International Journal of Arts Humanities and Social Sciences Studies
Volume 5 Issue 10 ǁ October 2020
ISSN: 2582-1601
www.ijahss.com

Cognitive Behavioural Intervention: Remedy for School Dropout in an Inclusive Setting in Secondary Schools in Kenya

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***Abstract**: Preventing student dropout seems to be a big challenge for school systems. This becomes even more severe for students who display aggressive behaviour. Aggression in students is manifested in several ways such as being defiant, use of profane language, verbally and physically aggressive. Without intervention, these behaviours become an impediment to academic success and quite often put the student on high-risk category for later social problems, school exclusion school failure or drop out. Student aggression is further compounded in Kenya given that there are no special schools for students with Emotional and Behavioural difficulties. This means that the only option for their placement is in regular schools. The purpose of the present study was to investigate the use of cognitive behavioural strategies in managing aggressive behaviour displayed by students in secondary schools in Kakamega County. Target population was 351 teachers drawn from Kakamega County. Stratified random sampling technique was used to sample 106 teachers. Data was collected using a questionnaire and behaviour checklist. The result of the study indicates a significant relationship between the cognitive behavioural intervention and student retention in secondary schools. The finding has direct implication to provision and practice of education in secondary schools in Kenya. Efforts should be made to train teachers on the use of cognitive behavioral strategies in order to reduce dropout of students who display aggressive behaviours.*

***Key words:** Cognitive behaviour intervention, aggressive Behaviour, student dropout.*

I. Introduction

Teachers need to adopt evidence based practice in their management of aggressive behaviour presented by students with aggressive behaviour. Brownie (2013) defines evidence-based practice as a movement within Psychology and Education to identify, disseminate and promote the adoption of practices with demonstrated research support. It is within the interest of the present study to identify practices to best serve the diverse needs of students who present aggressive behaviour in inclusive classroom. By identifying aggressive behaviour management strategies that are not research based has the potential to lead to teachers' fatigue, frustrations, burn out and other negative consequences that are associated with negative management strategies of behaviour. Given that students need to be engaged in order to learn and that aggressive behaviour can interfere with learning (Johnsen, Little & Akin-Little, 2011), effective strategies to promote positive behaviour must be considered as an important aspect of class management. Academic failure and aggressive behaviour have been considered to be closely related (Little & Akin-Little, 2008) and academic and behavioural performances cannot be considered as separate entities (Sutherland *et al.,* 2008). It would be reasonable to conclude that positive learning environment should not only focus on development learning but also on social, emotional and behavioural competencies of students who present aggressive behaviour. Some of these competencies can be achieved if teachers are aware of their own cognitive perception of aggressive behaviour and management strategies that are suitable for students who present aggressive behaviour. In this study, the authors are reluctant to refer to these students as aggressive students but adopt the term students who present aggressive behaviour to avoid labelling this group of students.

II. Review of Related literature

Aggression as a form of aggressive behaviour presents serious challenges to teachers with the treatment suggested by various therapists providing major controversies (Collin & Cornish, 2002). These controversies are deepened by the fact that the term aggressive behaviour is used in so many different ways that no single definition can cover all the meanings (Russell & Harris, 1993; McDonnell Stummey, Oliver Cunningham, Khasakhala and Galava ((2015). In most cases, aggression depends on the context under which it occurs. There is a steadily growing body of research on how aggression can be reduced (Owens, 1987; Bailey, 2006 & Williams, 2008). Most of these studies advocate for settings where students have an opportunity to engage in a meaningful activity, improvement in quality of social environment and increase of personal choice and preferences. Though the use of aversive stimulus such as punishment and sanctions have been frequently used (Owens, 1987), positive intervention to build skills, teach new concepts, solve problems and repair relationships is rapidly gaining popularity (Russell & Harris, 1993; Penerai, Ferrente&Zingale, 2002; Bailey, 2006; Adams & Allen 2011 Khasakhala et. al 2014b).

In Adams& Allen (2011) study that was conducted to ascertain the nature of aggressive behaviour among students indicated that aggression occurred at higher rate in the study group (60%) and the behaviours resulted into serious consequences for the teachers. In a related study in UK (McDonnell *et al*., 2008) incidence of aggressive behaviour among students was approximately 2-15% in the selected study group. A case study carried out by Lam, Chui and Ng, (2007) in China to analyze the rating of aggressive behaviour of hitting others was rated at 57%. This finding is also consistent with an earlier finding (Male, 2004) which cited aggression as the most aggressive behaviour presented by students.

These studies analyzed aggression without breaking it into its subcomponents. In the present study, aggression was analyzed based on six categories these were 1. Hits others with head 2. Uses threatening language 3.Uses threatening gestures 4. Bites, pinches, scratches or chokes others 5. Spits at others, and 6. Throws objects at others. Such categorization is important in three folds one it may help teachers in determining whether the learner is physically or verbally aggressive second it may help to determine the environmental consequences sustaining the behaviour third may help in determining the function of the aggressive behaviour.

