



The Big Five Personality as A Predictor of Involvement in Violence among Students in Secondary Schools in Nyando Sub-County, Kenya

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Doi: <https://doi.org/10.47285/hr.v2i2.101>

Citation: Omanyo A.O., Omae P.O. & Disiye M.A (2021). The Big Five Personality as A Predictor of Involvement in Violence among Students in Secondary Schools in Nyando Sub-County, Kenya. *Healthcare Review*, 2(1), 9-26. Doi: <https://doi.org/10.47285/hr.v2i2.101>

Research Article

Abstract

Involvement in violence among students is a common menace not only in Nyando Sub-county, Kenya but also in the whole world. Predicting involvement in violence based on the big five personalities could be useful in developing various personality-based interventions to involvement in violence. This prompted the present study to investigate both qualitative and quantitative Predictiveness of the big five personalities to involvement in violence. The convergent parallel mixed-method research design was used. Multistage random sampling was used to generate a sampling size of 418 students. Apart from the students, 26 teacher counselors and 26 deputy headteachers were also interviewed in order to triangulate the sources of information. Both self-report questionnaires and interview schedules were used to collect data. The results indicated that the big five personalities were significantly predictive of involvement in violence at 23.4% ($F(5, 391) = 26.886$ $p < 0.05$ and $R^2 = 0.23$). Hence other factors (apart from the big five personalities) predictive of involvement in violence which was qualitatively explored included: environmental factors, social factors, economic factors, familial factors, political factors, cultural factors, the psychosocial stages of development, exposure levels of a person, temperamental issues, modernism, and post-modernism. These other factors were assumed to predict involvement in violence at 76.6%. Therefore to minimize involvement in violence, more personality-based interventional measures should be applied.

Keywords: Extraversion; Conscientiousness; Openness; Agreeableness; Neuroticism; Violence

1. Introduction

Involvement in violence among students is a common menace not only in Nyando Sub-county, Kenya but also in the whole world as evident by different reviewed studies. According to Youth Risk Behavior Surveillance System, on top of the top six listed risky behaviors among young people in USA were behaviors that contribute to unintentional injuries and violence (CDC report, 2011).

Williams (2009) in Australia reported that 14.5% of boys and 3.1% of girls were involved in violent behavior while 8.8% of boys and 3.6% of girls were involved in antisocial behaviors. Reddy (2013) in South Africa reported that over 17% of young people carried weapons and 41% had been bullied, 14% belonged to gangs, and 10% had been forced to have sex. In Kenya specifically to the study area, according to Kenya inter-Agency Rapid Assessment report (2014), about three out of five children in Nyando sub-county (62% aged 2-14 years) were predisposed to different forms of violence and 31% abuse different forms of drugs. Inter-clan tension over political power was believed to be the source of violence. The sub-county also borders Nandi County and there had been a lot of border disputes and ethnic violence due to cattle rustling and struggle for resources (KIRA, 2014).

With regard to theoretical framework of personality, the present study adopted the Five-Factor personality model instead of the other famous models of personality because it provided one of the most elaborate explanations of personality since 1990s, with increasing evidence to support the big five traits (over other models) (Hirsh & Peterson, 2008). The Five-Factor model, which was advanced by Goldberg, Costa and Mc Crae in 1990s, classifies personality into openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Paunonen & Jackson, 2000). The broad dimension of extraversion encompasses such more specific traits as talkative, energetic, and assertive. Agreeableness includes traits like sympathetic, kind, and affectionate. Conscientiousness includes traits like organized, thorough, and planful. Neuroticism includes traits like tense, moody, and anxious. Openness to Experience includes traits like having wide interests, and being imaginative and insightful (Srivastava, 2016).

Predicting involvement in violence based on the big five personality could be useful in developing various personality based interventions to involvement in violence. This prompted the present study to investigate both qualitative and quantitative Predictiveness of the big five personality to involvement in violence. The following hypotheses were tested: **H₀** [null hypothesis]: The big five personality is not a significant regression predictor of the involvement in violence. **H_A** [alternative hypothesis]: The big five personality is a significant regression predictor of the involvement in violence.

2. Methods

The convergent parallel mixed method research design (Creswell, 2014) was used. A multistage random sampling was used to generate a sampling size of 418 students. A part from the students, 26 teacher counselors and 26 deputy head teachers were also interviewed in order to triangulate the sources of information. Both self-report questionnaires (of reliability coefficient 0.880) and interview schedules were used to collect data. The quantitative data was analyzed using frequencies, percentages, means, standard deviations and Pearson's correlation. On the other hand, qualitative data was analyzed through content analysis. The results were presented using tables and figures.

3. Results and Discussion

In this section the results of the study were discussed based on the four major sub-headings: response rates, demographic characteristics, distribution of responses on personality scales, distribution of responses on the violence scales, qualitative Predictiveness of personality to violence, the multiple regression analysis results and other factors predictive of violence.

3.1. Respondents' Response Rates

The respondents' response rates (students = 94.98%, teacher counselors = 80.77%, deputy head teachers = 84.62%) for the study were sufficient in that they were far above the 50% bench-mark

rate proposed by US Government Accountability Office (2017). This high response rate enhanced the validity and reliability of the study.

Table 1: Respondents' Response Rate Summary

Disposition of Sampled Elements	Eligible Sampled Elements	Usable Responses	Response Rate
Students	418	397	94.98%
Teacher Counselors	26	21	80.77%
Deputy Head Teachers	26	22	84.62%
Questionnaire Items	40,128	38,112	94.98%

3.2. Respondents' Demographic Characteristics

In this study, several demographic characteristics of students, teacher counselors and deputy head teachers were considered. Table 2 clearly arrayed the demographic characteristics of the respondents.

