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Discipline, Academic stress, and Aggression among Secondary School Adolescents in Mbarara City, Uganda

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Abstract

Purpose: The purpose of this study was to examine the associations among discipline, academic stress, and aggression among adolescent secondary school students in Mbarara City, Uganda.

Methodology: In this study, a cross-sectional research design and quantitative approach was used. Data was collected from adolescent secondary school students (N= 384) using a structured questionnaire. Pearson product moment correlation coefficient and linear regression were ran to establish the associations among the variables.

Findings: The findings found out that, majority of the secondary school adolescents 342(89%) reported use of positive methods of discipline by school authorities. There was generally high level of academic stress (M = 42.2, SD = 8.2), and students exhibited low levels of aggression among themselves (M = 46.50, SD = 14.54). Further, the results revealed that increase in academic stress and use of negative methods of discipline increases the likelihood of the occurrence of aggressive behaviour ($\beta = .251$, $p < .001$ and $\beta = .237$, $p < .001$) respectively.

Recommendations: It was therefore recommended that schools be encouraged to use positive methods of discipline instead of negative methods, and that they further regulate academic programmes to include co-curricular activities in order to reduce academic stress. In addition, there is an urgent need for psychologists to be employed in all schools for further psychological interventions, besides the regular teacher interventions which are limited to purely aiding classroom instruction

Key words: *Discipline, Academic stress, Aggression among Adolescents, Secondary School, Mbarara City, Uganda*

INTRODUCTION

Discipline and strategies of maintaining or enforcing it among different social groups has been a concern since the beginning of the 21st century due to the many radical and violent human interactions (Hudley et al., 1998). Discipline can be understood as a behaviour that reflects orderliness, self-control, self-direction, and following of regulations and instructions (Cotton, 2000). In this study, discipline refers to the methods or process of bringing about orderliness, and enabling instructions, rules and regulations to be followed in a school (Cotton, 2000). This orderliness includes observance of school rules and regulations, time management, and the administration of punishments. Discipline methods can be positive or negative.

According to Cotton (2000), positive methods of discipline involve praising the child for doing something good or for stopping doing something inappropriate, thus helping children to understand why certain behaviour is unacceptable and other behaviour is acceptable. Negative discipline focuses on doing what you are told in order to avoid something unpleasant, for example, smacking a child for doing something wrong.

Methods of discipline can bring orderliness, self-control, and harmony between custodians and recipients (Cotton, 2000). However, they can cause academic stress which later on induces aggression in the learners, depending on the nature of the method used (Widom, 1989). Academic stress can be understood as the anxiety that comes from the pressure during schooling and education pursuit (Nakalema, 2013). Students respond variously to stress; stress responses may be positive or negative. Positive stress response involves working hard to achieve the educational objectives being pursued. However, for other students, stress may manifest itself in more negative ways, including externalizing behaviours such as physical aggression (Selye, 2007).

Aggression is defined as a behaviour or disposition that is forceful, hostile, or attacking, which may occur either in retaliation, or without provocation, characterised by anti-social behaviour such as irritability, hostility, lack of remorse and guilt, lack of empathy, irresponsible behaviour, recklessness, and incapacity for love (Martens, 2002). In this study, aggression is categorised into overt, relational, and instrumental dimensions (Little, Henrich, Jones, & Hawley 2003).

In Uganda, there is a general outcry about the increasing prevalence of aggression in its different dimensions among students in secondary schools (Mpaata, 2008). This is contrary to the popular expectation of a school. Ideally, a school should lead the rest of the society in knowledge and understanding of the process of human growth and development. Socialization of children should take the lead in avoiding or minimising accumulation of stress and the associated aggression (Mafabi, Higwira, & Osire, 1993). However, the discipline methods employed, coupled with academic stress seem to contribute to the increasing trend of aggression experienced in secondary schools, where property has been destroyed and some lives have been lost between 2002 and 2013 (see Appendix A). The main factor to blame has been negative discipline methods, which tend to dominate corrective measures and so, students are inclined to demand for justice through violent means. Hence, Widom's (1989) theory that violence begets violence is upheld. Against such a negative trend of developments in our education, there is need for a systematic investigation into the link between the current aggressive behaviours, academic stress, and the methods of discipline among adolescent secondary school students in Mbarara City secondary schools.

Scope

The study considered both private and government aided secondary schools, co-educational (mixed) and single sex (girls and boys), ordinary and advanced level students in Mbarara City, Uganda., South-Western Uganda, following rampant strikes that took place in the area (Tumushabe, et al. 2013). However, the study limited itself to adolescent students aged 12-17, methods of discipline, academic stress, and aggression.

In this study, academic stress was limited to the academic demands that put pressure on the student in his/her pursuit of academic studies.

Significance

The study findings are hoped to inform the head teachers and teachers about the salient issues concerning their methods of discipline. This is hoped to enable them to come up with appropriate strategies of handling students to regulate academic stress and aggression by applying appropriate discipline measures.

The findings are expected to enable the adolescent students to develop mechanisms of handling or taming their aggression by addressing issues related to discipline and academic stress. This may be achieved as students establish underlying factors leading to academic stress and aggression especially those related with school environment. Hence they may be able to work with the concerned parties such as head prefects and teachers to avoid such causes.

The study findings are expected to add on the existing body of knowledge concerning variables of discipline, academic stress, and aggression in the context of secondary education. This knowledge would enable the potential future researchers and academicians to borrow a leaf in form of related literature. This would eventually add knowledge on existing theories and paradigms about these variables, especially in evaluating their relevance in today's discipline among adolescent students.

LITERATURE REVIEW

This chapter presents a review of the past scholarly literature on discipline, academic stress, and aggression among adolescent students. The presentation was thematically oriented based on study objectives.

Methods of Discipline Used to Guide Adolescent Students

Discipline as the means of bringing control, training obedience and order or drill (Bahemuka, 1998), is a key mode of healthy human interactions. School discipline, the regulation of children and maintenance of order in the school (Cotton, 2000), is very vital in achieving the goal of education. One of the goals of discipline, which can be also seen as a challenge for many schools, is to provide a safe environment for all learners and educators (Smit, 2010). Thus discipline is about positive behaviour management aimed at promoting appropriate behaviour and developing self-discipline and self-control in learners (Squelch, 2000 cited in Smit, 2010).

Discipline methods used among adolescent secondary school students by teachers and other school administrators can either be positive or negative, depending on the prevailing circumstances. A review of some of the positive discipline methods used is presented below. According to Cotton (2000), discipline can be positive, for example, praising the child for doing something good or for stopping doing something inappropriate; or discipline can be negative, for example, smacking a child for doing something wrong. Positive discipline normally involves helping children to understand why certain behaviour is unacceptable and other

behaviour is acceptable. Negative discipline focuses on doing what you are told in order to avoid something unpleasant.

School rules and regulations are among the strategies designed to instil good conduct of students, and this implies self-control, orderliness, good behaviour and obedience to school authority (Adams, 2003). Also, on admission in schools especially at secondary level, students are given prospectuses which spell out some of the expectations. These rules and regulations specify in most cases what school members should do and what they should not do (Adams, 2003). Despite this expectation, in most secondary schools, students break these rules and regulations with widespread indiscipline acts such as escaping from schools, taking of alcoholic drinks, participating in frequent strikes with closure of schools and suspension of students that affect students' academic performance (Wa Kivilu & Wandai, 2009, cited in Smit, 2010). These indiscipline behaviours could be attributed to the aggressiveness of the students due to negative discipline methods used in the selected schools.

According to Kabandize (2001), individual schools in Uganda set rules and regulations to control students, and these are enforced through prefects' bodies and councils, disciplinary committees, teachers and involvement of parents. This agrees with Cotton (2000) who also argued that the best results could be obtained through vigilantly reminding students about rules and regulations of the school and monitoring their compliance with them. However it has become normal in many secondary schools for students to break school rules and regulations with impunity, showing lack of respect to school authority, damaging of school property, beating up their teachers, rioting at any slightest opportunity and even inflicting harm on one another to the extent of using acid as a means of defence (Abaasa, 2006).

Harris (2005) carried out a study on discipline among learners in a state funded secondary school in Oxford, United Kingdom, and established that the collapse of discipline in the classroom order and classroom hooligans was an indication of students disrespecting classroom rules and regulations. Much as Harris' study concentrated on discipline and established that it was declining among students, it did not focus on the extent to which negative discipline methods can be used alongside positive discipline methods.

In reference to the above presentation, some of the scholars have carried out studies on the extent and circumstances under which negative discipline methods have been used among adolescent students in secondary schools. In line with this, Morell (2001), as cited in Smit (2010), states that corporal punishment persists in secondary schools as a method of discipline because many parents use it at home and support its use at school. Using corporal punishments on students is a possible cause of stress (De Klerk & Rens, 2002).

In 2003, Nelson and Quick indicated that use of positive methods of discipline was preferred to punishment. They described the traditional consequences for disciplinary infractions as typically punitive, reactive, and meted out in stages, such as: warning, detention, student and parent conference, suspension, transfer to another school, and expulsion. This is in agreement with an earlier study by Asmal (1999) as cited in Smit (2010), that corporal punishment does not achieve a culture of learning and discipline in the classroom; instead it leads to violent behaviour and it does not build a culture of tolerance, human rights and respect. It is also noted in yet another study that corporal punishment contributes to absenteeism and high dropout rates in South African schools (Smit, 2010).