There is small but steadily growing body of research evidence which suggests that the best methods to manage aggressive behaviour is to carry out assessment of functional relationship between the behaviour and the environmental consequences sustaining the behaviour by experienced professionals such as psychologists (Wilkins, 2008 & Williams, 2008). These experienced professionals are however in short supply and are prohibitively expensive for most families in Kenya (Awuor&Karume, 2014; Khasakhala et. al. 2014 c). Furthermore, experience and expertise are factors that have not been quantified in the literature making them nearly impossible for parentsand schools that have students who present aggressive behaviours to single out in a professional. Without effective intervention, core symptoms of aggression and accompanying aggressive behaviour and comorbid psychopathology can become lifelong concern (Wilkins, 2008).

Students who present aggressive behaviour like other students need to be treated with respect and supported by the society's institutions and services in order for them to realize their potentials (Autism Society of Kenya, 2009). Though they may appear strong and agile, in the real sense, they are among the most vulnerable group and often depend on teachers, parents and other members of society to a greater degree than other students. They may be more susceptible to mistreatment, exclusion from services and less able to lobby for services and support which they need compared to other groups in society (Bailey, Hare, Hatton & Limb, 2006).

Aggressive behaviours presented by these students can result into negative consequences for these studentssuch as being excluded from services or neglected by communities (Hastings, 1997). Aggressive behaviour can have a wide variety of personal and social consequences for the students who engages in it and for other people. It may hinder the student and other students from learning, endanger the students life and that of other student, cause great strain and stress to the student who presents aggressive behaviour, other students and teachers working with the student. It may also be inappropriate for age or developmental level of the student and may put the student on high-risk category for later social problems, school failure or drop out. There is a small but a steadily growing body of research evidence on aggressive behaviour and school exclusion and drop out (The Mansell report, 2007; Michail, 2011;Stamou, Edwards, Daniels and Ferguson, 2014; Department for Education and Skills, 2013). The Mansell report (2007) in United Kingdom (UK) identified problems faced by people whose behaviours were challenging. The problems identified in Mansell (2007) report faced by students who presented aggressive behaviour included breakdown in community placement, increased rejection by community members and poor quality of institutional care. A case study carried out in USA by Michail (2011)

which investigated cases of school exclusion found that school exclusion was becoming an acceptable direction in USA for a range of behaviours that were considered to put the school community at risk such as aggression. It clearly emerged from Michail (2011) study that the highest number of studentswho were being excluded from school were those who presented aggressive behaviours. According to Department for Education and Skills (2013) in UK the number of students who dropped out of school increased from 50080 during 2011-2012 to 51700 during 2012 -2013 periods. This indicated that 1620 students were dropping out of school in United Kingdom. In the same vein, Stamou, Edwards, Daniels and Ferguson (2014) study carried out in UK established that students who presented aggressive behaviour were six times more likely to drop out of school due to problems related to the behaviour that they presented. The office of Children's commissioner (2012) in UK established that ¾ of students who present aggressive behaviour were dropping out of school due to ineffective management strategies used by teachers.

Teachers working with students who present aggressive behaviour can be quite instrumental in reducing the intensity, frequency and impact of such behaviour. However Hasting and Brown (2002) study vividly demonstrates that when teachers are faced with cases of aggressive behaviour, they mostly use mal-adaptive coping strategies, which in addition to the risk of strengthening the aggressive behaviour portrayed, are likely to lead to burn out and emotional exhaustion among the teachers. There is a small but convincing body of research evidence that shows close relationship between staff frustration, anger, anxiety and burn out leading to high attrition in teaching profession and students aggressive behaviour (Male, 2004; Hastings, 2008; Montgomery, Martin, Shooshtari, Stoesz&Heinrichs, 2014).Teachers working with students who present aggressive behaviour have reported feelings of anger, annoyance, anxiety and being upset (Hastings, 2008). In an educational setting aggressive behaviour may cause severely restricted access to the curriculum or exclusion of the students from school (Male, 2004 Khasakhala and Galava, 2015), Students displaying aggressive behaviour are also a major source of intense stress in the lives of teachers (Hastings, 2008). Job dissatisfaction may result when teachers are not well equipped with knowledge and skills of dealing effectively with aggressive behaviour presented by students. A synthesis study carried out in Canada (Montgomery, Martin, Shooshtari, Stoesz&Heinrichs, 2014) that analyzed peer reviewed journals published between 2000 - 2013 addressing aggressive behaviour presented by students found out that teachers identified aggressive behaviour presented by students as a primary reason for leaving their profession. In particular school administrators reported high rate of teachers' attrition in special in schools and identified difficulties in filling this specific positions.

Several studies have investigated strategies used in managing aggressive behaviour. These strategies include interactive strategies (Prevezer, 2001; Kaufman, 2002), augmentative communication (Bondy and Frost, 2005), social stories (Collins, 2008), gentle teaching (Ashdown, 1999). Harvey et. al. (2009) reviewed intervention strategies for aggressive behaviour among students and found that teaching individual skills combined with ecological manipulation had significant effect on aggressive behaviour. In a closely related meta-analysis study by Hervey et al. (2012) that evaluated 30 studies in management strategies that involved the use of pharmacological, psychotherapeutic and contextual intervention among students with Intellectual disabilities indicated that these interventions had a large and statically significant positive effect on aggressive behaviour.

