with media content that was not appealing to the parents and therefore very rarely would the parents find something they could engage the children in a discussion over. For instance, a parent mentioned social media sites where the children watched a show they referred to as 'Sanitize' which the parent found too noisy and 'juvenile'.

4.7.4 Monitoring of Media Use

Respondents were asked to indicate how often their parents monitored what they were engaging with on the media. This could be in the form of supervising them from time to time as they watched

television, checking their social media posts and profiles, and finding out whom they communicate with and about what. Their responses have been summarized in Figure 4.19.

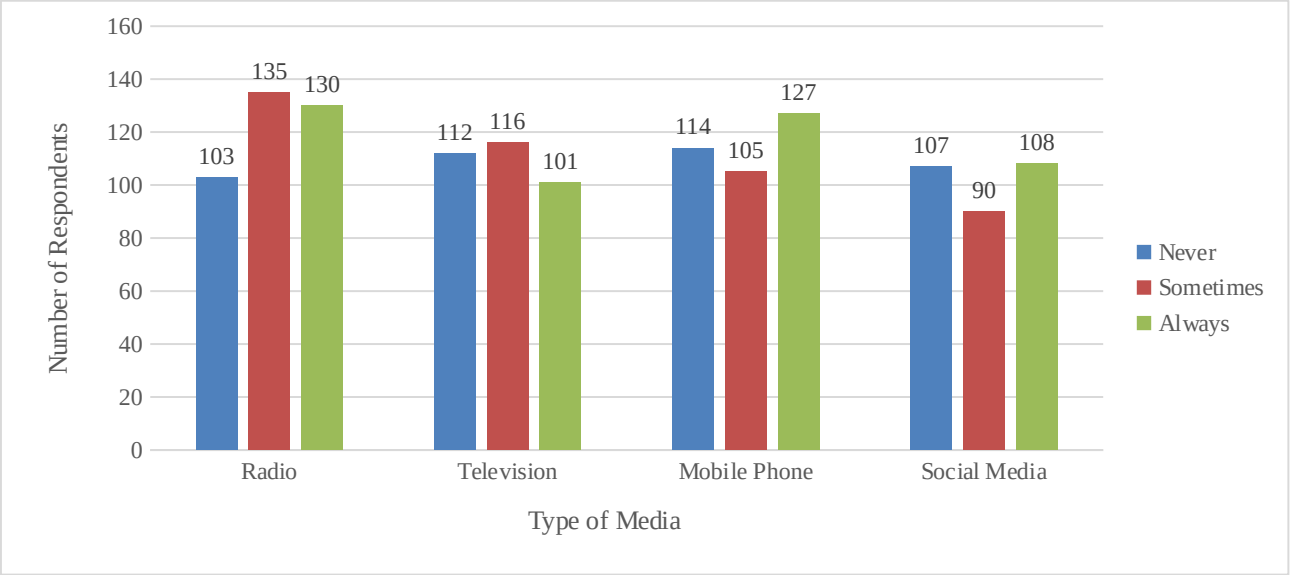

Figure 4. 19: *Respondents whose Parents Monitored their Media Use*

A majority of respondents reported that their parents monitored their media use at least occasionally (radio 265, 72%, N=368; TV 217, 66%, N=329; mobile phone 232, 67%, N=346, social media 198, 64.9%, N=305). This agreed with the findings from the interviews. Parents who participated in the interviews said they often "kept tabs' of what their children were watching and sometimes they would stop them from watching certain shows. One parent mentioned a show, 'Ten-over-ten' which they never allowed their children to watch for fear that the show had a lot of nudity.

4.7.5 Moderating Role of Parental Involvement on the Relationship between access to Media and Aggression

An ordinal regression analysis was conducted using SPSS to investigate the association between level of access to radio, level of access to TV, level of access to mobile phone, level of access to social media, and aggression, while controlling for parental involvement. In this analysis, the aim was to determine whether and to what extent levels of access to different types of media (radio, TV, mobile phones, and social media) are associated with aggression. The researcher also sought to account for the potential influence of another variable, "parental involvement," which was held constant or controlled for in this analysis. Controlling for parental involvement meant that the researcher could isolate the impact of media access on aggression while taking into account the potential influence of how involved parents are in their children's media lives.

Parental involvement was assessed through self-reports, where respondents indicated the frequency with which their parents employed four strategies, thus, co-use, rule enforcement, discussion of media content, and monitoring media use, using a 3-point Likert scale ranging from "never" to "always." The mode was then used to aggregate the responses across these strategies to derive an overall parental involvement score for each respondent.. The regression model is as presented in Table 4.19.

Table 4. 19: *Regression Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.260[a]	.068	.048	1.081

a. Predictors: (Constant), How often do your parents moderate your use of SNS?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, How often do your parents moderate your use of TV?, How often do your parents moderate you use of radio?, On average, how much time per day do you spend on the social media?, On average, how much time per day do you spend on the mobile phone?, How often do your parents moderate your use of mobile phone?

This model demonstrates a relatively weak explanatory capacity, as it only accounts for 6.8% of the variance in the dependent variable. This implies that the independent variables, level of access to radio, level of access to television, level of access to mobile phone and level of access to social media and level of parental moderation, are only able to explain a small portion (6.8%) of the variation observed in level of aggression.

The Adjusted R-squared value of 0.048 is equally relatively low, suggesting that the current model does not have much predictive power as it only explains 4.8% of the variation in the dependent variable, even after adjusting for the number of predictors.

The standard error of the estimate is 1.081, indicating that, on average, the model is only off by 1.081 units when predicting the dependent variable, suggesting a relatively good fit for the data. Accordingly, the predictions from the model are relatively accurate. The ANOVA table derived was as indicated in Table 4.20.

Table 4. 20: *ANOVA*[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.803	8	3.975	3.402	.001[b]
	Residual	438.155	375	1.168		
	Total	469.958	383			

a.Dependent Variable: In the past year, how often have you been a perpetuator of violence against fellow students? b. Predictors: (Constant), On average, how much time per day do you spend on the social media?, How often do your parents moderate your use of TV?, How often do your parents moderate you use of radio?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, How often do your parents moderate your use of SNS?, On average, how much time per day do you spend on the mobile phone?, How often do your parents moderate your use of mobile phone?

The ANOVA table shows that the regression model is a significant predictor of the outcome with an F value of 3.402 and the p-value of .001, indicating that the model explains a significant portion of the variance in the outcome. The sum of squares for the regression model is 31.803, which means that 31.803 units of variance in the outcome can be attributed to the regression model. The mean square for the residual is 438.155, which means that 438.155 units of variance in the outcome cannot be attributed to the regression model. The regression coefficients derived from this analysis were as presented in Table 4.21.

Table 4. 21: *Regression Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.861	.328		5.665	.000
	Parental moderation on radio	-.111	.116	-.056	-.958	.339
	Parental moderation on TV	-.008	.069	-.006	-.118	.906
	Parental moderation on mobile phone	.085	.110	.061	.775	.439
	Parental moderation on social media	.011	.082	.010	.132	.895
	Access to radio	.-.120	.056	-.115	-2.137	.033
	Access to television	.212	.055	.223	3.874	.000
	Access to mobile phone	-.014	.061	.017	.233	.816
	Access to social media	.046	.053	.060	.865	.388

Dependent Variable: Level of Aggression

The baseline value of aggression in this model is 1.861; that is, when all independent variables (level of access to radio, level of access to TV, level of access to mobile phone and level of access to social media) are equal to zero, the expected value of the dependent variable (level of aggression) is 1.861. The regression model shows that, when access to radio and television increases by one unit, the predicted amount of aggression significantly decreases by 0.120 and increased by 0.212 respectively. On the other hand, when access to mobile phone and social media increases by one unit, there was an insignificant reduction in the predicted aggression by 0.014 and increase by 0.046 respectively.

Earlier results had indicated that before parental mediation was added into the model, the regression coefficients for the relationship between level of access to radio, level of access to television, level access to mobile phone, and level of access to social media on level of aggression was -0.120, 0.218, 0.002 and 0.038 respectively (Table 4.14). However, from table 4.21, it shows that after parental mediation was added, the regression coefficients became -0.120, 0.212, -0.014

and 0.046 respectively. This means that parental involvement had no effect on the relationship between level of access to radio and level of aggression. Additionally, with parental involvement, the regression coefficient for the relationship between level of access to mobile phone and level of aggression reduced by 0.016 and the coefficient for the relationship between level of access to social media and level of aggression increased by 0.008.

However, of significance is that including parental involvement in the model significantly changed the regression coefficient between level of access to television and level of aggression, reducing it from 0.218 to 0.212. This suggests that when parents are involved in their children's television viewing, it can help reduce the amount of aggression that their children display that is associated with television viewing. These findings are in agreement with what Cabello, Cabello and Claro (2018) found from their study, that lower parental involvement in their children's media use was associated with more risk. Similarly, Chen and Shi (2018) report that parental involvement was an effective way of controlling negative media impact on children. However, parental involvement had an insignificant effect on the association between access to mobile phone and social media and aggression.

4.7.6 Moderating Role of Parental Involvement on the Relationship between access to Media and Self-esteem

An ordinal regression analysis was conducted using SPSS to explore the relationship between access to radio, television, mobile phone, social media and self-esteem while controlling for parental involvement. The regression model is as presented in Table 4.22.

Table 4. 22: *Regression Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.167[a]	.028	.007	.722

a. Predictors: (Constant), On average, how much time per day do you spend on the social media?, How often do your parents moderate your use of TV?, How often do your parents moderate you use of radio?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, Hoe often do your parents moderate your use of SNS?, On average, how much time per day do you spend on the mobile phone?, How often do your parents moderate your use of mobile phone?

The regression model summary indicates that the relationship between the predictors (level of access to radio, level of access to TV, level of access to mobile phone and level of access to social media, level of parental involvement) and the response variable (level of self-esteem) is very weak, as evidenced by the low R-squared value of 0.028. This means that only 2.8% of the variation in level of self-esteem is explained by the predictors. The adjusted R-squared value is even lower, at 0.007, which is further evidence for a weak relationship. The standard error of the estimate is 0.722, which indicates that the average predicted value of the response variable is likely to be within 0.722 of the true value. The ANOVA table derived was as indicated in Table 4.23.

Table 4. 23: *ANOVA*[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.621	8	.703	1.346	.219[b]
	Residual	195.752	375	.522		
	Total	201.372	383			

a. Dependent Variable: What is your level of self esteem?

b. Predictors: (Constant), On average, how much time per day do you spend on the social media?, How often do your parents moderate your use of TV?, How often do your parents moderate you use of radio?, On average, how much time per day do you spend on the radio?, On average, how much time per day do you spend on the television?, Hoe often do your parents moderate your use of SNS?, On average, how much time per day do you spend on the mobile phone?, How often do your parents moderate your use of mobile phone?

This ANOVA table indicates that there is no significant relationship between the predictor variables (level of access to radio, level of access to television, level of access to mobile phone, level of access to social media, level of parental moderation on radio, level of parental moderation on television, level of parental moderation on mobile phone, level of parental moderation on social media) and the dependent variable (level of self-esteem). The F-value is 1.346, which is not statistically significant (p=.219) and indicates that the predictor variables do not explain a significant amount of variance in the dependent variable. This suggests that other factors not included in the model may be more relevant to predicting level of self-esteem. The regression coefficients derived from the analysis are presented in Table 4.24.

Table 4. 24: *Regression Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.446	.220		11.145	.000
	Parent moderation on radio	-.063	.077	-.048	-.813	.417
	Parent moderation on TV	-.007	.046	-.009	-.160	.873
	Parent moderation on mobile phone	-.117	.074	-.127	-1.589	.113
	Parent moderation on social media	.065	.055	.089	1.185	.237
	Access to radio	.007	.037	.011	.193	.847
	Access to TV	.025	.037	.040	.677	.499
	Access to mobile phone	-.098	.041	-.179	-2.398	.017
	Access to social media	.007	.035	.014	.199	.843

a. Dependent Variable: What is your level of self esteem?

When all of the independent variables (level of access to radio, level of access to TV, level of access to mobile phone, and level of access to social media) are set to zero, the predicted level of self-esteem in this model is 2.446. An increase of one unit in level of access to mobile phone is associated with a decrease in level of self-esteem of 0.098, while an increase of one unit in level of access to radio, level of access to television, and level of access to social media is associated with an increase in level of self-esteem by 0.007, 0.025, and 0.007 respectively.

Before parental involvement was added to the model, the regression coefficients for the relationship between level of access to radio, level of access to television, level of access to mobile phone, level of access to social media, and level of self-esteem were 0.004, 0.024, -0.080 and 0.007 respectively (Table 4.18). The introduction of parental mediation into the model had a slight positive but insignificant impact on the relationship between the level of access to radio (from 0.004 to 0.007), level of access to television (from 0.024 to 0.025), and level of self-esteem. On the

other hand, it had no impact on the relationship between level of access to social media and level of self-esteem as the coefficient remained the same at 0.007. Finally, parental involvement was found to further reduce the coefficient for the relationship between level of access to mobile phone and level of self-esteem from -0.080 to -0.098.

The discovery that despite parental involvement, the relationship between level of access to mobile phones and level of self-esteem remained negative yet slightly stronger appears to be counterintuitive and contradictory to initial expectations. However, there exist several potential explanations for this unforeseen outcome. Primarily, it is plausible that adolescents perceive parental involvement as an encroachment upon their privacy, eroding their sense of autonomy and trust. Consequently, such perceptions may foster feelings of resentment and heighten negative self-esteem. Furthermore, parental involvement may inadvertently accentuate the adverse consequences associated with mobile phone usage, thereby amplifying the significance of social comparison. As a result, adolescents may experience increased pressure when comparing themselves to their peers who enjoy greater freedom in mobile phone usage, consequently contributing to diminished self-esteem.

4.7.7 Summary of Role of Parents in Media

Among the respondents who reported having used the radio and television (N=370, N=332 respectively), only 93% for radio and 85% for TV said they listened to the radio or watched television with their parents at least occasionally, while the majority (7% for radio and 15% for television) reported that they never did, see Figure 4.16. On the other hand, for mobile phone and

social media users (N = 350 and N = 305, respectively), only 52% of mobile phone users and 49% of social media users always shared these platforms with their parents.

Additionally, majority of respondents reported that their parents never implement any regulations concerning their use of radio (54%, N=365), television (60%, N=328), mobile phone (42%, N=350) and social media (47%, N=307), see Figure 4.17.

Furthermore, the findings indicated that for majority of respondents, their parents either never discussed media content with them or did so only occasionally (radio 75.3%, N=369; TV 80%, N=270; mobile phone 84%, N=347; social media 83%, N=309) or only did so occasionally (Radio 44.2%, N=369; TV 24.4%, N=270; mobile phone 43.8%, N=347; social media 41.4%, N=309), see Figure 4.18.

Finally, a significant portion of respondents reported that their parents monitored their media use at least occasionally (radio 72%, N=368; TV 66%, N=329; mobile phone 67%, N=346, social media 64.9%, N=305), see Figure 4.19.

The study found that before parental mediation was included in the model, the regression coefficients for access to radio, television, mobile phone, and social media against aggression were -0.120, 0.218, 0.002 and 0.038 respectively. After parental mediation was included, these coefficients changed to -0.120, 0.212, -0.014 and 0.046 respectively. Parental involvement reduced the coefficient for access to television and aggression from 0.218 to 0.212, indicating that access to

television had a weaker effect on aggression when parental involvement was involved, see Tables 4.14 and 4.22.

The introduction of parental mediation had a slight positive but insignificant impact on the relationship between radio (from 0.004 to 0.007), television (from 0.024 to 0.025), and self-esteem. However, it had no effect on the relationship between access to social media and self-esteem. Interestingly, parental involvement further reduced the negative relationship between access to mobile phone and self-esteem (-0.080 to -0.098), see Tables 4.18 and 4.24.

According to teachers who participated in the interviews, in order to reduce the possibility of media having a negative impact on students, parents take various measures. These include censoring potentially damaging material like wrestling, pornography, and other explicit content; limiting access to certain media via passwords and access codes; monitoring their children's use of media; and providing alternative forms of entertainment that are more appropriate for students.

Overall, this fourth objective was largely successful in determining the moderating role of parental supervision on media effects on psychosocial development of adolescent students. Data collected allowed for an evaluation of various involvement strategies implemented by parents, such as co-use, enforcement of rules, discussion of media content, and monitoring of media use. Additionally, the moderating role of parental involvement was assessed via regression analysis.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the researcher presents a summary of the results along with conclusions and recommendations based on the objectives of the study. Further, implications for further research are also suggested.

