

# EFFECTS OF ACCEPTANCE-COMMITMENT THERAPY AND SOCIAL SKILLS TRAINING ON ANXIETY OF ADOLESCENT STUDENTS FROM FATHER-ABSENT FAMILIES IN LAGOS STATE.

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## ABSTRACT

*The home is the first and the oldest training ground where the child is mentored by parents, siblings and members of the extended family in which they exhibit different forms of behaviour which he observes and imitates. The home provides the initial training for the child and the parents act as models for their children since the process of socialization depends on both parents playing complementary roles in bringing up the child. Adolescents from father absent households manifest a number of internalizing and externalizing problem behaviour, including anxiety, interpersonal difficulties and low self-esteem. Thus, this study investigated the effects of Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) on anxiety of adolescent students from father-absent families. A pre-test, post-test control group quasi-experimental research design was used for the study. The population of the study comprised all Senior Secondary two (SS11) students in Lagos state. Simple random sampling was used to select a sample size of 157 Senior Secondary one and two students comprising of eighty two (82) males and seventy five (75) females. The instruments used to obtain relevant data for the study were Kessler Psychological Distress Scale (K10), Father-Absence Questionnaire (FAQ) and the depression, anxiety and stress scale (DASS). Two research hypotheses were generated to guide the study. The pre-test and post test scores were analysed using Analysis of Covariance (ANCOVA) at 0.05 level of significance. The study revealed that Acceptance-Commitment Therapy and Social Skills Training significantly reduced anxiety among adolescents from father-absent families. It was also revealed that gender did not have any significant impact on self-esteem of the participants in the experimental groups. In the light of the study's results, the researchers presented a number of recommendations and proposals the most important of which are:*

**Keywords:** *Anxiety, Acceptance-Commitment Therapy, Social Skills Training, Adolescent students from father-absent families, gender*

## Background to the Study

The early socializing process starts from the family and home. The home is the first and the oldest training ground where the child is mentored by parents, siblings and members of the extended family in which they exhibit different forms of behaviour which he observes and imitates (Makinde, 2010). It is within the family; the basic unit of the society, that a child learns the fundamentals of social interactions and then acquires the behavioural pattern and basic personality structure. The family also functions as a system in which each component part acts on the others. Traditionally, nuclear family is a family unit that includes two married parents of opposite sex and their biological children living in the same residence. Each component part has a unique role to play especially in the overall development of their children. Family environments constitute the basic ecology where children's behaviour is manifested, learned, encouraged and suppressed (Dishion & Patterson, 2006). In the

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words of Osarenren (2002) the manifestation and enhancement of traits and dispositions a child is born with, hinge on the kind of environment the child grows in.

Families are among the strongest socializing forces in life (Wright & Wright, 1994). They teach children to control unacceptable behaviours, to delay gratification and to respect the rights of others. Conversely, the families can teach children aggressive, anti-social, violent behaviours and other forms (Wright & Wright, 1994). This could explain how juvenile may end up becoming a delinquent. When the emotional climate at home is questionable, the children's emotional development will be fixated and distorted which can lead to cases of delinquency (Makinde, 2004). The home provides the initial training for the child and both parents act as models for their children since the process of socialization depends on both parents playing complementary roles in bringing up the child (Azuka-Obieke, 2013).

However, some socialization difficulties are encountered where these models are missing due to death, divorce, separation or abandonment. Some families now headed mothers or children as the father becomes the absent parent or family member (Mabusela, 2014). Families are now defined by relations and not by their constituency. There is no satisfying substitute for a mother or a father because it is often argued that troubled homes are more likely to produce troubled children. These alterations such as father absence among others in Nigeria have weakened the ability of families to successfully raise children.

Fathers are absent in nearly a third of the household in most of the African countries and from more than half of all households in Namibia and South Africa (Mabusela, 2014). It is evident that there is significant number of absent fathers and the number is not static, it is steadily increasing not only nationally but internationally. Adolescents are young people in their teens – boys and girls between the ages of 10 and 16 years who are within the secondary school age in Nigeria (Hashmi, 2013). This is the transitory stage from childhood to adulthood characterized by emotional turbulence. The transition through puberty and into adolescence is a challenging time for many young people, with heightened risk of mental health issues. During this period, the father-child relationship can be a significant protective factor. For example, youths who spend more time with their fathers have been found to have higher general self-worth than those adolescent students from father-absent families.

