

Difference in Anger Expression in Boys and Girls in Secondary School Students in Nakuru County, Kenya

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Abstract

Differences in anger expression and anger control across gender are a crucial issue that needs to be addressed to understand why the emotional and behavioral patterns of boys and girls are different in secondary schools. Prior studies have pointed out that there are no major differences in anger expression and anger control between boys and girls. This study examined whether there were differences in anger expression and control between 50 boys and 50 girls assigned either to an experimental group which was exposed to a Mindfulness Based Cognitive Behavioral Therapy for a period of 10 weeks, or a control group which continued with Therapy As Usual for the same period. The findings indicated that there were differences in anger expression and control between boys and girls.

Key Words: anger expression, anger control, student, adolescent

Introduction and Background

Anger is a disruptive emotion that influences the behavior of adolescents (Llorca, Malonda, & Samper, 2016). This behaviour is noted in the expression of anger by the individual, which at times if inappropriately expressed, both physical and verbal aggression is a likelihood of such individuals faced with extreme anger (Faupel, Herrick, & Sharp, 2017). It is worrying that when anger is not expressed appropriately, it leads to serious generation of problems which affects the educational, physical, social, and mental well-being of an adolescent (Maleki, Khoshknab, Rahgooi, & Rahgozar, 2011). Though all individuals express anger differently, there seems to be a gender disparity in the expression of anger. The differences in anger expression between boys and girls might not be major (Zimprich & Mascherek, 2012) but they might impact seriously on the quality of life of a secondary school student.

Methodology

Two schools were selected through purposeful random sampling from the 24 public secondary schools within the Nakuru sub-County, Kenya. The schools were purposefully sampled owing to the fact that they had the desired characteristics and that they had students who were faced with anger management problems. A population of 100 students (50 girls and 50 boys) from the two secondary schools with similar demographic and situational characteristics was recruited into this study. This sample size was obtained after screening all the forms three and four students for anger using STAXI-2. Those who scored above 22 on trait anger were recruited to participate in the study. Participants from one school were randomly assigned to the experimental group while those from the second school were assigned to the control school.

The study adopted a quasi-experimental research design. This research design was used because subjects were randomly assigned to the experimental group which received the treatment, and to a control group which did not receive the treatment. This research design minimizes threats to external validity as natural environments do not suffer the same problems of artificiality as compared to a well-controlled laboratory setting. Additionally, quasi-experimental research design is appropriate in collecting and analyzing quantitative data in social sciences for the purposes of testing the outcome of an intervention (Mugenda, 2008). In a quasi-experimental research design, the findings in one are applied to other subjects and settings thus allowing for some generalizations that can be made about the population.

The main instruments used in this study were the STAXI-2, Beck's Depression Inventory (BDI), and the Beck's Anxiety Inventory (BAI). STAXI-2 is a 57 item self-report questionnaire which produces six scales and two subscales. It is a self-report measure of the experience of anger and expression of anger. Each item is rated on a four-point scale from 'almost never' to 'always'. It comprises 7 scales:

- i. Trait anger, measuring differences in the dispositional experience of anger.
- ii. Anger expression, is a general index of the frequency of the expression of anger with two subscales of trait anger

- iii. State anger, measuring the individual's present feeling of anger
- iv. Anger control, measuring the frequency of external expression of anger
- v. Angry temperament, measuring the general tendency to experience the expression of anger, without provocation
- vi. Anger-in, measuring the frequency of suppression of angry feelings
- vii. Angry reaction, measuring the general dispositional experience of anger when the individual is provoked

Beck Depression Inventory (BDI) was developed by Beck and Steer in 1993. It is a self-completion questionnaire designed to measure the severity of depression. It has a range of 0–63. A score of between 0-10 indicates a normal level of depression; 11-16 indicates mild mood disturbance; 17-20 indicates borderline clinical depression; 21-30 indicates moderate depression, 31-40 indicates severe depression and over 40 indicates extreme depression. BDI has been used for over 35 years to identify and assess depressive symptoms, and has been reported to be highly reliable regardless of the population. It has a high coefficient alpha, (.80) its construct validity has been established, and it is able to differentiate depressed from non-depressed patients (Sharp & Lipsky, 2002).

The BAI is also a self-completion questionnaire designed to measure the levels of anxiety. Developed by Aaron T. Beck and colleagues, BAI is a 21-item multiple-choice self-report inventory that measures the severity of an anxiety in adults and adolescents. The items in the BAI describe the emotional, physiological and cognitive symptoms of anxiety but not depression thus BAI has the ability of discriminating anxiety from depression. A score of 0-7 indicates minimal level of anxiety; 8-15 indicates mild anxiety; 16-25 indicates moderate anxiety while 26-63 indicates severe anxiety. Studies done including those done in Kenya have reported high levels of reliability and validity of the BAI (Muriungi & Ndeti, 2013).