Corporal punishment has been abolished in all countries in Europe, and other countries like Israel, Japan, and most states in Australia (Stewart, 2004). However, in some jurisdictions, corporal punishment is still permissible. In the United States of America, there are 30 states

where corporal punishment is allowed (Brister, 1999, cited in Smit, 2010). In most countries, corporal punishment has been replaced with more pervasive and mostly preventive actions such as loss of privileges, and corrective measures such as suspension and expulsion, to deal with undisciplined and disruptive learners (Stewart, 2004).

In further criticism of the negative discipline methods, Gershoff (2002) contends that the use of corporal punishment has been linked to a wide variety of negative mental health outcomes, including internalizing characteristics such as lower self-esteem. In 2003, a study done by Kazdin and Benjet correlated the use of harsh discipline with the ability of young adults to establish autonomy while maintaining a healthy parent-adolescent relationship. The authors found that the use of harsh discipline by both parents resulted in greater adolescent depression. They also found that the use of harsh discipline by mother resulted in adolescents who were less engaged and warm toward their mothers. This negative effect on the parent-adolescent relationship is found to result in adolescents reported significantly lower levels of self-esteem (Gershoff, 2002).

Levels of Academic Stress among Adolescent Secondary School Students

Stress, the body's automatic response to any physical or mental demand placed upon it (Seaward, 2007), affects the human normal psychological and somatic function. When confronted with stressors, the body creates extra energy and stress occurs because our bodies do not use up all of the extra energy that has been created (Selye, 2007). Stress responses can be both positive and negative. For example, if a student needs a 90% on a test to bring his grade up to passing, stress could motivate him to study diligently or it could lead him to a downward spiral of anxiety or a depressed mood. Likewise, children and adolescents may respond both positively and negatively to stressful situations that are occurring in their families. That is, when a student's family is experiencing financial stress, he or she may be motivated to help more around the house with family chores, watch siblings, or simply show their parent (s) how much they love them (Selye, 2007). However, for other students, stress may manifest itself in more negative ways, including a drop in grades, substance use and/or abuse, internalizing behaviours (anxiety, depression, self-blame), and/or externalizing behaviours such as physical aggression, verbal aggression and bullying (Seaward, 2007). Becoming a student, whatever your age or background, involves the psychological and practical challenges. Particular stress points occur at the beginnings and ends academic stress (Abouserie, 1994).

The environment in which adolescent secondary school students live contributes to the levels of academic stress, for example the cultural context and demands from their peers. The environmental demands are quite different from one student to another (Zeidner, 1992). Kuth (2009) highlighted the important characteristics of a supportive academic environment, such as one that provided support to students to succeed academically and socially. Such a conducive environment enables the students to meet the non-academic demands and provides support that enhances the students' relationship with fellow students, staff and institutional administration. The inability to integrate in the academic and social environment may cause psychological distress to the students (Parker & Jones, 1999).

Misra, Mckean, West, and Russo's (2000) research findings suggest that stress levels vary by gender of the students. Levels of academic related stress differed among male and female students with female students being more prone to more academic stress than their male counterparts (Abouserie, 1994; Bang, 2009; Misra & Mckean, 2000; Rayle & Chung, 2008). Females experience higher levels of academic stress because of negative appraisals of the stressful event and focus on the emotional challenges in the wake of the stressful event. Male

students are trained to display strength and masculinity in the face of challenges right from their tender age (Misra & Mckean, 2000). However, female students performed better than the male students and had better grades than male students even in case of some sort of stress (Talib & Zia-ur-Rehman, 2012).

In 2011, Jutengren, Kerr, and Stattin examined the predictive effects of peer victimization and harsh parenting on deliberate self-harm. As derived from the experiential avoidance model, the authors also tested whether these links were moderated by individual self-regulation approaches. Data were collected at two times from 880 junior high school students (mean age = 13.72) in Sweden. Analyses using structural equation modelling revealed that peer victimization was predictive of self-harm. Although harsh parenting was not predictive of self-harm, this link was moderated by adolescents' gender. No moderating effect of self-regulation was revealed. The authors concluded that the high prevalence of deliberate self-harm recently found in community samples of adolescents cannot be prevented without attending to environmental psychosocial factors.

Brusaert and VanHoutte (2004) identified perceived social support mechanisms through which the gender composition of the school may influence pupils' stress responses, using data from 68 academically oriented Flemish secondary schools in Belgium. Of these schools, 25 were co-educational schools and 43 were single-sex schools (21 girls' schools and 22 boys' schools). Respondents (3,370 girls and 3,057 boys) were third-year students, ages 14 and 15. A multilevel analysis (Hierarchical Linear Modelling) was performed, adjusting for parental socioeconomic status (SES), parental support, academic performance, curriculum enrolment, school mean SES, sense of belonging in school, and quality of teacher-pupil relationships. Results showed that girls in early adolescent stages in single-sex schools experience lower levels of stress than do girls in co-educational schools and that this effect is largely accounted for by sense of belonging.

In another research, Elgar, Arlett, and Groves (2003) studied the differences between rural and urban adolescents and gender differences related to stress levels, coping strategies and behavioural problems. Four major results were found. First, they found no differences between rural and urban adolescents in terms of stress levels and behavioural problems, but urban adolescent boys reported more conflictual problems than did girls, and urban boys reported having more external problems than did rural boys and girls. Second, rural adolescents were more affected by higher unemployment, poverty, and emigration, but did not differ significantly from urban adolescents in terms of stress levels or coping strategies. Third, even though conflict levels and behaviour problems seemed to be similar between rural and urban adolescents, rural adolescents seemed to have a closer relationship between these two variables, as well as between conflict and coping strategy in this same group. Fourth, the approach strategy did not act as a moderator in the relationship between stress and behavioural problems.

Landis et al. (2007) explored potential mechanisms through which uncontrollable, chronic stressors may lead to hopelessness in 796 racially and ethnically diverse low-income urban adolescents. In particular, the roles of specific coping strategies as moderators and/or mediators of the association between stressors and hopelessness were examined. Chronic, uncontrollable stressors were significantly and positively related to hopelessness in their sample. Active coping, distraction coping, and social-support-seeking coping emerged as moderators for boys, such that uncontrollable stressors were more highly associated with hopelessness for those boys who reported using more active, distraction, and social-support-seeking coping strategies. A similar moderating effect was found for ruminative coping by

girls. Ruminative coping also emerged as a mediator of the relation between uncontrollable stressors and hopelessness for girls.

Wadsworth and Berger (2006) examined adolescents' family stress related to poverty in order to predict psychological symptoms. Coping strategies related to primary and secondary control predicted a reduction of aggressive and anxious/depressive behaviour, whereas those based on disengagement had the inverse effect which was verified for anxiety and depression but not for aggression. Family stress linked with poverty interfered with coping strategies by interfering with adolescents' abilities to use primary and secondary control strategies to help them avoid using disengagement strategies: this stress predicted anxious/depressive and aggressive behaviour. It was the same for the interaction between involuntary reactivity to stress and these coping strategies. Primary and secondary control strategies were associated with changes in psychological symptoms with initial symptoms and low involuntary reactivity to stress. The interaction between coping strategies based on primary and secondary control and psychological symptoms predicted a reduction of these symptoms in those who have these initial symptoms, which was verified by internalized symptoms but not externalized symptoms.

In 2005, Hamfpel and Peterman found that adolescent girls perceived more interpersonal stress than did adolescent boys. They did not differ from boys in regard to externalized problems, which was rather surprising. Interpersonal stress was also related to anger management problems and emotional distress in female adolescents. The authors confirmed that adaptive coping strategies are inversely related to adjustment problems and maladaptive strategies. Problem focused coping strategies are less associated with poor adjustment problems, and this supports the notion that active strategies or approach strategies are a protective factor, relative to internal disorders. Emotional coping strategies are related to less anxiety or depression and aggression problems. Maladaptive coping strategies constitute a risk factor. Adolescent girls react strongly to interpersonal stressors and make more efforts to adapt to social stressors than boys do (Hampel & Peterman, 2005).

O'Connor, Rasmussen, and Hawton (2009) investigated the extent to which perfectionism and acute life stress predict depression, anxiety and self-harm among adolescent school children (n = 515) over a 6 month period (Time 1–Time 2). Socially prescribed perfectionism (SPP), self-oriented perfectionism critical (SOP-critical), and the associated interactions with acute life stress, differentially predicted anxiety, depression and self-harm. Acute life stress was an independent predictor of depression, anxiety and self-harm. SPP predicted depression and interacted with acute life stress to predict self-harm. SOP-critical and the SOP-critical by acute life stress interaction predicted anxiety. Self-oriented perfectionism striving (SOP-striving) did not predict any of the Time 2 measures of distress. The dimensions of perfectionism are differentially associated with psychological distress. Whereas O'Connor et al. concentrated on distress, a study on stress and aggression was inevitable.