5.2 Summary of Findings

5.2.1 Patterns of Access to Media

This study found that social media was the most commonly (38.4%) used form of media,(Figure 4.2 and Table 4.7), with majority of respondents (31%) using it daily for more than six hours on average (Figure 4.3). When using media independently, social media (40.7%) and mobile phones (28.3%) were the most popular choices, whereas radio and television were the most common when used in conjunction with parents (Figure 4.4 and Table 4.8). Radio (32%) and television (31.8%) were mostly used for education purposes, whereas social media (34.6%) and mobile phone (25%) were mainly used for entertainment (Figure 4.5). A significant portion (40%) of respondents owned their personal mobile phones and had easy access to the internet (38%), with WhatsApp, Facebook, and Tik Tok being the most popular social media sites (Table 4.9).

5.2.2 Relationship between Exposure to Media and Aggression

A significant portion (46%) of respondents reported rarely encountering violence on the media (Figure 4.6). Of those who always did, the majority (59%) encountered it on television, while fewer

(11%) encountered it on the radio. Also, 48% of those who witnessed violence in the media reported emulating it (Table 4.10), and a large majority (91%) believed that violent media characters were justified, at least some of the time (Figure 4.9). Most respondents reported moderate levels of aggression as either victims (56.5%) or perpetrators (53.1%), while a significant proportion reported high to extreme aggression in both roles (Figure 4.10). The correlation analysis results showed that television had the strongest significant relationship with aggression ($r = 0.211$, $p = 0.000$), followed by social media ($r = 0.137$, $p = 0.007$) and mobile phones ($r = 0.154$, $p = 0.002$), both of which were also significant (Table 4.11). Conversely, there was an insignificant negative connection between exposure to radio ($r = -0.058$, $p = 0.256$) and levels of aggression. The regression analysis revealed that the strongest predictor of aggression was exposure to television (0.218, $p = 0.001$), followed by exposure to radio (-0.120, $p = 0.025$), both of which were significant. In contrast, exposure to social media (0.038, $p = 0.461$) and mobile phones (0.002, $p = 0.970$) were not significant predictors of aggression, as shown in Table 4.14.

5.2.3 Relationship between Exposure to Media and Self-esteem

The results showed that a significant portion of respondents (24%) had compared themselves to characters on various types of media, with social media being the most common source of comparison (37%) as seen in figure 4.11. Additionally, a significant portion of respondents (29%) experienced a comparison in which media characters were seen as superior to themselves (4.12). Furthermore, a significant number (34%) reported having received negative comments about their school, physical appearance, gender and family in the previous 6 months (Figure 4.14). The results also indicated that while a significant number of respondents had a high self-esteem (29%), the majority (71%) had average to low self-esteem (Figure 4.15). he analysis indicated that the level of

exposure to television (r = -0.035, p = 0.495), radio (0.004, p = 0.921), and social media (0.007, p = 0.834) showed no significant relationship with self-esteem. However, exposure to mobile phones demonstrated a significant relationship with self-esteem (r = 0.101, p = 0.049), as presented in Table 4.14. The analysis ranked the predictors of self-esteem from strongest to weakest relationship as follows: exposure to mobile phones (-0.080, p = 0.043), which had a significant negative association, followed by exposure to television (-0.080, p = 0.043), which also had a significant negative association. In contrast, exposure to social media (0.007, p = 0.834) and exposure to radio (0.004, p = 0.921) were not significant predictors of self-esteem, as indicated in Table 4.18.

5.2.4 Role of Parents in Media Use among Students

The majority of respondents indicated that they occasionally watched or listened to radio (93.2%) and television (85.2%) with their parents at least part of the time. However, 48% reported never sharing their mobile phones, and 52.5% said they never shared their social media accounts with their parents (Figure 4.16). Most respondents indicated that their parents did not impose rules or restrictions on their media use (radio 53.7%, television 60.1%, mobile phone 42.3%, social media 46.6%), nor did they engage in discussions about media content (radio 74.5%, television 80%, mobile phone 83.6%, social media 79.3%) as shown in Figures 4.17 and 4.18. However, a majority also reported that their parents monitored their media use at least occasionally (radio 72%, television 66%, mobile phone 67%, social media 64.9%) as indicated in Figure 4.19.

The impact of level of exposure to radio on levels of aggression was not affected by parental involvement (-0.120, p = 0.025 to 0.212, p = 0.000). However, the effect of level of exposure to

television on level of aggression was reduced when parental involvement was in place (0.218, p= 0.001 to 0.212, p = 0.000). Parental involvement altered the influence of level of exposure to mobile phone on level of aggression from a positive one to a negative one (0.002, p = 0.970 to -0.014, p = 0.816). Furthermore, parental involvement increased the effect of level of access to social media on level of aggression (0.038, p = 0.461 to 0.046, p = 0.388(as seen in Table 4.21.

With parental involvement, the impact of level of exposure to radio (0.004, p = 0.921 to 0.007, p=0.847) and level of exposure to television (0.024, p= 0.509 to 0.0.025, p = 0.499) on level of self-esteem increased even further. Parental involvement also further increased the negative impact of level of exposure to mobile phone on level of self-esteem (-0.080, p = 0.043 to -0.098, p = 0.017). However, parental involvement had no effect on the impact of level of exposure to social media on level of self-esteem (0.007, p = 0.834 to 0.007, p = 0.843) as illustrated in Table 4.21.

5.3 Conclusions

In light of the findings of the study, the following conclusions were made.

5.3.1 Patterns of Access to Media

The findings of the study reveal that, among the four forms of media analyzed, social media emerged as the most frequently utilized platform, with 38.4% of respondents indicating it as their primary media source. Furthermore, social media was reported as the medium with the highest daily usage, with 31% of respondents spending an average of 6 hours per day on these platforms. In terms of purpose, 34.6% of respondents stated that their primary use of social media was for entertainment, highlighting the platform's role as a dominant source of leisure and recreation.

Additionally, the study revealed that 40.7% of respondents access social media without parental supervision,

5.3.2 Relationship between Exposure to Media and Aggression

Among the four forms of media examined, television demonstrated the most significant correlation with aggression, with a correlation coefficient of $r = 0.211$ and a highly significant p-value of $p = 0.000$. Additionally, television also exhibited the strongest predictive value in relation to aggression, with a predictive correlation of $r = 0.218$ and a p-value of $p = 0.001$.

5.3.3 Relationship between Exposure to Media and Self-esteem

Mobile phones exhibited the strongest correlation with self-esteem, evidenced by a correlation coefficient of $r = 0.101$ and a statistically significant p-value of $p = 0.049$. Moreover, mobile phones demonstrated the highest predictive power concerning self-esteem, with a predictive correlation of $r = 0.080$ and a significant p-value of $p = 0.043$.

5.3.4 Role of Parents in Media Use among Students

Parental involvement in adolescents' media consumption was found to be minimal, with only 16% of parents actively engaging in their children's use of mobile phones and 15% in their use of social media. In contrast, parents demonstrated a greater degree of intervention regarding the use of radio (40%) and television (29%). Notably, after controlling for parental involvement, the correlation between television exposure and aggression experienced a slight decrease from $r = 0.218$ to $r = 0.212$, while still remaining statistically significant. Conversely, the negative correlation between mobile phone exposure and self-esteem strengthened, increasing from $r = -0.080$ ($p = 0.043$) to $r = -0.098$ ($p = 0.017$), indicating a more robust negative relationship with greater statistical significance.

5.4 Recommendations

With regard to the findings and conclusions of the study, the following recommendations were made:

i. The first objective of the study was to determine the patterns of access to media among adolescent students in Kakamega, Kisii and Siaya Counties, Kenya. The findings of the study revealed that social media was the predominant form of media among this group. Furthermore, it was observed that students predominantly accessed social media in private settings and primarily utilized it for entertainment purposes. The most frequently utilized social networking platforms were identified as Tik Tok, WhatsApp, and Facebook.

   Based on these findings, the study proposed that teachers should take advantage by incorporating social media into their teaching, guidance, and mentorship of students. This could be accomplished by providing access to educational content through mediums such as videos, podcasts, and articles in order to facilitate learning. Additionally, teachers could employ social media for various classroom activities that require collaboration, such as assignments and discussions, as well as for providing students with feedback and acknowledging their accomplishments, which would effectively motivate them to achieve their goals. Furthermore, schools could establish virtual clubs and activities to maintain engagement and connectivity among students.

ii. The second aim of the study was to investigate the relationship between media exposure and aggression among adolescent students. The results revealed that a significant number of students were exposed to violent content in the media, which in turn affected their social interactions within the school setting. Specifically, television viewing exhibited the

strongest positive association with aggression, indicating that increased television consumption was linked to a higher likelihood of displaying aggressive tendencies. Additionally, among the four types of media analyzed - radio, television, mobile phone, and social media - television emerged as the strongest contributor to aggression.

This study recommends that despite existing efforts to establish regulations limiting the presence of violence in media, there is a need for more stringent implementation, particularly in relation to television. This can be achieved by bolstering regulatory enforcement through an increase in the number of inspectors and the imposition of more severe penalties against violators. It is proposed that entertainment companies should be mandated to include parental guidance ratings for all their content, thereby assisting parents and children in determining the appropriateness of the material. Moreover, policymakers are urged to contemplate the introduction of legislation that mandates schools to provide media literacy education to students. Additionally, public cybercafes ought to impose restrictions to prevent unsupervised usage by minors.

iii. The findings revealed that a significant number of students engage in self-comparisons with media characters, particularly those encountered on social media platforms, who are perceived as superior in certain aspects. Notably, access to mobile phones demonstrated the strongest positive correlation with self-esteem, indicating that increased exposure to mobile phones was linked to increased self-esteem among students. Furthermore, when compared to radio, television, and social media, mobile phone usage appeared to have the most significant impact on self-esteem.

Based on the findings, it is imperative to enhance awareness and promote media literacy among adolescent students, enabling them to comprehend and critically evaluate the unrealistic comparisons and depictions of media characters. This can be achieved through the integration of media literacy education into the existing school curricula, facilitating guidance on the navigation and interpretation of media content. Additionally, it is advisable to establish avenues and opportunities for students to cultivate self-esteem through activities unrelated to media exposure. Encouraging their involvement in sports, arts, and community engagement can foster a sense of achievement and self-value that is not solely influenced by comparisons to media representations.

iv. The fourth objective of the study was to examine the role of parental supervision in moderating the effects of media on the psychosocial development of adolescent students. The findings revealed that a majority of students did not engage in co-use of social media and mobile phones with their parents, whereas co-use of radio and television was more prevalent. Additionally, a large portion of students reported that their parents did not enforce any rules regarding media usage and did not engage in discussions about media content. Notably, Parental intervention slightly reduces but does not eliminate the significant effect of television on aggression. Furthermore, parental intervention significantly amplified the negative effect of access to mobile phones on self-esteem.

In light of the aforementioned findings, it is recommended that parents be empowered with the necessary competencies and knowledge to effectively mentor and monitor their children's social media engagement, thereby fostering a secure and responsible digital environment. This can be achieved through the provision of parental training that sensitizes

parents to potential online hazards, including cyberbullying, predatory behavior, and the propagation of misinformation. Instruction on the utilization of parental control tools embedded within prevalent social media platforms and mobile devices, as well as guidance on conducting conversations with children regarding appropriate online behavior, should be provided. Dissemination of informative materials, such as handouts and the facilitation of seminars or workshops, can aid in the implementation of these measures. Schools and organizations can play a role by hosting forums and discussions, offering educational resources, and ensuring parents are kept informed. Additionally, the formulation and enforcement of policies mandating parental supervision features across all social media platforms should be considered.

5.5 Suggestions for Further Research

The primary focus of this study was examining the relationship between media exposure and the psychosocial development of students. However, it is important to acknowledge that the impact on adolescent psychosocial development may not solely be attributed to the mere exposure to media. Factors such as the nature of content and the context of media use might also play a significant role. Hence, it is recommended for future research to explore and investigate the specific aspects of exposure that are influential in shaping this relationship.

Furthermore, this study found that parental involvement further increased the negative contribution of access to mobile phone on self-esteem, rather than reducing it as would have been expected. Therefore, This study suggests that future research could employ a qualitative methodology, such as in-depth interviews or focus groups, to delve into the perceptions and experiences of adolescents

regarding parental involvement in mobile phone usage. By taking this approach, researchers can gain a more nuanced understanding of how this involvement influences self-esteem and the underlying mechanisms at play.

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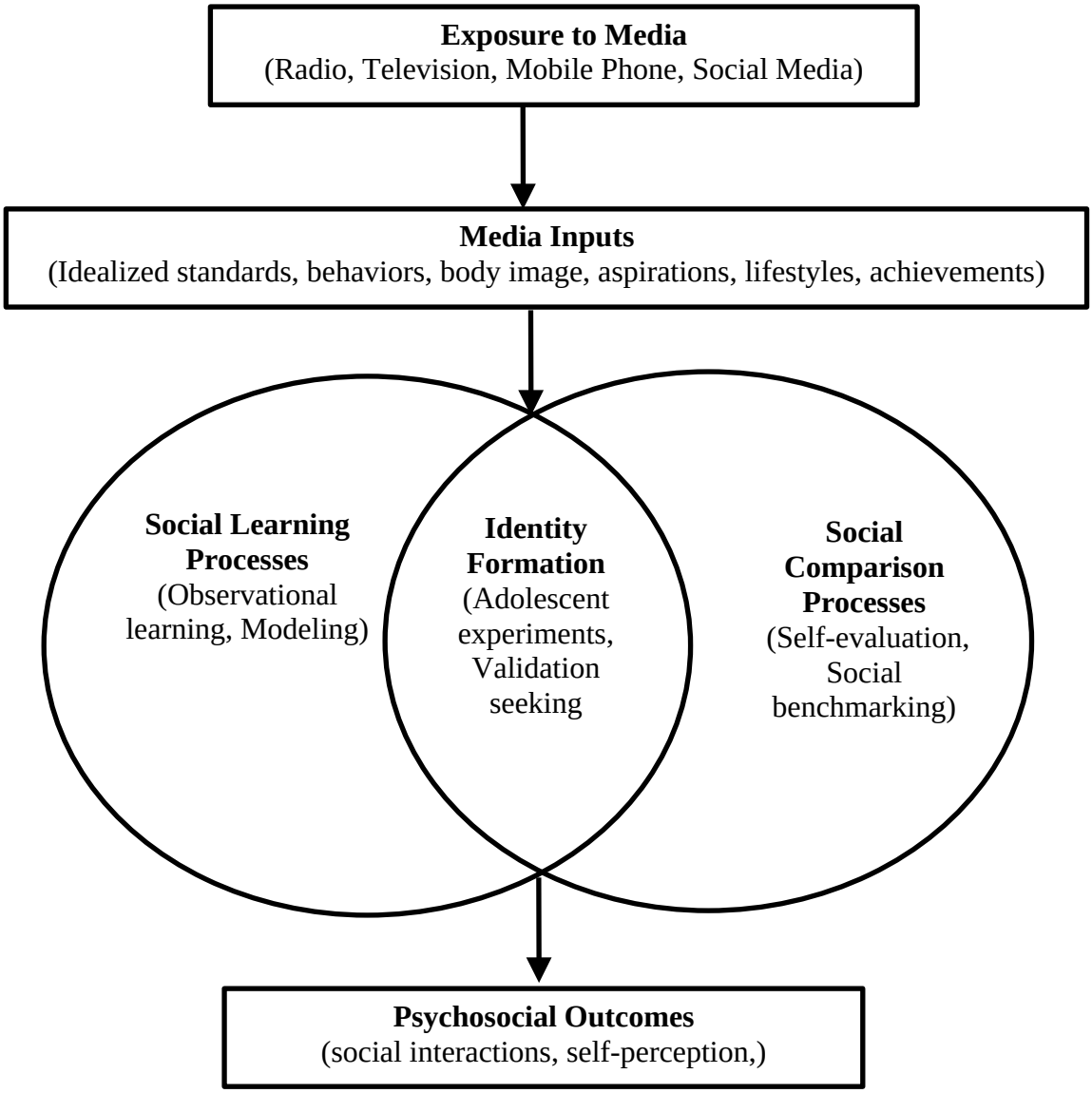
APPENDICES

Appendix A: Eclectic Model Illustrating the Combined Processes of Social Learning, Social Comparison and Identity Formation