In developing societies including Africa, adolescents from father-absent homes tend to be stubborn, angry and violent in behaviour. They manifest disorders and misconducts usually first diagnosed in infancy, childhood, or adolescence, under the DSM-IV-TR classification of Axes 1 and 11, such as depressive disorder(mood alteration), psychotic disorder, Amnesic and other cognitive disorders, disruptive and attention –deficit- hyperactivity disorder. Sometimes they show impulsive –control disorders with mixed disturbance of emotions and conduct or other conditions that may be a focus for clinical attention (Ogbuja, 2008). Also, “Children from father absent homes are more likely to experience emotional disorders and depression” (Amato, 1991). Father absence in early childhood is

a risk factor for the development of adolescent depressive symptoms, particularly in girls (Culpin, Heron, Araya, Melotti, & Joinson, 2013).

Adolescents from father absent households manifest a number of internalizing and externalizing problem behaviour, including anxiety, depression, interpersonal difficulties, low self-esteem, aggression, among others. Anxiety is a feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome. Current research indicates that parental / familial and environmental factors play a role in the development of increased anxiety levels in children. For example, a study by Grover, Ginsburg and Lalong (2005) found that children, who experienced a more negative environment, including factors such as marital difficulties, serious family illness, and parental psychopathology, had significantly higher levels of anxiety in both the first and seventh grade.

Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) are used to address anxiety of adolescent students from father-absent families. The choice of these two treatments is based on the premise that they can effectively be used to manage the psychological problems of adolescents from father-absent families. The Acceptance-Commitment Therapy (ACT) is a metacognitive psychotherapeutic approach that stems from behavioural and cognitive methods and emerged as the third wave of behavioral therapy (Saedy & Judi, 2012). Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) are used to of adolescent students from father-absent families. The choice of these two treatments is based on the premise that they can effectively be used to manage the psychological problems of adolescents from father-absent families. The Acceptance-Commitment Therapy (ACT) is a metacognitive psychotherapeutic approach that stems from behavioural and cognitive methods and emerged as the third wave of behavioral therapy (Saedy & Judi, 2012). This study investigated the effects of Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) on anxiety.

ACT aims to increase psychological flexibility, and thereby improving the individual function that is done by six processes including acceptance, diffusion, self as context, contact with present moment, clarifying values and committed action. ACT is an intervention that helps individuals to accept difficult experiences and commit to behaviour that is consistent with their values. Recently, ACT has been used for a wide range of psychological problems including depression, anxiety disorders, substance abuse disorders, psychosis, chronic diseases, eating disorders, and work-related problems, among others (Hayes, Masuda & De Mey, 2003). ACT does not attempt to help clients to control or manage anxiety and instead teaches them how to let go of their control struggle. Thus, ACT is different from what many clients and therapists typically expect must be done to solve anxiety problems. It is therefore an essential first step in treatment that therapists help clients experience the costs of remaining trapped in the idea that effective anxiety control is a prerequisite for leading a better life, and how anxiety control strategies have negatively impacted their life functioning and increased distress when they failed to work as intended (Eifert & Heffn, 2003).

Burckhardt, Manicavasagar, Batterham, and Hadzi-Pavlovic (2016) studied a randomized controlled trial of strong minds. A school-based mental health programme combining acceptance and commitment therapy and positive psychology. Their sample comprised 267 year 10 and 11 high school students who were randomly selected from the students population of an independent Episcopalian high school in Sydney, Australia. Their instrument comprised the depression anxiety and stress scale (DASS-21) and flourishing scale (FS). The data was subjected to statistical analysis with the use of mixed model for Repeated Measures (MMRM), independent samples t-tests and Chi-Square test. They concluded that including the emotion regulation strategy of acceptance in early intervention programmes may be effective in reducing symptoms and improving wellbeings in high school students.