The way the teachers perceive theseaggressive behaviours directly influences the choice of behaviour management strategies. The Relationship between teachers' cognitive perception of aggressive behaviour and the Choice of Management Strategies is an area that seems not to have received attention of scholars to date. Instead, most studies have concentrated on perception of causes of aggressive behaviours (Lambrechts et. al., 2008; Whitaker, 2009; Crossland, 2009). There are at least two reasons why most of these researchers have begun to focus on teachers' perception causes of aggressive behaviours. First, there is implicit assumption that the ideas about the causes of aggressive behaviour will influence their responses towards it (Crossland, 2009). Although there is no information currently on how and when teachers perception of aggressive behaviour may be related to the choice of management strategies, it has been suggested that perception of the causes of aggressive behaviour interact with a number of factors to determine the teachers behaviour on either to assist or not assist a studentpresenting behaviour (Lambrechts et. al., 2008; Whitaker, 2009Khasakhala, Oracha and Ouma 2014a). These factors include teacher's demographic information such as professional qualifications, working experience, their age and gender (Male, 2004). The second reason for this interest in teachers' perception relates to the needs to evaluate teachers training on aggressive behaviour and other support services that can be provided to them to enable them manage aggressive behaviours effectively (Hastings, 2005). Some of the well-documented support services in the current literature in the field of intellectual disabilities are development of partnership between teachers and parents of students (Jones and Hall, 2005), clear organizational structures at workplace (Whitaker, 2009) and proper remuneration (Mansell, 1993). None of these studies has addressed the cognitive behavioural strategy in managing aggressive behaviour presented by students. Teachers cognitive Perception of the causes of aggressive behaviours may influence the way they

respond to and manage aggressive behaviour presented by students who present aggressive behaviours. However, there is relatively dearth of research into this area. Little is known about how their cognitive perception of causes of aggressive behaviour may influence the choice of management strategies.

III. Methodology

Descriptive survey and correlation research design was adopted for the present study since they have been established as the best research paradigm for investigating behaviour (Woods, 1986; Bryman, 2001 & Creswell, 2009). According to Robson (2002), descriptive survey and correlation research provide simple and straightforward approach to the study of attitudes, values, beliefs and motives. Correlation research enabled the researchers to assess the degree of relationship that existed between two or more variables such as age of respondents and their rating of occurrence of aggressive behaviour among students.

The study was carried out in Kakamega county Kenya in public secondary schools. The study involved 351 teachers teaching in public secondary schools. Twenty teachers were used for pilot study. This population was not part of the actual study. For the remaining population consisting of 106 teachers, saturated sampling technique was used to sample respondents in the county. Saturated sampling was used in collecting data because the target population was too few to make a sample out of them (Creswell, 2009). The sample study consisted had 42 males and 64 females. Data was collected using a set of questionnaires and aggressive behaviour checklist. Three sets of questionnaires were administered in order to establish the teachers cognitive perception of aggressive behaviour, to determine strategies used in the management of aggressive behaviour and to identify factors that determine the choice of aggressive behaviour management strategies.

In order to negotiate access to schools, written consent for the study was sought from sub county education offices in the counties and principals of the secondary schools where the study was carried out. Letters requesting for permission from sub-county county educational officials were written and upon approval letters requesting for permission to carry out the study in selected schools were sent to the principals. Researchers made visits to schools and explained to the participants what the study was about and why it was being carried out. Participants were individually requested to take part in the study. When they accepted to take part in the study, they were requested to sign a consent form stating that they understood that they were voluntarily taking part in the study. some of the ethical consideration in the study were consent, confidentiality, protection of respondents physical and psychological harm, deception and debriefing.

Quantitative data was collected using a set of questionnaires and checklist and it was analyzed using descriptive statistics and inferential statistics.

Assumptions of Analysis of Variance and Regression

Tabachnic and Fidel (2000) maintain that for analysis of variance to be carried out, there are a number of assumptions to be met. The present study used regression and ANOVA as methods of data analysis. The need to identify any violations of the underlying assumptions of any of these methods is a prequisite when using analysis of varrience (Tabachnick &Fidell, 2000). Some assumptions were considered necessary in order to draw conclusions about a population on the basis of a regression analysis, and analysis of variance on sampled data. For regression analysis, assumptions related to the type of variables, homoscedasticity, linearity, normality of residuals and multicollinearity (Field, 2005). For analysis of variance, assumptions included Normal distributions, and homogeinity of variance(Tabachnic and Fidel, 2000).

Assumptions for Regression Model

The normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multi-co linearity, assumptions were assessed in order to determine whether the data was fit for regression analysis. The results were presented as per the subsections.