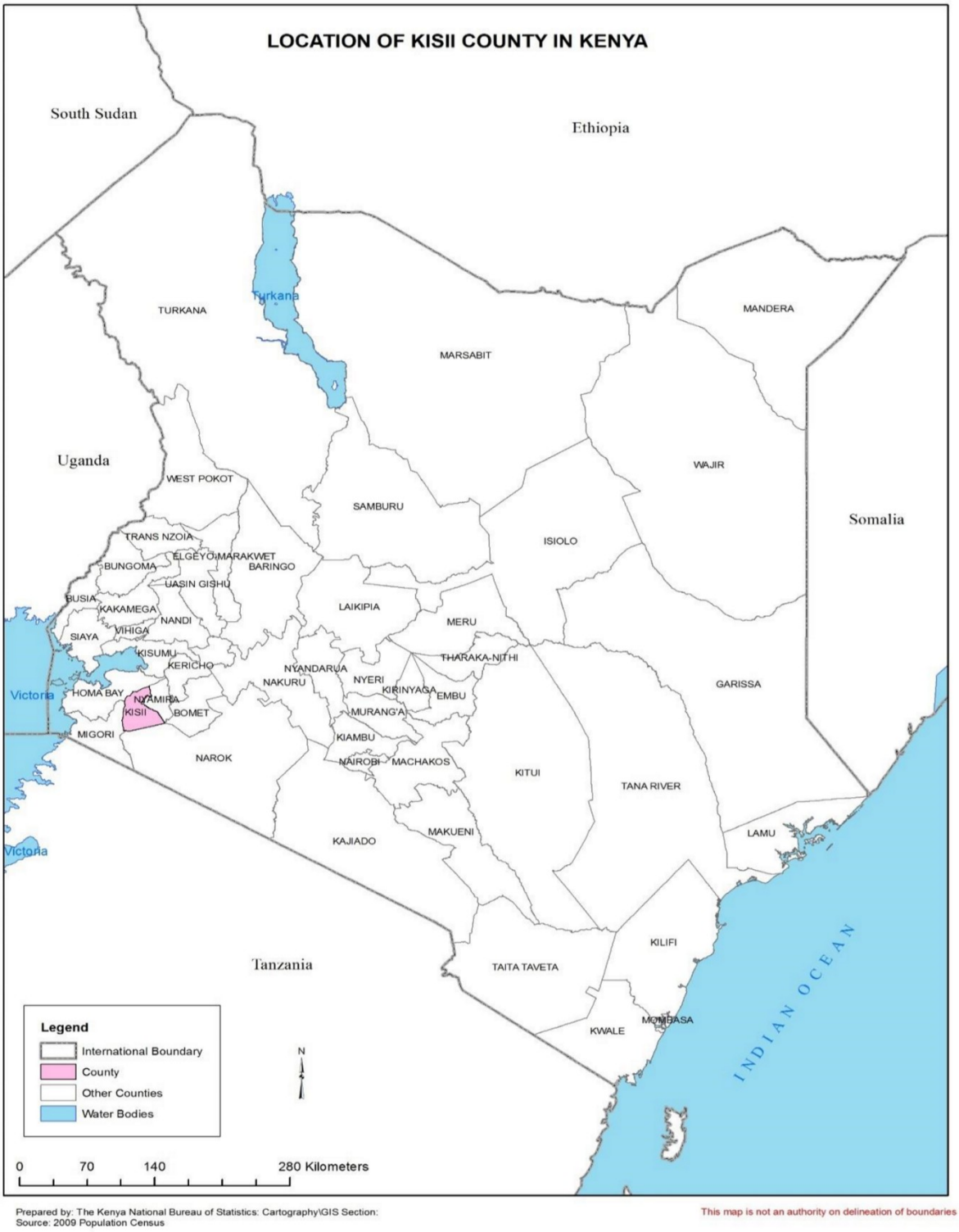


Appendix B: Map of Kenya Showing the Position of Kakamega County



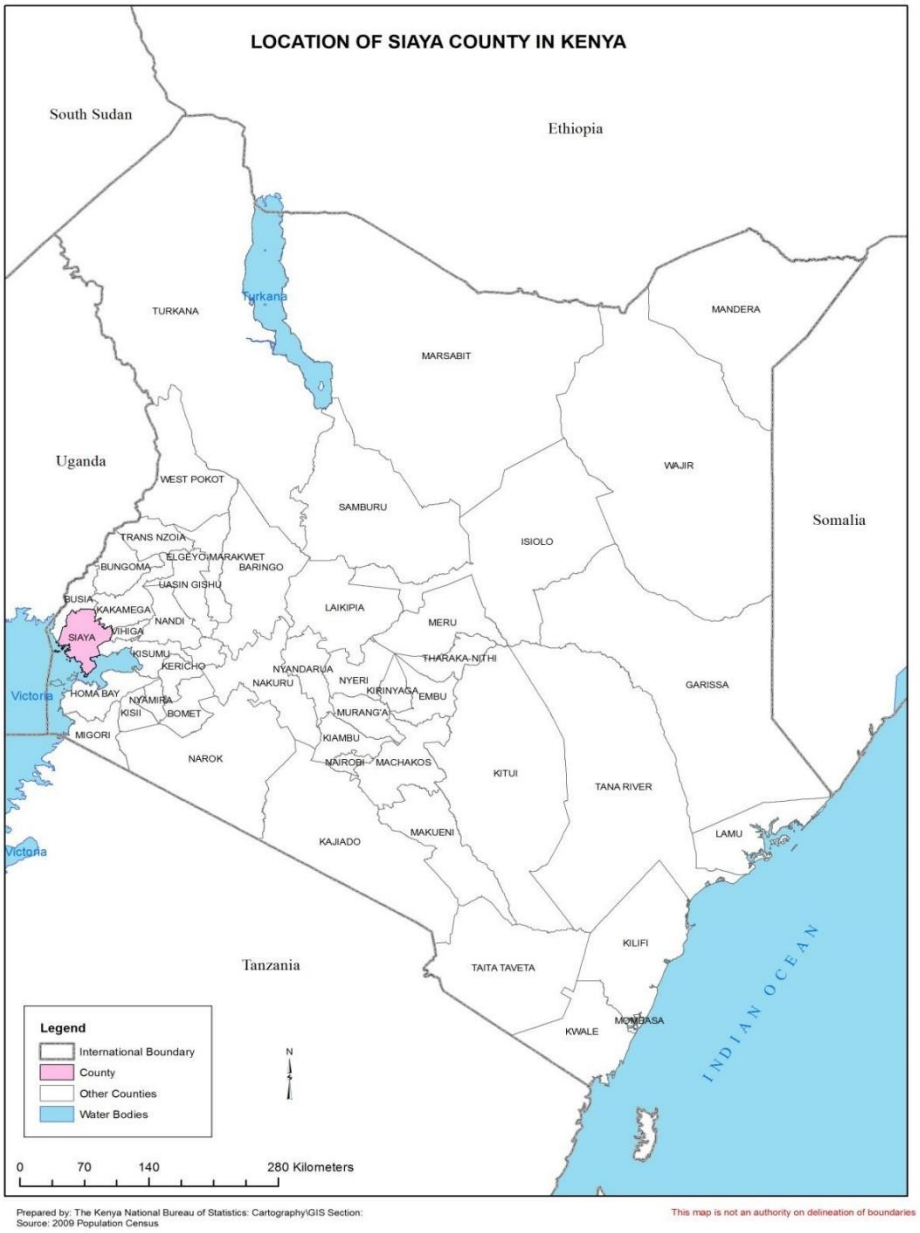
Source: Kenya National Bureau of Statistics (2015a)

Appendix C: Map of Kenya Showing the Position of Kisii County



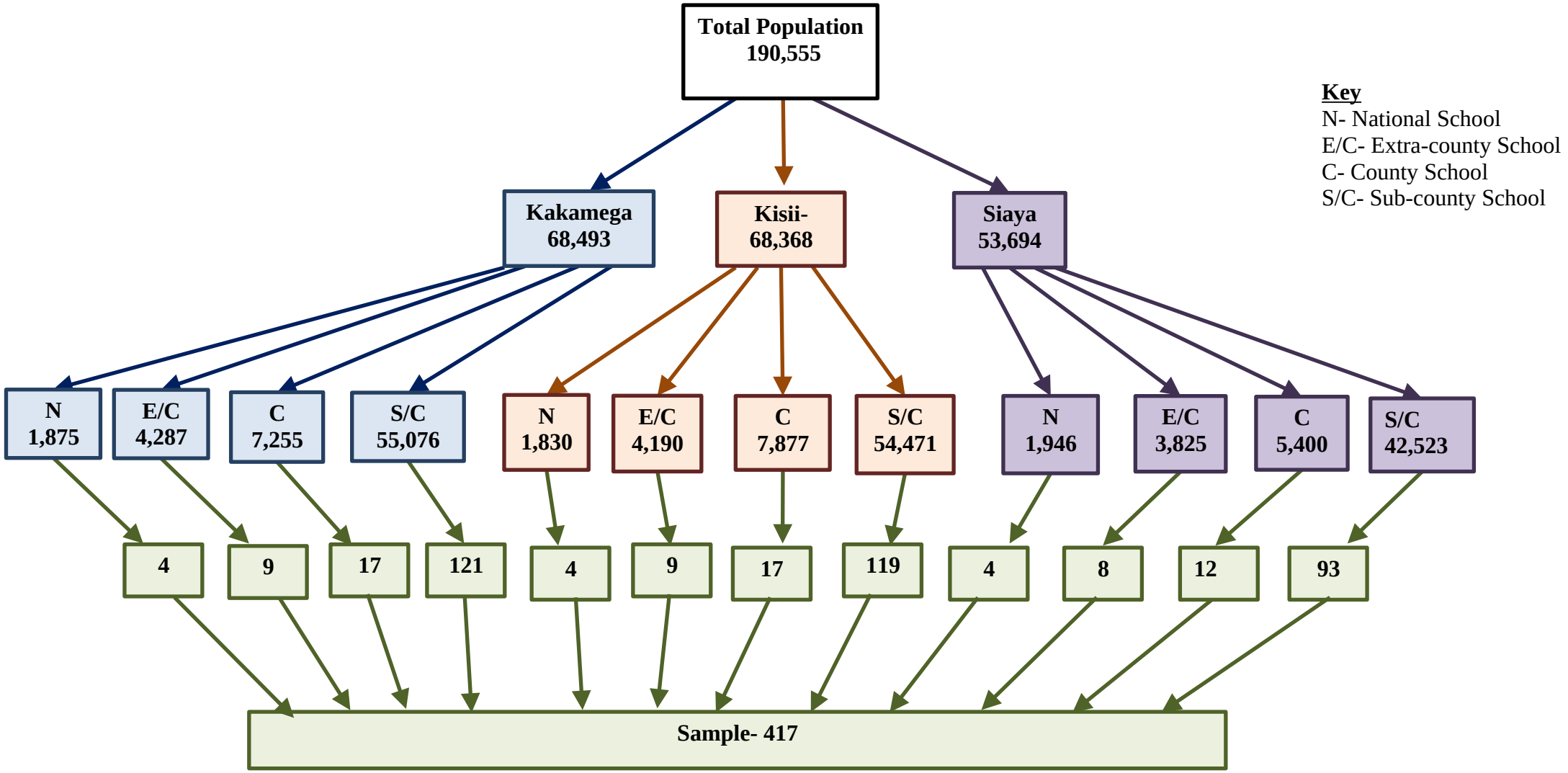
Source: Kenya National Bureau of Statistics (2015b)

Appendix D: Map of Kenya Showing the Position of Siaya County

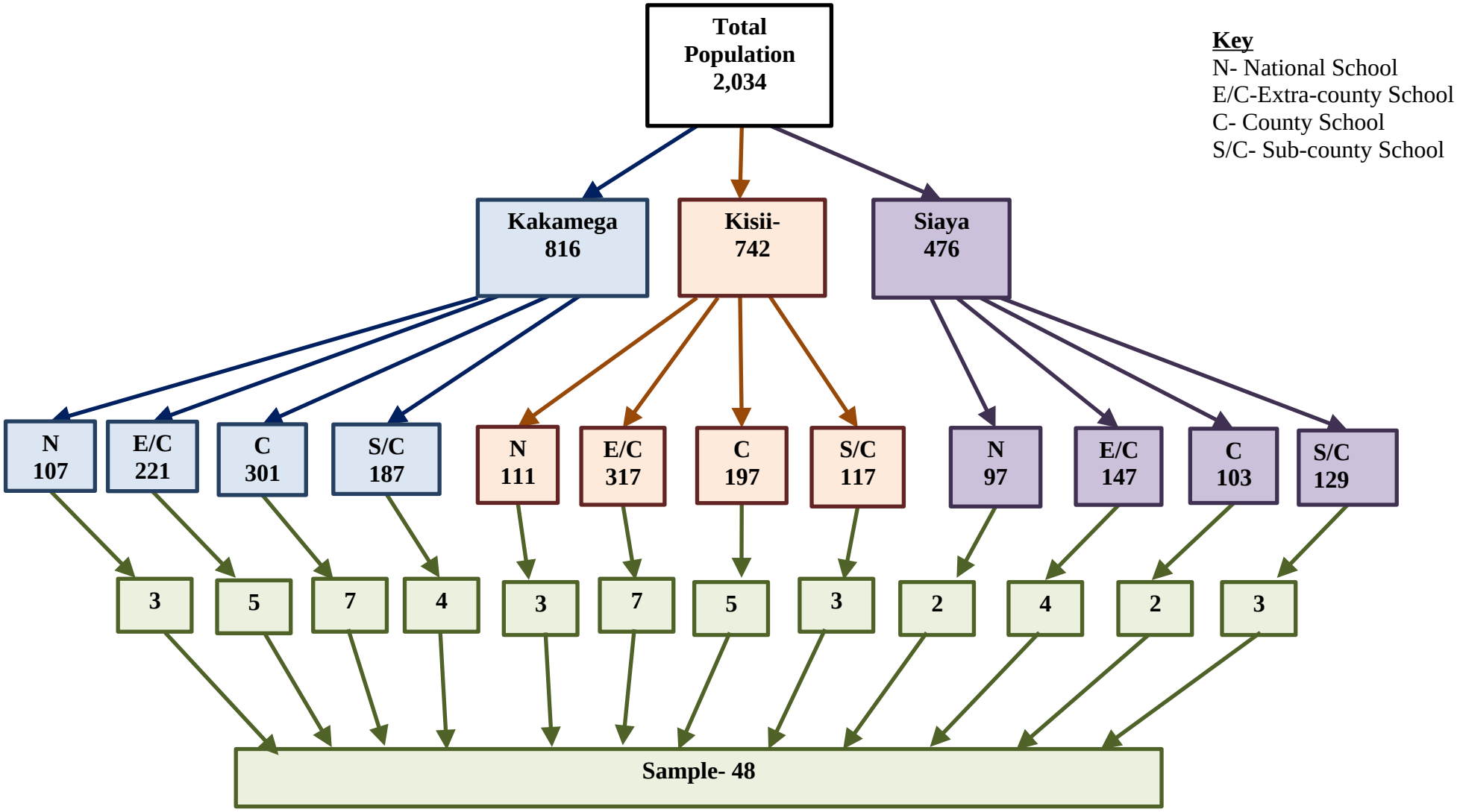


Source: Kenya National Bureau of Statistics (2015c)

Appendix E: Illustration of Stratified Sampling Process Used to Select Students



Appendix F: Illustration of Stratified Sampling Process Used to Select Teachers



Appendix G: Questionnaire for Students

EXPOSURE TO MEDIA AND PSYCHOSOCIAL DEVELOPMENT QUESTIONNAIRE FOR STUDENTS

Guidelines for Filling in the Questionnaire

---

i. The purpose of this questionnaire is to gather information concerning media use among adolescent secondary school students.
ii. You are kindly asked to respond to all the questions in this questionnaire to enable us get a full picture.
iii. All information collected through this questionnaire will be treated with a lot of confidentiality and will only be used for purposes of the study.
iv. Do not write your name or school anywhere in this questionnaire

---

Section A: Demographic Information

(Place a tick [] against the most appropriate answer.)

1. Sex
    a. Male [ ]
    b. Female [ ]
2. Grade
    a. Form 2 [ ]
    b. Form 3 [ ]
3. How old are you?
    a. Below 14 years [ ]
    b. 14 years [ ]
    c. 15 years [ ]
    d. 16 years [ ]
    e. 17 years [ ]
    f. Above 17 years [ ]
4. Parental status
    a. Have both biological parents [ ]
    b. Have one biological parent [ ]
    c. Total orphan [ ]

5. Which of the following describes the category of school you go to?
    a. National [ ]
    b. Extra-county [ ]
    c. County [ ]
    d. Sub-county [ ]

Section B: Media Exposure

(Place a tick [✓] against the most appropriate answer.)

6. From the list below, identify all the forms of media you have been able to access in the past 6 months.
    a. Radio [ ]
    b. Television [ ]
    c. Mobile phone [ ]
    d. Social media e.g. Facebook, WhatsApp, Twitter and Instagram [ ]
    e. None [ ]

7. On average, how much time do you spend on the following forms of media in a day?
    (Place a tick [✓] as appropriate)

#	Media form	0 hours	1 to 2 hours	3 to 4 hours	5 to 6 hours	Above 6 hours
1	Radio					
2	Television					
3	Mobile phone					
4	Social media					

8. How often do you use the following media alone

#	Media form	Never	Sometimes	Always	I do not use that media
1	Radio				
2	Television				
3	Mobile phone				
4	Social media				

9. From the list below, identify the most common purposes for which you use the following media devices.

#	Media form	Entertainment	Education	Both academic and education	I do not use that media
1	Radio				
2	Television				
3	Mobile phone				
4	Social media				

10. Respond to each of the following statements by placing a tick [✓] to agree with it or across [✗] to show disagreement.
    a. You own your own personal mobile phone back at home. [ ]
    b. While at home, you are able to access the internet any time you want to.