Moksnes, Moljord, Espnes, and Byrne (2010) investigated whether leisure time physical activity moderated the relationship between stress and psychological functioning (depression, anxiety, self-esteem) among Norwegian adolescents 13-18 years old (n = 1508). In preliminary analyses, girls reported higher scores of depression and anxiety and boys scored higher on self-esteem. Interaction effects of gender by age were found on all outcome variables. Stress was positively associated with depression and anxiety, and negatively associated with self-esteem. Higher frequency of leisure time physical activity was weakly associated with lower levels of depression and anxiety, and higher levels of self-esteem. The primary analyses revealed no support for leisure time physical activity as a moderator of the association between stress and psychological functioning. But this study seeks to link stress and aggression.

Similar to the emergent themes in the environmental stress category, adolescents regulate interpersonal and academic stressors (Byrne, et al., 2007). Emotional regulation becomes emotional self-regulation and there are differences between internalizing and externalizing behaviour in adolescents resulting from stress factors. A medical study by Roemmich, et al. (2011) suggests that stress may be linked to disease in those who develop certain cardiovascular stress reactivity, although the authors used some controversial methods to assess cardiovascular activity. Haraldsson et al. (2008) claimed that by engaging in health promotion activities, adolescents can improve their sense of well-being related to stress.

Lohman and Jarvis (2000) used Bronfenbrenner's Ecosystemic Model to explore the relationship between adolescents' cohesive and conflictual relations with others in relation to their mental health and behaviour problems. According to the model, perception of family cohesion predicted low levels of stress among adolescents, whereas a perception of family conflict predicted increase in levels of stress. More cohesion and less conflict, as well as parents' understanding of their adolescents' stress related problems, predicted fewer mental health symptoms. Heaven and Ciarrochi (2008) agreed that when perceptions were congruent between family pairs (especially between father and adolescent), this influenced mental health more than when an individual was struggling with stressful situations alone. Family members who knew other members' stressors were more likely to support each other when problems arose (Uwe, Hempel, & Miles, 2003).

The above model findings portray a picture of resultant anti-social behaviours among the adolescent students once the coping strategies between the student and the teachers/school administrators are conflictual. This may worsen the stress and turn the affected student into an aggressive one in the quest to find his/her suitable coping strategy. It is no wonder that to some extent, student aggressive behaviour has been attributed to accumulated academic stress among such students. This therefore leads to the common aggressive behaviours exhibited by adolescent students.

Aggressive Behaviours among Adolescent Secondary School Students

The word aggression comes from a Latin word "*aggression,*" which means attack. Freud defined aggression as an inherited, independent and instinctive disposition in a human being (Beumeister, Brad, & Campbell, 2000). He further argues that civilization tries to put up barriers against the human aggressive instinct. But he also stated that the aggressive instinct is in fact a death instinct that is opposite to the life-giving and pro-social erotic instinct and the society that creates this instinct.

Aggressive people often use anger, aggressive body language, or other threatening behaviour to bully and dominate other people (Beumaster et al., 2000). Earlier studies by Moyer (1968) considered aggression as a behaviour that leads to, or seems to result in damage or destruction of a target entity. In a later study, Martens (2002) explained that aggression has a motive of restoring self-organization structure, confidence and positive self-image after disillusion, frustration, disappointment and/or threatening actions of others.

Recent studies have indicated that African American adolescent male students are more prone to truancy and aggressive behaviour in school environments than peers of other races (Alexander, Entwisie, & Olson, 2001). Within this at risk group, African American adolescent male students stand alone in terms of the vast accumulation of negative factors affecting their future (Comer, 2004; Ferguson, 2000 & Smith, 2004). For example, in the Minneapolis School system, enrolment of black and white students is nearly equal, but 43% of all suspended students were black males versus 14% of white males (Fremon & Renfrow-Hamilton, 2001).

Research has shown that when black male students are compared to other students by gender and race, they consistently rank lowest in academic achievement (Ogbu, 2003), have the worst attendance records (Voelkle, Welte, & Wieczorek, 1999), are suspended and expelled the most often (Raffaele-Mendez, 2003 & Roderick, 2003), are most likely to drop out of school, and most often fail to graduate from high school (Pinkney, 2000; Pollard, 1993).

The work of Dodge and colleagues (Crick & Dodge, 1994; Dodge, 1991; Dodge, Bates, & Petit, 1994) has identified types of childhood and adolescent aggression, to include overt, relational, and instrumental categories of aggression. The author notes that all the forms can involve serious physical violence, but the purpose behind the violence is quite different. Students who engage in physical aggression in school present a serious challenge to maintaining a safe and supportive learning environment. Unlike many other forms of student aggression, fighting is explicit, is violent, and demands attention. A fight between students in a classroom, in the dormitory, or at the school kitchen/ dinning room brings every other activity to a halt, and draws fellow students and concerned adults toward the violence. The disruption is total, the after effects lingering, and the potential for serious injury very real.

Klomek, Marrocco, Kleinman, Schonfeld, and Gould (2007) have indicated that low self-worth frequently reported by depressed students, might both be a cause and a result of being bullied or being aggressive. Bullied adolescents' feelings of being less socially accepted by peers might weaken their ability to fight for their positions in school or in peer groups, and therefore, make them more prone to becoming easy targets (Perren & Alsaker, 2006). According to Dill, Vernberg, Fonagy, Twemlow, and Gamm (2004), the contribution of shyness/social withdrawal in predicting negative affect could be explained by the effect of peer rejection/social difficulties on negative effect, which was mediated by the experience of actual victimization. In another study, the adolescents who were aggressive toward others also reported a wide array of conduct problems, and they showed higher levels of depressive, aggressive, and delinquent behaviours than non-involved students, consistent with earlier findings (Sourander, 2007).

In another research, it was found out that while boys employ more direct aggression than girls, girls use more indirect aggression than boys (Tapper & Boulton, 2004). However, the reasons for the sex differences remain controversial (Tapper & Boulton, 2004). Whilst some authors suggest that sex differences may have a biological basis (Campbell, 1999), others place more emphasis on cultural influence (Eagly & Wood, 1999), the socialization process of children (White, 2000), and use of the effect/danger ratio (Osterman, 1999). Tapper and Boulton suggest that to get a full account of the reasons for sex differences in aggression, a mechanism by which biological pre-dispositions and cultural influences are translated into behaviour is required.

Archer and Haigh (1997) predict a link between belief about aggression and level of aggression. Referring to the expectancy value theories of Fishbein and Ajzen (1975) and cognitive social learning theory by Bandura (1973), the anticipated consequences of aggression might influence behaviour. According to Archer and Haigh, the instrumental scale would be associated with positive anticipated outcomes of aggression whereas the expressive scale would be associated with more negative anticipated outcomes. They, therefore, predicted that instrumental beliefs would show a positive correlation with aggression while the expressive beliefs would show a negative correlation. Since the items on their scale tended to be concerned with physical aggression, they also predicted that the correlation between an instrumental belief and level of the aggression would be higher for physical aggression than for verbal aggression.

In 1999, Campbell found out that females grow up believing that it is socially unacceptable for a female to engage in aggressive behaviours, particularly physical and direct bodily aggression, since these are masculine features not characteristic of females. "This belief makes females feel guilty when they resort to aggression to show their anger or disapproval of a situation. They see their aggression as loss of self- control, caused by high level of stress" (p. 245). In Ghanaian senior secondary schools, female students who engage in physical aggressive acts such as physical fighting, slapping, or kicking peers in conflict situations are called by nicknames to show that such behaviour is a deviation from the standard and acceptable norm. Names include "yaaasantewaa" (a heroine), "man-woman", "iron-lady" or "witch". However, on the whole, female students in Ghana do not employ direct physical aggressive behaviour in registering their displeasure with other students or between the student body and school authorities. In fact, it is rare to hear of school demonstrations or student unrest in girls' schools in Ghana.

Campbell (1999) further notes that although conflict between the student body and school administration may arise, female students tend to use the student teacher consultative councils to resolve issues. In situations where students fight among themselves in the dormitories or the classroom or playground, it is common to find the students involved weeping afterwards to show their remorse for fighting. They also explain to school authorities that they lost their self-control due to extreme provocation from their peers, resulting in a physical attack. In the girls' schools studied by Campbell, the students mostly employ indirect aggressive methods to "fight back" at those who annoy or provoke them. These include gossiping about their aggressors, insulting each other, and refusing to talk to peers as a way of showing their disapproval.

Relationship among Discipline, Academic Stress and Aggression

In 2012, Kavuli carried out a study on the relationship between parental behaviour towards adolescents and their manifest aggression in Nairobi secondary schools. The findings of the study showed that adolescents whose parents were harsh were significantly more aggressive than those adolescents whose parents were affectionate. Adolescents whose movements were restricted by parents were more aggressive than those adolescents whose movements, activities, and social contacts were monitored by their parents. Adolescents whose parents used punishment and threats were significantly more aggressive than those adolescents whose parents used inductive reasoning and reinforcement. Adolescents whose parents enforced discipline inconsistently were significantly more stressed and thus aggressive than those adolescents whose parents enforced discipline consistently. Adolescents who experienced tension and conflicts in their families became stressed and were significantly more aggressive than those from harmonious homes.