Burckhardt, Manicavasagar, Batterham, Hadzi-Pavlovic and Shand (2017) studied Acceptance and commitment therapy universal prevention programme for adolescents: A feasibility study. Their sample comprised 48 year 10 high school students who were randomly selected from the students population of private high school located in Sydney, Australia. They hypothesized that, there is no statistically significant difference between the post-test mean scores on depression, anxiety, stress and wellbeing among high school students exposed to Acceptance and commitment therapy (ACT) and the control group. And there is no significant difference between the pre-test scores and post-test scores on depression, anxiety, stress and wellbeing among high school students exposed to ACT. The instruments used comprised the depression anxiety and stress scale (DASS-21) and flourishing scale (FS). The data was subjected to statistical analysis. The result indicated that the intervention was acceptable to students and feasible to administer in a school settings. There were no statistically significant differences between the ACT and control conditions on the outcome measures of depression, stress, anxiety, total negative affect and wellbeing. However, there were significant improvement in the stress scores than anxiety scores between group effect sizes demonstrated small to large differences for baseline to post-intervention mean scores and medium to large differences for baseline to follow-up mean scores, all favouring the ACT-based condition. The researchers concluded that ACT-based prevention programme delivered in school setting led to moderate to large effect size differences between the conditions at the 5 month follow-up and that the programme was feasible and acceptable to participants. This study suggested that an ACT-Based programme should be examined further in a larger and more representative sample.

Social skills training is a set of systematic techniques and strategies useful for teaching interpersonal skills that are based on social learning theory. It is a widely used treatment of a range of psychological distress (El Malky, Atia & Alam, 2016).

In the study titled “The effectiveness of social skill training program on self-esteem, depression and interpersonal difficulties among schizophrenic patients by El Malky, Atia and Alam (2016). Quasi-experimental design (one group pretest posttest design) was used to achieve the aim of the study. A convince sample of 50 hospitalized patients who had psychotic disorders were selected from the Psychiatric Hospital in Tanta and the Psychiatric Hospital in Mit-Khalf at Menoufyia, Egypt. Their

instrument comprised a semi-structured interviewing questionnaire, the depression, anxiety and stress scale (DASS), Self-Esteem Inventory Scale and Relationship Scales Questionnaire. The data were statistically analyzed by SPSS version 16 (SPSS Chicago.Inc). Student's t-test, one a way ANOVA (F test), t test and paired t tests were used for parametric data. Kruskal-Wallis, Mann-Whitney and Wilcoxon in signed rank tests were used for non-parametric data. Pearson's Correlation analysis was used to show strength and direction of association between two quantitative variables. P value < 0.05 is considered significant. They concluded that social skills training program had a positive effect on interpersonal difficulties, depressive symptoms and self-esteem of the schizophrenic patients after receiving social skill training program.

### **Statement of the Problem**

Adolescents from father-absent families seem to have a risk factor more than that of fathered adolescents for a wide range of negative outcomes most especially anxiety and becoming delinquent juveniles. The importance of fathers in families seems to be in significant decline and is reaching critical proportions since the economic realities of our time have forced both fathers and mothers, but especially fathers, to take up gainful employment in order to meet the needs of the family that take them away from home. This massive erosion of fatherhood contributes mightily to many of the major psychological and social problems of adolescents of our time.

Adolescents from father-absent families may seem to be at a greater risk of becoming involved in drug and alcohol abuse, mental illness, suicide, poor educational performance, teenage pregnancy and poverty. Thus, mental, social and behavioural correlates of health problems seem to have resulted in lowered quality of life and becoming misfits in the society. Adolescents today tend to encounter difficulties and more life challenges than previous generations, yet are provided less guidance and intervention for their personal development.

This has been a source of concern to families, government, non-governmental organizations and society at large. It is therefore necessary to interrupt the ugly trend of anxiety among adolescent students from father absent families by alleviating their anxiety among others which has been observed to be a major deterrent of their general well-being. Therefore, this study sets out to find out the effects of Acceptance-Commitment Therapy and Social Skills Training on anxiety of Adolescent students from father-absent families in Lagos State.

### **Research Hypotheses**

The following research hypotheses were tested based on the research questions at 0.05 level of significance.

1. There is no significant difference in the post- test mean scores on anxiety among adolescents from father-absent families exposed to Acceptance-Commitment Therapy, Social Skills Training and the control group.
2. There is no significant gender difference in the post-test mean scores on anxiety among adolescents from father-absent families across the treatment and the control groups.

