

Effects of Mentoring and Cognitive Restructuring on Aggression among Selected Secondary School Students in Lagos State, Nigeria

Dr. Ubangha Monday Bassey, Dr. Nwadinigwe I. Peter, Dr. Iyayi Mary Omazagba

Department of Educational Foundations, Faculty of Education, University of Lagos, Akoka-Yaba, Lagos Nigeria

Abstract

The study investigated the effectiveness of Mentoring and Cognitive Restructuring in the modification of adolescent aggression among selected Senior Secondary School students in Lagos State, Nigeria. The study utilised survey research design to obtain the baseline data while the second phase was a Quasi-experimental pre-test post-test control group design. It was hypothesized that there would no significant difference in post treatment aggression between adolescent students treated with Cognitive Restructuring and those exposed to Mentoring. Through multistage sampling technique, a total of 420 adolescents were drawn from six senior secondary schools in Lagos State, Nigeria and they provided baseline data for the study. However, the final sample consisted of 94 (47 male and 47 female) adolescents identified as aggressive. Buss and Perry (1992) Aggression Questionnaire, Rathus (1973) Assertiveness Schedule and Mynard and Joseph (2000) Multidimensional Peer Victimization Scale were adapted by the researcher and used to collect the relevant data which were analysed using Analysis of Covariance (ANCOVA) technique. The findings revealed that Mentoring was more efficacious than Cognitive Restructuring in the modification of aggressiveness in adolescent students. These findings were situated within the existing body of knowledge and their implications for Counselling Education were discussed.

Keywords: Mentoring, Cognitive Restructuring, Aggression

Background to the Study

Aggression has been reported to be a prevalent anti-social act affecting man on a daily basis. It is a noxious stimulus to another person with the intention of harming that person and in the expectation that the aversive stimulus will reach its destination (Geen, 2001). No matter the reasons that may be adduced for this maladaptive behaviour, it is a social menace that should not be tolerated in any sphere of life. Towards this, appropriate steps must be taken urgently and decisively to stem the menace.

Buttressing points on behavioural modification, Omoegun (2005) argued that there is a need to provide role models for adolescents so as to re-direct their energies towards the right channel that would produce rewarding and satisfactory behaviour in them. Odebunmi (2007) maintains that creating mentoring initiative would help the adolescent student to work on his behavioural deficiencies. These mentors would help to protect and guide these students to remain focused and avoid the pitfalls of negative influence. In the school organisation, mentoring can be seen as a developmental, caring, sharing and helping relationship where one person invests time, knowhow and effort in enhancing another person's growth, knowledge and skills. The mentor responds to critical needs in the life of the mentee so as to help prepare him for greater achievement in life.

In having a deeper understanding of the student's behaviour pattern, Nwadinigwe and Longe (2008) asserted that the environment is the culture in which socialisation takes place with all its myths and rituals, exerting great impact on an individual's social and psychological development which can be managed by refocusing their perception through the use of Cognitive Restructuring. Joseph (2009) suggested that Cognitive Restructuring is a suitable counselling technique which can help the maladjusted adolescent to adjust his perceptions and do away with conflicting ideas that govern his emotions.

In effect, using behaviour modification techniques such as Mentoring and Cognitive Restructuring in schools would tackle adolescent behavioural issues such as aggression. It is against this background that this study investigated effects of Mentoring and Cognitive Restructuring on aggression among selected secondary school students in Lagos State, Nigeria.

Statement of the Problem

Given the obvious devastating effect of aggression in the school community, it is surprising that little or no attention is paid to the problem. Where responses to aggressive acts have been reported by schools, reactive strategies adopted are usually punitive such as, corporal punishment, rustication and expulsion. This is disturbing because Popoola (2005) revealed that most secondary school students in South Western Nigeria experienced high level of peer victimisation. Thus, the whole situation of effective handling of cases of aggression in schools is thought provoking as some cases of school dropout could be traced to wrong handling of

cases of aggression. Therefore, the provision of interventions using psychological strategies such as Mentoring and Cognitive Restructuring to modify aggressiveness in adolescent students makes this study imperative.

Research Hypothesis

There is no significant difference in post treatment aggression between adolescent students treated with Cognitive Restructuring and those exposed to Mentoring.