Normality of Residuals Test

To assess the normality of residuals, Tabachnick & Fidell (2007) recommends looking at the residuals and the normal probability plot. When this assumption is met, the data of an individual variable corresponds to the normal distribution. In the present study, the dependent variable, which was the choice of management strategies scales were assessed. The results are presented using a histogram of regression of standardized residuals and a normal probability plot of regression standardized residuals as shown in figure

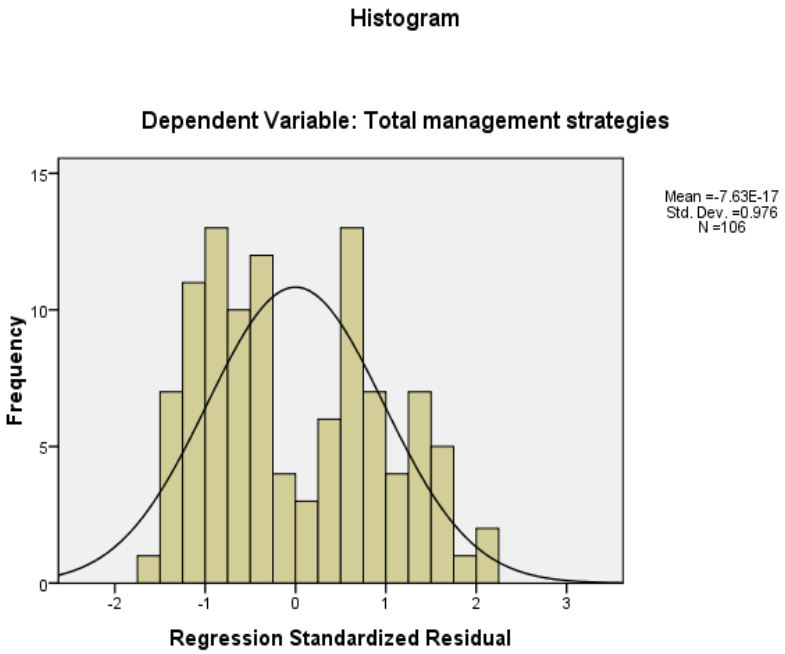

Figure 1.0 Regression Analysis on Total Aggressive Behaviour Management Strategies

The normal probability plot indicated that data was normally distributed and thus the assumption of normality was met.

3.8.3.2 Testing for Linearity

For linearity condition to be met, the outcome variable for each increment of predictor(s) should lie along a straight line (Field, 2005). Testing this assumption is important because modeling a non-linear relationship using a linear model limits the generalization of the data (Field, 2005).

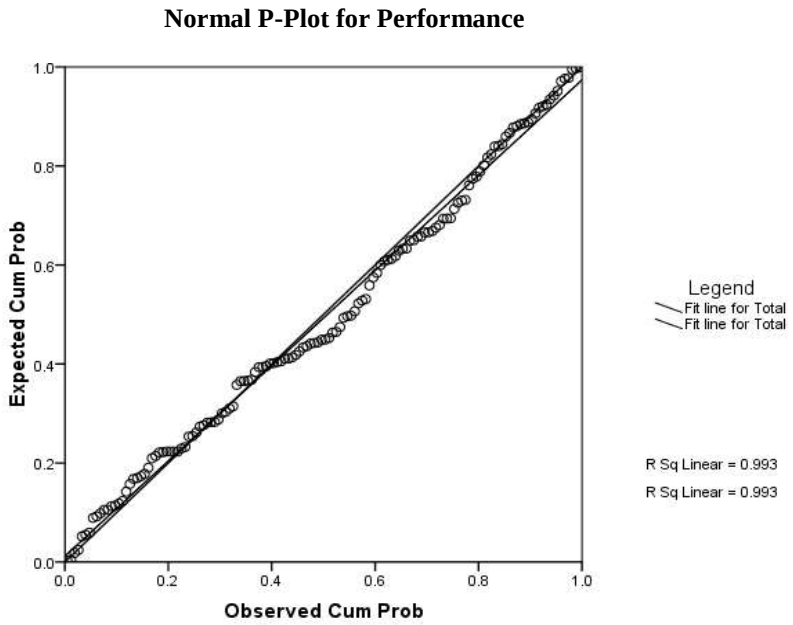

Fig. 1.1 Normal P-P Plot for Regression Standardized Residuals for Dependent Variable showing Teachers perception of cognitive aspect of aggressive behaviour management strategies have a linear relationship. Source: Survey data, (2018)

Testing for random error and homoscedasticity

Homoscedasticity requires that the dependent variable exhibit equal levels of variance across a range of predictor variables (Robson, 2002). If the assumption does not hold the accuracy of the *r* coefficient may be untenable. Assuming that distribution of data is homoscedastic when indeed is actuality heteroscedastic leads to a result that overestimates the goodness of fit as measured by the Pearson coefficient (Field, 2005). A plot of standardized differences between the observed data and the values predicted by the regression model (ZRESID) against the standardized predicted values of the dependent variable (ZPRED) was used to assess whether the assumption of random error and homoscedasticity had been satisfied. This was done for performance on the dependent variable- aggressive behaviour management strategies.

In addition the shape of the normal scatter P-P plot of regression-standardized residuals satisfied the general requirements for rectangularity necessary for linearity and homoscedasticity. Further, there is no curvilinear pattern, and the assumption of linearity is reinforced (Field, 2000). In addition, there were no much outliers as shown in figure 3.3.