[ ]

c. Back at home, you have a television in your bedroom. [ ]
d. The television is always on in our house. [ ]

11. Which of the following is your most favorite Social Networking Sites
    a. Facebook
    b. Twitter
    c. WhatsApp
    d. Instagram
    e. None

12. State three of your most favorite television shows
    a. _____
    b. _____
    c. _____

Section C: Media and Aggression

13. In the past 6 months, how often have you observed or experienced any form of violence on the following media devices?

#	Media form	Never	Sometimes	Always	I do not use that media
1	Radio				
2	Television				
3	Mobile phone				
4	Social media				

14. How often have you imitated the violence you observed in the following media devices?

#	Media form	Never	Sometimes	Always	I do not use that media
1	Radio				
2	Television				
3	Mobile phone				
4	Social media				

15. Do you believe that media characters who are violent are right in their actions?
    a. Never [ ]
    b. Sometimes [ ]
    c. Always [ ]
    d. I do not use any media [ ]

16. a. For each of the following statements place a tick against the one that most closely
describes you.

In the past year at this school I…

#	Statement	Never	Sometimes	Once in a month	Once a week	Several times a week	Every day
1	Abused, quarreled with, said bad things about or made fun of a students						
2	Pushed, knocked, slapped, punched, threw things at or threatened to beat a fellow student						
3	Said bad things about, refused to play with or looked at a student badly						

b. For each of the following statements place a tick against the one that most closely
describes your experience.
In the past year at this school I…

#	Statement	Never	Sometimes	Once in a month	Once a week	Several times a week	Every day
1	I was abused, called names or laughed at by a student.						
2	I was pushed, kicked, knocked, threatened or fought by a student						
3	A student refused to be my friend or started rumors against me.						

Section D: Media and Self-Esteem

17. How often do you compare yourself with characters in the following media?

#	Media form	Never	Sometimes	Always	I do not use that media
1	Television				
2	Social media				
3.	Radio				

18. For each of the following statements, respond by placing a tick [] against the most appropriate answer.

#	Statement	Never	Sometimes	Always	I do not use the media
1	I always feel that the media characters I see are much better than me				
2	I feel I am much better than the characters I see on the media including social media				

19. For each of the following statements, respond by placing a tick [] against the most appropriate answer.
In the past 6 months, someone on social media said something negative about my…

#	Statement	Zero times	0 to 3 times	More than 3 times	I do not use social media
1	Physical appearance				
2	School				
3	Family				
4	Gender				

20. Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement by placing a tick [] in the appropriate box.

#	Statement	Strongly agree	Agree	Disagree	Strongly disagree
1.	I like myself despite any negative comments about me I may get from the media.				
2.	At times I think I am not good at all.				
3.	There are many good things about me just like the media characters				
4.	I can perform well just like other people I see in the media.				
5.	I am not very proud of myself because there are better people in the media.				

6.	Sometimes I feel useless.				
7.	I am a worthy person just like the characters I see in the media.				
8.	I wish I loved myself more than I do like I see characters in the media love themselves.				
9.	I am a failure, not like the successful people I see in the media.				
10.	I am proud of myself just like the characters I see in the media.				

Section E: Role of Parents in Media Exposure

21. How often do your parents do the following whenever you are watching television?

#	Activity	Never	Sometimes	Always	I do not watch television
1	Watch together with me				
2	Enforce rules and/or use passwords to control how much I am allowed to access television				
3	Discuss with me the content on television				
4	Monitor what I am watching on television				

22. How often do your parents do the following whenever you are listening to the radio?

#	Activity	Never	Sometimes	Always	I do not listen to the radio
1	Listen together with me				
2	Enforce rules and/or use passwords to control how much I am allowed to access the radio				
3	Discuss with me the content on radio				
4	Monitor what I am listening to on radio				

23. How often do your parents do the following whenever you are using a mobile phone?

#	Activity	Never	Sometimes	Always	I do not use mobile phones
1	Share a mobile phone with me				
2	Enforce rules and/or use passwords to control how much I am allowed to access a mobile phone				
3	Monitor what I am doing on the mobile phone				

24. How often do your parents do the following whenever you are using social media?

#	Activity	Never	Sometimes	Always	I do not use social media
1	Use social media together with me				
2	Enforce rules and/or use passwords to control how much I am allowed to access social media				
3	Discuss with me the content on social media				
4	Monitor what I am doing on social media				

25. In the table below, place a tick [] to indicate the approximate age gap between you and your parent/guardian, as appropriate.

#	Parent/Guardian	0 to 10 Years	11- 20 years	21 to 30 Years	Above 30 years
1	Father				
2	Mother				
3	Guardian				

Appendix H: Adolescents Peer Relations Instrument (APRI)

Section A

Since you have been at this school this year how often have you done any of the following things to a student (or students) at this school?
Circle the number that is closest to your answer.

In the past year at this school I…
1. Teased them by saying things to them
2. Pushed or shoved a student
3. Made rude remarks at a student
4. Got my friends to turn against a student
5. Made jokes about a student
6. Crashed into a student on purpose as they walked by
7. Picked on a student by swearing at them
8. Told my friends things about a student to get them into trouble
9. Got into a physical fight with a student because I didn't like them
10. Said things about their looks they didn't like
11. Got other students to start a rumor about a student
12. I slapped or punched a student
13. Got other students to ignore a student
14. Made fun of a student by calling them names
15. Threw something at a student to hit them
16. Threatened to physically hurt or harm a student
17. Left them out of activities or games on purpose
18. Kept a student away from me by giving them mean looks

Section B

Please indicate how often a student (or students) at this school has done the following things to you since you have been at this school this year.
Circle the number that is closest to your answer.

In the past year at this school…
1. I was teased by students saying things to me
2. I was pushed or shoved
3. A student wouldn't be friends with me because other people didn't like me
4. A student made rude remarks at me
5. I was hit or kicked hard
6. A student ignored me when they were with their friends
7. Jokes were made up about me
8. Students crashed into me on purpose as they walked by
9. A student got their friends to turn against me
10. My property was damaged on purpose
11. Things were said about my looks I didn't like
12. I wasn't invited to a student's place because other people didn't like me
13. I was ridiculed by students saying things to me
14. A student got students to start a rumor about me
15. Something was thrown at me to hit me

16. I was threatened to be physically hurt or harmed
17. I was left out of activities, games on purpose
18. I was called names I didn't like,

Rating scale
1=Never
2=Sometimes
3=Once or twice a month
4=Once a week
5=Several times a week
6=Everyday

Scoring
Section A
Verbal bullying: Items 1, 3, 5, 7, 10, and 14
Social bullying: Items 4, 8, 11, 13, 17, and 18
Physical bullying: Items 2, 6, 9, 12, 15, and 16

Section B
Verbal victimization: Items 1, 4, 7, 11, 13, and 18
Social victimization: Items 3, 6, 9, 12, 14, and 17
Physical victimization: Items 2, 5, 8, 10, 15, and 16

No = 0

Source: (Parada, 2000)

Appendix I: Rosenberg's Self-Assessment Scale (RSES)

Instructions:
Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

Items:

#	Statement	Strongly agree	Agree	Disagree	Strongly disagree
1.	I am satisfied with myself.				
2.	At times I think I am not good at all.				
3.	I feel that I have a number of good qualities.				
4.	I am able to do things as well as other people.				
5.	I feel I do not have much to be proud of.				
6.	I certainly feel useless at times.				
7.	I feel that I am a person of worth just as much as other people.				
8.	I wish I could have more respect for myself.				
9.	Generally, I feel that I am a failure.				
10.	I have a positive attitude towards myself				

Scoring:

- Items 2, 5, 6, 8, 9 are reverse scored.
- Give "Strongly Disagree" 1 point, "Disagree" 2 points, "Agree" 3 points, and "Strongly Agree" 4 points.
- Sum scores for all ten items.
- Keep scores on a continuous scale.
- Higher scores indicate higher self-esteem.

Source: https://fetzer.org>pdf>selfmeasures

Appendix J: Interview Schedule for Parents

1. Gender_____
2. Age_____
3. In what ways does your child engage with different forms of media, and can you provide some insights into the specific contexts or situations in which they typically utilize these media platforms?

4. In what ways do you engage with your child in relation to media devices or platforms such as radio, television, mobile phones, and social media? Additionally, please describe the frequency and manner in which you share these media devices or platforms with your child.

5. To what extent do you establish and enforce guidelines regarding your child's usage of radio, television, mobile phones, and social media? If applicable, kindly describe the specific measures implemented and the frequency with which they are implemented.

6. How do you engage in discussions about the content your child consumes on the radio, television, mobile phone, and social media? Additionally, how frequently do these discussions take place?

7. To what extent do you actively oversee and supervise your child's activities and engagements on Radio, Television, Mobile phone, and Social Media? If applicable, please elaborate on the methods and frequency of your monitoring practices.

8. In your opinion, what measures can parents take to ensure the well-being of their children in relation to their engagement with media? Additionally, what suggestions or recommendations would you offer to enhance parental efforts in this domain?

Appendix K: Focus Group Discussions Guide for Class Teachers

1. What forms of media devices are the students able to access in school and at home?

2. What are some of the primary motivations or factors that drive students to consistently utilize these media devices? Let's explore the different reasons behind their frequent usage.

3. Could you share some observations or examples of the specific situations or contexts in which students commonly interact with media?

4. What are your thoughts on the potential effects of media access on the psychological and social well-being of students? Please share your experiences, observations, and any insights you may have regarding the influence of media on students' psychological and social well-being.

5. In your opinion, what proactive measures or strategies can parents employ to safeguard students from negative consequences or harmful impacts of media exposure?

Appendix L: Content Analysis Schedule

	Content Description	None	Moderate	Strong	Extreme
1.	Presence of verbal violence (e.g. Abuse, threats, insults, shouting, hate speech, derogatory remarks)violent language				
2.	Presence of physical violence e.g. punching, fighting, strangling, destruction, vandalism, slapping, brandishing weapons)				
3.	Depiction of relational violence (e.g. social exclusion, backbiting, manipulation, power dynamics, bullying, intimate partner violence)				
4.	Characters use violence to solve a problem (e.g. e.g. resolve a conflict, overcome obstacles, or achieve their goals)				
5.	Characters use violence for fun (e.g. for entertainment, enjoyment, amusement, pleasure)				
7.	Characters are rewarded for using violence (e.g. gaining power, control, respect, or admiration from others)				
8.	Characters are punished for violence (e.g. being arrested, facing legal charges, being expelled or suspended, losing relationships or social standing, or experiencing personal hardships as a result of their violent behavior)				
9.	Availability of parental controls (e.g. software, applications, or settings that limit access)				
10.	Violence is concealed (e.g. violence occurs off-screen, is suggested through dialogue or visual cues, or is shown in a more subtle and implied way)				

11. What are the 3 most dominant themes in the show?
    a. _____
    b. _____
    c. _____

Appendix M: Approval from School of Graduate Studies

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

Tel: 056-30870
Fax: 056-30153
E-mail: directordps@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
Kakamega – 50100
Kenya

Directorate of Postgraduate Studies

Ref: MMU/COR: 509099

19th August 2022

Pauline Adhiambo
EPY/H/01-56082/2017,
P.O. Box 190-50100,
KAKAMEGA.

Dear Ms Adhiambo,

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your PhD proposal entitled: ***"Relationship between Exposure to Media and Pyschosocial Development among Preadolescent and Adolescent Learners in Western Kenya."*** and appointed the following as supervisors:

1. Prof. Peter Odera - MMUST
2. Dr. Samuel Maragia - MMUST

You are required to submit through your supervisor(s) progress reports every three months to the Director Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Education Graduate Studies Committee and Chairman, Department of Education Psychology. Kindly adhere to research ethics consideration in conducting research.

It is the policy and regulations of the University that you observe a deadline of two years from the date of registration to complete your PhD thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
DIRECTORATE OF POSTGRADUATE STUDIES
P.O. BOX 190 – 50100, KAKAMEGA (K)
Date:..... Sign:.....

Prof. Stephen O. Odebero, PhD, FIEEP
DIRECTOR, DIRECTORATE OF POSTGRADUATE STUDIES

Appendix N: Permit form National Commission for Science, Technology and Innovation

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **699344**

Date of Issue: **25/August/2022**

RESEARCH LICENSE



This is to Certify that Ms.. Pauline Adhiambo of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Kakamega, Kisii, Siaya on the topic: Relationship between Exposure to Media and Psychosocial Development among Preadolescent and Adolescent Learners in Western Kenya for the period ending : 25/August/2023.

License No: **NACOSTI/P/22/19904**

699344

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix O: Permit from Ministry of Education State Department of Early Learning and Basic Education, Kakamega County

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEA3RING AND BASIC EDUCA4TION

Telephone: 056 -30411
Fax: 056 – 31307
E-mail: rceducation2016@gmail.com
When replying please quote our Ref.

County Director of Education
Kakamega County
P. O. BOX 137 - 50100
KAKAMEGA

REF: KAKA/C/GA/29/17/VOL.VI/63

30th August, 2022

MS. PAULINE ADHIAMBO
MASINDE MULITO UNIVERSITY OF SCIENCE
AND TECHNOLOGY
KAKAMEGA

RE: RESEARCH AUTHORIZATION

Reference is made to a letter from NACOSTI Ref.No. NACOSTI/P/22/19904 dated 25th August, 2022 concerning subject matter,

This is to inform you that you have been authorized to carry out research to **"Relationship between Exposure to Media and Psychosocial Development among Preadolescent and Adolescent Learners in Kakamega County"** for the period ending 25th August, 2023.

Please accord him/her any necessary assistance he/she may require.

FOR
COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

DICKSON O. OGONYA
COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

Copy to:
The Regional Director of Education
WESTERN REGION

Appendix P: Permit from Ministry of Interior and Coordination of National Government, Kakamega County

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

Telephone: 056 -31131

Email: cckakamega12@yahoo.com
When replying please quote:

County Commissioner
Kakamega County
P O BOX 43 - 50100
KAKAMEGA

Ref: ED.12/1/VOL.VI/ 83

Date: 31st August, 2022

Pauline Adhiambo
P.O Box 190- 50100
KAKAMEGA

RESEARCH AUTHORIZATION

Following your authorization vide letter **Ref: No. NACOSTI/P/22/19904** dated 25th August, 2022 by **NACOSTI** to undertake research on "***Relationship between Exposure to Media and Psychosocial Development among Preadolescent and Adolescent Learners in Western Kenya***" for the period ending 25th August, 2023. I am pleased to inform you that you have been authorized to carry out the research on the same in this county.

COUNTY COMMISSIONER
KAKAMEGA COUNTY

F.A. ONGORI
FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY

Appendix Q: Permit from Ministry of Education State Department of Early Learning and Basic Education, Kisii County

REPUBLIC OF KENYA

MINISTRY OF EDUCATION

State Department of Early Learning and Basic Education

Telegram: "EDUCATION"
Telephone: 058-30695
Email address: cdekisii@gmail.com
When replying please quote

COUNTY DIRECTOR OF EDUCATION
KISII COUNTY
P.O. BOX 4499 - 40200
KISII.

REF: CDE/KSI/RESEARCH/V/8/138

Date: 16th November, 2022

PAULINE ADHIAMBO
MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
P.O.BOX 190- 50100
KAKAMEGA.

RE: RESEARCH AUTHORIZATION.

Following your research Authorization vide your letter **Ref.NACOSTI/P/22/19904** to carry out research in Kisii County,this letter refers.