Review of Literature

Rahman and Huq (2005) opined that aggression is a psychological phenomenon which stems from deliberate intention of harming another person. It is an action which is visible in overt behaviour. It is therefore clear that aggression has three elements. These are intention, action tendency and actual harm committed to the person (Berkowitz, 1981). To have a deeper insight of the concept of aggression, drive theories attribute it to an impulse created by an innate need. The most well known drive theory of aggression is the Frustration-Aggression theory (Dollard, 1939). In this theory, frustration and aggression are linked in a cause and effect relationship. Frustration is the cause of aggression and aggression is the result of frustration. The higher the frustration level the more prone the person is to act aggressively.

As aggression in the adolescent student cannot be left unattended to, Okoli (1996) proffered behaviour modification as a remedy for indiscipline and offered observation of persons by others as a way out. Therefore, the mentoring procedure entails giving an opportunity for a student to observe a person who is interestingly of significance to him displaying a new desired pattern of behaviour. To make this happen, schools are using mentoring relationships as a significant factor in behaviour modification. Tucker (2007) defined mentoring as a supportive, learning relationship between an individual – the mentor – who shares his or her knowledge, experience and insights with another less experienced person – the learning associate – who is willing and ready to benefit from this exchange. In the support relationship, the mentor will act as a Big Brother or Big Sister for the mentee as their close physical relationship helps to erase the effect of aggression on the aggressor (mentee). Since mentoring is the process of forming a relationship whereby a more experienced, seasoned and wiser person (mentor) helps a less experienced person (mentee) develop in a specified capacity, the nature and quality of the relationship and the ways that the roles are understood depend largely on the personal qualities of the mentor (Osunde, 1996).

Unlike many other theories, the Social Learning theory postulates that aggression is a learned behaviour rather than a genetically based tendency. According to the social learning theory, the adolescent learns aggressive behaviours from watching other people model them. To change aggressive behaviour and prevent recidivism, proponents of the social learning theory must structure treatment around the precepts of the theory (Langley, 2011). School counsellors need to ensure that positive peer models are available to demonstrate socially acceptable behaviour through mentoring intervention programme. Mentors would help the mentees develop a sense of self-efficacy with the belief that mentees can work to change that behaviour and meet their goals.

Although the current zeitgeist regarding peer influence is that of negative pressure, there is a burgeoning literature indicating positive effects of peer interaction. Mentoring may provide some needed social support and hence improve youth functioning. Considering the normative social and cognitive development needs of the mentees, it may be that having their own peers involved as mentors could alter interpersonal dynamics in positive ways that could affect the overall climate of a school. On the other hand, Hansen (2004) in his research posited that peer mentoring should involve an interpersonal relationship between two youths of different ages so as to provide friendship in which the goal is for the older youth to promote one or more aspects of the younger youth's development. According to Jacobi (2011) cross-age mentoring involves a tutoring component, personal mentorship and guidance or both and incorporating many of the advantages of other forms of peer mentorship. Since student mentors are closer in age, knowledge, authority and cognitive development than adult mentors, mentees often feel freer to express ideas, ask question and take risks. These similarities also make it easier for mentors to understand problems that mentees may be facing and present solutions in a more understandable and relevant way.

According to Aderanti and Hassan (2011) Cognitive Restructuring is aimed at correcting faulty information processing. The trainer does not tell the aggressive adolescent that his belief is wrong but rather asks questions to elicit the meaning, function, usefulness and consequences of the aggressor's beliefs. Cognitive Restructuring can thus be defined as the process of learning to refute cognitive distortions, or fundamental "faulty thinking" with the goal of replacing one's irrational counter-factual beliefs with more accurate and beneficial ones. Self belief has a great effect on how an individual goes through life. It influences life since negative self-belief will lead to poor success (Nwadinigwe and Longe, 2007). In effect, Cognitive Restructuring training programme is a systematic psychological intervention usually employed in modifying human behaviour and attitudes. In line with this, Omoegun (2003) asserted that Cognitive Restructuring can be used by counsellors to effect changes in

clients' behaviour from illogical thoughts to logical thinking. Yahaya (2006) working with 50 secondary school students aged 14-20 years in Ilorin, Nigeria, by using Cognitive Restructuring training package succeeded in effecting a change in the thinking pattern of the respondents.