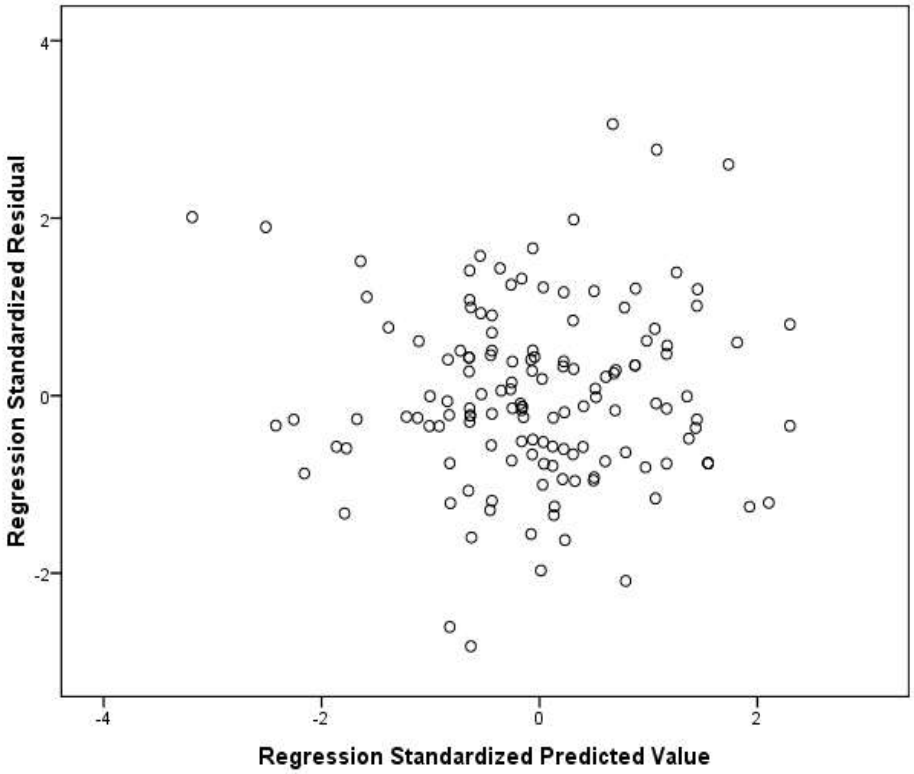

Figure 1.2 : Scatter plot of ZRESID against ZPRED for Performance showing Choice of aggressive Behaviour Management Strategies

Source: Survey data (2015)

Figure 3.3 indicates that there were no much outliers which indicated that dispersion of points were closely concentrated along the line of best fit.

3.8.3.4Testing for Multicollinearity

Since highly collinear items can distort the results substantially, make them unstable, not generalizable or harmful to multiple regression (Robson, 2002), it was necessary to test for multicollinearity in the present study. Multicollinearity occurs when two or more items measure the same entity and are therefore identical (Robson, 2002). The present study assessed the multicollinearity of the independent variables by means of tolerance and variance inflation factor (VIF). A tolerance of below 0.10 or a VIF greater than 10 is regarded as indicative of serious multicollinearity problems (Field, 2000). Table 3.3 shows the results of the multicollinearity statistics. As indicated in Table 3.3 the tolerance statistics were all well above 0.10 and the variance inflationary factor (VIF) values were all well below 10. (Field, 2000). It is therefore concluded that there was no multicollinearity within the data.

Table 1.1Collinearity Statistics

Independent variable	Collinearity Statistics	
	Tolerance	**Variance Inflation Factor**
Cognitive perception	.820	1.22
Behaviour perception	.647	1.54
Dependent variable= management strategies		

Source: Field pre-survey (2018)

As indicated in Table 1.1 the tolerance statistics were all well above 0.10 and the VIF values were all well below 10 (Field, 2000). It can, therefore, be safely concluded that there was no multicollinearity within the data.

3.8.3.5 Assumptions of Analysis of Variance

The study revealed that the independent variables were not strongly correlated with each other; therefore, the assumption of independence was not violated. The other assumptions that involve checking whether the data was normally distributed and checking for the homogeneity of variance were tested using the regression analysis. The data therefore satisfied the analysis of variance tests.

IV. Results

The demographic Information of the Respondents

The demographic information identified in this study included age of respondents, length of service in the current post, amount of experience teaching in a secondary school, and professional qualifications. These were considered important variables in perception and management of aggressive behaviours presented by students in Kakamega county, The frequency table 2.0 displays demographic information of respondents in frequency counts and percentages.

Table 2.0 Teachers' Demographic Information

Demographic information	Category	F	%
Age	18-24 years	8	7.5
	24-30 years	26	24.5
	30-36 years	33	31.1
	36-42 years	22	20.8
	42-48 years	10	9.4
	48-54 years	7	6.6
Gender	Male	42	39.6
	Female	64	60.4
Work place	Mixed school	77	72.6
	Boys/girls school	29	27.4
Length of service	below 5 years	13	12.4
	5-10 years	57	54.3
	10-15 years	25	23.8
	15-20 years	11	9.5
Experience	below 5 years	4	3.8
	5-10 years	21	19.8
	10-15 years	50	47.2
	15-20 years	22	20.8
	20-25 years	9	8.5
Professional Qualification	Diploma in Education	7	6.6
	Degree in Education	59	55.7
	Higher Diploma in education	29	27.4
	Masters in special needs education	11	10.4
	Total	**106**	**100.0**