Corporal punishment is associated with children's aggression and other antisocial behaviour (towards peers, siblings and adults). Corporal punishment may legitimise violence for children in interpersonal relationships because they tend to internalise the social relations they experience (Vygotsky, 1978). Ironically, the behaviour that parents are most likely to intend to prevent when they physically punish children is exactly the behaviour that they are likely to be strengthening. Social learning theory (Bandura, 1969) also suggests that physical punishment enables children to learn aggressive behaviour through modelling. If parents try to modify their children's behaviour through inflicting pain, then those children are likely to do the same to others when they want to influence other people's actions.

In addition, there are many factors that affect aggressive behaviours in schools. Poor academic achievement has been found to be related to low self-esteem, depression, hopelessness and

suicidal ideation, and low expectations for success (Jessor, Turbin, & Costa, 1998; Thompson, & Eggert, 1999; & Ystgaard, 1997). Further still, academic failure, absenteeism, and school misbehaviour were found to be associated with poor school attitudes, and increased cigarette and alcohol use during adolescence (Bryant, Shulenberg, Bachman, O'Malley, & Johnson, 2000). Girls who experienced social rejection at school, or who had learning disabilities, thus stressed academically, were found to be more likely to engage in aggressive behaviour (Whithecomb, 1997).

Adolescents who were at risk for problems with school authorities are more likely to have displayed early conduct difficulties such as oppositional or antisocial behaviour. Consequently, these youth were more likely to have affiliations with antisocial peers, and thus, reduced commitment to educational achievement. Interestingly, there were no differences found between male and female participants, because the developmental processes were the same when early conduct difficulties were present (Fergusson & Horwood, 1998).

Research regarding conflict tactics used by parents is often contradictory, most significantly regarding whether there are negative effects following the use of harsh discipline and, if so, what these may be. Research suggests that the use of harsh discipline is significantly related to the use of abusive child rearing, and to the existence of conflict within families (Simons, Whitbeck, Conger, & Chyi-In, 1991), and subsequently, high amounts of conflict have been shown to negatively impact on self-esteem (Pawlak & Klein, 1997).

The given literature above gives a thorough explanation of what the three variables – discipline, academic stress, and students' aggression refer to, what they entail and how they affect adolescent students in secondary schools. It explores into circumstances where various discipline methods have been used, sources of academic stress and aggressive behaviours, as a result of discipline methods used among adolescent students. However, little attempts or efforts have been made to establish clearly the linkage between discipline methods, academic stress, and aggression among adolescent students in secondary schools. This would establish the extent to which discipline methods used in secondary schools lead to academic stress, and the extent to which discipline and academic stress lead to aggressive behaviours among adolescent students. This study thus would address this information gap by examining the association among discipline methods, academic stress, and aggression among secondary school adolescent students in Mbarara City, Uganda.

MATERIALS AND METHODS

The study adopted quantitative approach of data collection. This approach was preferred because of the nature of the variables, which were measured using standard instruments and the fact that the results can be summarised in tables, which often communicate precisely and efficiently under severe time shortage (Velez, 2008). A cross sectional research design was used because different class levels of secondary school adolescents were to be studied at one point in time. The descriptive nature of the study catered for the descriptions of discipline methods used in secondary schools in their different categories, academic stress levels, and levels of aggression among the adolescents. The associations among the methods of discipline, level of academic stress, and aggression among secondary school adolescents in Mbarara City, Uganda was also described.

Study Population

Mbarara City has 25 secondary schools by the time of data collection; some were government aided, others privately owned; some co-educational, and others single sex. Out of the 25

eligible secondary schools, six schools (24%), with an accessible population of 4027 students, were selected for the study. According to Rife (2008), a minimum of 10% is required to have a representative sample of the population, thus selecting the six schools (24%) was very appropriate.

Sampling

A two stage stratified random sampling was used to obtain a representative sample from the different categories particularly from among (a) private and government aided secondary schools, constituting the first stage, and (b) girls only, boys only, and co-educational (or mixed) secondary schools constituting the second stage of the strata . One school was randomly selected from each of the six sub-strata. According to Yamane (1967), the minimum sample size computed was 359 for the population of the schools. However, 400 respondents were selected to cater for mortality. Adolescents aged 12 to 17 were sampled for the study.

The number of adolescents to be included in the sample from each school was obtained proportionately, that is, the number of students in each school was divided by the total number of students in all sampled schools in Mbarara City, and multiplied by the computed sample size. Further, the number of students from each class included in the proportion of students from that school was also proportionately computed. This was done by dividing the number of students in each class by the number of students in the whole school, and then multiplying by the number of students to participate in the study from that school.

At the different classes, adolescents were selected by systematic random sampling where the total number of students was divided by the target sample. The figure obtained gave the N^{th} interval (every 10^{th}) for selecting the next and subsequent students. In this approach, progression through the lists, which were provided by the school administration, was treated circularly, with a return to the top once the end of the list is passed. Using this procedure, each member in the population had equal chance of being selected (Black, 2004).

The major instrument used was a highly structured questionnaire, which consisted of four sections that sought information and/or assessed the following: (a) demographic information of the adolescents, (b) methods of discipline used by school authorities, (c) experience of academic stress by adolescents, and (d) aggressive behaviours exhibited. The demographic information collected included gender, age, and class of the adolescent; type of school (government or private); religious affiliation of the adolescents; whether or not the adolescent had both parents; and the tribe they belonged to.

The different methods of discipline were documented using the Dimensions of Discipline Inventory (DDI; Straus & Fauchier, 2007). This is a 21 item, 5- likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) modified and adapted for the study to determine the different methods of discipline used by school authorities within the last 6 months. The scale was divided into two sections according to the major types of discipline methods: The first section consisting of Items 1-10 measured positive discipline methods, while the second section composed of Items 11-21 measured negative discipline methods. A score of up to 30 indicated low level of use of positive discipline; where as a score ranging from 31 to 50 indicated high level of use of positive discipline. Cronbach's Alpha Coefficient for the original scale was .70 (Straus & Fauchier, 2007), and it was also .70 for the current study.

Academic stress levels among adolescent students were determined using Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). This 14-item scale was modified and adapted to measure the degree to which respondents appraised situations as stressful within the

last 6 months on a 5- likert scale as 1 (*never*) to 5 (*very often*). Cronbach's alpha coefficient for this scale was .82 (Cohen et al. 1983), and for the current study α was computed as .70.

Aggressive behaviour exhibited by the adolescents was measured using a modified School Aggression Scale (SAS; Little, Henrich, Jones, & Hawley, 2003), which is a 24 item and three sectioned instrument. In this scale, adolescents are requested to indicate the frequency with which they engaged in 24 deviant and aggressive behaviours at school over the last 6 months, on a 5-point likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The first section of the scale consisting of 10 items (1-10) measured overt aggression, the next consisting of seven items (11-17) measured relational aggression, and the last section comprising seven items (18-24) measured instrumental aggression. Each of the sections; overt aggression, relational aggression, and instrumental aggression; of the original Little et al. (2003) SAS had Cronbach alpha of .82, .73, and .78 respectively. In the current study, the Cronbach alphas for the same sections were respectively .79, .71, and .71.

Data Management

The completed questionnaires were assigned serial numbers for easy future reference and the data were entered in SPSS version 16.0. Discipline methods measured by items 1-21 of the DDI on a five point likert scale were indexed and scored for positive methods of discipline by summing the scores of the respondents to items 1-10, where the minimum score was 10 and the maximum score was 50. A score ranging from 10 to 30 indicated low use of positive discipline methods coded as *one* while 31-50 indicated high use of positive methods coded as *two*. Therefore, any score less than or equal to 30 indicated low use of positive discipline, while any score above 30 was high use of positive discipline. An index for negative methods of discipline was created by summing scores of the respondent on items 11-21, and 11-33 indicating low use of negative methods coded as *one,* while 34-55 indicated high use of negative methods coded as *two.* Thus, any score less than or equal to 33 showed low use of negative methods of discipline, and any score above 33 indicated high use of negative methods of discipline.

Scores of items 1-14 of PSS were summed up to measure academic stress and this gives a sum score of 14-70, such that the minimum score was 14 and the maximum score was 70. A total score of 14-42 coded as *one* indicated low academic stress, while 43-70 coded as *two* indicated high academic stress. Therefore, any score less than or equal to 42 indicated low academic stress, and scores above 42 indicated high academic stress. This is in agreement with Cohen (1988) who found out that individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

Aggressive behaviours measured by items 1-24 of SAS were scored on a 5- point likert scale. The first 10 items of SAS measured overt aggression. A total score of 10-30 coded as *one* indicated low overt aggression, while 31-50 coded as *two* indicated high overt aggression. This means that the minimum score is 10 and the maximum score is 50. Therefore, any score less than or equal to 30 refers to low overt aggression, and any score greater than 30 refers to high overt aggression.

Items 11-17 were used to measure relational aggression, where a sum score of 7-21 coded as *one* indicated low relational aggression, and 22-35 coded as *two* indicated high relational aggression. In this case, the minimum score was 7 and the maximum score was 35. Any score equal to or less than 21 indicated low relational aggression, and scores above 21 referred to high relational aggression.