## **Methodology**

This section focused on the research methodology used under the following sub-headings: research design, area of study, population for the study, sample and sampling techniques, research instruments, reliability and validity of instruments, administration of instruments and method of data analysis.

## **Research Design**

The research design for this study was pretest, post-test control group quasi-experimental research design. Three experimental groups were used for the study. There were two treatment groups and one control group. One group was exposed to Acceptance-Commitment Therapy (ACT) while the second group was exposed to Social Skills Training (SST). The control group was not exposed to any treatment.

The target population for this study comprised all adolescent students from father-absent families in the public Senior Secondary Schools in Lagos metropolis, Nigeria. The SS 2 students were used for this study because they were the most stable class for this research and were considered to be free from the pressure of the Senior Secondary School Certificate Examination.

Multi-stage sampling process was used to select Senior Secondary School Two (SS2) students for the study. The first stage of the multi-stage sampling process was the selection of three Education districts in Lagos State out of six Education districts using hat and draw method. The three Education districts are: Education district II, Education district III and Education district IV. The second stage involved the selection of three zones from each of the selected Education districts using hat and draw method. The three zones are: Kosofe zone from Education district II, Lagos Island zone from Education district III and Mainland zone from Education district IV. The third stage involved the selection of one Senior Secondary School from each of the three zones using simple random sampling technique. One Senior Secondary School was selected from fourteen senior secondary schools in Kosofe zone, one Senior Secondary School from eleven senior secondary schools in Lagos Island zone and Senior Secondary School from nine senior secondary schools in Mainland zone. The fourth stage involved the identification of adolescents from father-absent families from the Senior Secondary School Two (SS2) students from the selected Senior Secondary Schools using Father-Absence Questionnaire (FAQ). A total number of two hundred and twenty one (221) students were identified as adolescents from father-absent families from one thousand and sixty three (1063) Senior Secondary School Two (SS11) students who participated. The Kessler's Psychological Distress Scale (K10) was administered to the adolescents that were identified as adolescents from father-absent families. A total number of 157 students scored above 25 which indicated those that are psychologically distressed. The three selected senior secondary schools were randomly assigned to the three treatments. Fifty six (56) participants which comprised twenty (20) males and thirty six (36) females belonged to Group A were given Acceptance-Commitment Therapy, fifty five (55) participants, forty one (41) males and fourteen (14) females were in Social Skills Training Group B while forty six (46) participants, twenty one (21) males and twenty five (25) females were in Group

C, the control group were not given any treatment during the study but were given the treatment that worked better after the study to enable them benefit from the treatment.

**Table 1: Distribution of sample in pre-assessment selection for baseline data.**

SCHOOL	TOTAL	PRE-ASSESSMENT SCORES	
		LOW SCORE	HIGH SCORE
A	83	27	56
B	75	20	55
C	63	17	46
<b>TOTAL</b>	<b>221</b>	<b>65</b>	<b>157</b>

The table above showed the students that have low and high scores from the test assessment conducted by the researcher so as to identify the students that qualified for the study using Father-Absence Questionnaire (FAQ). The sample of 221 students were administered Kessler's Psychological Distress Scale (K10) and only 157 students were identified as having high scores, that is they are psychologically distressed. These 157 students formed the sample that were administered the research instrument – The anxiety and stress scale (DASS).

**Table 2: Number of students who participated in the study and their training group**

School	Type of Intervention	Type of group	Male	Female	Total number of participants
A	Social Acceptance-Commitment Therapy	Training I	20	36	56
B	Social Skills Training	Training II	41	14	55
C	Control Group	Control group	21	25	46
	<b>Total</b>		<b>82</b>	<b>75</b>	<b>157</b>

Here in table 2, selected male students were 20, 41 and 21 respectively for school A, B and C making a total of 82 male students and 36, 14 and 25 female students were randomly selected from school A, B and C respectively making a total of 75 female students. 157 students participated in the study.

The following research instruments were used to obtain relevant data for the study:

1. Kessler Psychological Distress Scale (K10) by Kessler et al., 2002
2. Father-Absence Questionnaire (FAQ)
3. The depression, anxiety and stress scale (DASS) by Lovibond & Lovibond, 1995

All the instruments were revalidated through a pilot study carried out on secondary school students in public Senior Secondary School in Lagos State (this was not part of the sample).