Table 2: Demographic Characteristics of Respondents

Demographic Characteristics	Response Categories		
	Students	Teacher Counselors	Deputy Head Teachers
Age Brackets (students)	Below 15yrs	18 (5%)	
	15 – 18yrs	300 (76%)	
	Above 18yrs	79 (20%)	
Gender	Male	188 (47%)	9 (43%)
	Female	209 (53%)	12 (55%)
Class Form	Form 1	118 (30%)	
	Form 2	80 (20%)	
	Form 3	99 (25%)	
	Form 4	100 (25%)	
Income Status of students' family	Low	67 (17%)	
	Medium	319 (80%)	
	High	11 (3%)	
Parenting background of students	Single parenthood	84 (21%)	
	Divorced/separated	11 (3%)	
	Orphaned	21 (5%)	
	Living with both parents	281 (71%)	
School type	Mixed	157 (40%)	7 (33%)
	Boys	114 (29%)	7 (32%)
	Girls	126 (31%)	7 (32%)
Years of service	Below 5yrs	3 (14%)	0 (0%)
	Above 5yrs	18 (86%)	22 (100%)
Experience in Counseling	Below 5yrs	5 (24%)	2 (9%)
	Above 5yrs	16 (76%)	20 (91%)
Total		397	21

Majority of the students were in age bracket 15 – 18yrs (76%) while few in age brackets below 15yrs (5%) and above 18yrs (20%). This data was typical of high school age bracket in Kenya. The study was gender balanced for students (Male = 47%, Female = 53%), teacher counselors (Male = 43%, Female = 57%) and deputy head teachers (Male = 55%, 45%). The respondents were evenly distributed across the classes (Form 1 = 30%, Form 2 = 20%, Form 3 = 25%, Form 4 = 25%). This implied that the views of the students were reported across all classes. The income status of the students' families was most frequent at medium income (80%), but least for low income (17%) and high income (3%). Considering the parenting background of students, the students living with both parents were the most frequent in the study (71%) followed by single parenthood (21%) then

orphaned (5%) and divorced/separated (3%). The school type was evenly distributed (Mixed = 40%, Boys = 29%, Girls = 31%). This implied that response was sought across all schools. Most teacher counselors (86%) and deputy head teachers (100%) had adequate years of service suitable for participating in the study. Their experiences in guidance and counseling was also adequate (Teacher counselors = 76%, Deputy Head teachers = 91%) for the study. Therefore, these demographic characteristics set a strong and reliable basis for generalization of the findings to such population as documented by Connelly (2013).

3.3. Distribution of Response on the Big Five Personality Scales

This section entitled “distribution of the big five personality” described the frequency distribution of the responses on various scales of the big five personality. This section also described the assessment of normality for such distribution as a prerequisite for all parametric tests.

3.3.1. Distribution of Openness

Openness to experience is one of the big five personality which sometimes is called Intellect or Intellect/Imagination. It includes traits like having wide interests, and being imaginative and insightful (Srivastava, 2016). The table 3 provided a frequency distribution of the responses on the 10 scales used in determining the levels of openness among the respondents.

Table 3: Frequency Distribution of Responses on the Openness scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I have a rich vocabulary and need a creative outlet.	33 (8%)	62 (16%)	94 (24%)	159 (40%)	49 (12%)	3.32	1.132
2. I have a vivid imagination and I'm inventive	33 (8%)	47 (12%)	86 (22%)	166 (42%)	65 (16%)	3.46	1.147
3. I have excellent ideas and see beauty in things that others might not notice.	24 (6%)	26 (7%)	63 (16%)	183 (46%)	101 (25%)	3.78	1.084
4. I am quick to understand things and a deep thinker	20 (5%)	32 (8%)	61 (15%)	186 (50%)	98 (25%)	3.78	1.064
5. I use difficult words and I'm curious about many different things	35 (9%)	94 (24%)	79 (20%)	125 (32%)	64 (16%)	3.22	1.226
6. I spend time reflecting on things.	33 (8%)	55 (14%)	46 (12%)	189 (48%)	74 (19%)	3.54	1.183
7. I am full of ideas and formulate them clearly	21 (5%)	37 (9%)	64 (16%)	208 (52%)	67 (17%)	3.66	1.033
8. I can handle a lot of information.	28 (7%)	35 (9%)	64 (16%)	204 (51%)	66 (17%)	3.62	1.082
9. I like to solve complex problems and open to new experiences/ideas	26 (7%)	30 (8%)	62 (16%)	191 (48%)	88 (22%)	3.72	1.092
10. I always think quickly, original and comes up with new ideas	27 (7%)	28 (7%)	59 (15%)	204 (51%)	79 (20%)	3.71	1.076

The highest means were 3.78 (SD = 1.084) and 3.78 (SD = 1.064) which resulted from the response on the statements “I have excellent ideas and see beauty in things that others might not notice” and “I am quick to understand things and a deep thinker” respectively. While the lowest mean 3.22 (SD = 1.226) resulted from the response on the statement “I use difficult words and I'm curious about many different things”. Though the means (3.32, 3.46, 3.78, 3.22, 3.54, 3.66, 3.62, 3.72, and 3.71) slightly differed from each other, the standard deviations of the responses did not differ much. This indicated same spread-outedness from the means across all the statement. And since

the standard deviations were low, it was therefore clear that most responses on the statements were close to the mean responses on this scale.

From the standard deviation, the normality of the distribution was not clear hence a pictorial view of normality was then assessed graphically by the normal Q-Q plot as displayed in figure 1.