The table 2.0 indicates that teachers aged between 30-36 years were the majority teaching in secondary schools in Kakamegacounty. They were closely followed by those aged between 24-30 years at 26(24.5%) Those with

the least frequency were aged between 48-54 years, recording 7 (4.8). This finding is consistent with Male (2004) study that indicated that most teachers working in schools were within this range. Frequency table 4.1 shows that there were 64 female teachers (60.4%) and 42 male teachers (39.6) outof the 106 respondents. This finding is consistent with Male (2004) finding where respondents were predominantly female (59 female, 11 male) with a mean age of 40 years (range 28–52 years). In relation to management of aggressive behaviour and based on Bandura (1980) social learning theory where students learn by imitating models it's most likely that male students with lack male models to imitate the acceptable behaviour and are likely to present more aggresive behaviour than female students who have more female role models to imitate(64 female).

Table 2.1 Aggressive Behaviour as Rated by Teachers

Behaviour	NVF	NF	FR	VF	Mean
Hits others with head	14(13.2)	24(22.6)	31(29.2)	37(34.9)	2.86
Uses threatening language	16(15.1)	26(24.5)	29(27.4)	35(33)	2.78
Uses threatening gestures	23(21.7)	27(25.5)	30(28.3)	26(24.5)	2.56
Bites, scratches, pinches or chokes others	23(21.7)	17(16)	33(31.1)	33(31.1)	2.72
Spits at others	25(23.6)	26(24.5)	27(25.5)	28(26.4)	2.55
Throws objects at others	15(14.2)	18(17)	41(38.7)	32(30.2)	2.85

Interpretation of the Means: 1.00 – 1.44 = NVF; 1.45 – 2.44 = NF; 2.45- 3.44 = FR; 3.45 – 4.00 =VF
Table 2.1 clearly indicates that teachers rated the aggressive of hitting others with head as the most frequent behaviour 37 (34.9%) a mean of 2.86 followed by use of threatening language 35 (33%) with a mean of 2.78. The frequent behaviours rated were throwing objects at others 41 (38.7%) with a mean of 2.85; biting scratching and pinching others 33 (31.1%) a mean of 2.72. The least frequent rated behaviours were spiting at others 25 (23.6%) and using threatening gestures at 23(21.7). The findings support a study carried out by Lam *et al* (2007) in China determine the teachers rating of aggressive behaviour where the aggressive behaviour of hitting others was rated at 57%. This finding is also consistent with an earlier finding (Male, 2004) which cited aggression as the most aggressive behaviour presented by students.

The rating of frequency of aggression by teachers in table 2.1 indicate that it was a significant aggressive behaviour presented by students in Kakamega county as all forms of aggression enlisted were exhibited by students albeit in different frequencies. This finding supports Adams and Allen (2011) that was conducted to ascertain the nature of aggressive behaviour, which indicated that aggression, occurred at higher rate in the study group (60%) and the behaviours resulted into serious consequences to teachers. This also compares well with McDonnell et al., (2008) study in UK which rated the incidence of aggression at 2-15% in students. This study also supports Samantha and Whitaker (2012) study in UK that involved 71 nurses and nurse assistants' management strategies of aggressive behaviours presented by people with mental health problems in hospital which indicated that nurse assistant were more likely to receive injuries as part of their job with over 70% of the staff having received injuries.

Findings on the analysis ofaggressive behaviour presented by students is consistent with Studies that have investigated teachers' self reports on the frequencies and variability of aggressive . Porter and Lacey (2009) that targeted learners with Autistic spectrum disorders in UK indicated that teachers differed in their reports on the frequency of aggressive behaviour. Lambrechts and Maes (2009) investigated whether teachers vary in their frequency reports on aggressive behaviour concerning the same student. They hypothesized that a range of teacher's characteristics, which could explain their variability to the aggressive behaviour, presented, influences teacher's approaches to management of aggressive behaviour. These characteristics that influence their choice included their age, gender, experience of working with people with disabilities, professional qualifications and their emotional reactions and beliefs regarding the aggressive behaviour. The findings of Lambrechts and Maes (2009) study indicates that a part from variability between teachers reports on frequency of aggressive behaviours, working hours, internal attribution, gender and experience in working with people with

developmental disabilities were the influencing variables. In the present study, the researchers subjected the data collected to correlations in order to identify whether there were any relationship between the frequency of rating the aggressive behaviour and other variables such as experience of working with students with, professional qualifications and the type of aggressive behaviour rated.