### **Kessler's Psychological Distress Scale (K10)**

The scale was developed by Kessler. Psychological distress was measured using the 10-item screening scale K10, as used in national and state-wide surveys in Australia (Kessler et al., 2002). The items are based on the level of anxiety and depressive symptoms experienced in the most recent four-week period, for example: "how often did you feel nervous" and "how often did you feel hopeless". Subjects report the frequency of each experience on a five point scale ranging from 'all of the time' to 'none of the time'. The scoring system used is based on the method developed by the Clinical Research Unit for Anxiety and Depression at the University of New South Wales (Kessler et al., 2002). In this method, each item is scored from one 'none of the time' to five 'all of the time'. Scores of the 10 items are then summed, yielding a minimum score of 10 and a maximum score of 50. Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress. This results in individual's K10 scores being restricted to a range of 10–50. 10 - 19 Likely to be well, 20 - 24 likely to have a mild disorder, 25 - 29 likely to have a moderate disorder while 30 - 50 Likely to have a severe disorder. Some samples of the items are stated below.

### **Father-Absence Questionnaire (FAQ)**

The instrument which contains 25-items split into two sections was designed by the researcher. Section A focuses on personal data of the participant's demographic information such as age, gender, name of school, Biological father presence or absence and Reason for Absence. Section B contains 20-items designed on a two point scale to identify adolescents from father-absent families. The content validity was determined by the researcher's supervisors and experts from Measurement and Evaluation. The responses were Yes and No. Yes=2 and No=1. The maximum scores was 40 while the minimum scores was 20. Some samples of the items include:

### **The depression, anxiety and stress scale (DASS)**

The depression, anxiety and stress scale (DASS) by (Lovibond & Lovibond, 1995) is a 42-questionnaire which includes three self-report sub-scales designed to measure the negative emotional states of depression, anxiety and stress. The DASS is available in a 21-item short form with seven items in each of the subscales, which was used in this study. In this study the researcher used the depression and anxiety subscale only which consists of 14 items of the 21-item DASS. There are 21 items in this scale with four response options: 0 "Did not apply to me at all–Never", 1 "Applied to me to some degree, or some of the time–Sometimes", 2 "Applied to me to a considerable degree, or a good part of time–Often" to 3 "Applied to me very much, or most of the time–Almost always". Scores for depression and anxiety were calculated by summing the scores for the relevant items. The total score ranges from 14-56. The higher score indicates negative emotional status. During the pilot study, the instrument obtained a test retest reliability coefficient of 0.88 and 0.52 for depression and anxiety respectively within four weeks interval. Sample of the items include:

### **Procedure for Data Collection**

A letter of introduction was obtained from the Department of Educational Foundations, Faculty of Education, University of Lagos, Akoka, Yaba and was submitted to the Ministry of Education, Alausa, Lagos State. The researcher sought permission to use the selected schools for the study. A letter of approval was given which the researcher took to the selected schools for the study.

### **Administration of Research Instruments**

A preliminary investigation was done by sorting out students who scored above average on father absence and above average on psychological distress to justify their eligibility and satisfy the criteria for randomization. The administrations of the research instruments were in three phases and were administered to the participants by the researcher and the research assistants. The phases are as follows:

#### **Phase 1: Pre-treatment Assessment:**

The researcher with the help of the research assistants administered all the research instruments to the students as pre- test a week before the treatment session.

#### **Phase 2: Treatment Phase:**

There were two treatment groups and one control group. The selected schools were randomly assigned to treatment and control groups. Group one was exposed to Acceptance and Commitment Therapy (ACT), Group two was exposed to Social Skills Training (SST), while Group three, the control group did not receive any intervention. The treatment groups met once a week for eight weeks.

#### **Phase 3: Post –test Assessment:**

At the end of the treatment which lasted for eight weeks, all the research instruments were re-administered as posttest to the same treatment and control groups.

### **Control of Extraneous Variables**

The researcher controlled some extraneous variables that could affect the outcome of the experiments. The researcher ensured that randomization was used in selecting the sample for the study. Other unidentified extraneous variables were taken care of through the adoption of Analysis of Covariance (ANCOVA) and repeated measures.