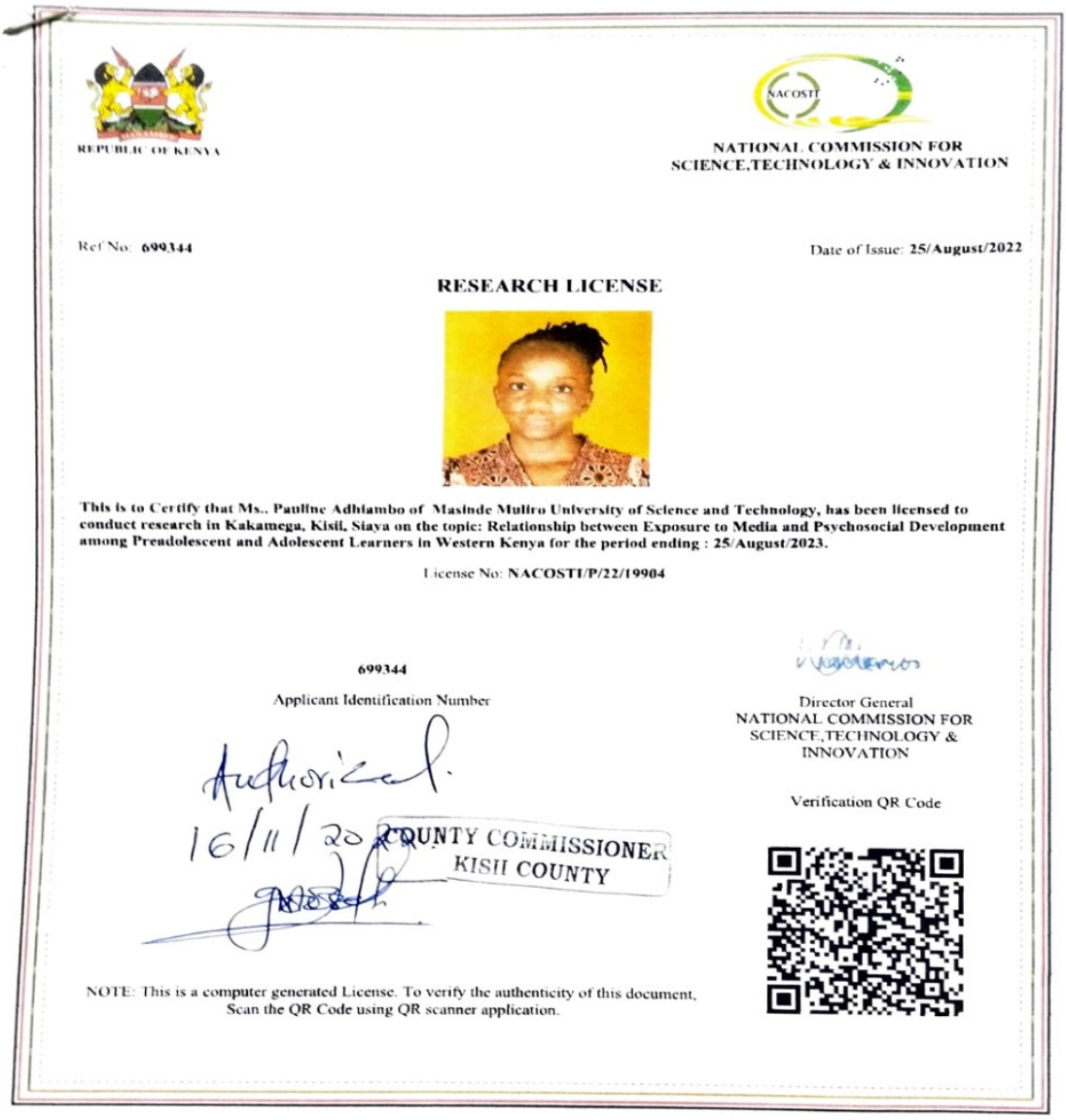
I am pleased to inform you that you can carry out your research in the County on **"Relationship between exposure to media and psychosocial development among preadolescent learners in Western Kenya"** for a period ending **25th August,2023**.

Wish you a successful research.

COUNTY DIRECTOR OF EDUCATION
KISII COUNTY
16 NOV 2022
P. O. Box 4499 - 40200, KISII.

Pius Ng'oma
County Director of Education
Kisii.

Appendix R: Permit from Ministry of Interior and Coordination of National Government, Kisii County



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 699344

Date of Issue: 25/August/2022

RESEARCH LICENSE

This is to Certify that Ms., Pauline Adhiambo of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Kakamega, Kisii, Siaya on the topic: Relationship between Exposure to Media and Psychosocial Development among Preadolescent and Adolescent Learners in Western Kenya for the period ending : 25/August/2023.

License No: NACOSTI/P/22/19904

699344

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

Authorized
16/11/20
COUNTY COMMISSIONER
KISII COUNTY

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix S: Ministry of Education State Department of Early Learning and Basic Education, Siaya County

REPUBLIC OF KENYA
MINISTRY OF EDUCATION
State Department of Early Learning and Basic Education

COUNTY DIRECTOR OF EDUCATION
SIAYA COUNTY
P.O. BOX 564
SIAYA

E-mail:cdesiaya2016@gmail.com

MOE/SYA/CDE/URA/1/10/VOL.II/48 Friday, September 2, 2022

TO WHOM IT MAY CONCERN

RE: APPROVAL OF PROPOSAL **PAULINE ADHIAMBO**

Reference is made on the above subject.

Authority is granted to research License No. **NACOSTI/P/22/19904** dated 25th August, 2022 to be used in conducting research in this county for the period ending 25th August, 2023.

The research title is "***Relationship between Exposure to Media and Psychosocial Development among Preadolescent and Adolescent Learners in Western.***"

Please accord her necessary assistance in this County as she requires.

FOR
COUNTY DIRECTOR OF EDUCATION
SIAYA COUNTY
P. O. Box 564 - 4060, SIAYA

ISABELLA OMACHE
FOR: COUNTY DIRECTOR OF EDUCATION
SIAYA COUNTY

Copy to:

All Sub County Directors of Education
Siaya County

Appendix T: Permit from Ministry of Interior and Co-ordination of National Government, Siaya County

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT

MINISTRY OF INTERIOR & CO-ORDINATION OF NATIONAL GOVERNMENT

E-Mail cc.siaya@yahoo.com
When replying please quote ref. & date

COUNTY COMMISSIONER
SIAYA COUNTY
P O Box 83-40600
SIAYA

CC/SC/A.31 VOL.IV/94

1ST September, 2022

All Deputy County Commissioners
SIAYA COUNTY

RE: RESEARCH AUTHORIZATION – Ms. PAULINE ADHIAMBO

The person referred to above from Masinde Muliro University has been authorized by the Director General, National Commission for Science, Technology and Innovation vide letter Ref.no *NACOSTI/P/22/19904/699344* dated 25th August 2022 to carry out research on "***Relationship between exposure to media and Psychosocial Development among preadolescent and adolescent learners***", for the period ending **25th August 2023**.

Therefore, the purpose of this letter is to ask that you accord her the necessary support as she conducts research in your Sub County.

NOTE: Due to the prevailing COVID - 19 situation, she must observe containment protocols as directed by the Ministry of Health.

RODAH CHERUS
For: COUNTY COMMISSIONER
SIAYA COUNTY

COUNTY COMMISSIONER
SIAYA COUNTY
P. O. Box 83
SIAYA - 40600

Copy to; Pauline Adhiambo
Masinde Muliro University of Science and Technology

Appendix U: Consent Letter to Principals

c/o Masinde Muliro University
P.O. Box 190-50100
KAKAMEGA
Mobile: 0723679393
Email: mchiku08@gmail.com

20th April, 2022

To the Principal,
_____

Dear Sir/Madam

REF: REQUEST FOR YOUR PARTICIPATION IN A STUDY

The above subject refers

I am a student at Masinde Muliro University of Science and Technology, pursuing a Doctor of Philosophy in Educational Psychology. As part of the requirements, I am currently carrying out a study aimed at determining the media use habits among adolescent students in Kakamega, Kisii and Siaya Counties and the influence this has on their psychosocial development. The study will also look into the role parent play in their children's media use. Findings from this study will be useful in coming up with policies that would help minimize negative media influence among students while maximizing its benefits.

I therefore request your school to participate in the study by allowing me to collect data from your students, parents and teachers. The role of these participants will be to respond to questionnaire's, and participate in interviews and discussions. Kindly note the following:

i. The information collected through the study, including respondents identity will be treated with utmost confidentiality.
ii. Respondents are free to pull out of the study at any stage without having to give prior notice.
iii. The information collected will strictly be used for purposes of the study.
iv. There is no third party interested in the current study and therefore it is solely being carried out as a requirement for the stated degree.
v. insights from this study will be shared with participating schools upon request.

To indicate your consent or otherwise to be a part of the study, kindly fill in one copy of this letter in the spaces below as appropriate. Attached find a copy on the questionnaire.

Agreement

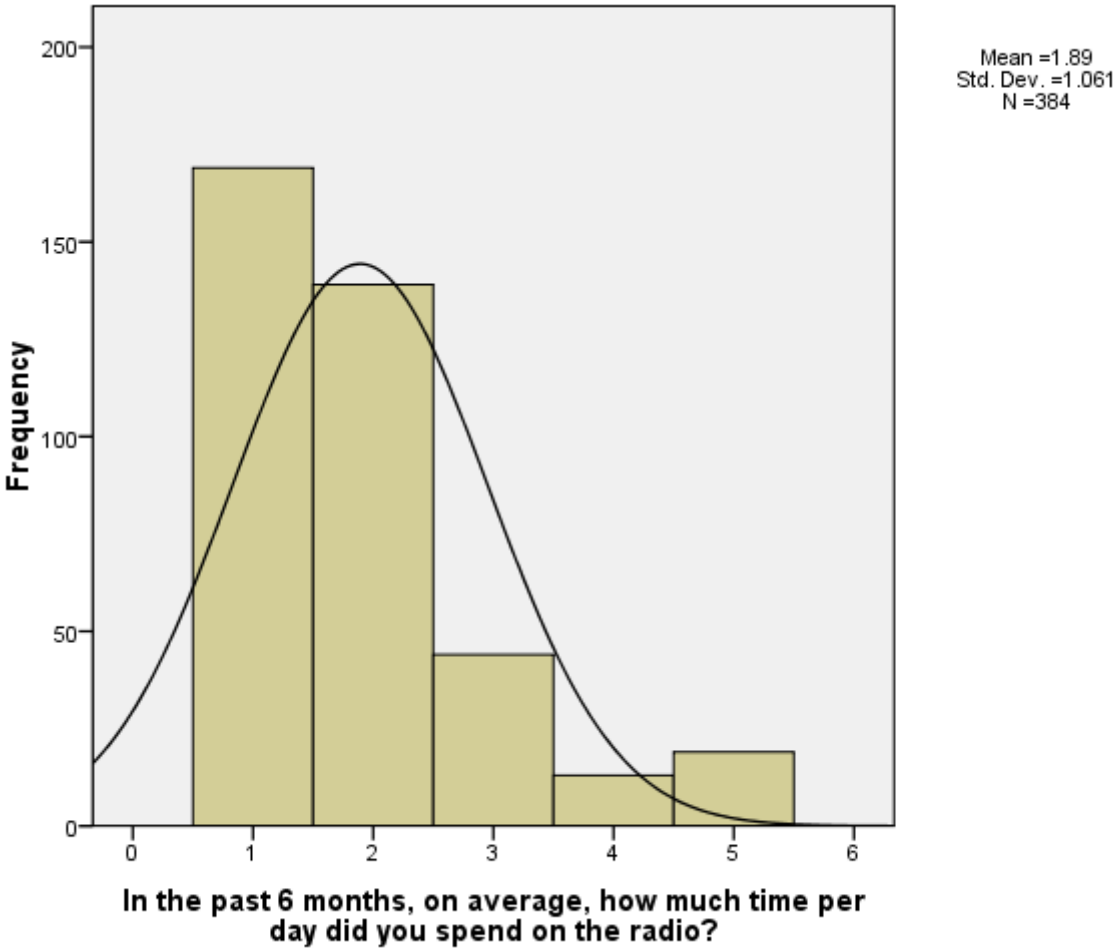
I AGREE/DO NOT AGREE (tick as applies) to participate in the above study:

Name: _____ Signature: _____
Designation: _____ Date: _____

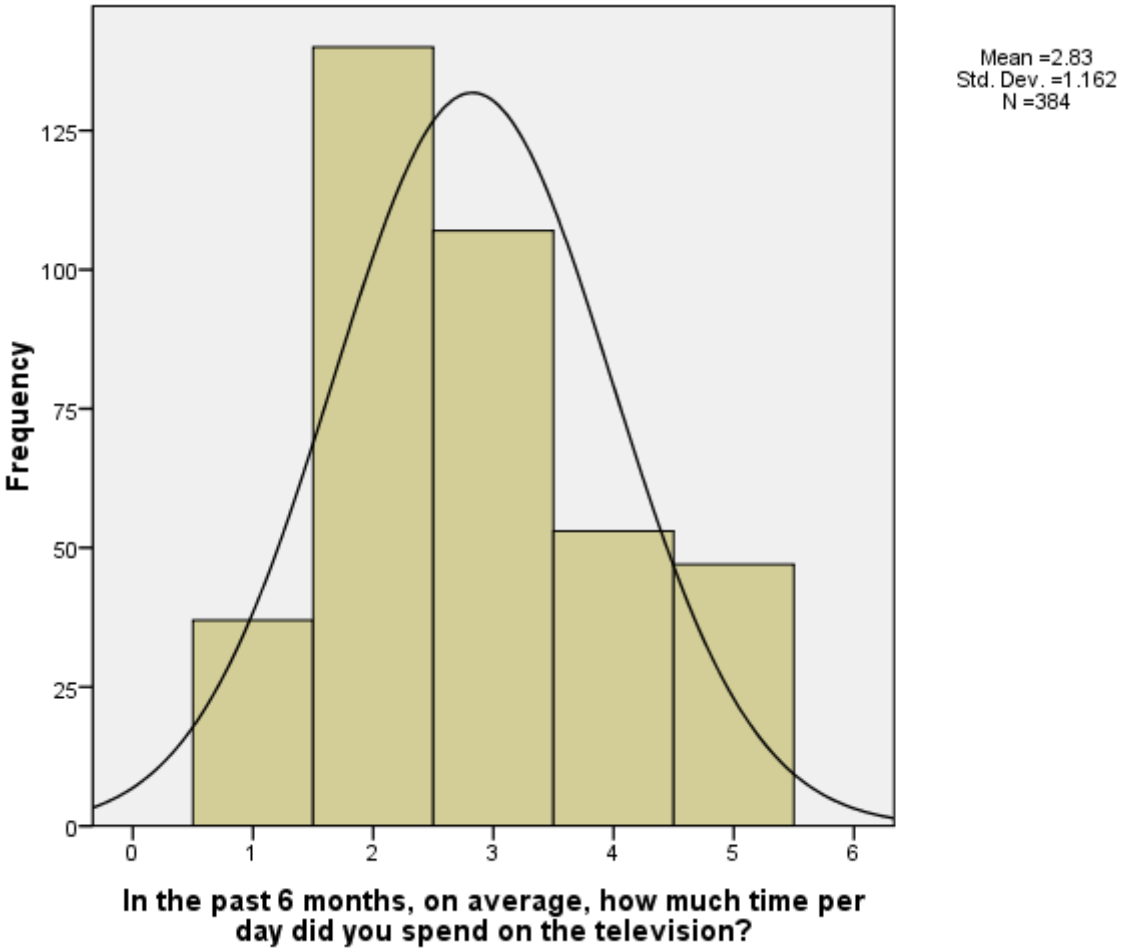
Thank you.