Table 2.2: Correlations between Aggressive Behaviours and Teachers Perception

		Gender	Age of respondent	Years of working	Experience of working	Professional qualification
Mean of inappropriate vocal behaviour	Pearson Correlation	0.111	-0.148	.317**	-0.097	0.126
	Sig. (2-tailed)	0.257	0.129	0.001	0.324	0.198
	N	106	106	106	106	106
Mean of interpersonal behaviour	Pearson Correlation	0.09	-0.104	.270**	-0.152	-0.065
	Sig. (2-tailed)	0.358	0.288	0.005	0.123	0.51
	N	106	106	106	106	106
Mean of personal behaviour	Pearson Correlation	0.06	-0.07	-0.153	.211**	0.016
	Sig. (2-tailed)	0.538	0.479	0.117	0.009	0.867
	N	106	106	106	106	106
Mean of self injurious behaviour	Pearson Correlation	-0.022	0.005	.192*	-0.192	0.09
	Sig. (2-tailed)	0.82	0.957	0.048	0.05	0.361
	N	106	106	106	106	106
Mean of property damage	Pearson Correlation	0.006	0.015	-0.101	.199*	-0.097
	Sig. (2-tailed)	0.947	0.876	0.303	0.041	0.323
	N	106	106	106	106	106
Mean of stereotype behaviour	Pearson Correlation	0.025	-0.13	0.289**	.193**	-0.164
	Sig. (2-tailed)	0.798	0.183	0.003	0.369	0.093
	N	106	106	106	106	106
Mean of aggressive behaviour	Pearson Correlation	0.004	-0.191	.289**	-0.14	0.076
	Sig. (2-tailed)	0.967	0.05	0.003	0.155	0.439
	N	106	106	106	106	106

***. Correlation is significant at $p \leq 0.05$ level (2-tailed).**

****. Correlation is significant at $p \leq 0.01$ level (2-tailed).**

The results in table 2.2 indicate that there was a moderate positive relationship between teaching experience and personal behaviour rating, (r=0.211, $p \leq 0.01$). Stereotype behaviour was also moderately correlated with experience, resulting in a low positive correlation, r=0.193, $p \leq .05$. Data also indicates that there was a moderately significant relationship between stereotype behaviours and years of working at 0.289 $p \leq 0.01$ and years of working and aggressive behaviour (r=0.289 $p \leq 0.01$). The rest of other aggressive behaviours portrayed by students in public secondary schools in Kakamega county did not significantly correlate with any of the teachers demographic factors. This indicates that teachers' demographic factors have moderate influence on rating of aggressive behaviourpresented by by students in Kakamega county. This finding is consistent with Lambrechts and Maes (2009) which established a positive relationship between rating of frequency of aggressive behaviour and experience of working with people with disabilities. The finding is not consistent with Lam *et al*. (2007) study that found no significant rating of frequency of personal behaviour by teachers based on experience.

2.3 Model Summary of Teachers aggressive Behaviour Management Strategies

To show the interaction of teachers' demographic variables and aggressivebehaviour management strategies a model summary was developed as illustrated in table 2.3

Table 2.3: Model Summary

Model	R	R Square	Adjusted R Square	R Square Change	F Change	df1	Sig. F Change
1	0.084[a]	0.007	0.016	0.007	0.313	3	0.816
2	0.236[b]	0.055	0.019	0.048	3.333	2	0.039

a).Predictors: (Constant), years of working, gender, age of respondent
b).Predictors: (Constant), years of working, gender, age of respondent, professional qualification
c).Dependent Variable: total management strategies used

R square stands for the coefficient of determination, that is, the amount of variation in the dependent variables: total management strategies of aggressive behaviour used by teachers. Therefore the model summary as shown in Table 2.4 shows that before controlling the variables such as age, gender and years of working the variance was 0.7% and after controlling the variables the variance of independent variables was 5.5% which was low. This indicates that the overall model predicted 5.5% of variation in the choice of management strategies by teachers. It thus emerged that demographic variables influenced teachers' choice of aggressive behaviour management strategies by 5.5%. The results clearly imply that demographic variables have a moderately significant role in teacher's choice of aggressive behaviour management strategies especially professional qualifications. To further determine the influence of demographic factors on the choice of aggressive behaviour management strategies a multiple regression was carried out as illustrated in table 2.4

To find out the influence of age, gender, professional qualifications, and work experience on choice of management strategies, a multiple hierarchical regression analysis was carried out as shown in table 2.4

Table 2.4 Multiple Regression on Choice of Management Strategies by Teachers.

	B	Beta	T	Sig
(Constant)	4.887		9.746	.000
Age of respondent	-.055	.013	-.138	.890
Gender	.461	.040	.452	.652
years of working	.462	.211	3.888	.006
professional qualification	1.056	.247	4.665	.004
Experience in years	-.370	.188	-2.175	.031

The results clearly indicates that professional qualification had the highest significant unique contribution to the choice of management strategies, (β=0.247, $p \leq .05$). Years of working had the second highest contribution, (β= 0.211, $p \leq .05$) and finally, experience in years moderately contributed as well, (β=0.188, $p \leq .05$). On the other hand, gender, and age of the teachers did not have significant contribution on the choice of management strategies. A finding that is not consistent with Lambrechts and Maes (2009) study that found a significant relationship between management strategies and age and gender of respondents.

