The Interactive Effect of Gender on the Effectiveness of Contigency Management and Cognitive Self Instruction on Bullying Behaviour of Secondary Students in Nigeria

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Abstract

Bullying constitutes a significant threat to the mental, social and physical wellbeing of school children. As an old phenomenon and worldwide problem, it has defied several efforts to curb it. This study examined the interactive effect of gender on the effectiveness of contigency management and cognitive self -instruction on bullying behaviour of secondary students in Nigeria. The population for the study consisted of bullies in public secondary schools in Ogun state. Stratified random sampling technique was used to select three schools and purposive sampling was used to select the participants. The study adopted a 3x2 pre-test and post test experimental research design consisting of two treatment groups and one control group. Adolescent Peer Relation Inventory (APRI) was the instrument used for data collection and a total number of one hundred and fourteen students participated. Analysis of covariance (ANCOVA) was used to analyse the two hypotheses formulated at the 0.05 level of significance. Results revealed a significant effect of cognitive self-instruction, contingency management and control on bullying behaviour ($F_{2, 101} = 6.444$: $p < 0.05$). Also gender, ($F_{(2,101)} = .041$; $p > 0.05$) did not affect the effectiveness of contigency management and cognitive self -instruction on bullying behaviour of secondary students in Nigeria. Based on these findings, it was recommended that psychologists, counsellors, parents, teachers and social workers should use these treatment packages in controlling bullying behaviour among secondary schools students. Also .the government should sponsor seminars/workshops for school counsellors and educational psychologists on how to use cognitive self-instruction and contingency management techniques in controlling bullying behaviour.

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Introduction

Violence in schools is an issue that has become more prominent in the last few years, as news articles about violent deeds within the school setting is now on the increase. Despite the increasing rate of violence in schools, the society still expects that the school should be a safe place for students. Thus, in order to maintain a peaceful and safe school environment, stakeholders in education have tended to concern themselves with the problem of violence in our schools (Aluede,2011).

It is an aggressive behaviour that is growing and is a significant problem among Ogun State students and the world at large. (Adeoye,2008a; Aderanti,2006; Stassen,2007). Bullying is a form of harassment (Work place bullying, 2004). The behaviour is based on misuse of power in human relationship. It is an intentional hurtful action and involves a complex interplay of dominance and status. It involves a peer imbalance between the bully and the victim whereby the victim is unable to defend himself or herself from the bully(Rigby,2001;Tapper& Boulton,2005). This peer imbalance and the fact that bullying behaviour are repeated over times differentiate bullying from other forms of aggressive behaviour(Sulvan,2000). Bullying is perceived as an inevitable part of growing up (Sameer & Jamia,2007). The perceived imbalance of power that is associated with bullying can be as a result of age, strength, size or with the more powerful child or group attacking a physical or psychologically vulnerable victim. A repeated, ongoing pattern of aggression distinguishes bullying from other aggressive behaviours. Bullying can be direct or indirect and can be accomplished through physical, verbal or other means.

Physical bullies are action-oriented. This type of bullying includes hitting or kicking the victim or slapping or grabbing the victims. (Dodge, 1991; Olewus 1993; Smith & Sharp,1999).

This is the last sophisticated type of bullying because it is so easy to identify. Verbal bullies use words to hurt or humiliate another person. Verbal bullying includes names calling like insults, making racist comment and constant teasing. This type of bullying is the easiest to inflict on others. It is quick and to the point. It can occur in the least amount of time available, when no one else is around; its effect can be more devastating in some ways than physical bullying because there is no visible scar. (Lamb, Pepler & Craig,2009).

The lack of visible scar often lead people to think that the victim is exaggerating and so cutting off support from the person because there is no visible trace for others to follow .It is a form of indirect aggression which involves psychological harm and manipulation of the social system (Balogun, & Olapegba 2005;Bjorkqvist, 1992). Social bullying can take the form of rumour spreading, backbiting and or social exclusion within the peer group. (Brehm, Kassin & Fein,2005)