The Cognitive Restructuring Theory proposed by Ellis (1998) is based on the idea that individuals have predisposition to hold certain beliefs about themselves, others and external environment. These beliefs have the capacity to influence feelings and behaviour with these beliefs therefore leading either to positive or negative behavioural patterns. Thus, this theory emphasizes the interaction between what people do and what they think (Longe, 2008). This view regards antisocial behaviour such as aggression as the end result of disordered or maladaptive thinking process.

In summary, relevant literature has been reviewed to provide an insight into adolescent aggression and the evidence suggests that whatever the theoretical orientation of the researchers, they all agree with Rahman and Huq (2005) that aggression is an unacceptable behaviour. Although suggestions for treatment of aggression have proliferated, there has been little or no attempt to evaluate the impact of such intervention in Nigerian schools. The present study addressed gaps that arise regarding the adolescent aggression phenomenon.

Methodology

Two research designs were used for the study. The first was a survey design that was used to collect the baseline data. The second research design used was the quasi-experimental pre-test/ post-test control group design. The dependent variable of interest was aggression while the independent variables included Cognitive Restructuring and Mentoring. The study was carried out in Lagos State. Lagos State has six Education Districts, namely Districts I, II, III, IV, V, VI and the Local Governments in each District are tabulated in Table 1.

Table 1: Education Districts and their constituent Local Government Areas showing study locations.

DISTRICTS	LOCAL GOVERNMENT AREAS			
I (Mentoring)	Agege	Ifako Ijaiye*	Alimosho	
II (Cognitive Restructuring)	Ikorodu*	Kosofe	Shomolu	
III	Ibeju-Lekki	Lagos-Island	Epe	Eti-Osa
IV	Mainland	Surulere	Apapa	
V (Control)	Badagry	Ojo*	Ajeromi-Ifelodun	Amuwo-Odofin
VI (Pilot)	Oshodi-Isolo	Mushin	Ikeja*	

*Study location in each of the selected Districts.

The target population of the study consisted of all Senior Secondary School students in Public and Private Secondary Schools in Lagos State of Nigeria. The participants were within the age bracket of 13-19 years, thus they were in the adolescent stage of development. Multistage sampling technique was used for this study. At the first stage, the hat and draw method was used to select three Education Districts from the six existing Education Districts in Lagos State. The three selected Education Districts were Districts I, II and V. The second stage of sampling involved randomly selecting one Local Government Area from each of the three Education Districts earlier selected at the first stage. Thus by the use of the hat and draw method, Ifako-Ijaiye, Ikorodu and Ojo Local Government Areas were randomly selected from Education Districts I, II, and V respectively.

At the third stage of sampling, stratified random sampling technique was used to select one private and one public boarding school from each of the three Local Government Areas selected at the second stage. By this method, six schools (two from each Local Government Area) were chosen. The fourth and final stage of sampling involved selection of 70 students from each of the two schools in each of the three Local Government Areas. All the research instruments – Aggression Questionnaire (AQ), Rathus Assertiveness Schedule (RAS) and Multidimensional Peer-Victimisation Scale (MPVS) were administered to provide pre-test scores While the Aggression Questionnaire (AQ) was also used to identify aggressive students .

For the second phase of the study, the 124 students who were identified as having high scores on AQ that is, exhibiting aggressive tendencies were chosen for treatment. However a methodological triangulation was undertaken to confirm the 'aggressive label' on the students by presenting the names of these 124 high scorers to their respective class masters and the school counsellor to confirm that these students had been directly involved in cases of fighting, verbal abuse, vandalism and such other aggressive acts. Through this method, 30 of the 124 high scorers who have not been consistently involved in cases of aggression were eliminated from the second phase of the study. Thus only 94 students who scored high on the aggression scales and have been involved in cases of aggression participated in the treatment phase. For the experiment, each of the three Education Districts was randomly assigned an experimental group.