Pauline Adhiambo

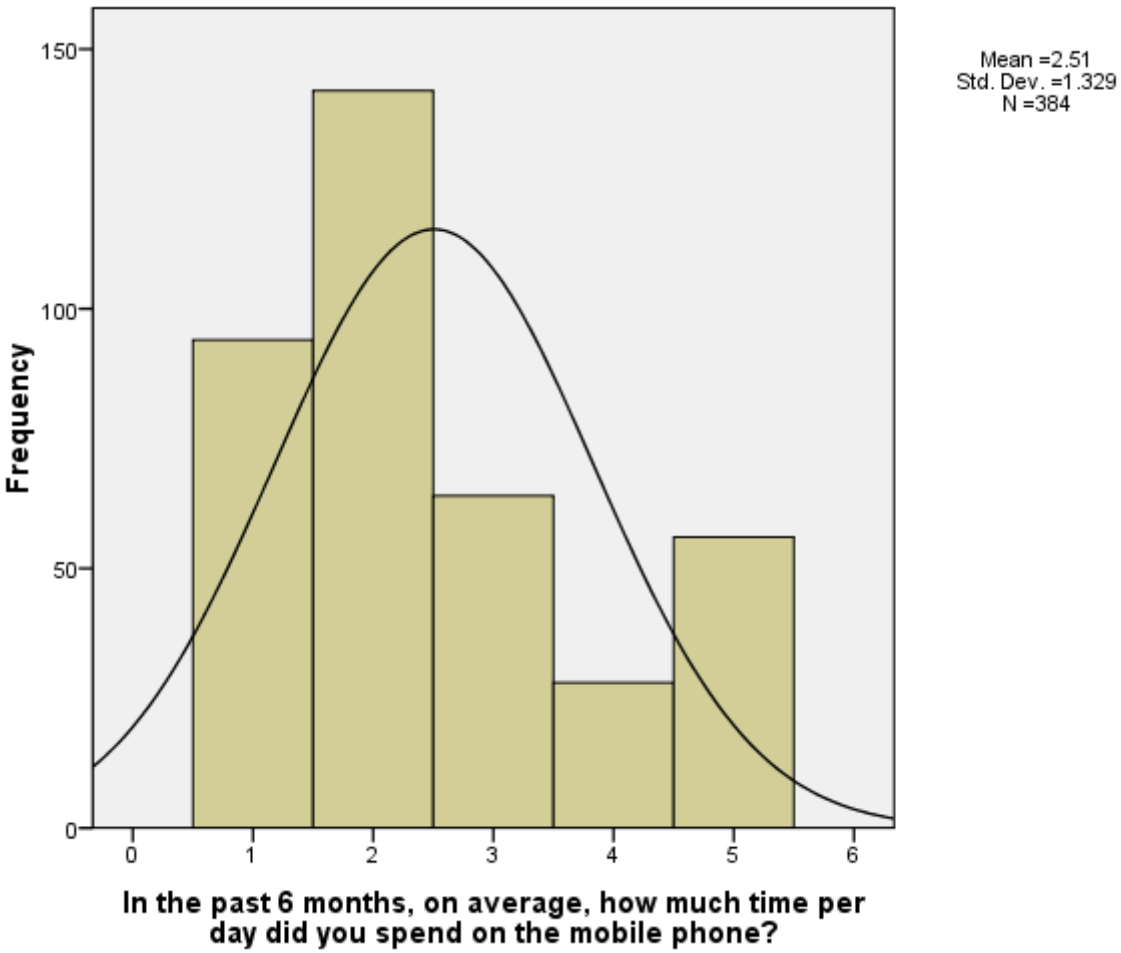
Appendix V: Histogram for Distribution of Level of Access to Radio



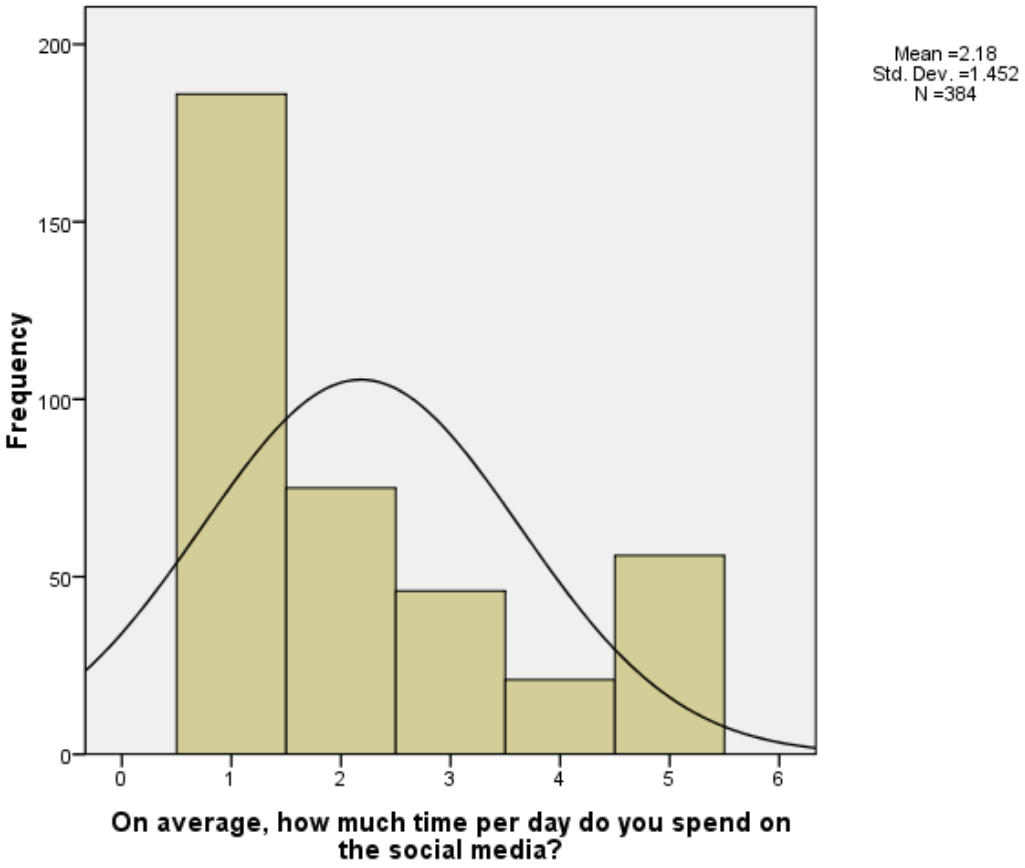
Appendix W: Histogram for Distribution of Level of Access to Television



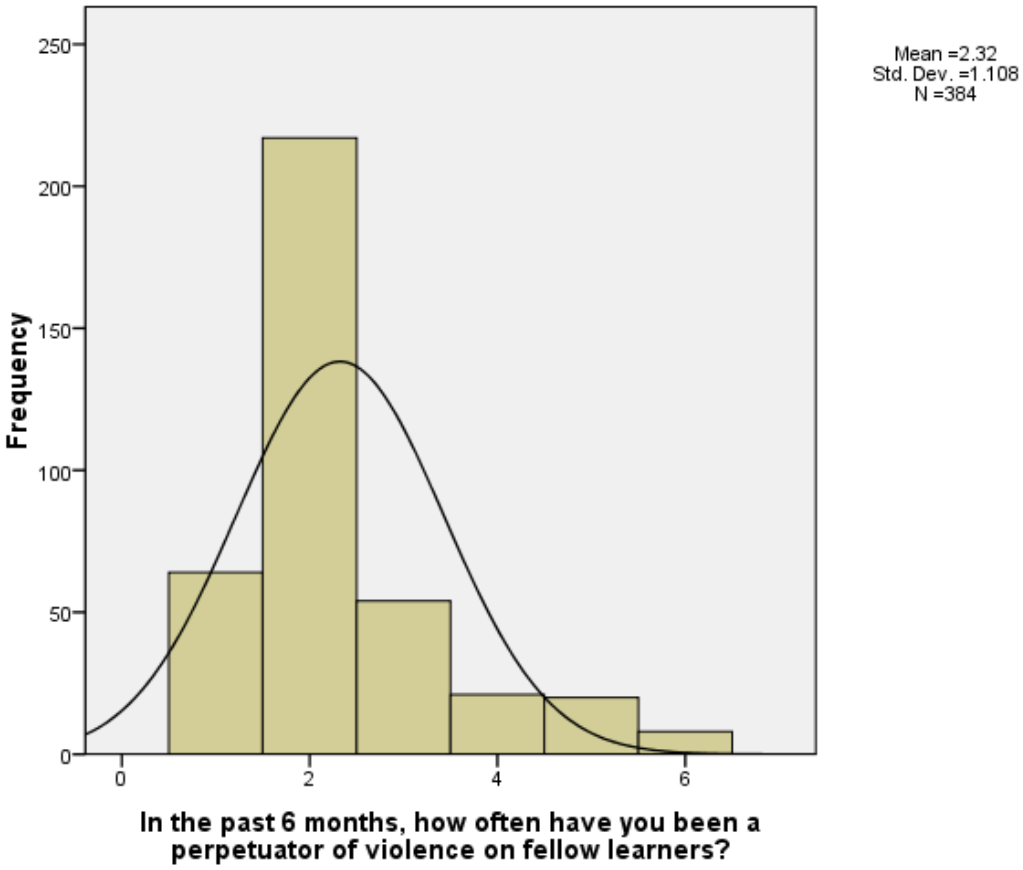
Appendix X: Histogram for Distribution of Level of Access to Mobile Phone



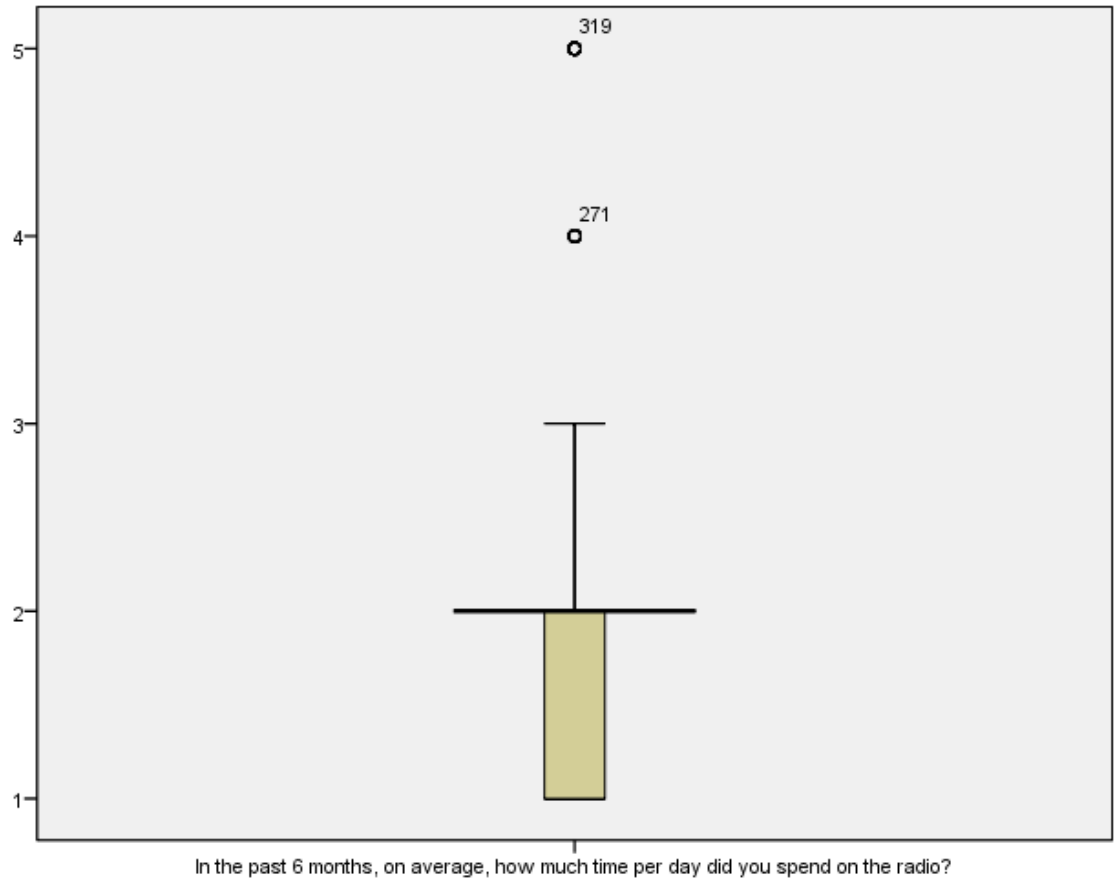
Appendix Y: Histogram for Distribution of Level of Access to Social Media



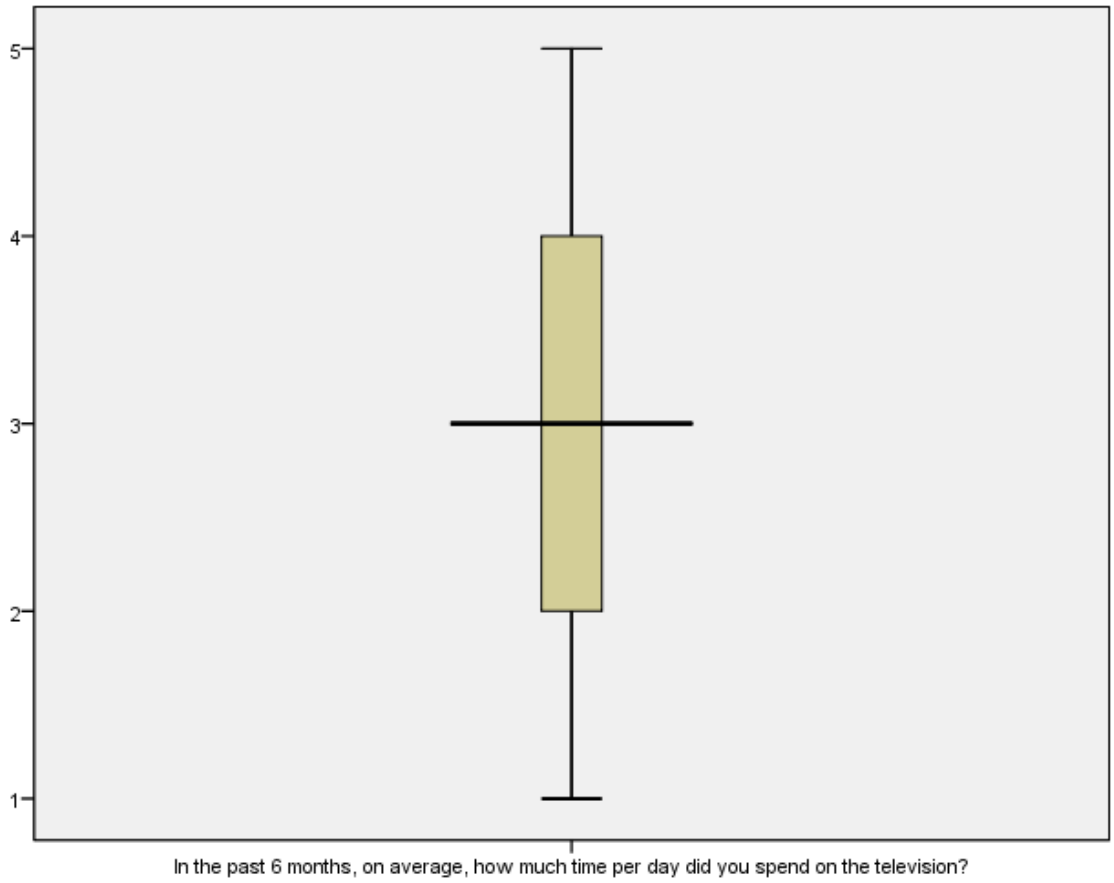
Appendix Z: Histogram for Distribution of Levels of Aggression



Appendix AA: Boxplot for Level of Access to Radio



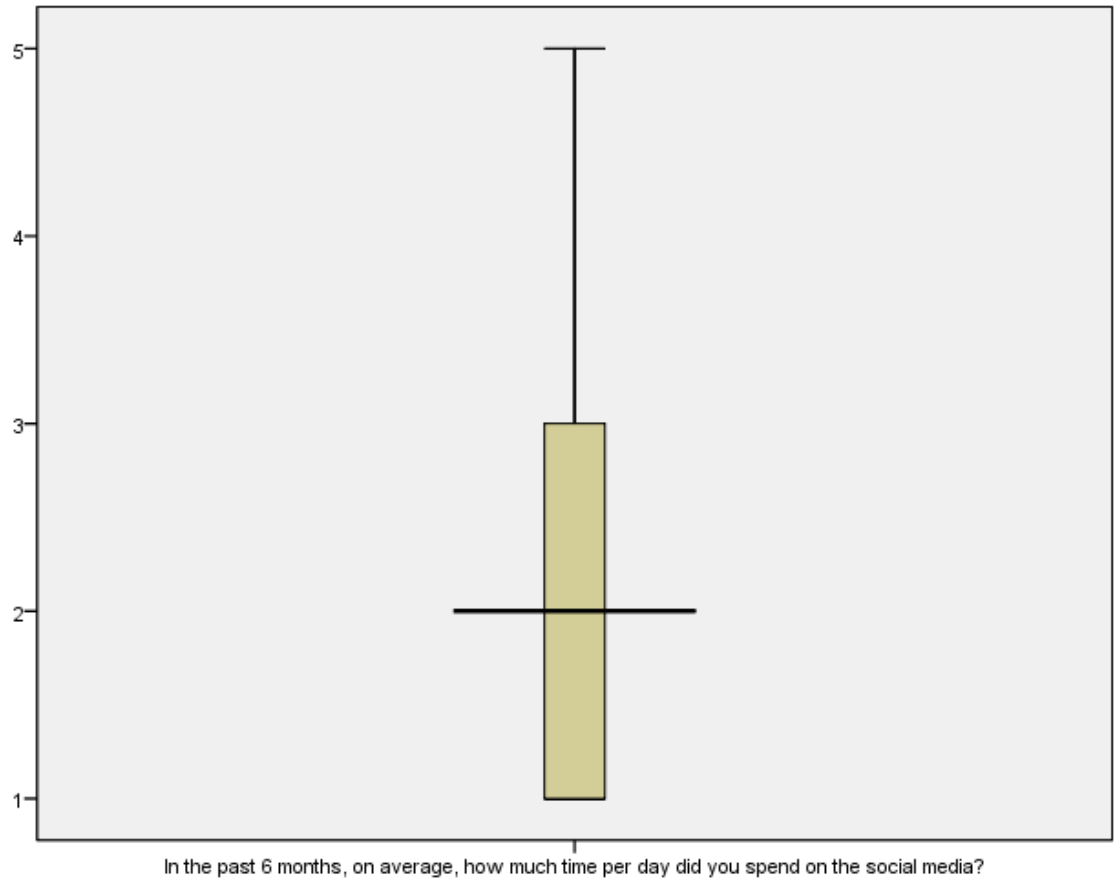
Appendix AB: Boxplot for Level of Access to Television