To establish the influence of teacher's cognitive perception on the choice of aggressive behaviour strategies, Pearson correlation coefficient was carried out. The results are presented in table 2.5

Table 2.5 Correlation of Cognitive Perception of Aggressive Behaviour and Choice of Management Strategies.

		timeline episodic	timeline chronic	consequence to the teacher	consequence to the student	Control by the teacher
intensive interaction	Pearson Correlation	.271**	.309**	0.109	0.094	.438**
	Sig. (2-tailed)	0.005	0.001	0.268	0.338	0
	N	106	106	106	106	106
development of social understanding	Pearson Correlation	.330**	.451**	0.093	-0.074	.287**
	Sig. (2-tailed)	0.018	0	0.342	0.448	0.003
	N	106	106	106	106	106
social stories	Pearson Correlation	0.167	0.142	0.117	-0.071	.429**
	Sig. (2-tailed)	0.088	0.145	0.233	0.472	0
	N	106	106	106	106	106
gentle teaching	Pearson Correlation	0.187	.386**	0.01	0.139	.473**
	Sig. (2-tailed)	0.055	0	0.922	0.154	0
	N	106	106	106	106	106
behaviour therapy model	Pearson Correlation	.421**	-.333**	-0.101	-.230*	-.317**
	Sig. (2-tailed)	0.017	0	0.303	0.018	0.001
	N	106	106	106	106	106
experimental function analysis	Pearson Correlation	.255**	0.024**	0.066	-0.058	.283**
	Sig. (2-tailed)	0.008	0.809	0.502	0.553	0.003
	N	106	106	106	106	106
pharmacology or medical	Pearson Correlation	0.065	0.046	-0.16	-.408**	-0.081
	Sig. (2-tailed)	0.509	0.638	0.101	0	0.412
	N	106	106	106	106	106
mental health consultations	Pearson Correlation	0.294**	-0.162	-0.005	.195*	.243*
	Sig. (2-tailed)	0.002	0.097	0.962	0.045	0.012
	N	106	106	106	106	106
augmentative communication	Pearson Correlation	384**	-.196*	-0.121	-.199*	-.196*
	Sig. (2-tailed)	0	0.044	0.218	0.041	0.044
	N	106	106	106	106	106

*. Correlation is significant at the $p \leq .05$ level (2-tailed).

**. Correlation is significant at the $p \leq .01$ level (2-tailed).

The results in Table 2.6 indicate that there was a relationship between cognitive perception of aggressive behaviour behavior and choice of management strategies. First, there is a relationship between the aggressive behaviours presented by students being time line chronic and the choice of gentle teaching management

strategy(r= 0.386, $p \leq 0.01$), behavior therapy model (r=0.333, $p \leq 0.01$).Analysis also indicate a moderate correlation between time line chronic and choice of more restrictive management strategies such as augmentative communication(r=0.384 $p \leq 0.01$), mental health consultation(r= 0.294 $p \leq .05$) and Functional Experimental analysis(r= 0.255 $p \leq 0.01$). The results also indicate a moderate significant correlations between time line episodic and choice of least restrictive management strategies such as intensive interaction (r=271 $p \leq 0.01$), development of social stories (r=0.330 $p \leq 0.01$)behavior therapy model(r=421 $p \leq .05$). It is evident from the study that teachers who perceived the behaviour presented by students as timeline chronic chose mental health consultations as their management strategies as indicated by a correlation (r=0.348 $p \leq 0.01$). This finding clearly indicates that teachers who perceived aggressive behaviour presented by students as a temporary feature were more likely to use less restrictive aggressive behaviour management strategies such as intensive interaction while those who perceived it as a permanent future chose more restrictive strategies such as mental health consultation.

This finding supports Werner's (1980) theory of helping behaviour. The theory states that the cognitive perception made about a person and his/her behaviour will affect the feelings of a care giver which in turn would eventually affect carer givers willingness to help the person presenting the behaviour. Succinctly, this finding supports a small but steadily growing body of research evidence that has investigated teachers' cognitive perception of aggressive behaviour and choice of management strategies (Wanless&Jahoda; Williams, 2008 &Dgnan, 2011; Khasakhala et. Al. 2014c). These studies suggest that interpretation of aggressive behaviour as either being permanent or temporary and subsequent emotions exert an effect on choice of management strategies.

V. Conclusion

The results of the present study indicate that teachers' cognitive perception had a moderate influence on the choice of aggressive behaviour management strategies in Kakamega county. This is illustrated by a moderate correlation between positive cognitive perception and choice of least restrictive strategies and negative perception with more restrictive management strategies. This study clearly indicates that teachers who perceived aggressive behaviour presented by students as a temporary feature chose less restrictive challenging behaviour management strategies such as intensive interaction while those who perceived it as a permanent future chose more restrictive strategies such as mental health consultation. Teachers perceived challenging behaviour to have negative consequences to both the students and teachers. This study indicates that cognitive perception of aggressive behaviour influenced the choice of behaviour management strategies in public secondary schools in Kakamega county.It can be concluded that teachers cognitive perception of aggressive behaviour has a direct influence on the choice of aggressive behavioural management strategies. This factor need to be considered when designing behavioural intervention strategies for aggressive behaviour presented by students in schools. Demographic factors also influence aggressive behaviour management strategies. The cognitive perception held by teachers will directly influence the choice of aggressive behaviour management strategies. Efforts should be made to train teachers to perceive aggressive behaviours more positively as the study clearly indicates that positive perception of aggressive behaviour will lead to least restrictive management strategies. On the other hand negative perception will lead to choice of more restrictive management strategies which will lead to more aggressive behaviours by students and more frustrations for teachers. These are clear recipe for students suspension, exclusions and drop out and teachers anger, annoyance, frustration, emotional exhaustion and high attrition.

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