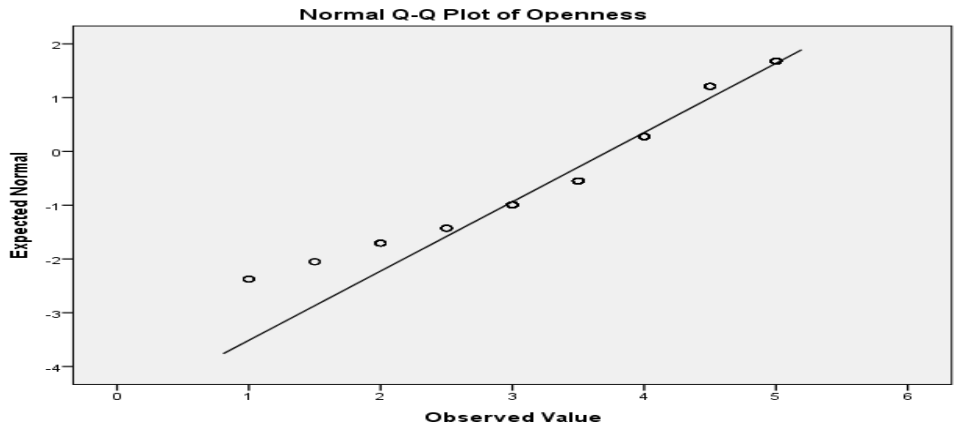


Figure 1: Normal Q-Q plot for assessing normality of Openness

The plotted points in figure 1 were tending to be closer to the line. This depicted a near normal distribution. This justified the used of parametric tests in analysis of the data related to openness (Marshall & Samuels, 2020).

3.3.2. Distribution of Conscientiousness

Conscientiousness is one of the big five personality defined by the traits like organized, thorough, and playful (Srivastava, 2016). The table 4 provided a frequency distribution of the responses on the 10 scales used in determining the levels of Conscientiousness among the respondents.

Table 4: Frequency Distribution of Responses on the Conscientiousness scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I have tendency to think things through before acting or speaking.	27 (7%)	28 (7%)	31 (8%)	182 (46%)	129 (31%)	3.90	1.136
2. I pay attention to details.	20 (5%)	15 (4%)	25 (6%)	209 (53%)	128 (32%)	4.03	0.996
3. I like seeing that rules are observed.	23 (6%)	10 (3%)	29 (7%)	204 (52%)	131 (33%)	4.03	1.013
4. I like order and self-discipline	25 (6%)	7 (2%)	13 (3%)	88 (48%)	164 (41%)	4.16	1.030
5. I like following a schedule and want every detail taken care of.	21 (5%)	20 (5%)	36 (9%)	204 (51%)	116 (29%)	3.94	1.029
6. I always makes plans and follows through with them	22 (6%)	24 (6%)	40 (10%)	215 (54%)	96 (24%)	3.85	1.032
7. I get things done quickly and perseveres until the task is finished	30 (8%)	40 (10%)	53 (13%)	199 (50%)	75 (19%)	3.63	1.127
8. I always know what I am doing.	23 (6%)	22 (6%)	37 (9%)	200 (50%)	114 (29%)	3.91	1.059
9. I keep things tidy and does a thorough job	38 (10%)	39 (10%)	44 (11%)	157 (40%)	119 (30%)	3.71	1.258
10. I always want everything to be "just right."	27 (7%)	17 (4%)	22 (6%)	178 (45%)	153 (39%)	4.04	1.107

The statement “I like order and self-discipline” attracted 164 responses at the highest mean response of 4.16 (SD = 1.030) while the statement “I get things done quickly and perseveres until the task is finished” obtained the lowest mean response at 3.63 (SD = 1.127). The standard deviations of 1.030 and 1.127 indicated that the mean of 4.16 was closer to the overall mean than that of 3.63. Therefore, the statement “I like order and self-discipline” determined conscientiousness more than the statement “I get things done quickly and perseveres until the task is finished”.

Generally speaking, the means, (3.90, 4.03, 4.16, 3.94, 3.85, 3.63, 3.91, 3.71 and 4.04) if rounded off will form a whole number 4 which is equivalent to agree (A) hence most respondents agreed to the statements on this scale. Most of the standard deviations were nearly equal, an indication of a uniform flow of responses from the mean.

The nearly equal standard deviations only showed the uniform spread-outedness of the responses on conscientiousness from the means, but the normality of the distribution of responses on this scale of conscientiousness was not clear hence a pictorial view of the normality of the distribution was then assessed graphically by generating the normal Q-Q plot as displayed in figure 2.

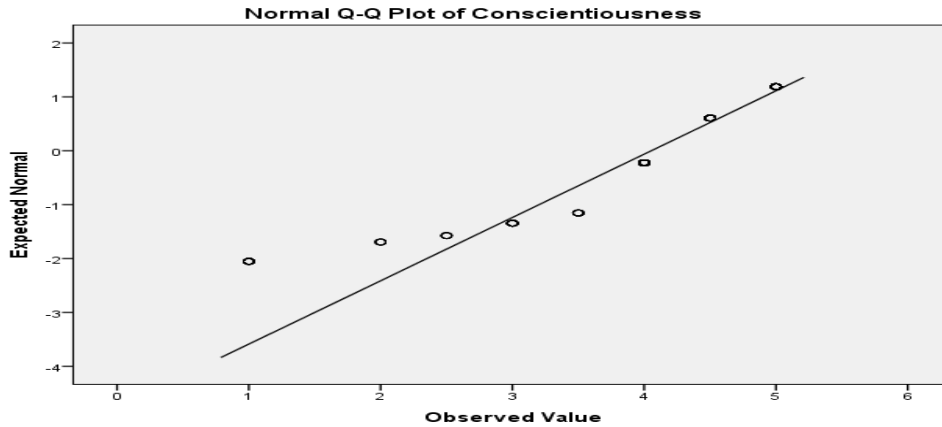


Figure 2: Normal Q-Q plot for assessing normality of Conscientiousness

The plotted points in figure 2 were tending to be closer to the line, except for the point (1,-2) which appeared some distance away. This depicted a near normal distribution because only one point was far away from the line. The point (1,-2) may have appeared that way because of inconsistency of responses among the respondents. This justified the use of parametric tests in analysis of the data related to conscientiousness (Marshall & Samuels, 2020).