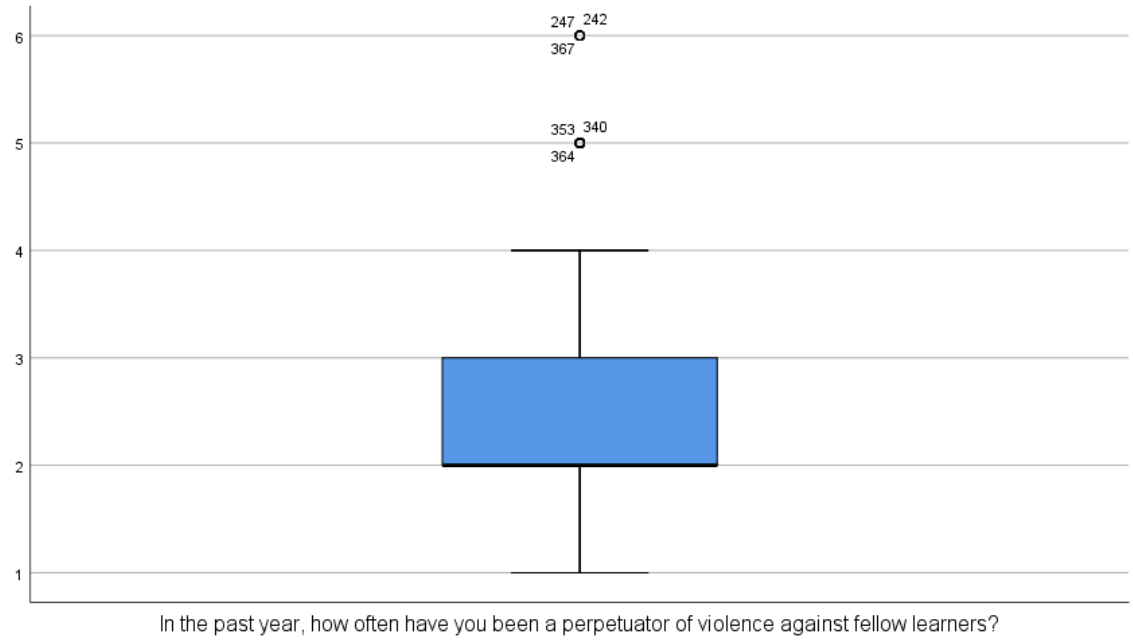
Appendix AC: Boxplot for Level of Access to Mobile Phone



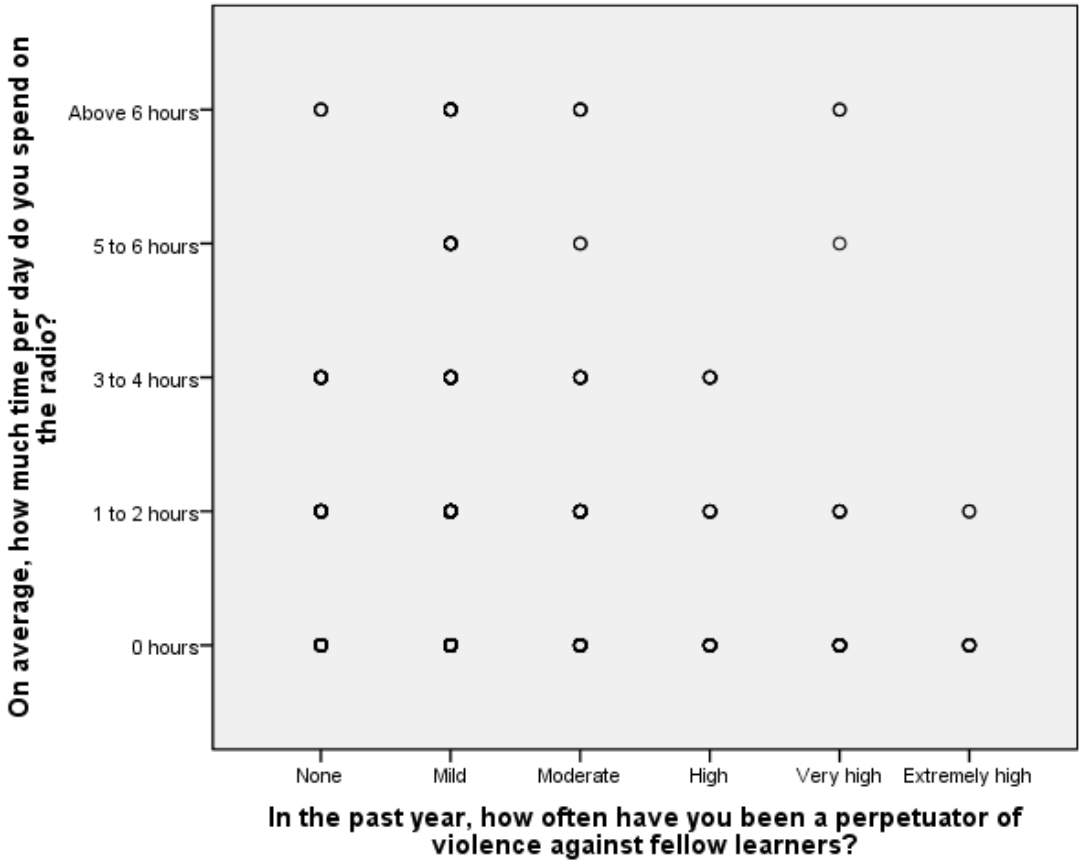
Appendix AD: Boxplot for Level of Access to Social Media



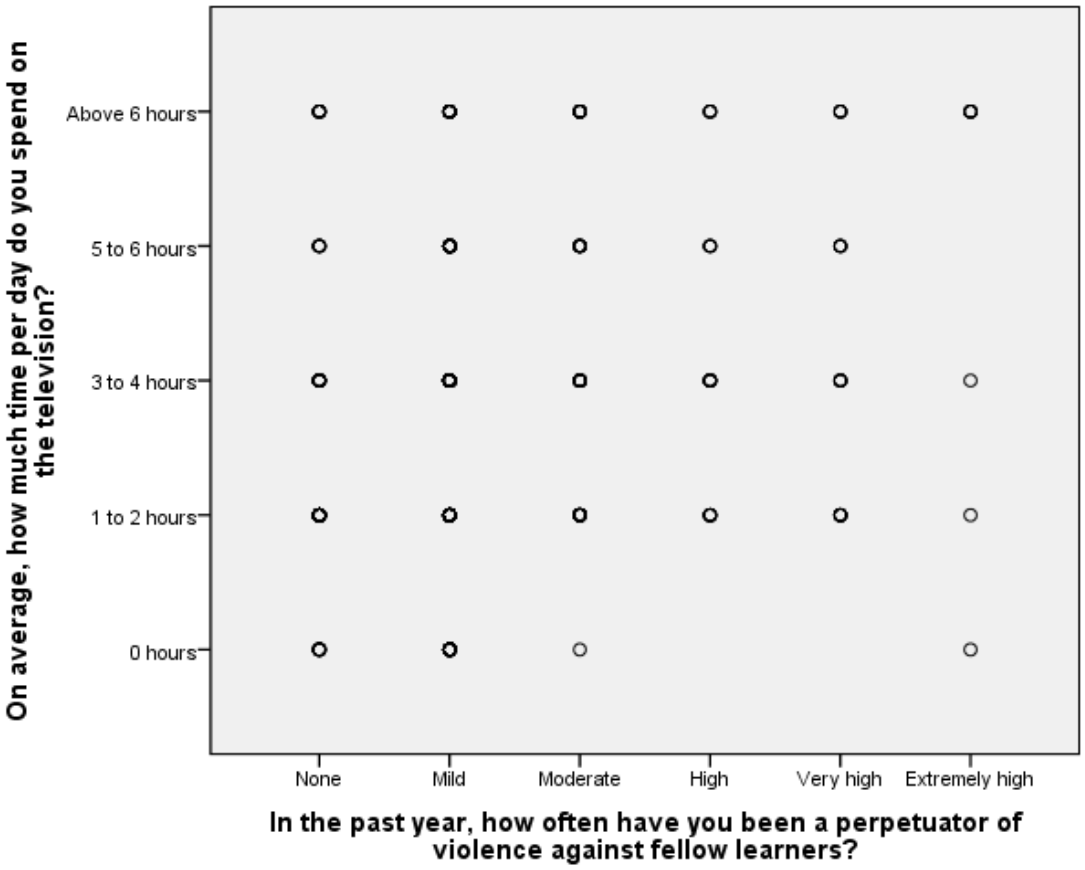
Appendix AE: Boxplot for Levels of Aggression



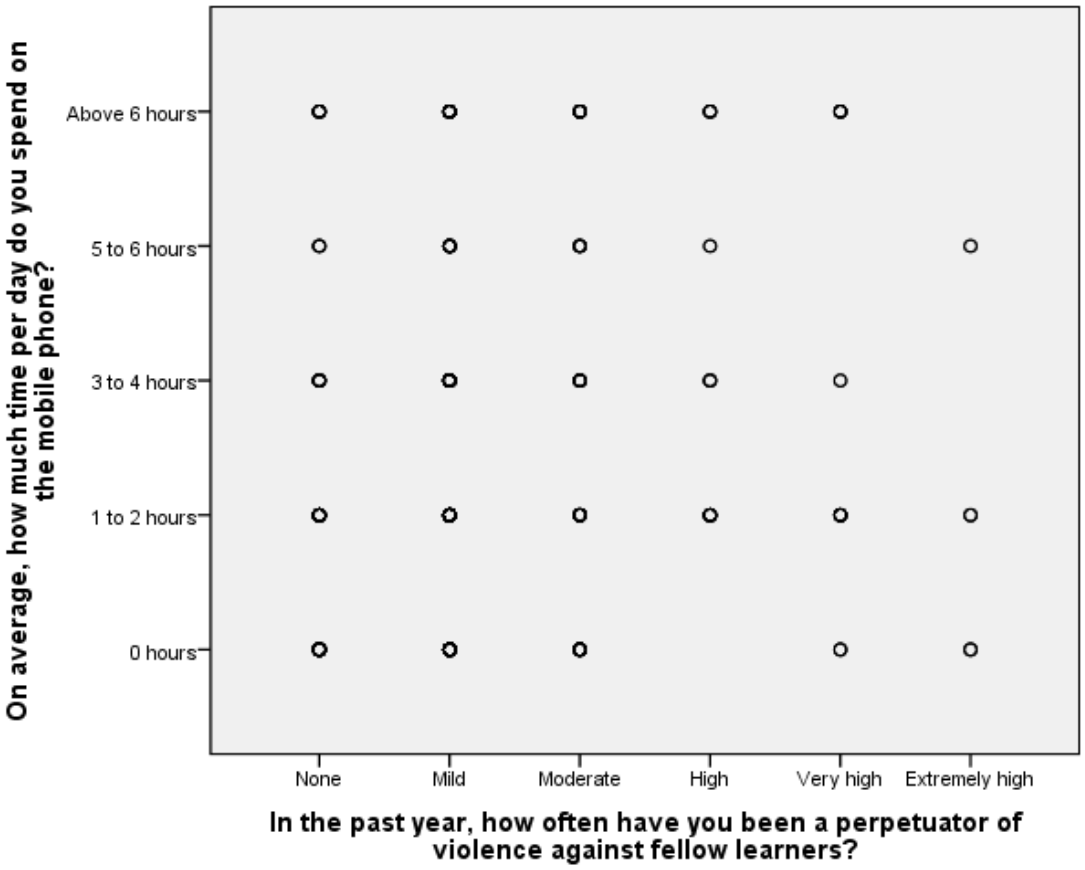
Appendix AF: Scatterplot for Access to Radio by Level of Aggression



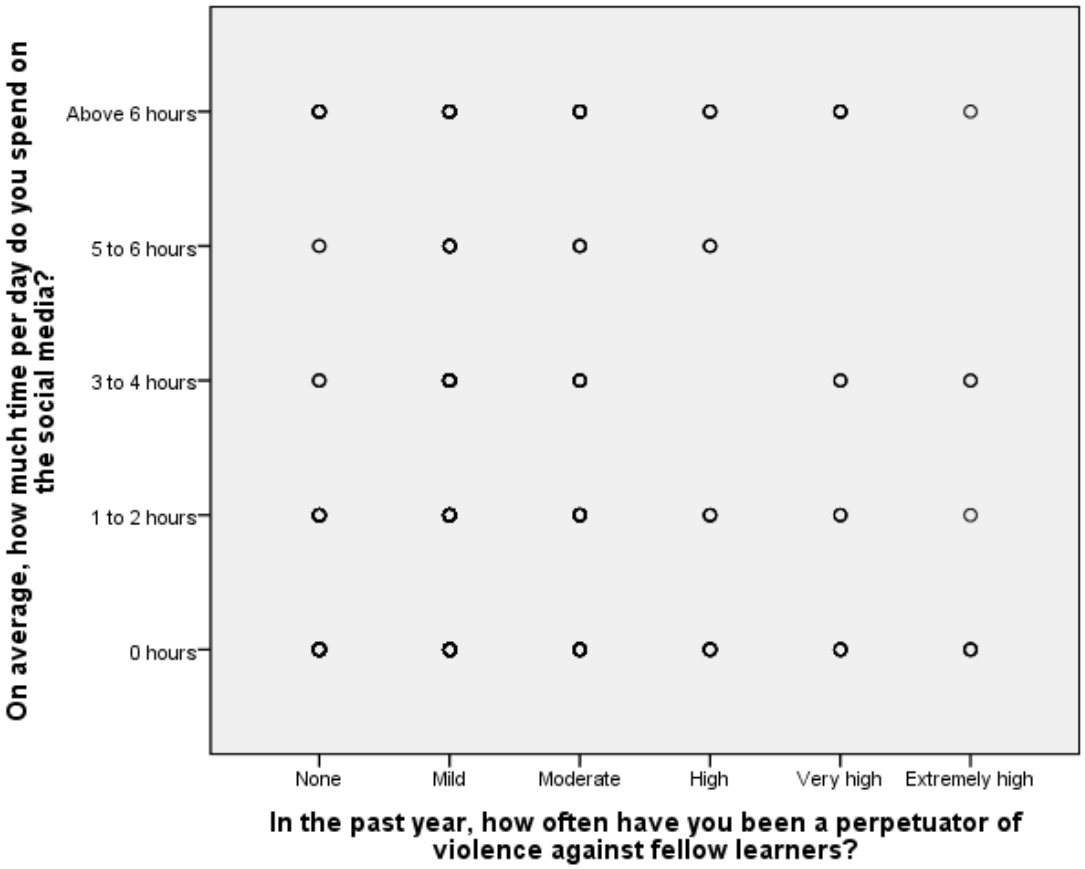
Appendix AG: Scatterplot for Access to Television by Level of Aggression