Most secondary school students in South Western Nigeria experienced high levels of peer victimisation.(Adeoye,2008b;Popoola,2007) Data collected on the prevalence of this phenomenon among secondary school students revealed that 70.6 per cent of the study sample reported high level of peer victimisation while 27% and 2.1% reported moderate and low levels of peer victimisation respectively. Studies also revealed attack on property was the most frequent form of peer victimisation, followed by physical victimisation and social manipulation The high proportion of students who reported high level of peer victimisation with regard to attack on property and 'physical victimisation' appears worrisome as it suggests the existence of a serious problem that may have far-reaching effects on children's emotional, social development and by logical extension impact negatively on the social and psychological wellbeing of the entire Nigerian society.(Owoaje &Ndubisi,2007)The issue of peer victimisation is a social issue requiring the immediate attention of school authorities in Nigeria. It is reasonable to assume that the exposure of young people to bullying and victimisation while in school normally will generate high level of social aggression which according to Farrington (1993) in Poopoola(2007) may persist into adulthood in the form of criminality, marital violence, child abuse and sexual harassment.

Contingency Management treatments are based upon a simple behavioural principle that, if a behaviour is reinforced or re-enacted, it is more likely to occur in the future (Petry, Martin, Cooney & Kranler,2000).

These behaviour principles are used in everyday life. For examples, employers use salaries and bonuses to receive good job performance. In other treatments behaviours can be reinforced using these principles. Asides this, a range of positive reinforcement methods such as prone, use of take-home privileges and eligibility are used in Contingency Management (National Treatment Agency, 2000).

Cognitive self- instruction (CSI) is a viable approach for teachers to remediate behavioural deficits and excesses by providing students with the tools necessary to control their own behaviour. Cognitive self-instruction involves teaching the use of inner speech ("self-talk") to modify underlying cognition that effect overt behavior. (Cann, Falshaw, Nugent & Friendship,2003; Mahoney, 1974; MeicheGbum, 1977). Since theorist consider the internalization of self-statements fundamentals to developing self-control, deficient or maladaptive self-statement are viewed as contributing to negative beliefs about oneself, which can contribute significantly to childhood behaviours problems. Kendall (1993) noted that cognitive self-instruction techniques for the remediation of social deficits can incorporate cognitive, behavioral, emotive and development strategies using rewards, modeling, redeploys and self-evaluation. The fundamentals assumption of Cognitive self-instruction is that overt behaviour (e.g. hitting or pushing a peer when teased) is meditated by cognitive events and that individual can influence cognitive events to change behavior.

The objective of this research work is to investigate the interactive effects of gender on the effect of Contigency management and Cognitive self -Instruction training programmes on bullying behaviour among secondary schools students in Remo zone comprises of Shagamu, Ikenne and Remo North local Government of Ogun state, Southwest, Nigeria. The study is aimed at establishing the effects of these independent variables (Contigency management and Cognitive self-Instruction) on the dependent variable (Bullying behaviour). It is also designed to establish the moderating effects of gender.

1. There is no significant main effect of Contingency Management, Cognitive self-instruction and Control on bullying behavior of secondary school students.
2. There is no significant interaction effect of treatment and gender on bullying behavior scores of secondary school students

Methodology

Research Design

This study adopted a 3x2 pre-test, post-test, factorial design. The factors of the study are treatment, which exists at three levels (Contingency Management, Cognitive Self- Instruction and Control), gender which exists at two levels, (Male &Female).This design enabled the researcher to determine the effect of the independent and moderator variables on the dependent variable at a single shot.

Population of the Study

The population of this study consisted of secondary school students exhibiting bullying behaviour in Remo zone comprising of Sagamu, Ikenne and Remo North Local Government Areas in South Western states. Nigeria.

Sample and Sampling Technique

A stratified random sampling technique was used to pick one schools each in each of the three Local Government Areas in Remo namely Shagamu,Ikenne and Remo North Local Government. In each of the randomly selected Local Government Areas. One school each was randomly selected, the researcher requested the counselors to provide a list of bullies. From each of these lists 40 bullies (20 males and 20 females) were selected to participate making a total of one hundred and twenty participants, Each of the schools was assigned with the treatment and the control group thus:. (A,B&C)

Instrumentation

Bullying behaviour was assessed by Adolescent Peer Relation Instrument (APRI) by Parada (2000) for both pre-test and post-test. Items No. 1, 3, 5, 7, 10, & 14 represent verbal bully, while Items No, 2, 6, 9, 12, 15, 16 represent physical bully, Items No, 4, 8, 11, 13, 17, 18, represent social. It is of 6 – point scales from 1 – Never, 2 – Sometimes, 3 -1 or 2 times a months, 4 – once a week, 5-Several times a week, 6-Everyday.