3.3.3. Distribution of Extraversion

Extraversion, a part of the big five personality also sometimes called Surgency has broad dimensions of traits. The broad dimension of extraversion encompasses such more specific traits as talkative, energetic, and assertive (Srivastava, 2016). In this study, extraversion was determined by 10 statements as described on the response scale distribution of table 5.

The statement “I feel comfortable around people” recorded the highest mean response at 3.70 (SD = 1.087) while the statement “I am always the first to act” recorded the lowest mean response at 2.71 (SD = 1.278). The statement “I feel comfortable around people” was much closer to overall mean response than the statement “I am always the first to act” (by studying their standard deviations). This implied, the statement “I feel comfortable around people” defined extraversion

more than the other statements. This finding was congruent with the definition of extraversion by Srivastava (2016).

Table 5: Frequency Distribution of Responses on the Extraversion scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I feel comfortable around people.	34 (9%)	29 (7%)	19 (5%)	253 (64%)	61 (15%)	3.70	1.087
2. I always start conversations.	26 (7%)	105 (26%)	64 (16%)	162 (41%)	40 (10%)	3.21	1.138
3. I always talk to a lot of different people at parties.	62 (16%)	125 (32%)	32 (8%)	120 (30%)	58 (15%)	2.97	1.138
4. I don't mind being the center of attention.	71 (18%)	98 (25%)	66 (17%)	111 (28%)	51 (13%)	2.93	1.325
5. I make friends easily.	46 (12%)	71 (18%)	21 (5%)	180 (45%)	79 (20%)	3.44	1.304
6. I'm outgoing and sociable	50 (13%)	99 (25%)	64 (16%)	135 (34%)	49 (12%)	3.09	1.258
7. I prefer the company of others	93 (23%)	95 (23%)	50 (13%)	105 (26%)	53 (13%)	2.82	1.398
8. I can talk others into doing things	68 (17%)	92 (23%)	60 (15%)	124 (31%)	53 (13%)	3.01	1.330
9. I am always the first to act.	74 (19%)	136 (34%)	61 (15%)	85 (21%)	41 (10%)	2.71	1.278
10. I'm excitement seeking	41 (10%)	72 (18%)	49 (12%)	162 (41%)	73 (18%)	3.39	1.262

Analysis of the mean responses, (3.39, 2.71, 3.01, 2.82, 3.09, 3.44, 2.93, 2.97, 3.21 and 3.71) indicated responses at the mid-point of the scale (3). This implied that the distribution of the extraversion was a perfect normal distribution in the population. This results could be attributed to the fact that this scale was the first to be administered hence the participants were more accurate in reporting their feelings than on the other scales.

Analysis the standard deviations, (1.278, 1.262, 1.330, 1.398, 1.258, 1.304, 1.325, 1.138 and 1.087) depicted equal distance from the mean responses. This distribution was typical of a perfect normal distribution.

To further analyze the nature of the distribution, especially with regard to the test of normality of the distribution on the extraversion scale. The normal Q-Q plot was conducted using the explore function of the SPSS. The pictorial view of the result was as displayed in figure 3.

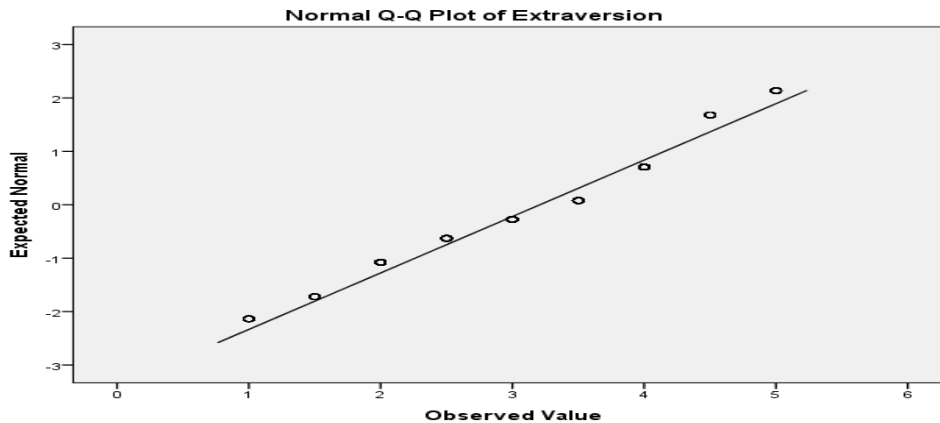


Figure 3: Normal Q-Q plot for assessing normality of Extraversion

The plotted points in figure 3 were all too close to the line. This depicted a perfect normal distribution because all points were touching the line. This justified the used of parametric tests in analysis of the data related to Extraversion (Marshall & Samuels, 2020).

3.3.4. Distribution of Agreeableness

Agreeableness as one of the big five personality is defined by traits like sympathetic, kindness, and affectionate (Srivastava, 2016). In this study, a group of 10 traits displayed on the scales as statements was used to determine Agreeableness. The response on the scale of agreeableness was as tabulated in table 6.