Students who were recruited for this study were also screened for depression using the BDI, and anxiety using the BAI at baseline. Those assigned to the experimental group were subjected to ten sessions of Mindfulness Based Cognitive Behavioral Therapy while those assigned to the control group continued with Therapy As Usual (TAU) for ten

weeks same as those in the experimental group. A midline assessment for anger, anxiety, and depression was done after three months for both groups. After six months, a follow-up assessment was also done.

Descriptive statistics such as the mean were used to summarize continuous variables while categorical variables were summarized using frequencies. General linear modeling with two-way multivariate analyses of covariance (MANCOVA) and analysis of variance (ANOVA) were used to determine the main effects of gender on depression, anxiety, stress and all subscale scores of anger. P values of $p < 0.05$ were considered statistically significant.

The Mann-Whitney U-test for independent samples was used to determine the presence of statistically significant group differences in each of the study phases (baseline, midline and end line). Bonferroni corrections was applied in an effort to reduce the probability of finding statistical differences that arise by chance (significance level equal to or lower than 0.017 was considered). Friedman's test for related samples was used to find out possible statistically significant differences in the control and experimental groups in the means of the variables in the three phases.

Results

A one-way ANOVA run showed that there were differences in the mean scores between boys and girls for the variables state anger, trait anger, anger expression in, anger expression out, anger control out, anger control in, anxiety, and depression at baseline for the experimental group. The results are presented in the Table 1.

Table 1: Baseline Mean Scores for State Anger, Trait Anger, Anxiety, and Depression for Boys and Girls

		N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min.	Max
						Lower Bound	Upper Bound		
State Anger	Male	25	34.04	7.919	1.584	30.77	37.31	22	52
	Female	25	33.44	7.917	1.583	30.17	36.71	23	51
	Total	50	33.74	7.842	1.109	31.51	35.97	22	52
Trait Anger	Male	25	24.32	4.905	.981	22.30	26.34	13	34
	Female	25	25.48	4.155	.831	23.77	27.19	17	34
	Total	50	24.90	4.537	.642	23.61	26.19	13	34
Anger Expression In	Male	25	19.68	3.625	.725	18.18	21.18	13	27
	Female	25	19.32	4.516	.903	17.46	21.18	9	27
	Total	50	19.50	4.057	.574	18.35	20.65	9	27
Anger Expression Out	Male	25	19.12	3.308	.662	17.75	20.49	11	26
	Female	25	18.52	3.842	.768	16.93	20.11	12	25
	Total	50	18.82	3.561	.504	17.81	19.83	11	26
Anger Control Out	Male	25	19.12	3.308	.662	17.75	20.49	11	26
	Female	25	18.52	3.842	.768	16.93	20.11	12	25
	Total	50	18.82	3.561	.504	17.81	19.83	11	26
Anger Control In	Male	25	18.68	3.132	.626	17.39	19.97	14	27
	Female	25	20.56	3.720	.744	19.02	22.10	12	29
	Total	50	19.62	3.533	.500	18.62	20.62	12	29
Anxiety	Male	25	23.92	5.693	1.139	21.57	26.27	12	40
	Female	25	29.28	7.453	1.491	26.20	32.36	17	43
	Total	50	26.60	7.100	1.004	24.58	28.62	12	43
Depression	Male	25	21.28	6.255	1.251	18.70	23.86	11	32
	Female	25	27.52	6.266	1.253	24.93	30.11	17	39
	Total	50	24.40	6.952	.983	22.42	26.38	11	39

The results obtained in Table 1 show that boys scored lower in trait anger (24.32 ± 4.905 SE 0.981); anxiety (23.92 ± 5.693 SE 1.139); depression (21.28 ± 6.255 SE 1.251) as compared to girls who scored higher on trait anger (25.48 ± 4.155 SE 0.831); anxiety

(29.28 ± 7.453 SE 1.491); depression (27.52 ± 6.266 SE 1.253). However, the boys scored higher in state anger (34.04 ± 7.919 SE 1.584) while the girls scored lower (33.44 ± 7.917 SE 1.584). The higher score on state anger among boys explains why males get provoked easily by events in their environment. This triggers their state anger plunging them into breaking of things or screaming as compared to females. On the other hand, the findings indicate that females were more predisposed to experience anger more, and were more anxious and most likely to be depressed as compared to males.