Instrumental aggression was measured by items 18-24, with a total score of 7-21 coded as *one* to indicate low instrumental aggression, and a sum score of 22-35 coded as *two* indicated high instrumental aggression. The minimum score was 7 and the maximum score was 35. Thus, any score equal to or less than 21 indicated low instrumental aggressions, and any score greater than 21 indicated high instrumental aggression.

Finally, overall aggression in the PSS was measured by all the items from 1-24. The minimum score was 24, and the maximum score was 80. In this case, any score less than or equal to 52 was perceived as low overall aggression, and scores above 52 indicated high overall aggression.

Data Analysis

Frequencies and percentages of respondents in the categories of discipline methods according to the sample biodata were computed to address objective one. Levels of academic stress in objective two were determined by recoding the respondents' scores according to the values for low and high academic stress. The mean academic stress was obtained by computing the mean and standard deviation of the total academic stress score, and then recoding it according to the ranges for low and high academic stress. The frequencies and percentages of respondents in each category of stress were also computed for each biodata variable. Objective three was answered by computing frequencies and percentages of respondents who indicated each category of aggression. To achieve objective four, Pearson product moment correlation coefficient was first generated to establish the relationships between age, positive discipline, negative discipline, and academic stress (predictor variables), and aggression (criterion variable). A linear regression was then modelled to predict the associations between the predictor variables and the criterion variable.

FINDINGS

This chapter presents and describes the results of the study beginning with the demographic characteristics of the adolescents and then following the order of the objectives. To give a general picture of all the participants in the study, the demographic characteristics including gender, class of study of the adolescent, school type by ownership, school type by composition, and the religious affiliation of the students were categorized and are summarized in Table 1.

Table 1: Sample Demographic Characteristics (N=384)

Characteristic	Category	n	%
Gender	Male	224	58.3
	Female	160	41.7
Class of respondents	Senior one	125	32.6
	Senior two	111	28.9
	Senior three	103	26.8
	Senior five	45	11.7
School Type	Government aided	261	68.0
	Private	123	32.0
School Composition	Single sex	301	78.4
	Mixed	83	21.6
Religious Affiliation	Protestant	167	43.5
	Pentecostal	23	6.0
	Roman catholic	166	43.2
	Muslim	25	6.5
	Other	3	0.8

The Discipline Methods Employed by School Authorities as Reported by the Secondary School Adolescents

The documentation of the methods of discipline employed by school authorities was obtained by asking the students to identify what is administered to them. The methods were in turn assessed as high or low. Objective one sought to document these methods used to impart discipline among secondary school adolescents in Mbarara City and the results are summarized in Table 2. The discipline methods employed by school authorities were summarised and categorized into only two methods: (a) Positive methods, and (b) Negative Methods. The sums of positive discipline scores ranged from 18 to 50 with mean of 36.7 (*SD* = 5.09) indicating high use of positive methods of discipline on secondary school adolescents. The sums of negative discipline ranged from 11 to 55 with mean of 15.3 (*SD* = 8.77), indicating low use of negative methods of discipline. The age of the respondents ranged from 12 to 17 years with mean age of 15.3 years (*SD* = 1.37).

Table 2: Levels of use of Methods of Discipline Reported by Adolescent Secondary School Students in Mbarara City (N=384)

Demographic Characteristic	Category	Level of Use of Discipline Methods							
		Positive Methods				Negative Methods			
		Low		High		Low		High	
		n	%	n	%	n	%	n	%
Gender	Male	23	10.3	201	89.7	198	88.4	26	11.6
	Female	19	11.9	141	88.1	142	88.8	18	11.2
Class	Senior one	13	10.4	112	89.6	117	93.6	8	6.4
	Senior two	9	8.1	102	91.9	99	89.2	12	10.8
	Senior three	14	13.6	89	86.4	80	77.7	23	22.3
	Senior five	6	13.3	39	86.7	44	97.8	1	2.2
School Type	Government aided	35	13.4	226	86.4	229	87.7	32	12.3
	Private	7	5.7	116	94.3	111	90.2	12	9.8
School Composition	Single sex school	32	10.6	269	89.4	269	89.4	32	10.6
	Mixed school	10	12.0	73	88.0	71	85.5	12	14.5
Religious Affiliation	Protestant	17	10.2	150	89.8	149	89.2	18	10.8
	Pentecostal	1	4.3	22	95.7	22	95.7	1	4.3
	Roman catholic	19	11.4	147	88.6	143	86.1	23	13.9
	Muslim	4	16.0	21	84.0	23	92.0	2	8.0
	Other	1	33.3	2	66.7	3	100.0	0	0.0

Levels of Academic Stress

Levels of academic stress were determined according to objective two, which was, "To determine the levels of academic stress among secondary school adolescents in Mbarara City". The level of stress experienced by the individual adolescent was obtained and the results for all were presented according to their demographics. The results indicated that the students generally had high level of academic stress (M = 42.2, SD = 8.2) with a minimum score of 14.0 and a maximum score of 64.0 on a range of 14 to 70. In addition, a greater percentage of females had high academic stress than males. More proportions of senior one and senior five adolescents reported low levels of academic stress; adolescents in senior two and three indicated high levels of academic stress. Students in private secondary schools had a majority proportion who reported low levels of academic stress. In government aided secondary schools, studied samples of adolescents showed high levels of academic stress. This is indicated in Table 3 below.

Table 3: Levels of Academic Stress among Adolescent Secondary School Students (N=384)

Demographic	Category	Levels of Academic Stress				Total
		Low		High		
Characteristic		n	%	n	%	
Gender	Male	130	58.0	94	42.0	224
	Female	77	48.1	83	51.9	160
Class	Senior one	75	60.0	50	40.0	125
	Senior two	55	49.5	56	50.5	111
	Senior three	49	47.6	54	52.4	103
	Senior five	28	62.2	17	37.8	45
School Type	Government aided	131	50.2	130	49.8	261
	Private	76	61.8	47	38.2	123
School composition	Single sex school	165	54.8	136	45.2	301
	Mixed school	42	50.6	41	49.4	83
Religious affiliation	Protestant	85	50.9	82	49.1	167
	Pentecostal	9	39.1	14	60.9	23
	Roman Catholic	99	59.6	67	40.4	166
	Muslim	12	48.0	13	52.0	25
	Other	2	66.7	1	33.3	3

Aggressive Behaviours Portrayed by Secondary School Adolescents

Objective three aimed at identifying aggressive behaviours exhibited by secondary school adolescents. The aggressive behaviours were categorised as over aggression, relational aggression, and instrumental aggression and thee adolescents' responses under these sections were recorded according to their demographic groupings. Under the three categories of expression of aggressive behaviour, each was further assess as high or low. Generally, the students' mean scores for aggression were low for all the types of aggression; overt aggression (M = 17.71, SD = 6.82), relational aggression (M = 16.10, SD = 5.74), instrumental aggression (M = 12.69, SD = 5.76), and overall aggression (M = 46.50, SD = 14.54). Table 4 shows the number and percentage of students in each of the levels of overt aggression, relational aggression, instrumental aggression, and overall aggression.

Table 4: Levels of Aggression Exhibited by Adolescent Secondary School Students (N=384)

Demographic Characteristic	Category	Overt - Low	Overt - High	Relational - Low	Relational - High	Instrumental - Low	Instrumental - High	Overall - Low	Overall - High	Total
Gender	**Male**	208 (92.9%)	16 (7.1%)	182 (81.3%)	42 (18.8%)	191 (85.3%)	33 (14.7%)	206 (92.0%)	18 (8.0%)	224
	Female	156 (97.5%)	4 (2.5%)	126 (78.8%)	34 (21.3%)	155 (96.9%)	5 (3.1%)	158 (98.8%)	2 (1.2%)	160
Class	**Senior one**	121 (96.8%)	4 (3.2%)	110 (88.0%)	15 (12.0%)	117 (93.7%)	8 (6.4%)	121 (96.8%)	4 (3.2%)	125
	Senior two	101 (91.0%)	10 (9.0%)	83 (74.8%)	28 (25.2%)	96 (86.5%)	15 (13.5%)	102 (91.9%)	9 (8.1%)	111
	Senior three	98 (95.1%)	5 (4.9%)	81 (78.6%)	22 (21.4%)	90 (87.4%)	13 (12.6%)	96 (93.2%)	7 (6.8%)	103
	Senior five	44 (97.8%)	1 (2.2%)	34 (75.6%)	11 (24.4%)	43 (95.6%)	2 (4.4%)	45 (100%)	0 (0%)	45
School Type	**Government aided**	248 (95.0%)	13 (5.0%)	209 (80.1%)	52 (19.9%)	231 (88.5%)	30 (11.5%)	246 (94.3%)	15 (5.7%)	261
	Private	116 (94.3%)	7 (5.7%)	99 (80.5%)	24 (19.5%)	115 (93.5%)	8 (6.5%)	118 (95.9%)	5 (4.1%)	123
School Composition	**Single sex**	289 (96.0%)	12 (4.0%)	249 (82.7%)	52 (17.3%)	271 (90.0%)	30 (10.0%)	288 (95.7%)	13 (4.3%)	301
	Mixed	75 (90.4%)	8 (9.6%)	59 (71.1%)	24 (29.0%)	75 (90.4%)	8 (9.6%)	76 (91.6%)	7 (0.8%)	83
Religious Affiliation	**Protestant**	158 (94.6%)	9 (5.4%)	133 (79.7%)	34 (20.1%)	147 (88.0%)	20 (12.0%)	156 (93.4%)	11 (6.6%)	167
	Pentecostal	23 (100.0%)	0 (0.0%)	19 (82.6%)	4 (17.4%)	23 (100.0%)	0 (0.0%)	23 (100.0%)	0 (0.0%)	23
	Roman Catholic	158 (95.2%)	8 (4.8%)	136 (81.9%)	30 (18.1%)	153 (92.2%)	13 (7.8%)	161 (97.0%)	5 (3.0%)	166
	Muslim	22 (88.0%)	3 (12.0%)	17 (68.0%)	8 (32.0%)	22 (88.0%)	3 (12.0%)	21 (84.0%)	4 (16%)	25
	Other	3 (100.0%)	0 (0.0%)	3 (100.0%)	0 (0.0%)	0 (33.3%)	2 (66.7%)	3 (100.0%)	0 (0.0%)	3