Table 6: Frequency Distribution of Responses on the Agreeableness scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I believe in the sincerity and good intentions of others	50 (15%)	46 (12%)	40 (10%)	170 (43%)	91 (23%)	3.52	1.304
2. I sympathize with others' feelings.	44 (11%)	44 (11%)	41 (10%)	169 (43%)	99 (25%)	3.59	1.277
3. I am helpful and unselfish with others	36 (9%)	26 (7%)	33 (8%)	164 (41%)	137 (35%)	3.86	1.222
4. I always take time out for others.	46 (12%)	86 (22%)	62 (16%)	150 (38%)	53 (13%)	3.20	1.298
5. I often feel others' emotions.	34 (9%)	61 (15%)	53 (13%)	175 (44%)	74 (19%)	3.49	1.203
6. I like Making people feel at ease.	20 (5%)	40 (10%)	54 (14%)	196 (50%)	87 (22%)	3.73	1.069
7. I always inquire about others' well-being.	32 (8%)	66 (17%)	48 (12%)	165 (42%)	86 (22%)	3.52	1.226
8. I take an interest in other people's lives.	104 (26%)	116 (29%)	50 (13%)	88 (22%)	39 (10%)	2.60	1.342
9. I like doing things for others.	56 (14%)	102 (26%)	52 (13%)	132 (33%)	55 (14%)	3.07	1.307
10. I rarely put people under pressure.	97 (24%)	80 (20%)	40 (10%)	119 (30%)	61 (15%)	2.92	1.446

The statement "I am helpful and unselfish with others" had the highest mean response at 3.86 ($SD = 1.222$) while the statement "I take an interest in other people's lives" had the lowest mean response at 2.60 ($SD = 1.342$). Though the means differed but the standard deviations were close. This implied the two statements were at almost equal intervals from the mean hence they were good indicators of agreeableness. Since the statements with the lowest and the highest mean were good indicators of agreeableness hence other statements were also considered good indicators of agreeableness. The statements on this scale actually described traits such as sympathetic, kindness, and affectionate which forms typical characteristics of agreeableness as reported by Srivastava (2016).

To further probe the standard deviations (ranging from 1.069 to 1.446), the variation among the statements were almost uniform as justified by the reliability statistics of the questions ($\alpha = 0.880$). To justify the use of parametric tests on the agreeableness scales, the normality of the distribution was assessed graphically by the use of Q-Q plots. The pictorial view of the distribution was displayed in figure 4.

Since the plots were trending towards the line, a near normality was depicted hence the application of the parametric test on the distribution of agreeableness was totally justified as reflected on the literature published by Marshall and Samuels (2020).

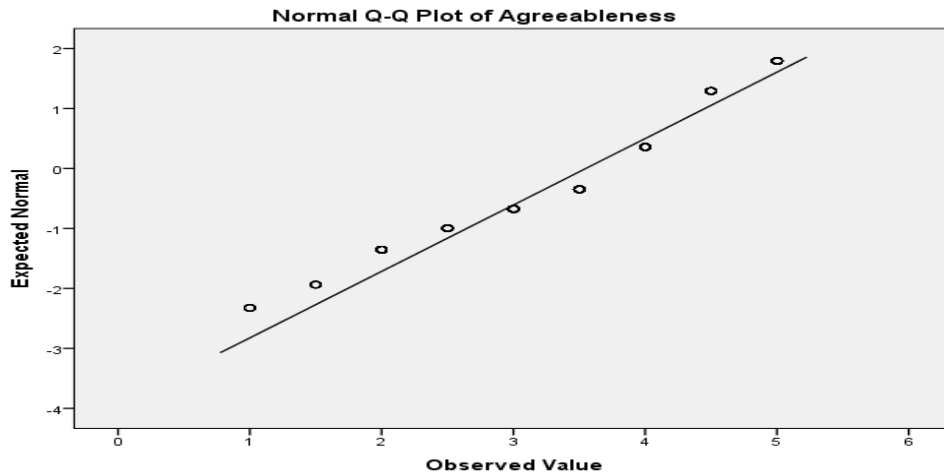


Figure 4: Normal Q-Q plot for assessing normality of Agreeableness

3.3.5. Distribution of Neuroticism

Neuroticism is a part of the big five personality which sometimes reversed and called Emotional Stability. It includes traits like tense, moody, and anxious (Srivastava, 2016). In this study neuroticism was determined by 10 statements rated on a five point Likert scale as tabulated in table 7.

Table 7: Frequency Distribution of Responses on the Neuroticism scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I get stressed out easily and feel threatened easily.	82 (21%)	86 (22%)	48 (12%)	108 (27%)	73 (18%)	3.01	1.434
2. I always worry about things.	40 (10%)	73 (18%)	48 (12%)	179 (45%)	57 (14%)	3.35	1.221
3. I am easily disturbed and can be tense	67 (17%)	111 (28%)	49 (12%)	101 (25%)	69 (17%)	2.98	1.382
4. I get upset easily and Am afraid of many things.	69 (17%)	104 (26%)	39 (10%)	124 (31%)	61 (15%)	3.01	1.374
5. I change my mood a lot and gets nervous easily	77 (19%)	100 (25%)	37 (9%)	127 (32%)	56 (14%)	2.96	1.384
6. I get irritated easily.	69 (17%)	109 (28%)	64 (16%)	96 (24%)	59 (15%)	2.92	1.343
7. I am filled with doubts about things	62 (16%)	117 (30%)	65 (16%)	105 (26%)	48 (12%)	2.90	1.289
8. I feel threatened easily.	92 (23%)	119 (30%)	57 (14%)	81 (20%)	48 (12%)	2.68	1.348
9. I am easily discouraged and become overwhelmed by events.	74 (19%)	106 (27%)	85 (21%)	82 (21%)	50 (13%)	2.82	1.302
10. I'm conscious about myself and feel a lot of impulsiveness	45 (11%)	86 (22%)	97 (24%)	122 (31%)	47 (12%)	3.10	1.202