Regarding anger expression in and anger expression out, generally boys scored higher as compared to girls as presented in Table 1. The difference in anger expression between boys and girls indicates that the boys in this study tend to refrain from the free manifestation of anger which they found unpleasant. This caused them a psychological discomfort. Interestingly, the boys too scored higher in anger expression out as compared to girls in this study implying that the boys easily expressed anger towards external environment. This explains why more boys' schools engage in violent strikes as compared to girls' schools. Similarly, at baseline, the boys scored higher in anger control out (19.12 ± 3.308 SE 0.662) as compared to girls (18.52 ± 3.842 SE 0.768), pointing to the fact that the boys exercise over-control of the expression of anger as compared to girls. Despite this, the girls scored higher in the anger control in, indicating that when girls are confronted with angry feelings, they tend to resolve them most of the time by consciously or intuitively engaging in relaxation methods, among other coping strategies.

A descriptive analysis of the mean and corresponding standard deviations for the variables anger expression and anger control for boys and girls was done at pretest phase for both the experimental and control groups. The mean scores in the variables anger expression and anger control for boys and girls were then compared.

Table 2: Mean and Standard Deviation for the Variable Anger Expression and Anger Control for Boys and Girls in the Pretest of the Experimental and Control Groups

VARIABLE	EXPERIMENTAL GROUP				CONTROL GROUP			
	BOYS		GIRLS		BOYS		GIRLS	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Anger Expression Out	20.52	3.454	19.19	3.116	16.92	2.737	15.88	2.666
Anger Expression In	19.12	3.308	18.52	3.842	20.28	2.189	18.84	3.236
Anger Control Out	19.68	3.625	19.32	4.516	19.68	3.010	18.08	2.707
Anger Control In	18.68	3.312	20.56	3.720	21.00	4.021	19.76	3.166
Anger Expression Index	49.64	4.932	48.28	5.021	46.40	6.970	45.60	5.859

Table 2 revealed that there was a significant difference in anger expression and anger control in boys and girls. In the experimental group, the mean scores for boys in anger expression out ($20.52 \pm 3.454SD$), anger expression in ($19.12 \pm 3.308SD$), and anger control out ($19.68 \pm 3.625SD$) were higher. However, the girls scored higher in anger control in ($20.56 \pm 3.720SD$) as compared to the boys ($18.68 \pm 3.312SD$). Further, the results in the experimental group showed that the boys had a higher anger expression index ($49.64 \pm 4.932SD$) than the girls ($48.28 \pm 5.021SD$). The results of the experimental group were very similar to the results of the control group. The boys scored higher in all the variables of anger expression and control besides having a higher anger expression index.

The findings in Table 2 confirmed that boys express angry feelings verbally or in form of aggressive behaviors towards other persons or objects in the environment more often than girls. They are also better in experiencing and turning inward or suppressing angry feelings, and endeavors to prevent or control the expression of angry feelings as compared to the girls. The results further show that boys are weaker in controlling angry feelings by calming down or cooling off. In addition, the results revealed that the boys tend to invest more energy in monitoring and preventing the outward expression of anger.

Though desirable, over-control can lead to passivity, depression, and withdrawal among the boys.

Due to the nature of this study (non-parametric and not normally distributed data), the Mann-Whitney U test for independent samples was used to determine the presence of statistically significant group differences in the experimental and control groups.

Table 3: Differences in Anger Expression between Boys and Girls for Pretest in Experimental and Control Groups (Mann Whitney test for independent samples)

Variable	Experimental Group		Control Group	
	Z	P-Value	Z	P-Value
Anger Expression Out	-0.487	0.625	-1.667	0.096
Anger Expression In	-0.341	0.733	-1.553	0.120
Anger Control Out	-0.681	0.496	-1.617	0.101
Anger Control In	-1.496	0.135	-1.202	0.229
Anger Expression Index	-0.945	0.345	-0.329	0.742

The Mann-Whitney's test for independent samples of pretest scores above revealed that there were no statistically significant group differences in the mean scores of the target variables in the pretest.

Descriptive analysis was also done for the key variables of anger expression and anger control for boys and girls at posttest for the experimental group (Table 4). The results revealed that the mean scores for girls in anger expression out ($16.56 \pm 3.042SD$), anger expression in ($14.36 \pm 2.396SD$), and anger control in ($22.36 \pm 2.998SD$) were higher than those of boys. However, the boys scored higher in anger control out ($23.36 \pm 2.481SD$). Further, the girls scored a higher anger expression index ($34.56 \pm 6.351SD$) than the boys ($32.76 \pm 6.351SD$).