### **Method of data analysis**

Data collected for this study were analyzed using descriptive and inferential statistics. All the hypotheses were tested using Analysis of Covariance (ANCOVA) statistics. The hypotheses were analyzed at 0.05 level of significance using Statistical Product for Service and Solution (SPSS) version 24.

## RESULTS

The data collected from the various instruments were analyzed using both descriptive and inferential statistics appropriate for each hypothesis. The means and standard deviations for pre and post-tests assessment measures were computed while Analysis of covariance was used to test the hypotheses. All hypotheses were tested at 0.05 level of significance.

**Hypothesis One:** There is no significant difference in the post- test mean scores on anxiety among adolescents from father-absent families exposed to Acceptance-Commitment Therapy, Social Skills Training and the control group.

**Table 3:** Descriptive Data on Pre and Post – test mean scores of the participants’ anxiety in the Experimental Groups.

Experimental Group	N	Pre-test		Post-test		Mean Differences
		Mean	S.D	Mean	S.D	
Acceptance-Commitment Therapy	56	12.82	2.57	8.16	1.86	-4.66
Social Skills Training	55	11.93	2.94	7.15	2.86	-4.78
Control	46	12.91	2.49	12.85	2.49	-0.06
<b>Total</b>	<b>157</b>	<b>12.54</b>	<b>2.71</b>	<b>9.18</b>	<b>3.41</b>	<b>3.17</b>

The results presented on Table 3 shows the pre-test mean scores for anxiety of the participants exposed to Acceptance-Commitment Therapy (12.82), Social Skills Training (11.93) and the control group (12.91). After the treatment, the mean self-esteem score of the participants were 8.16 with the use of Acceptance-Commitment Therapy, 7.15 for the use of Social Skills Training and 12.85 with the control group. Mean difference of -4.66, -4.78 and -0.06 was recorded on the interpersonal difficulties score of the participants through Acceptance-Commitment Therapy group, Social Skills Training group and the control group respectively. To determine whether significant difference exists in anxiety of among secondary school students due to the treatment, Analysis of covariance statistics (ANCOVA) was carried out and the result presented in Table 4 below.

**Table 4: Analysis of Covariance on the Difference in Participants’ anxiety across the experimental groups**

Sources	Sum of Square	Degree of Freedom	Mean of Square	F	Sig
Corrected Model	1226.518 <sup>a</sup>	3	408.839	106.293	.000*
Intercept	46.364	1	46.364	12.054	.001*
Covariate (Pre_Anxiety)	321.837	1	321.837	83.674	.000*
Experimental Condition	780.970	2	390.485	101.522	.000*
Within Group	588.488	153	3.846		
<b>Total</b>	<b>1815.006</b>	<b>156</b>			

\*Significant, P < 0.05; F-critical at 0.05 (2, 153) = 3.06 < 101.522

Table 4 shows that a calculated F-value of 101.522 resulted as the difference among the three experimental groups. This is statistically significant since it is greater than the critical value of 3.06 given 2 and 153 degrees of freedom at 0.05 level of significance. Consequently, the null hypothesis was rejected. The intervention was effective in reducing anxiety of the participants. Based on the significant F value obtained above, further analysis of data was carried out with the use of the least significant difference (LSD) test where in a pair wise comparison of group means was carried out to determine the trend of the difference among the three experimental groups in their self-esteem. The result of the analysis is presented in Table 5.

**Table 5: LSD Pairwise Comparison of Students' Anxiety based on experimental groups**

<b>(I) Anxiety</b>	<b>(J) Anxiety</b>	<b>Mean Difference (I-J)</b>	<b>Sig.<sup>b</sup></b>
Social Skills Training	Acceptance-Commitment Therapy	-.534	.158
	Control	-5.171*	.000
Acceptance-Commitment Therapy	Social Skills Training	.534	.158
	Control	-4.638*	.000
Control	Social Skills Training	5.171*	.000
	Acceptance-Commitment Therapy	4.638*	.000

Table 5 indicates that participants who were exposed to social skills training do not significantly differ in anxiety from those exposed to Acceptance-Commitment Therapy (Mean difference = 0.534,  $p > 0.05$ ). However, participants exposed to social skills training significantly experienced a decrease in anxiety than those in the control group (Mean difference = 5.171\*,  $p < 0.05$ ). In the same vein, participants exposed to Acceptance-Commitment Therapy significantly experienced a decrease in anxiety than those in the control group (Mean difference = 4.638\*,  $p < 0.05$ ). Other comparisons were not significant. It was observed that Acceptance-Commitment Therapy and Social Skills Training are highly effective in reducing anxiety among participants.