The statement "I always worry about things" recorded the highest mean response at 3.35 (SD = 1.221) while the statement "I feel threatened easily" recorded the lowest mean response at 2.68 (SD = 1.348). Though the highest and the lowest mean responses on the two statements differed, their standard deviations were almost equal. This indicated a nearly equal distance between the scores on the two statements hence depicted a high inter-correlatedness of the statements at large. This formed a good basis for the proof of the previously determined reliability statistics of the questionnaire (0.880).

The standard deviations, (from 1.434 to 1.202) were nearly equal, depicting a distribution nearing the normal distribution. Though the standard deviations gave some light on the distribution, it could not test the normality of the distribution. The Q-Q plots was generated from the explore function of the SPSS in order to help in the assessment of normality of the distribution. The pictorial display of the normality was shown in figure 5.

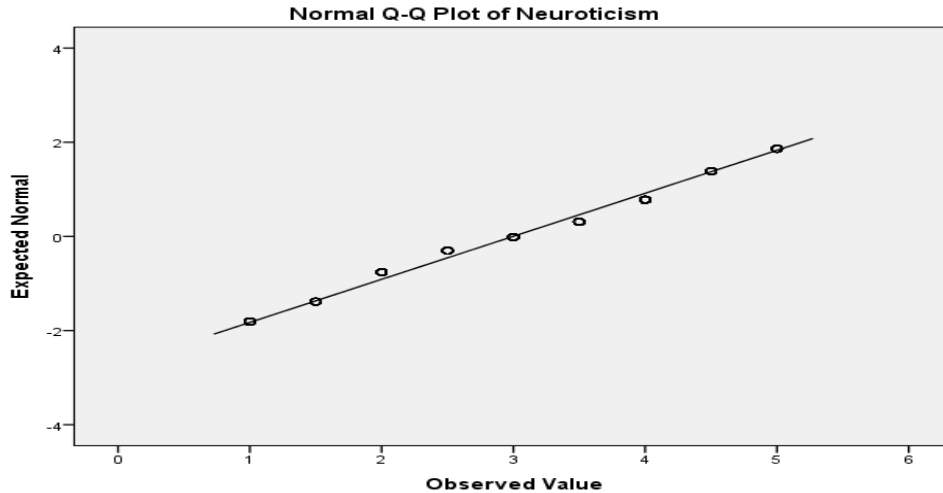


Figure 5: Normal Q-Q plot for assessing normality of Neuroticism.

The Q-Q plots for the distribution of neuroticism were joined to the line. This indicated a perfect normal distribution and a good justification for the use of parametric tests like Pearson's product moment correlation, regression analysis and ANOVA as depicted by the literature of Marshall and Samuels (2020).

3.4. Distribution of Response on the Violence Scale

Involvement in violence was determined by 10 statements rated on five point likert scale. The descriptive function of SPSS was used to generate a frequency distribution as tabulated in table 8.

Table 8: Frequency Distribution of Responses on the Involvement in violence scales

Statements	Scales (Frequencies and Percentages)					Statistics	
	SD	D	U	A	SA	Mean	St Dev.
1. I am not afraid to carry weapons for war	157 (40%)	80 (20%)	44 (11%)	62 (16%)	54 (14%)	2.44	1.473
2. Engaging in physical fight is my healthy way of solving disputes	208 (52%)	82 (21%)	35 (9%)	29 (7%)	43 (11%)	2.04	1.372
3. Destruction of property is the best way of demonstrating my grievances	194 (49%)	86 (22%)	53 (13%)	33 (8%)	31 (8%)	2.05	1.218
4. I like participating in violent political demos	198 (50%)	84 (21%)	56 (14%)	26 (7%)	32 (8%)	2.02	1.279
5. Engaging in violence is the best dispute resolution mechanism	213 (54%)	80 (20%)	43 (11%)	30 (8%)	31 (8%)	1.96	1.285
6. I like associating with peers who are violent	163 (41%)	96 (24%)	49 (12%)	53 (13%)	36 (9%)	2.25	1.351
7. Retaliation is the best way of quenching my anger	120 (30%)	97 (24%)	81 (20%)	60 (15%)	39 (10%)	2.50	1.323
8. I like destroying people's property even if not provoked	251 (63%)	76 (19%)	24 (6%)	15 (4%)	31 (8%)	1.74	1.217
9. I like seeing people suffer or cry	230 (58%)	89 (22%)	28 (7%)	16 (4%)	34 (9%)	1.83	1.248
10. Causing pain to someone is the best way of playing	230 (58%)	91 (23%)	25 (6%)	16 (4%)	35 (9%)	1.83	1.254

The statement “Retaliation is the best way of quenching my anger” recorded the highest mean response of 2.50 (SD = 1.323) while the statement “I like destroying people’s property even if not provoked” recorded the lowest mean response of 1.74 (SD = 1.217). The mean responses per statement differed greatly but the standard deviations are nearly equal. This indicated a constant variance within and between the statements. This depicted some correlatedness among the statements hence the statements formed a good basis for determining the involvement in violence.

The assessment of the normality of the distribution was done graphically by the use of the normal Q-Q plots. The explore function of the SPSS was used to generate the normal Q-Q plots as pictorially displayed in figure 6.