Association among Discipline, Academic Stress, and Aggression

Further, possible associations between discipline, academic stress, and aggression were sought in accordance with objective four, which aimed at, "establishing whether there was an association between discipline, academic stress, and aggression among secondary school adolescents". Pearson's product moment coefficients between aggression and age, discipline (both positive and negative), and academic stress were carried out, with the corresponding beta coefficients obtained from multiple linear regressions as summarised in Table 5.

Table 5: Pearson Product Moment Correlation Coefficients (N = 384)

		1	2	3	4	5	6	7	8
1. Age	R	N/A							
	P	N/A							
2. Positive Discipline	R	-0.067							
	P	0.188							
3. Negative Discipline	R	0.032	-0.195**						
	P	0.535	0.000						
4. Academic Stress	R	0.031	-0.018	0.197**					
	P	0.545	0.732	0.000					
5. Overt Aggression	R	0.107*	-0.160**	0.306**	0.225**				
	P	0.037	0.002	0.000	0.000				
6. Relational Aggression	R	0.103*	-0.047	0.139**	0.286**	0.373**			
	P	0.044	0.361	0.006	0.000	0.000			
7. Instrumental Aggression	R	0.158**	-0.190**	0.287**	0.215**	0.673**	0.255**		
	P	0.002	0.000	0.000	0.000	0.000	0.000		
8. Overall Aggression	R	0.153**	-0.169**	0.312**	0.303**	0.882**	0.671**	0.812**	
	P	0.003	0.001	0.000	0.000	0.000	0.000	0.000	

Note. * = Correlation is significant at the 0.05 level (2-tailed), ** = correlation is significant at the 0.01 level (2-tailed).

Results from table 5 showed that there was a significant positive association among age of adolescent secondary school students and overt aggression (r = 0.107, p = 0.037), relational aggression (r = 0.103, p = 0.044), instrumental aggression (r = 0.158, p = 0.002), and overall aggression (r = 0.153, p = 0.003).This implies that when age of respondents increases, overt aggression, relational aggression, instrumental aggression, and overall aggression increase.

There was a significant negative association among positive methods of discipline and overt aggression (r = -0.160, p = 0.002), instrumental aggression (r = -0.190, p = 0.000), and overall aggression (r = -0.169, p = 0.001). This implies that as teachers use more positive methods of discipline, then the students' overt aggression, instrumental aggression, and overall aggression decrease.

There was a significant positive association among negative discipline and academic stress (r = 0.197, p = 0.000), overt aggression (r = 0.306, p = 0.000), relational aggression (r = 0.139, p = 0.006), instrumental aggression (r = 0.287, p = 0.000), and overall aggression (r = 0.312, p = 0.000). This implies that as teachers use more negative methods of discipline, then the students' academic stress, overt aggression, relational aggression, instrumental aggression, and overall aggression increase.

The students' academic stress was significantly associated with their overt aggression (r = 0.225, p = 0.000), relational aggression (r = 0.286, p = 0.000), instrumental aggression (r = 0.215, p = 0.000) and overall aggression (r = 0.303, p = 0.000). Hence, the higher the levels of academic stress, then the higher the level of overt aggression, relational aggression, instrumental aggression, and overall aggression.

Table 6: ANOVA Table (N = 384)

Sum of Squares	Df	Mean Square	F	P
Regression	15260.127	4	3815.032	21.991
Residual	65749.862	379	173.482	
Total	81009.990	383		

Note. The multiple regression coefficient (R) = .434, R square = .188, Adjusted R Square = .18

Multiple linear regression models in Tables 6 and 7 showed a significant relationship between age, students discipline methods, academic stress and students' aggression ($F_{(4,379)} = 21.99$, $p = 0.000$) with adjusted R-square of 0.18 (18%).

Table 7: Linear Regression Model (N=384)

Model variables	B	t	*P*
Overall Aggression	9.005	.895	.371
Age	.130	2.811	.005
Positive Discipline Methods	-.109	-2.314	.021
Negative Discipline Methods	.237	4.920	.000
Academic Stress	.251	5.307	.000

Regression Model

Yi = 9.005 + 0.130 (Age) – 0.109 (PD) + 0.237(ND) +0.251(AS) + €

Where Yi = Overall Aggression

PD = Positive methods of Discipline

ND = Negative methods of Discipline

AS = Academic Stress

€ = Error (disturbance) term.

Interpretation of the Model

Results from Table 7 indicated that there was a significant relationship between age of respondents and overall aggression at 5% level of significance (t =2.81, p = 0.005). In addition, the regression model implies that an additional year on a respondent increases overall aggression by 13%.

There was also a significant relationship between PD and overall aggression at 5% level of significance (t = -2.31, p = .021). Also, the regression model indicates that an additional method of PD, overall aggression decreases by 11%.

There was a significant relationship between ND and overall aggression at 5% level of significance (t = 4.92, p < .01). The regression model further explains that an additional method of ND, Overall aggression increases by 24%.

There was a significant relationship between AS and overall aggression at 5% level of significance (t = 5.31, p < .01). In addition, the regression model explains that an additional method of ND, overall aggression increases by 25%.

In conclusion, results of the study imply that an increase in age, negative methods of discipline, and academic stress, result in an increase in aggression among adolescent secondary school students. On the other hand, increase in use of positive methods of discipline on adolescent secondary school students, results in decrease in aggression.

CONCLUSION AND RECOMMENDATIONS

Discussion

This study categorized the different forms of disciplining employed by school authorities into two: positive and negative discipline methods. The study revealed that majority of the students, 342 (89.0%), reported high use of positive methods of discipline by school authorities. This positive outcome in a country where the use of negative methods of discipline, especially in form of corporal punishment has been common is great news. It is probably the government policy against negative methods of discipline, especially corporal punishment, and the fact that students have increasingly come to also know their rights that is beginning to yield results in schools. Under children's Act, Section 94(9)59, the Ugandan law stipulates that no child shall be subjected to corporal punishment (Mbikyo, 2012). At the higher national level, article 24 of the 1995 constitution of the Republic of Uganda states that no person shall be subjected to any form of torture, cruel, inhuman, or degrading treatment because corporal punishment has an element of violence (Mbikyo, 2012). Sugai and Horner (2000) further agree that it is against the bill of rights for a teacher to administer corporal punishment, such as caning, hitting, or throwing things such as chalk or dusters at students. The offenders are liable for punishment. Therefore, it is likely that teachers' awareness of the consequences of acts of violence against students, and students' awareness of their rights, has impacted positively on the application of mainly positive discipline methods in schools.

However, 42 (11%) of the respondents reported high use of negative methods of discipline. Studies have continued to reveal persistent use of negative methods of discipline despite efforts by the Government of Uganda to discourage the practice. Lennan (2004) cited in Mbikyo (2012) reports on children testimonies of not escaping beatings, insults, and hard control. Mbikyo further reveals that despite the ban, corporal punishment is still prevalent in Ugandan schools. The children cited use of a ruler, stick, or board duster as some of the instruments teachers still use for administering punishment in classrooms. This also agrees with an earlier study by Brister (1999) cited in Smit (2010) that corporal punishment was still permissible in the United States where 30 states still embraced its use. Even many parents use negative methods of discipline at home and support its use at school (Morell, 2001 as cited in Smit, 2010).

Considering sample distribution by gender, similar proportions of male and female students indicated that positive methods of discipline were highly used on them (Table 2). In addition, similar proportions of boys and girls indicated high use of negative discipline on them. This is in sharp contrast with Connell (1993) who found that corporal punishment was more often used on boys than on girls. This implies that teachers are not discriminative in their use of positive discipline methods on boys and girls. This could be attributed to the continued sensitisation on emancipation and gender equality in Uganda.