**Hypothesis Two:** There is no significant gender difference in the post-test mean scores on anxiety among adolescents from father-absent families across the treatment and the control groups.

**Table 6: Descriptive Data on Pre and Post – test mean scores of the students' anxiety in the Experimental Groups based on gender**

<b>Gender</b>	<b>Experimental Group</b>	<b>N</b>	<b>Pre-test</b>		<b>Post-test</b>		<b>Mean Differences</b>
			<b>Mean</b>	<b>S.D</b>	<b>Mean</b>	<b>S.D</b>	
<b>Male</b>	Acceptance-Commitment Therapy	20	12.55	2.19	8.05	1.47	-4.50
	Social Skills Training	41	11.68	2.90	7.17	2.79	-4.51
	Control	21	12.57	2.79	12.14	2.37	-0.43
	<b>Total</b>	<b>82</b>	12.27	2.63	9.12	2.21	<b>-3.15</b>
<b>Female</b>	Acceptance-Commitment Therapy	36	12.97	2.78	8.22	2.06	-4.75
	Social Skills Training	14	12.64	3.03	7.07	3.15	-5.57
	Control	25	13.20	2.24	13.44	2.49	0.24
	<b>Total</b>	<b>75</b>	12.94	2.68	9.58	2.57	<b>-3.52</b>

The result of the descriptive data presented in table 6 indicates that the pre-test mean value of level of anxiety for male participants were 12.55 for acceptance-commitment therapy, 11.68 for social skills training and 12.57 for the control group. Likewise, the pre-test mean score value for female participants were 12.97 for acceptance-commitment therapy, 12.64 for Social Skills training and 13.20 for the control group.

Also, at post-test male participants in acceptance-commitment therapy, social skills training and control group had mean score of 8.05, 7.17 and 12.14 respectively. Their female counterpart in acceptance-commitment therapy, social skills training and control group had mean score of 8.22, 7.07 and 13.44 respectively.

The table further shows that male secondary school students from acceptance-commitment therapy group had a mean difference of 4.50, social skills training group had a mean difference of 4.51 while the control group participants had a mean difference of 0.43. In addition, the female secondary school students from acceptance-commitment therapy group had a mean difference of 4.75; social skills training group participants had a mean difference of 5.57 while the control group participants had a mean difference of 0.24. The table reveals that in acceptance-commitment therapy group, the female had the highest mean difference of 4.75 in level of anxiety followed by males with 4.50. The female participants also had the greater mean difference of 5.57. when exposed to social skills training than males with 4.51. However, in the control group both male and female participants had the lowest mean difference when compared with other groups with 0.43 and 0.24 respectively. It can therefore, be concluded that the females' anxiety in the acceptance-commitment therapy reduced than that of the males. Consequently, social skills training have more impact on the females in reducing their anxiety than the males.

To determine whether significant difference exists on the level of anxiety due to gender among the groups, Analysis of Covariance (ANCOVA) statistics was done and the results were presented in Table 7.

**Table 7: Analysis of Covariance on effects of Experimental Conditions and Gender on Post-test students' Anxiety**

Source	Sum of Squares	df	Mean Square	F	Sig
Corrected Model	1241.009 <sup>a</sup>	6	206.835	54.051	.000*
Intercept	43.176	1	43.176	11.283	.001*
Covariates (Pre_Anxiety)	316.640	1	316.640	82.746	.000*
Experimental Conditions	742.121	2	371.060	96.968	.000*
Sex	.313	1	.313	.082	.775 N.S
Experimental Group * Sex	14.070	2	7.035	1.838	.163 N.S
Within Group	573.997	150	3.827		
<b>Corrected Total</b>	<b>1815.006</b>	<b>156</b>			

\*=Significant,  $p < 0.05$ ; NS = Not Significant; F-critical at 0.05 (2, 150) = 3.06 < 96.968; F-critical at 0.05 (2, 150) = 3.06 > 1.838