The validity was also ensured through proper scrutiny of the items by experts in Educational Psychologist. The internal consistency of the scale was established using Chrombach's alpha which yielded a scale of 0.92.The Adolescent Peer Relation Instrument (APRI: Parada, 2000) is an 18 –items inventory that measure specifically 3 types of bullying behaviours (physical, verbal, and social) as well as to generate total bullying. A high scores in these subscales designated frequently bullying behaviour, whereas low scores designate bullying or victimization that is not as frequent. The Instrument was subjected to three weeks pre and post- test among some Secondary Schools students in Oyo state.

Scores generated from these were correlated using Pearson Product Moment Correlation method. A co-efficient(r) of 0.81 showing that the instrument is reliable to be used for the study.

Administration of the Instrument/Procedure

This study was carried out in three phases. In the first phase the participant was assigned to the two treatment groups (Cognitive self-Instruction, N=40,Contigency Management N=40 and Control group N=40) respectively. Adolescent Peer Relation Instrument (APRI) was administered. The data generated through the administration of pre-test served as covariate in the analysis of covariance. At phase two, each group went through six weeks (1 hour a week) of intensive training. 30 minutes of discussion/lecture, 15 minutes to discuss the previous assignments given, 15 minutes to summarize and give the next assignment. Instructions and explanations on the task involved in each experimental group such as lectures, discussion, and assignments were given to all participants. Among other discussions/lectures given to participants under cognitive self -Instruction (CSI) were the effect of self-statements on behavior and the importance of substituting negative self-statements with positive self-statements. Assignments include: giving examples of self-statements, substituting negative self-statement with positive self-statements such as substituting "I have to can overcome this behaviour" " I need to think twice before acting". The participants in the control group received a placebo treatment in which study habits technique was taught to them. Things like time management, jotting recap was mentioned and assignments were also given to them. Phase three involve the use of APRI as post -test.

Method of Data Analysis

All the stated hypotheses in this study were analysed using Analysis of Co-variance (ANCOVA).This method helped to draw out the effect of the independent variables on the dependent variable using scores as covariant. The hypotheses were tested at 0.05 level of significant.

Hypothesis One

There is no significant main effect of Contingency Management, Cognitive self -Instruction and Control on bullying behaviour of secondary school students.

Table 1: Estimates of Effect of Contingency Management, Cognitive Self Instruction and Control on Bullying Behaviour of Secondary School Students

Treatment Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Contingency Management Group	29.539[a]	1.516	26.532	32.547
Cognitive Self-Instruction Group	27.288[a]	1.490	24.331	30.244
Control Group	35.042[a]	1.548	31.971	38.113

a. Covariates appearing in the model are evaluated at the following values: Pre-test Bullying Behaviour = 37.0877.

The results in Table 1 revealed that participants in the contingency management group had a mean score of 29.539 and standard error of 1.516. In the cognitive self-instruction group, the mean score was 27.288 and the standard error was 1.490. However, in the control group, the mean score was 35.042 and the standard error was 1.548. The results was analysed to test whether these mean scores are significantly different are shown in Table 2.

Table 2: Univariates Test of the Effects of Contingency Management, Cognitive Self Instruction and Control on Bullying Behaviour of Secondary School Students

	Sum of Squares	Df	Mean Square	F	Sig.
Contrast	1072.308	2	536.154	6.444	.002
Error	8403.880	101	83.207		

The results in Table 2 revealed that there is a significant difference in the effect of contingency management, cognitive self- instruction and control ($F_{(2,101)}$ = 6.444; $p < 0.05$) on bullying behaviour of secondary school students. In effect the null hypothesis was therefore rejected by this finding.

The implication of this finding is that participants' bullying behaviour would differ with regards to the treatment given to them.

Hypothesis 2: There is no significant interactive effect of treatment and gender on bullying behaviour scores of secondary school students .