With regard to religious affiliations high use of positive discipline methods increased in the order Other, Muslim, Roman Catholic, Protestant, and Pentecostal. While use of negative discipline methods decreased in the order Roman Catholic, Protestant, Muslim, Pentecostal, and Other. This could be attributable to the doctrines envisaged in each of the religious affiliations. Some religions propagate the doctrine of "spare the rod and spoil the child"

(Proverbs 13: 24). Hence children are subjected to negative discipline methods including corporal punishment for children's moral, social, prudential, and escalated misbehaviours, to prevent further transgressions (Gershoff, Miller, & Holden, 1999). Religious education generally promotes harmonious living through obedience to authorities. According to Francis and Bourke (2003), religious young people are more submissive, sober, cheerful, more conforming, more expedient, and more tender minded, and self-disciplined as opposed to their irreligious counterparts. Hence the high prevalence of positive discipline may not be by chance.

By class, similar proportions of students expressed experiencing positive methods of discipline. This finding contradicts the common notion that senior twos are stubborn and therefore receive mainly negative methods of discipline, but instead implies that there is no apparent difference between students in lower classes (senior one and senior two) and those in higher classes (senior three to senior five) in their levels of discipline. This disagrees with Adams (2003) who posits that students in lower classes are still new and anxious to obey the school authorities and hence receive less negative discipline than those in higher classes who involve in indiscipline acts, and attract negative methods of discipline.

The private secondary schools had a greater proportion of respondents indicating high use of positive methods of discipline compared to the government aided schools. However, small but similar proportions of students in the two types of schools indicated low use of negative discipline methods on them. According to De Klerk and Rens (2003), this could be because private school students are governed by the contract which they and their parents sign with the school, which clearly spells out consequences for what the school considers unacceptable behaviour. In this case, there is limited room for indiscipline to attract negative methods of discipline.

Regarding school composition, single sex schools had a slightly greater proportion of the adolescent students having positive discipline used on them as opposed to the mixed secondary schools. Despite similar proportions of students reporting high use of negative discipline in single sex and coeducational schools, the proportion was slightly greater for coeducational schools. The cases of indiscipline in either type of school are dictated by the composition; boys' only and girls' only schools register fewer cases of moral discord than mixed schools. Immorality attracts more stringent negative rather than positive forms of discipline on the students.

In conclusion, it is clear that both positive and negative methods of discipline continue to be used in secondary schools. Although positive methods tend to dominate, the reports about negative methods of discipline should not be underestimated. The use of positive discipline methods such as warning, detention, student and parent conference, suspension, transfer to another school, and expulsion (Nelson & Quick, 2003) is expected to result in well behaved learners. However, Wa Kivilu and Wandai (2009) as cited in Smit (2010) point out that despite this expectation, in most secondary schools, students break the rules and regulations with widespread indiscipline acts such as escaping from schools, taking of alcoholic drinks, participating in frequent strikes with closure of schools and suspension of students that affect students' academic performance. Therefore, as argued by Cotton (2001), the best results are to be obtained through vigilantly reminding students about rules and regulations of the school, and monitoring their compliance with them, in addition to infrequent application of light negative discipline methods.

Academic Stress among Adolescent Secondary School Students

In this study, academic stress was categorised into low and high levels. The level of academic stress among adolescent secondary school students in Mbarara City was found to be generally high (M = 42.2, SD = 8.2) with a minimum score of 14.0 and a maximum score of 64.0 on a range of 14 to 70. Secondary school students cite day to day stresses of school (tests, grades, homework, and academic achievement expectations) among their greatest stressors (Crystal, Chen, Fuligni, Stevenson, Hsu, & Ko, et al., 1994; de Anda, et al., 2000). This finding concurs with another study that listed school or academic related stressors as demands for better academic performance, attendance, interactions with teachers, and balancing one's leisure time with school (Byrne, Davenport, & Mazanov, 2007). With barely enough time to rest and relax, students experience a lot of academic stress. Given that the data were collected in the month of October when students were preoccupied with promotional examinations, then the high levels of academic stress were to be expected.

By gender, the results (Table 3) indicate that more male adolescent students experienced low level of academic stress while majority of the females reported high level of academic stress. This agrees with a study by Hampel and Peterman (2005) that adolescent girls perceived more interpersonal stress, used more maladaptive coping strategies, and had more internalized problems than did adolescent boys. Nevertheless, adolescent girls react strongly to interpersonal stressors and make more efforts to adapt to social stressors than do boys (Hampel & Peterman, 2005).

Conversely, Misra, Mckean, West, and Russo's (2000) research findings further suggest that stress levels vary by gender of the students. Levels of academic related stress differed among male and female students with female students being more prone to more academic stress than their male counterparts (Bang, 2009; Rayle & Chung, 2008). Females experience higher levels of academic stress because of negative appraisals of the stressful event and focus on the emotional challenges in the wake of the stressful event. On the contrary, Male students are trained to display strength and masculinity in the face of challenges right from their tender age (Misra & Mckean, 2000). This finding contradicts with another study that female students performed better than the male students, and had better grades than male students even in case of some sort of stress (Talib & Zia-ur-Rehman, 2012).

Relating class distribution to academic stress levels, the study results indicate that the majority of adolescent students in classes of senior one and senior five have had low levels of academic stress. This is in contrast with more of the samples in senior two and senior three who indicated high levels of academic stress (see Table 3). The results could imply that newly enrolled students were less stressed than their seniors in senior two and senior three. This could further be attributed to the fact that students reach the climax of their adolescence as they move to higher classes and feel they want to be more independent of the school rules hence ending up antagonizing with school authorities. It could also be attributed to the academic workload accumulated over the years that need a lot of concentration in addition to fulfilling other school tasks. This agrees with findings by Nakalema (2013) that students experience higher levels of stress towards end of course examinations.

The study results (Table 3) showed more adolescent students in government aided secondary schools than in private schools experiencing high levels of academic stress. These results are similar to results of a study by Augustine et al. (2011) in which students in government aided schools had higher perceived stress than those in private schools. According to Boland (n.d.), government aided schools have more activities and more diverse student populations. The more

the activities students indulge in, the greater the stress they experience. Likewise the more the diversity of students, the more the problem behaviours they must encounter and hence the greater their perceived stress. In addition, students in government aided schools face more social economic challenges than those in private schools (Augustine et al., 2011). Hence the former are more likely to experience academic stress related to scholastic demands.

As regards school composition, the findings revealed that a bigger proportion of adolescents from coeducational schools than from single sex schools had high academic stress. This finding agrees with an earlier study by Brusaert and VanHoutte (2004) that girls in early adolescent stages in single-sex schools experienced lower levels of stress than did girls in co-educational schools, and that this effect is largely accounted for by sense of belonging. Although co-educational schools are known to offer a friendlier and more relaxed atmosphere with more opportunities for pleasure-centered social contact (Augustine et al., 2011), the current study shows that academic activities are perceived as more of stressors in co-educational than in single schools.

Considering religious affiliation, more Pentecostals reported high levels of academic stress followed by Moslems, Protestants, Roman Catholics, and then others. In line with Bataineh (2013), religion could serve as a source of positive coping strategy or negative coping strategy. Negative religious coping entails engaging in religious struggle and doubt to overcome academic stress. However, this strategy ends up being generally more maladaptive than constructive, leading to more academic stress. This could be the leading explanation for the variations in the percentages of learners reporting high levels of stress among the religious affiliations.

In summary, academic stress is common among adolescent secondary school students. When stressful experiences are not checked, multiple problems that might be precursors of aggressive behaviours often arise. Hence, programs which assist in the identification of academic stressors, and focus on prevention of problem behaviours are necessary to align the students' physical, emotional, and social health with the pursuit of academic dreams.

Aggressive Behaviours Exhibited by Adolescent Secondary School Students

This study categorised aggressive behaviour into three: overt aggression, relational aggression, and instrumental aggression. The results showed that generally the students exhibited low levels of all types of aggression, which was in sharp contrast to the expected result given the widespread cases of disruptive behaviours in schools. The generally low levels of aggression could be attributed to the fact that schools suspend or expel highly aggressive students (Reed, 1988 as cited in Hudley et al., 1998). In addition, most schools strive to provide a caring school environment and encourage positive peer relations (Hudley et al., 1998) that counteract aggressive tendencies.

The study findings (Table 4) showed that bigger proportions of male adolescents were highly aggressive overtly, instrumentally, and overall than their female counterparts. This finding agrees with Campbell (1999) who found out that females grow up believing that it is socially unacceptable for a female to engage in aggressive behaviours, particularly physical and direct bodily aggression, since these are masculine features not characteristic of females: "This belief makes females feel guilty when they resort to aggression to show their anger or disapproval of a situation. They see aggression as being a result of loss of self-control caused by high level of stress" (p. 245).

In addition, a slightly greater proportion of females than males reported high levels of relational aggression. This rhymes with findings of Tapper and Boulton (2004), in which it was found out that while boys employ more direct aggression than girls, girls use more indirect aggression than boys. However, the reasons for the sex differences remain controversial (Tapper & Boulton, 2004). Whilst some authors suggest that sex differences may have a biological basis (Campbell, 1999), others place more emphasis on cultural influence (Eagly & Wood, 1999), the socialization process of children (White, 2000), and use of the effect/danger ratio (Osterman, 1999). In the cultural setting of the current study area, girls are indeed expected to score more highly than boys in relational aggression.