Out of the 94 students who served as participants for the experiment, 30 participants received Cognitive Restructuring treatment, 33 received Mentoring treatment while 31 participants were in the Control group. The students were trained in their various schools so as to avoid contamination. The classrooms were used as

locations for the study. All the schools used for the study were boarding schools since peer mentoring was used. A pilot study was carried out to determine the validity and reliability of the research instruments. The test-retest reliability technique was employed to determine the stability of the instrument. The coefficient obtained after an eight week time interval between the first and second administration of the instruments were 0.79, 0.82 and 0.75 for AQ, RAS and MPVS respectively. Concurrent validity estimates ranged between -0.67 and 0.83

The assumption of the Cognitive Restructuring treatment is based on the belief that aggression can be attributed to the individual's belief system (Corsini and Wedding, 2006). The treatment sessions focused on establishing relationship, problem identification and exploration, planning for problem solving and solution application. Post-test assessment followed one week after treatment. RAS, AQ and MPVS were administered to help group members set logical priorities that initiated and sustained attitudinal changes. The scores obtained served as post-test scores.

The concept of peer mentoring is based on the notion that the behaviours of children are learned from peers. With the assistance of the class teachers and School Counsellors, eight mentors for the study were nominated from the SS Two classes, because being in a higher class, the effect of peer mentoring was easier to establish. The 33 mentees for treatment were SS One students who had displayed aggression. The treatment period was for six weeks. To ensure that the desired mentorship effect is achieved, eight groups evolved by each mentor being assigned to about four mentees. A week after the six weeks treatment sessions ended, all the mentees were once again given the RAS, AQ, MPVS to complete so that the data obtained served as post-test scores.

The control group was a treatment expectancy group. As reward, the control group was later exposed to the treatment that worked better so that they can benefit from the research. They were exposed to mentoring treatment one week after the administration of post-tests were concluded as mentoring worked better.

Results

To test the hypothesis, participants in the three experimental conditions were compared on their post-treatment aggression using One-way Analysis of Co-variance to determine the effect of experimental treatments. The results are presented in Tables 2 and 3.

Table 2: Pre and Post-test Aggression scores of Participants in the three experimental groups

GROUP	N	PRE-TEST SCORES		POST TEST SCORES		MEAN DIFFERENCE
		Mean	SD	Mean	SD	
Mentoring	33	121.30	3.74	72.94	7.05	48.36
Cognitive Restructuring	30	122.63	3.55	86.70	4.42	35.93
Control	31	121.84	4.13	119.45	7.19	2.39
TOTAL	94	121.90	3.81	92.67	20.70	29.23

The descriptive data presented in Table 2 indicate that the three experimental groups were very similar in their Aggression scores before the treatment, with respective mean scores ranging from 121.30 for the Mentoring group, 122.63 for the Cognitive Restructuring Group to 121.84 for the Control Group. Table 2 also shows that at post-test, the Mentoring Group recorded the greatest reduction in their aggression with a mean score of 72.94, followed by participants who received Cognitive Restructuring with a mean score of 86.70 while the Control Group experienced a negligible reduction with a mean score of 119.45 (SD=7.19) The mean differences between pre and post test aggression scores were 48.36, 35.93 and 2.39 for participants in the Mentoring, Cognitive Restructuring and Control groups respectively. To determine if these differences are statistically significant, the ANCOVA result is displayed in Table 3.

Table 3: One-way Analysis of Covariance of the Effect of Experimental Condition on Post- Test Aggression of adolescent students

Source	SS	Df	MS	F	Eta Square
Model	843521.11	4	210880.28	5289.80*	0.99
Experimental Condition	36132.27	3	12044.09	302.12*	0.91
Covariate (Pre-test Aggression)	119.97	1	119.97	3.01	0.03
Error	3587.89	90	39.87		
Total	847109.00	93			

* $p < 0.05$ $F_{0.05}(1 \text{ and } 90) = 3.92$ $F_{0.05}(3 \text{ and } 90) = 2.76$ $F_{0.05}(4 \text{ and } 90) = 2.53$

The results presented in Table 3 indicate that after adjusting for pre-intervention aggression scores, there were significant differences among the three experimental groups on post-intervention aggression scores F calculated = 302.12, $p < 0.05$, Partial Eta Squared = 0.91, a large effect size, indicating that 91 percent of the variance in post-test aggression is explained by the experimental condition. Table 3 also shows that there is no significant relationship between the pre and post-test aggression scores while controlling for experimental condition ($F_{1/90} = 3.92$, F calculated=3.01) and that the covariate (pre-test aggression) accounted for a negligible three percent of the variance in the dependent variable (post-test aggression).