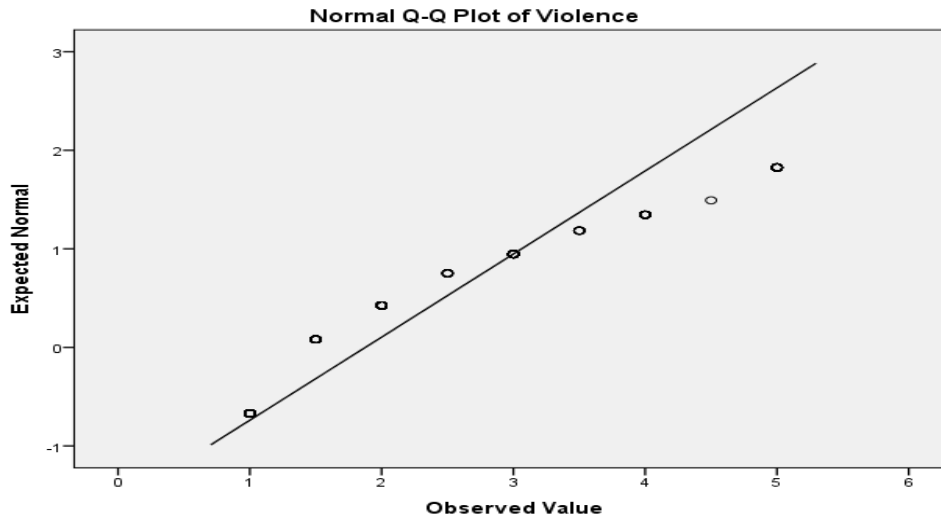


Figure 6: Normal Q-Q plot for assessing normality of Involvement in Violence.

The plots of co-ordinates (5, 2) and (4.5, 1.5) appeared far from the line, but the majority of the points were nearing the line. This depicted a moderate skewness. But still with such minimal skewness, the parametric tests can still be conducted upon transforming the variable. For the ease of analysis, the scales of risky behavior were transformed using the SPSS function transform to a single scale. This idea of transform was congruent to literature on statistics by Marshall and Samuels (2020).

3.5. Qualitative Predictiveness of the Big Five Personality to the involvement in Violence

The discussion of the findings on the qualitative Predictiveness of the big five personality to involvement in violence was obtained through answers sought by question three of the interview schedule: “How predictive are the big five personalities to the involvement in violence among young people in this school?”

The question was responded to by the teacher counselors as:

“The big five personality are predictive of the involvement in violence, but the percentage of predictive is difficult to estimate” [TC 1, 2, 3, 4, 5, 6, 8, 9, 14, 16, 18, 20].

“The extraversion, agreeableness, neuroticism, conscientiousness and openness are good at predicting the involvement in violence at different levels, though the levels of Predictiveness are not clear” [TC 7, 10, 11, 12, 13, 15, 17, 19].

The analysis of the above narratives revealed that the big five personality of extraversion, agreeableness, neuroticism, conscientiousness and openness were predictive of the involvement in violence. These findings were supported by Lahey (2010) who conducted research in Kenya on public health significance of neuroticism and reported that neuroticism is a robust correlate and

predictor of profound of much different health risks. Also by Olalekan (2014) who conducted research on personality, self-efficacy and health anxiety as predictors of health risk behavior among 202 scavengers in Ibadan, South Western Nigeria and reported that the conscientiousness, predicted personality safety of health risk. Neuroticism significantly predicted violence related behavior.

The deputy head teachers were also not left out. Instead they responded to the question as followed:

“Though the big five personalities are predictive of violence, quantifying the prediction is still a challenge” [DHT 1, 2, 3....18, 20].

“I can guess the probability of predictiveness for extraversion is greater than openness and conscientiousness, but for the rest I am not sure” [DHT19, 21, 22].

From the analysis of the above narratives, it was clear that establishing the Predictiveness of the big five personality to involvement in violence was not possible, especially based on qualitative data gathered. This gap was bridged by conducting a quantitative analysis of the research.

3.6. The Multiple Regression Analysis Results

The quantitative Predictiveness of the big five personality to the involvement in the selected risky behavior was determined by running multiple regression analysis in the SPSS. The following hypotheses were tested at 95% level of confidence: **H₀** [null hypothesis]: The big five personality is not a significant regression predictor of the involvement in violence. **H_A** [alternative hypothesis]: The big five personality is a significant regression predictor of the involvement in violence. The multiple regression analysis results were displayed in tables 9, 10 and 11.

Table 9: Model Summary for Violence

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.484 ^a	.234	.224	1.045
<i>a. Predictors: (Constant), Openness, Neuroticism, Extraversion, Conscientiousness, Agreeableness</i>				

Table 9 displayed the model summary of regression analysis for predicting the influence of the big five personality on the involvement in violence. The model 1 (Enter method of regression) was used in the analysis. The multiple correlation coefficient (R = 0.484) indicated a good quality of prediction of involvement in violence. The R square (R² = 0.234) was multiplied by 100 to obtain 23.4%. This indicated that the big five personality predicted involvement in violence at 23.4%. These findings were supported by those of (Chraif, Mihai, VladBurtăverde & Teodor, 2015) who reported that Emotional stability, agreeableness and conscientiousness predicted aggressive driving, which in turn predicted risky driving outcomes.

Table 10 displayed the ANOVA results for the significant prediction of the involvement in Violence by the big five personality. F-ratio in the ANOVA table tested whether the overall regression model was a good fit for the data. Since F (5, 391) = 26.886, then the regression model was a good fit for the data.