Table 3: Test of Estimates of the Interaction Effect of Treatment and Gender on Participants' Bullying Behaviour

	Sum of Squares	Df	Mean Square	F	Sig.
Contrast	1048.156	2	524.078	.041	.096
Error	1291021.40	101	12782.39		

Table 4: Estimates of the Interaction Effect of Treatment and Gender on Participants' Bullying Behaviour

Treatment Group	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Contingency	Male	30.123[a]	2.051	26.054	34.193
Management Group	Female	28.955[a]	2.226	24.541	33.370
Cognitive Self-Instruction	Male	27.271[a]	2.127	23.052	31.490
Group	Female	27.304[a]	2.051	23.236	31.373
Control Group	Male	35.375[a]	2.221	30.969	39.780
	Female	34.709[a]	2.103	30.537	38.881

a. Covariates appearing in the model are evaluated at the following values: Pre-test Bullying Behaviour = 37.0877.

The results in Table 3 revealed that there was no significant two-way interaction effect of treatment and gender on the bullying behaviour of secondary school students ($F_{(2,101)}$ = .041; p > 0.05). Therefore, the null hypothesis which stated that there is no significant gender difference in the effect of contingency management, cognitive self- instruction and control on the bullying behaviour of secondary school students was accepted by this finding.

The implication of the results is that gender would not interact significantly with treatment to affect the bullying behaviour of participants.

This was revealed in the results in Table 4, which showed that male participants in the contingency management group had a mean score of 30.123 and a standard error of 2.051 compared with those in the cognitive self-instruction group who had a mean score of 27.271 and a standard error of 2.127 and those in the control group who had a mean score of 35.375 and a standard error of 2.221.

Also female participants who are exposed to contingency management group had a mean score of 28.955 and a standard error of 2.226 compared to the female participants in the cognitive self-instruction group who had a mean score of 27.304 and a standard error of 2.051 and also female participants in the control group who had a mean score of 34.709 and a standard error of 2.103.

Discussion of Findings

The first hypothesis stated that there is no significant difference in the effect of contingency management, cognitive self-instruction and control on bullying behaviour of secondary school students .The result of the finding indicated that a significant difference exist in the effectiveness of the treatment on bullying behaviour, which is an indication that the two treatments (cognitive instruction and contingency management) are effective in the treatment of bullying behaviour. This result confirms the importance of independent variables in exerting influence on the criterion variables. The reason for this result was as a result of the six weeks exposure to treatment. This is due to the fact that positive changes are facilitated by using behavioural techniques (Aderanti, 2006; Madubuike, 2002).

The result in table 3 revealed the summary of the second hypothesis that stated that, there is no gender significant difference in the effect of contingency management, cognitive self-instruction and control on the bullying behaviour of secondary school students. The outcome of the data analysis on this hypothesis indicated that there is no significant difference in the two way interaction effects of gender and treatments on bullying behaviour. However, the summary of the findings showed that male participants had mean scores of 27.0271, 30.123 and 35.175 in cognitive self-instruction, contingency management and control group respectively. Also, the female participants had 27.304, 28.955 and 34.709 in cognitive self-instruction, contingency management and control group respectively. The means for the male and female seems to be close to each other.

The data further revealed the effectiveness of cognitive self-instruction over contingency management as it revealed a lower mean scores in both male and female. The result also affirms the researches of Okwun (2011),Onyechi and Okere (2007) and Obalowo (2004) that gender has no interaction effect with the use cognitive self-instruction technique. Also, the result of this finding is in line with Aderanti (2007), who opined that gender will not interact with cognitive self- instruction. However, this result contradicts the earlier findings of Maccoby and Jacklin (1987) who reported that males are more aggressive and rebellious than females. Thus, establishing the fact that males engage more in anti-social behaviour than the females. The insignificant difference in gender and treatment may be explained using Piaget cognitive development and social learning theories by Bandura(1977) who described that antisocial behaviours are learnt and imbibed especially at youthful ages irrespective of gender.

Recommendations

Based on the conclusion of the studies, the following recommendations were made: Counselling psychologists could use any of the treatment packages (cognitive self-instruction and contingency management) as identified by the study in the treatment of bullying behaviour. Also, Social workers could also use any of the two techniques in conjunction with what is obtained in the approved school. Teachers and school administrators should also help in referring students who exhibit bullying behaviour to the school counsellors. The counsellor will thereby employ the best methods in assisting these students. Parents could use both therapies to assist their wards that exhibit bullying behaviour. Interested Parents could be trained on how to use these two packages

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