Evidence from Tables 2 and 3 therefore suggest that experimental manipulation was effective in assisting adolescent students cope with their aggressive behaviours. Participants in the Control group did not experience any remarkable change between pre and post intervention aggression. However, of the two training strategies, Mentoring was more effective than Cognitive Restructuring; hence the hypothesis that there is no significant difference in post test aggression between participants in the three experimental conditions was rejected.

Table 4: Fisher's Protected t-test Pair wise comparison of the effect of treatment on post-test aggression of adolescent students

Experimental Condition	Cognitive Restructuring n=30	Mentoring n=33	Control n=31
Cognitive Restructuring	86.70 ^a	8.71*	-20.34*
Mentoring	13.76	72.94	-29.62*
Control	-32.75	-46.51	119.45

a =Group means are in the diagonal, difference in group means are below the diagonal while protected t-test values are above the diagonal.

*= significant at 0.05

The results presented in Table 4 indicate significant between group differences among the three groups as shown from their respective t-values. The mean differences between Mentoring and each of Cognitive Restructuring and Control Group were 13.76 and 46.51 which yielded respective t-values of 8.71 and 29.62 both of which are statistically significant at the 0.05 level of significance. The mean difference between Cognitive Restructuring and Control group was 32.75 which resulted in a t-value of 20.34, $P < 0.05$. These results therefore indicate that the Mentoring Group experienced the greatest reduction in aggression, followed by those in Cognitive Restructuring Group while the Control Group did not experience any change in aggression.

Discussion

The findings of this study showed that students who participated in the peer mentoring programme reported very significant reduction in their aggression much more than those who participated in Cognitive Restructuring training. The Control group participants did not record any significant change in their aggression. The findings of this study are in tandem with the treatment literature (Osunde, 1996; Tucker, 2007) which has demonstrated the efficacy of peer mentoring in helping aggressive adolescents acquire appropriate behaviours through a mentoring relationship utilising its various techniques including modelling and imitation.

The relative effectiveness of Mentoring in helping aggressive adolescents cope with their maladaptive, excessive or deficit behaviour may lie in its supportive, relaxed and informal atmosphere which builds mutual trust and positive regard. This study views Mentoring to be more effective than Cognitive Restructuring because both the mentor and the mentee have common experiences, share common issues, hopes and fears and the mentors show unconditional positive regard, empathy, spontaneity and are genuine to their mentees. The interaction advantage that mentoring encourages increased the chances of the mentees learning acceptable behaviour patterns since if behaviour can be learned it can be unlearned. However, the potency of Cognitive Restructuring as a treatment intervention should not be completely lost or discounted. Ubangha (2001) in utilising Cognitive Restructuring to manage teachers experiencing burnout has demonstrated how individuals can be assisted to uproot their negative, self-defeating and illogical thoughts and replace them with growth promoting ideas. In view of this, it might be necessary to suggest that in utilising Mentoring to assist aggressive adolescents to cope with their misbehaviour, Cognitive Restructuring may be used as an adjunct intervention. This way, participants would be better equipped to adopt those aspects of each treatment that worked better.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Since Mentoring has been found to be more efficacious in the modification of aggression in the adolescent student more than Cognitive Restructuring, the benefits of Mentoring could be obtained by its inclusion in the school's curriculum. Education on the process of Mentoring, how it works and skills in relationship development should form a prominent part in the curriculum of life-skills classes.
2. The general population of adolescents is engaged in a school setting for a substantial period of time on a regular basis. Schools should therefore make conscious effort to have school programmes that enhance interaction of students with themselves. If possible, more boarding facilities should be set up in Public and Private schools so as to enhance positive interaction of adolescents.
3. Adolescent students who are doing well should be celebrated by their schools so that more can be role models for their peers. This is expected to make more adolescents take initiative and be more responsive in making responsible life choices.

Conclusion

The conclusion drawn is that aggression should not be tolerated in schools and an empirical platform for the launching of the safe school initiative must be put in place. More so, the adolescent of today is the adult of tomorrow and suitable programmes carved out now will lead to the needed national reconstruction.

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