Table 4: Mean and Standard Deviation for the Variable Anger Expression and Anger Control for Boys and Girls in the Posttest of the Experimental Group

VARIABLE	EXPERIMENTAL GROUP			
	BOYS		GIRLS	
	Mean	Std. dev.	Mean	Std. dev.
Anger Expression Out	16.04	4.036	16.56	3.042
Anger Expression In	14.28	2.894	14.36	2.396
Anger Control Out	23.36	2.481	21.88	3.444
Anger Control In	22.24	2.773	22.36	2.998
Anger Expression Index	32.76	6.153	34.56	6.351

The results obtained (Table 4) indicated that in general, the girls scored higher in anger expression and anger control after exposure to treatment than the boys. This suggests that since anger is a disruptive emotion, girls were more receptive to emotional restructuring and accommodation after the intervention. It may also point to the fact that after being exposed to the treatment, awareness was created in the girls about anger, which appeared to be in line with the societal expectations that women need to camouflage or ignore their anger. The Man–Whitney’s U test for independent samples of posttest in the control group revealed that there were no statistically significant group differences in the mean scores of anger expression out, anger expression in, anger control in, anger control out and anger expression index (Table 5).

Table 5: Differences in Anger Expression between Boys and Girls for Posttest in Experimental and Control Groups (Mann Whitney test for independent samples)

VARIABLE	EXPERIMENTAL GROUP	
	Z	P-Value
Anger Expression Out	-0.415	0.678
Anger Expression In	-0.015	0.988
Anger Control Out	-1.592	0.111
Anger Control In	-0.153	0.879
Anger Expression Index	-0.812	0.417

The study also revealed that generally at the pre-intervention stage, the boys scored higher in anger expression and anger control. After the intervention, the girls scored higher in anger expression and control. However, the differences in anger expression and anger control were not statistically significant.

Discussion

These findings at one point tended to agree with those of Zimprich and Mascherek (2012) who argued that there are no major gender differences in anger expression among males and females. However, the girls in this study scored higher in anger expression and control than the boys though these differences were not statistically significant.

In this study, the boys scored higher in anger control out ($23.36 \pm 2.481SD$) than the girls (21.88 ± 3.444) after the intervention though. This finding is consistent with a study conducted by Csibi and Csibi (2011) that girls often use avoidance when dealing with stressful situations that cause emotional tension and at times tend to indulge into aggression as a means of releasing their tension compared to boys. High anger control out scores is a blueprint to an inability to the cognitive discomfort occasioned by the discomfort of their own emotions. The finding is also congruent with Fischer and Evers (2011).

Additionally, since females are more emotionally expressive than males, there was a likelihood of obtaining high scores in anger expression for girls, a fact supported by earlier studies (Brandts & Garofalo, 2012; Karreman & Bekker, 2012; Sadeh, Javdani, Finy, & Verona, 2011).

This study found out that male students scored higher in physical expression of anger as compared to girls, in line with that of Bilgel, and Bayram, (2014) whose study among Turkish high school students reported that female students expressed their anger by showing anxious behaviors more than male students. It is therefore not surprising that female students in this study had higher scores in depression and anxiety than the male students. This can be explained by the fact that girls tend to adopt suppression as an

internalized means of coping with anger as compared to boys (Cox, Stabb, & Hulgus, 2000).

The findings of this study brought out the disparity in the expression of anger between boys and girls addressing the gap on why so many boys' schools engage in violent strikes as compared to girls' schools. Although females get affected easily by anger provoking situations, they tend to control themselves from behaving aggressively (Balkaya & Sahin-Hisli, 2003). The societal expectations make females in one way play cool when angry and avoid serious confrontations with others.

Regardless of gender, the scores obtained in anger expression were high. The high scores in anger expression out is an indication that students easily express anger towards their external environment and lack control regarding the manifestation of anger most of the time. They are thus prone to behavioral problems and emotional conflicts. Consequently, they are likely to generate anxiety and depression because of the guilt brought about by angry feelings which have been suppressed.

Conclusion

Differences in anger expression and anger control between boys and girls exist and this affects their behavior which in turn impacts their interpersonal relationships, psychological, emotional, cognitive, and social well-being as well as academic achievement. This understanding is critical even as clinicians plan for a relevant intervention. The finding that females were more receptive to treatment due to their emotional expressiveness is also very important to clinicians and other mental health practitioners.

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