Appendix AH: Scatterplot for Access to Mobile Phone by Level of Aggression



Appendix AI: Scatterplot for Access to Social Media by Level of Aggression



Appendix AJ: Correlation Coefficients for Access to Radio, Television, Mobile Phone, Social Media and Levels of Aggression

c

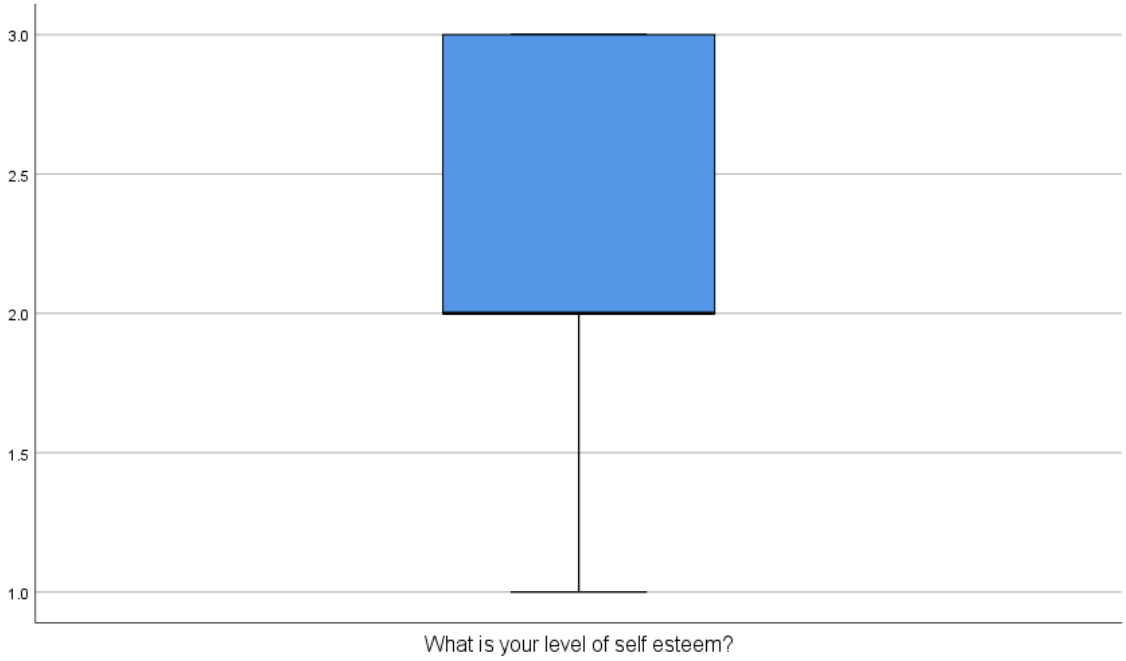
			On average, how much time per day do you spend on the radio?	On average, how much time per day do you spend on the television?	On average, how much time per day do you spend on the mobile phone?	On average, how much time per day do you spend on the social media?	In the past year, how often have you been a perpetuator of violence against fellow students?
Spearman's rho	On average, how much time per day do you spend on the radio?	Correlation Coefficient	1.000	.147**	.132**	.112*	-.058
		Sig. (2-tailed)	.	.004	.010	.028	.256
		N	384	384	384	384	384
	On average, how much time per day do you spend on the television?	Correlation Coefficient	.147**	1.000	.452**	.307**	.211**
		Sig. (2-tailed)	.004	.	.000	.000	.000
		N	384	384	384	384	384
	On average, how much time per day do you spend on the mobile phone?	Correlation Coefficient	.132**	.452**	1.000	.615**	.154**
		Sig. (2-tailed)	.010	.000	.	.000	.002
		N	384	384	384	384	384
	On average, how much time per day do you spend on the social media?	Correlation Coefficient	.112*	.307**	.615**	1.000	.137**
		Sig. (2-tailed)	.028	.000	.000	.	.007
		N	384	384	384	384	384
	In the past year, how often have you been a perpetuator of violence against fellow students?	Correlation Coefficient	-.058	.211**	.154**	.137**	1.000
		Sig. (2-tailed)	.256	.000	.002	.007	.
		N	384	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

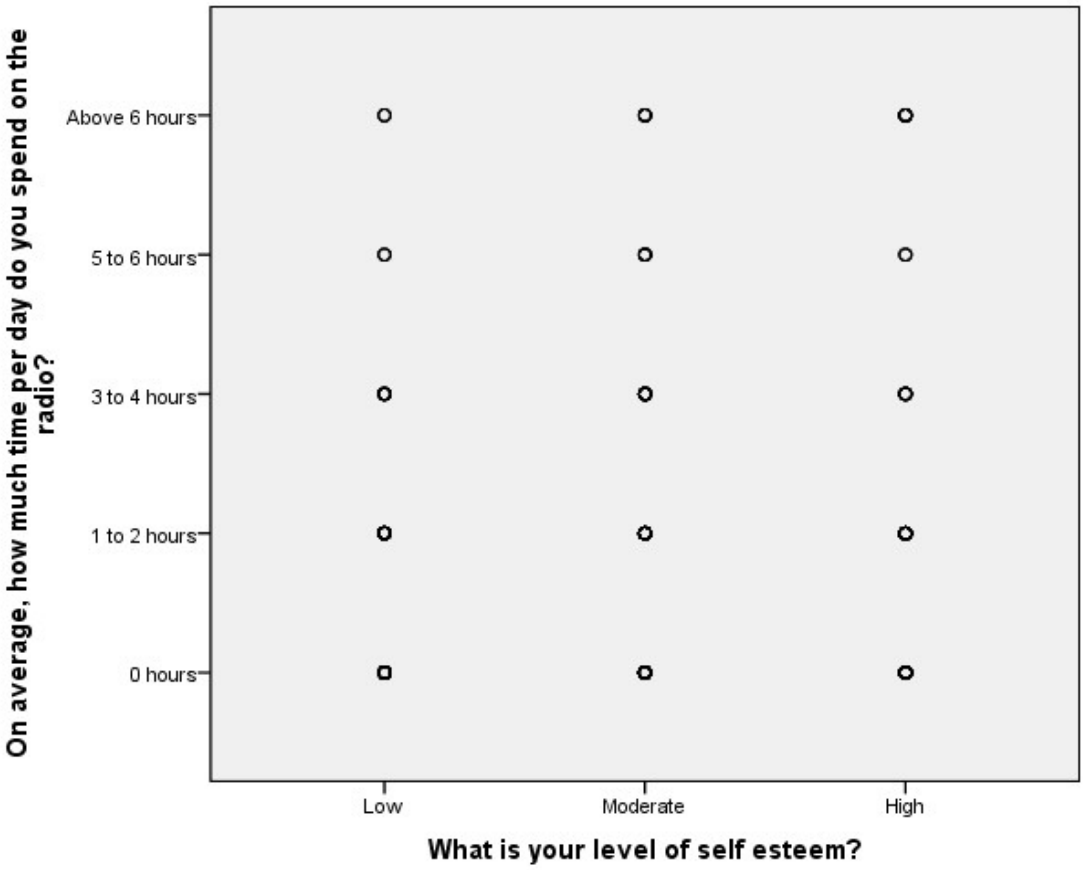
Appendix AK: Histogram for Distribution of Levels of Self-esteem



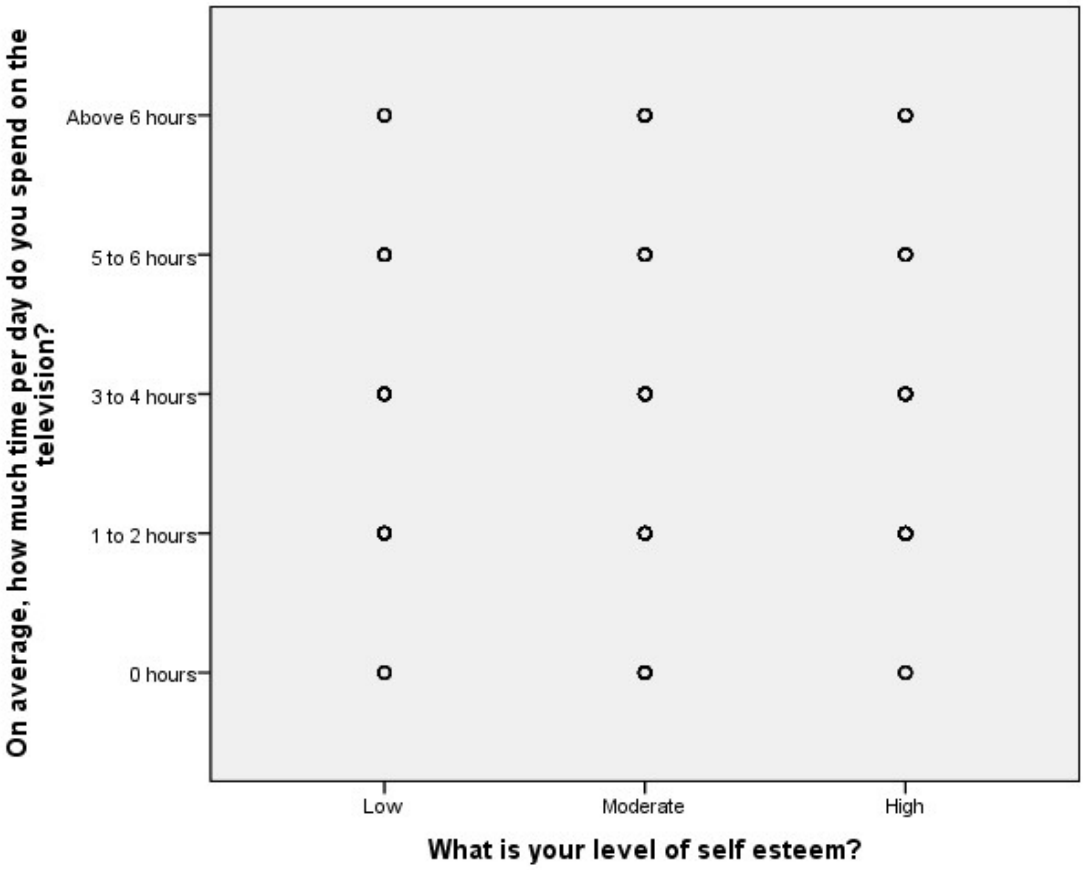
Appendix AL: Boxplot for Boxplot for Level of Self-esteem



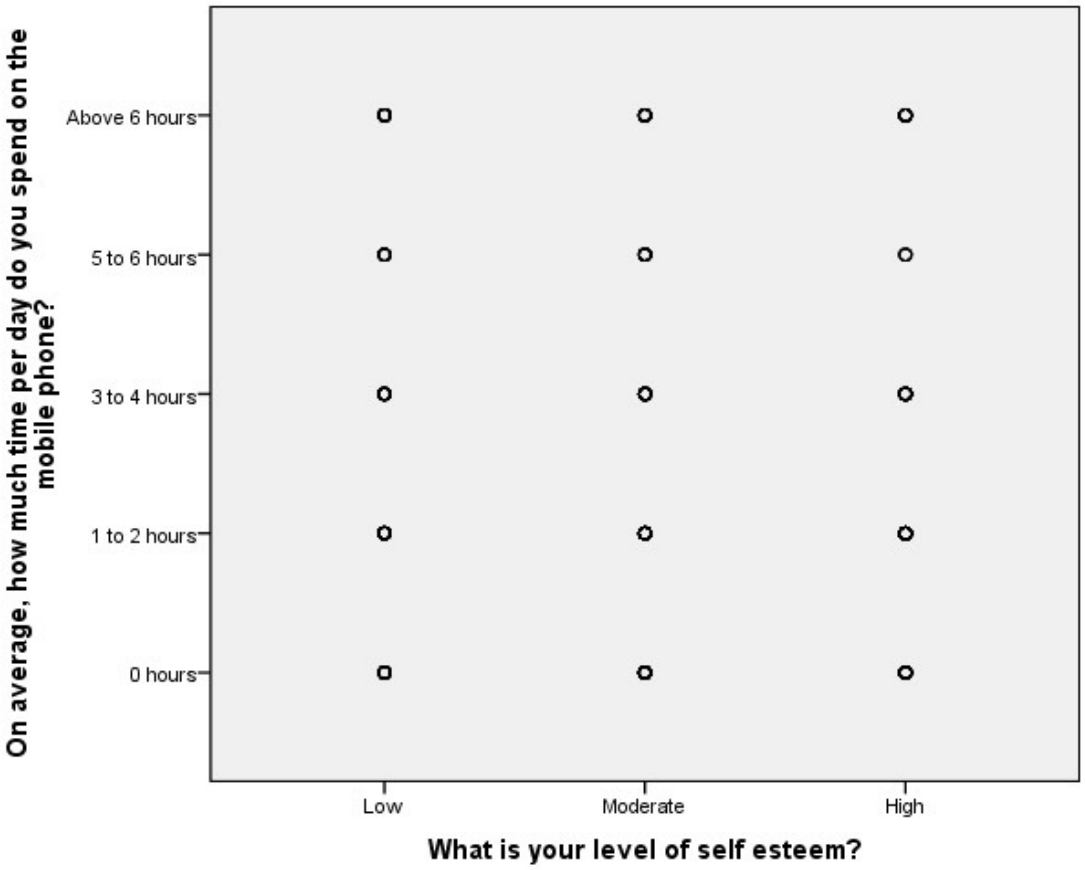
Appendix AM: Scatterplot for Access to Radio by Self-Esteem



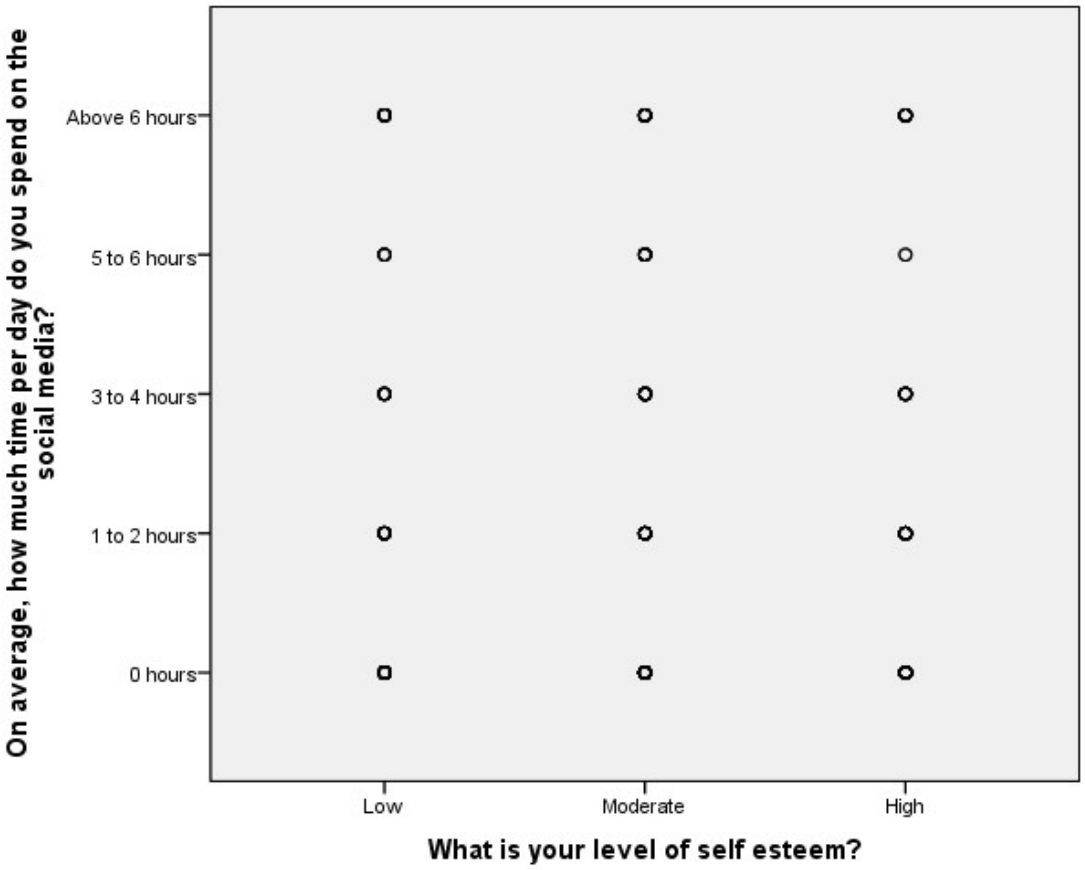
Appendix AN: Scatterplot for Access to Television by Self Esteem



Appendix AO: Scatterplot for Access to Mobile Phone by Self Esteem



Appendix AP: Scatterplot for Access to Social Media by Self Esteem



Appendix AQ: Correlation Coefficients for Access to Radio, Television, Mobile Phone, Social Media and Levels of Self-esteem

Correlations

			On average, how much time per day do you spend on the radio?	On average, how much time per day do you spend on the television?	On average, how much time per day do you spend on the mobile phone?	On average, how much time per day do you spend on the social media?	In the past year, how often have you been a perpetuator of violence against fellow students?
Spearman's rho	On average, how much time per day do you spend on the radio?	Correlation Coefficient	1.000	.147**	.132**	.112*	-.058
		Sig. (2-tailed)	.	.004	.010	.028	.256
		N	384	384	384	384	384
	On average, how much time per day do you spend on the television?	Correlation Coefficient	.147**	1.000	.452**	.307**	.211**
		Sig. (2-tailed)	.004	.	.000	.000	.000
		N	384	384	384	384	384
	On average, how much time per day do you spend on the mobile phone?	Correlation Coefficient	.132**	.452**	1.000	.615**	.154**
		Sig. (2-tailed)	.010	.000	.	.000	.002
		N	384	384	384	384	384
	On average, how much time per day do you spend on the social media?	Correlation Coefficient	.112*	.307**	.615**	1.000	.137**
		Sig. (2-tailed)	.028	.000	.000	.	.007
		N	384	384	384	384	384
	In the past year, how often have you been a perpetuator of violence against fellow students?	Correlation Coefficient	-.058	.211**	.154**	.137**	1.000
		Sig. (2-tailed)	.256	.000	.002	.007	.
		N	384	384	384	384	384

** Correlation is significant at the 0.01 level (2-tailed).