In a related development, in Ghanaian Senior Secondary Schools, female students who engage in physical aggressive acts such as physical fighting, slapping, or kicking peers in conflict situations are called by nicknames to show that such behaviour is a deviation from the standard and acceptable norm. Such nicknames include "yaaasantewaa" (a heroine), "man-woman", "iron-lady" or "witch". However, on the whole, female students in Ghana do not employ direct physical aggressive behaviour in registering their displeasure with other students or between the student body and school authorities, but rather use other indirect forms of aggression such as relational. In fact, it is rare to hear of school demonstrations or student unrest in girls' schools in Ghana (Campbell, 1999). This therefore partly explains why the study reports that male students were overtly and instrumentally aggressive.

As regards sample distribution by class, greater percentages of senior ones reported low levels in all types of aggression. This could be due to the fact that they are literally young children who are getting to a new school for the first time. The reason for low aggression could also be a transition from superiority complex in primary seven to inferior positions in senior one, thus the fear of not knowing how things are done. On the contrary, senior two students indicated the highest aggression compared to other classes. This could possibly be due to the excitement of not being the youngest in the school, and think they are established in school, and know most of the things. This could also be the reason for bullying new comers, with possibly an intention of initiating new ones. This is related with another research by Beumaster et al. (2000) that aggressive people often use anger, aggressive body language, or other threatening behaviours to bully and dominate other people. In senior three however, aggression drops. This could imply that anxiety of becoming candidates has set in and students possibly begin to concentrate on their work.

In addition, study findings indicate that aggression drastically drops in senior five. This could imply that they are beginning to be focused, are approaching a course of study in higher institutions of learning, and are possibly aware of the implications of aggressive behaviours. It could also be due to the fact that senior four examinations have humbled them. It is possible that they are approaching maturity, and have learnt to tolerate others, thus they have gentle behaviours (Kellam, 1998).

Looking at the type of secondary school, the study results show that a bigger proportion of adolescent secondary school students from government aided secondary schools exhibited more instrumental aggression than those from private schools. However, there was no much difference found in relational aggression. There was a difference in instrumental aggression, where government schools were found to be almost twice the private secondary schools. This possibly explains why there are strikes in most of the government schools. The reason could be that there are many stakeholders, for example, the state, foundation bodies, and the parents. Therefore it is possible that bureaucracy delays conflict resolution in relation to secondary school adolescents' demands. This also agrees with other studies that students who engage in

reactive aggression are responding to perceived threats around them, which also require due attention (Crick & Dodge, 1994; Dodge, 1991; Dodge, Bates, & Petit, 1994).

As far as school composition is concerned, findings of the study indicate that single sex schools are more aggressive (overall aggression) than mixed secondary schools. This could be due to the feeling of independence, coupled with peer group influence. This agrees with a study among adolescent students in Ghana, where Owusu-Banahene, Lokko, Kufe, and Acquash (2000) found that peer influence had the highest ranking on the causes of aggression among adolescent students. The study indicates that the activities of gangsters and cliques are quite common, although such groups are forbidden. The authors note that some members of the gang or cliques exhibit aggressive behaviour because of the explicit reinforcement they receive from other group members. In a related study, Newberger (2002) agrees with the strong effect of negative peer group influence on the other students. He noted that "boys in groups may pay off each other's aggressiveness and commit acts most of them would be incapable of – or at least far less capable of – if they were acting alone" (p.5). The author quotes a student who commented on this by noting that, "some of the students are influenced to misbehave in school by their seniors or their gang members, who turn out to be their role models because of their popularity" (Newberg, 2000, p.10).

On the other hand, a bigger proportion of students in mixed (co-educational) schools were found to have high levels of relational aggression than in single schools. This could be due to the students in mixed schools being involved in relationship affairs. This also agrees with another study by Steinberg (2008) that relational aggression is concerned with deliberate manipulation of social relationships. In a related study, females score high in relational type of aggression, hence influencing it in co-educational schools (Vaaleval & Sylivester, 1993, cited in Okon, Momoh, Imhonde, & Idiakheua, 2011).

As regards religious affiliation, the findings revealed that a greater proportion of Moslems portrayed high levels of overall aggression than other religious affiliations. A bigger proportion of Protestants exhibited high levels of instrumental aggression, with of Roman Catholics reporting low instrumental aggression. Results also show that Pentecostals are not aggressive at all. This could possibly be attributed to the way different religious groups orient and shape the behaviours of their children and other believers, whereby Catholics are trained to respect their elders and talk less compared to Protestants and Muslims who are freer to utter out their grievances. However, all the Christians are about the same level in relational aggression.

In conclusion, various forms of aggression do occur in secondary schools, varying across the demographic characteristics. Therefore, psychological interventions need to be sought by school authorities, such as counselling, so as to prevent against violence in secondary schools.

Association among Discipline, Academic Stress, and Aggression

In this study, the association among discipline methods, academic stress, and aggression was sought. The findings showed that there was a significant positive relationship between age of secondary school adolescent students and overall aggression. The fact that aggression increases with increase in age or the younger adolescents are less aggressive than their older counterparts agrees with other studies which revealed that aggressive behaviours progress from less to more severe over the course of adolescent development and peak between 15 and 16 years of age (Karrier, Foshe, Ennet, & Suchindran, 2008).

The results also revealed a significantly negative relationship between positive discipline (PD) and overall aggression. In other words, the more teachers use positive methods of discipline,

the less overall aggression. This result also agrees with a study which reports that adolescents whose parents were affectionate and used inductive reasoning and reinforcement were less aggressive (Kavuli, 2012). However, the results of the current study that concerns teachers or administrators and students, rather than parents may not exactly compare. Nevertheless, adolescents' responses to adults or any authority can generally compare as far as bringing order or their guidance is concerned.

The study further found out that there was a significant positive association between negative discipline and overall aggression. This implies that as teachers use more negative methods of discipline, then the students' overall aggression increases. This concurs with an earlier study that corporal punishment may legitimise violence for children in interpersonal relationships because they tend to internalize the social relations they experience (Vygotsky, 1978). Ironically, the behaviour that teachers are most likely to intend to prevent when they physically punish children is exactly the behaviour that they are likely to be strengthening. Yet another earlier study by Bandura (1969) also suggests that physical punishment enables children to learn aggressive behaviour through modelling. If parents try to modify their children's behaviour through inflicting pain, then those children are likely to do the same to others when they want to influence other people's actions. Nevertheless, a study by Bandura examined the parent's discipline methods, but this study is about school discipline.

In addition, the students' academic stress was positively significantly related to their overall aggression. Hence, the higher the levels of academic stress, then the higher the level of overall aggression. This agrees with other researchers that academic failure, truancy, and school misbehaviour were found to be associated with poor school attitudes, and increased cigarette and alcohol use during adolescence (Bryant, Shulenberg, Bachman, O'Malley, & Johnson, 2000. Girls who experienced social rejection at school, or who had learning disabilities were found to be more likely to engage in aggressive behaviour (Whithecomb, 1997).

In further analysis, the results showed a significant relationship between age, methods of discipline (positive and negative), academic stress, and students' aggression, with the same variables accounting for only 18% of the variations in students' aggression. Hence, there are other factors accounting for 82% of the variations in aggression among adolescent secondary school students.

In conclusion, age of the adolescent, negative methods of discipline used at school, and increased academic stress on adolescents result in increased aggression. On the other hand, increase in use of positive methods of discipline on adolescent secondary school students, results in decrease in aggression.

Conclusions

From the above discussion and presented results in chapter four, the following major conclusions can be derived and presented in regard to discipline, academic stress and aggression among adolescent students in secondary schools in Mbarara City, Uganda:

There is high use of positive methods of discipline, though there were some students who reported that negative methods of discipline were used on them. This implies that some teachers still use negative methods of discipline.

Adolescent students in Mbarara City secondary schools generally experienced high level of academic stress. This implies that the daily school routines including tests, homework, and academic achievement expectations are a potential source of stress to the students. The stress

experienced is therefore a factor of the reported levels of aggression in secondary schools. Hence stake holders need to work out means of curbing down aggressive tendencies in schools.

Finally, when teachers use more positive methods of discipline, then the students' overall aggression decreases. Conversely, when teachers use more negative methods of discipline, then the students' overall aggression increases. As the level of academic stress increases, the level of overall aggression also increases.

Recommendations

Schools need to be encouraged to further intensify use of positive methods of discipline in all cases to discipline students. This will eliminate the disadvantages such as aggression that come with negative methods of disciplining students**.**

Schools also need to regulate academic activities and allow for extracurricular activities, especially in this region where the study has taken place. This will reduce academic stress of students and eventually reduce factors of aggression that result from increased academic stress.

Factors such as student's home background, school environment, teachers' behaviours, methods of teaching, and school time table need be considered when correcting students' misbehaviour. Short of this, the discipline method applied might result in increasing the adolescents' level of aggressive behaviours at school.

Proactive sensitization, orientation and education of the adolescent students on the real life issues concerning their physical, biological, and psychological changes happening on them need be done by school psychologists. This may help them to appreciate and learn to cope with them without antagonizing with the school authorities in terms of discipline, academic stress, and aggressive behaviours. They should thus be constantly reminded and assisted to overcome the pressures associated with adolescence.

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