Table 10: ANOVA results for Violence

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.314	5	26.063	23.886	.000 ^b
	Residual	426.638	391	1.091		
	Total	556.952	396			
<i>a. Dependent Variable: Violence</i>						
<i>b. Predictors: (Constant), Openness, Neuroticism, Extraversion, Conscientiousness, Agreeableness</i>						

The significant level (0.000) was less than the set alpha of 0.05 and therefore, it was deduced that the big five personality statistically significantly predicted the involvement in violence, $F(5, 391) = 26.886, p < 0.05$. These findings were consistent with those of (Bischel, 2014) who reported that multiple regressions showed that personality was significant regression predictors of self-rated health, after controlling demography factors. Also a study by (Alvergne, 2010) reported that extraversion predicted higher testosterone levels in men.

Table 11: Coefficient Results for Violence

Model	Coefficients ^a						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	3.845	.366		10.494	.000	3.124	4.565
Extraversion	.248	.059	.198	4.216	.000	.133	.364
Agreeableness	-.103	.065	-.078	-1.587	.113	-.230	.025
Conscientiousness	-.545	.066	-.391	-8.233	.000	-.675	-.415
Neuroticism	.119	.050	.110	2.379	.018	.021	.218
Openness	-.148	.072	-.097	-2.044	.042	-.290	-.006

a. Dependent Variable: Violence

Table 11 displayed the coefficients (both un-standardized and standardized) of extraversion, agreeableness, conscientiousness, neuroticism and openness which indicated how much the involvement in violence varied with one of the big five personalities when the other big five personalities were held constant. The multiple regression analysis equation was as followed: $Violence = 3.845 + 0.248Extraversion - 0.103Agreeableness - 0.545Conscientiousness + 0.119Neuroticism - 0.148Openness$.

This equation was interpreted as followed: as the levels of extraversion and neuroticism rose among the participants, the levels of involvement in violence also rose significantly by 0.248 and 0.119 respectively. One the other hand, as the levels of agreeableness, conscientiousness and openness rose among the participants, the levels of involvement in violence significantly reduced by 0.103, 0.545 and 0.148 respectively.

Since significant levels of the coefficients were less than the set alpha of 0.05, except for agreeableness ($p > 0.05$), it was deduced that the coefficients were significantly different from zero, except for the agreeableness (in some instances).

The hypotheses H_0 and H_A were tested at 95% level of confidence with a margin error of 5%. Since the significant level in table 10 was significantly lower than 0.05, the null hypothesis H_0 was rejected hence the alternative hypothesis H_A was accepted: "The big five personality is a significant regression predictor of the involvement in violence". In conclusion, the quantitative multiple regression analysis did not only improve the initially analyzed qualitative predictions of the big five personality to involvement in violence, but also established the percentage predictions.

3.7. Other Factors Predictive of involvement in Violence

These other factors predictive of involvement in violence were sought for by answering the 8th question in the interview schedule: "Are there some factors apart from the big five personality which can influence involvement in violence?"

Ten teacher counselors reported the following:

"Yes, there are several factors that can contribute to involvement in violence among the learners. These factors include: environmental factors in ones' surrounding, exposure to media, culture and traditions, familial factors and peer influence" [TC 1, 2... 10].

Five teacher counselors reported the following:

"The factors influencing involvement in violence are peer pressure, economic factors, group psychology in terms of mob, family background, parenting styles and availability of risk factors" [TC 11, 12, 13, 14 and 21].

The other remaining six teacher counselors mentioned the factors responsible for the involvement in violence as:

"The factors influencing involvement in violence are: environmental factors like peer influence and media, prevailing traditions and culture like circumcision, economic factors like poverty levels and political factors like violent demos and riots" [TC 15, 16, 17, 18, 19 and 20].

Conducting the analysis of the interviews of the teacher counselors, it was summarized that the other factors, apart from the big five personality, predictive of involvement in violence included environmental factors, social factors, economic factors, familial factors, political factors and cultural factors.

The twenty two deputy head teachers reported the following factors:

"The factors influencing involvement in violence include: misuse of wealth, poverty, media, retrogressive cultures, family background, stages of development, punishment, lack of exposure, lack of proper guidance and counseling, temperamental issues, modernism, post-modernism, schooling and socio-economic status" [DHT 1, 2...22].

Analysis of the content of interviews of deputy head teachers gave similar factors influencing involvement in violence as those proposed by the teacher counselors. The only additional factors reported by the deputy head teachers were the psychosocial stages of development, exposure levels of a person, temperamental issues, modernism and post-modernism.

In general, other factors (apart from the big five personality) predictive of involvement in violence were: environmental factors, social factors, economic factors, familial factors, political factors, cultural factors, the psychosocial stages of development, exposure levels of a person, temperamental issues, modernism and post-modernism. Since the big five personalities were predictive of involvement in violence at 23.4% using regression model, it was assumed that the other factors were predictive of involvement in violence at 76.6%. Therefore the quantitative and qualitative data converged in explaining each other.

4. Conclusion

The big five personalities were significantly predictive of involvement in violence at 23.4% ($F(5, 391) = 26.886$ $p < 0.05$ and $R^2 = 0.23$). Hence other factors (apart from the big five personality) predictive of involvement in violence which were qualitatively explored included: environmental factors, social factors, economic factors, familial factors, political factors, cultural factors, the psychosocial stages of development, exposure levels of a person, temperamental issues, modernism and post-modernism. These other factors were assumed to predict involvement in violence at 76.6%. Therefore to minimize involvement in violence, more personality based interventional measures should be applied.

Conflict of Interest: The authors declare no conflict of interest.

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