Table 7 shows that a calculated F-value of 96.968 resulted as the difference in anxiety among participants in the three experimental groups. The F-calculated value of 96.968 is statistically significant since it is greater than the critical F-value 3.06 given 2 and 150 degree of freedom at 0.05 level of significant. This shows that the experimental condition significantly decrease anxiety among participants. The result also shows that a calculated F-value of 1.838 result as the influence of gender and experimental conditions on anxiety. This calculated F-Value is not significant since it is less than the critical F-value of 3.06 given 2 and 150 degree of freedom at 0.05 level of significance. Hence, hypothesis eight was accepted. Therefore, there is no significant difference in the post-test mean scores of participants' anxiety due to their gender.

### **Discussion of findings**

The findings revealed that there is significant difference in the post- test mean scores on anxiety among adolescents from father-absent families exposed to Acceptance-Commitment Therapy, Social Skills Training and the control group. The result of the analysis showed that there was significant difference in the post- test mean scores on anxiety among adolescents from father-absent families exposed to Acceptance-Commitment Therapy, Social Skills Training and the control group. Hypothesis one is therefore rejected. The reason for the impact of Acceptance-Commitment Therapy could be attributed to the contents of the intervention package that entailed teaching the participants the importance of mindfulness skills with the express purpose of facilitating valued action: to help people live by their values. Also, psychological flexibility which is the ability to accept our thought and feelings and be in the present moment with full awareness and openness, to our experience, and to take action guided by our values. Put more simply, it's the ability to "be present, open up, and do what matters.

These findings were supported by Burckhardt, Manicavasagar, Batterham, Hadzi-Pavlovic and Shand (2017) who found out that the use of was effective in reducing depression among high school students. These findings are also in agreement with a study conducted by Burckhardt, Manicavasagar, Batterham, Hadzi-Pavlovic and Shand (2017) on a high school students. They concluded that ACT-based prevention programme delivered in school setting led to moderate to large effect size differences between the conditions at the 5 month follow-up and that the programme was feasible and acceptable to participants. Result indicated that participants receiving ACT had reduction in anxiety. This finding is supported by Yadavaia, Hayes and Vilardaga (2014) in their study on using Acceptance-Commitment Therapy to increase self-compassion: a randomised controlled trial. Many people with anxiety have forced themselves to engage socially, frequently bullying themselves or berating themselves through much of each experience. A crucial component of ACT that goes hand-in-hand with defusion is self-compassion. No one with anxiety chooses to feel or think the way that they do. Holding a gentle and compassionate stance with oneself through a difficult experience has been shown to decrease the level of suffering that comes with it. Therefore,

a psychological muscle to develop in conjunction with defusion is the ability to be kind and compassionate towards oneself and one's pain.

Furthermore, the findings also revealed that there is no significant gender difference in the post-test mean scores on anxiety among adolescents from father-absent families across the treatment and the control groups. The result of the analysis showed that there was no significant gender difference in the post test means scores on anxiety among adolescents from father-absent families across the treatments and the control group. Hypothesis two is therefore accepted. This finding is further corroborated by Bakhla, Sinha, Sharan, Binay, Verma & Chaudhury (2013) who did a study on anxiety in school students: role of parenting and gender with a sample of 146 students, 55% male and 45% female with a mean age of 12.71 years. The mean scores across gender shows that female students scored significantly higher in total and all sub types of anxiety.

### **Conclusion**

According to the findings of this study, Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) are effective, simple and practical methods for reducing anxiety among adolescents from father-absent families.

### **Recommendations**

The following recommendations are put forward based on the findings of this study:

There is a need for the implementation of Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) for adolescents from father-absent families especially in public secondary schools by the Ministry of Education. This could be done through the counsellors in various schools. In this way, anxiety problems of the adolescents will be determined and reduced.

There should also be enlightenment, workshops and campaigns for parents on the effects of father absence on the anxiety of adolescents in secondary schools. Moreover, the Ministry of education and other stakeholders should provide counselling centres equipped with materials for Acceptance-Commitment Therapy (ACT) and Social Skills Training (SST) and awareness in different Local Government Areas in order to help the anxiety problem of the adolescents from father-absent families.

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