

**ASSESSMENT AND MANAGEMENT OF PRONENESS TO SUICIDE AMONG IN-SCHOOL  
ADOLESCENTS IN LAGOS STATE, NIGERIA**

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**ABSTRACT**

*This study assessed and managed proneness to suicide among in-school adolescents in Lagos state. Quasi-experimental pre-test/ post-test control group design was used for this study. The population of the study comprised all Senior Secondary two (SS11) students in Lagos state. Multi-stage sampling procedure was used to select a sample size of 66 Senior Secondary two students comprising of thirty one (31) males and thirty five (35) females. The instruments used to obtain data for the study were Life Attitude Scale Short Form (LAS-SF), Beck Depression Inventory (BDI) and Modified Scale for Suicide Ideation (MSSI). Two research questions and hypotheses were formulated 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 Dialectical Behaviour Therapy and Interpersonal Therapy significantly reduced depression among in-school adolescents prone to suicide. Suicide Ideation reduced significantly among the group exposed to Dialectical Behaviour Therapy and Interpersonal Therapy than the control group.. The study recommends that school counsellors should acquaint themselves with Dialectical Behaviour Therapy and Interpersonal Therapy so as to manage adolescents with proneness to suicide*

**Keywords: Assessment, Depression, Management, and Suicide Ideation**

**INTRODUCTION**

Incidences of suicide are becoming rampant as reported on social media and the dailies. Reading through these different stories, it is clear that suicide victims are not restricted to a particular group of persons, but cut across all classes of individuals, irrespective of gender, social and economic status, age or level of education. Suicide is a deliberate act of an individual to end his or her own life (O'Connor & Nock, 2014). This intentional act of an individual to end his or her life can be done in various ways as available or convenient to him or her. These include hanging, jumping into the river (drowning) or from a high platform, the use of bombs, ingestion of poisonous substances, electrocution, the use of fire arms among others. Most common of these means in Nigeria is the use of a popular and commonly available misused insecticide known as SNIPER which suicide victims have made popular through their usage.

Out of all the classes of individuals who commit suicide, suicide stories among the young (adolescents) are more prevalent in Nigeria. According to Oyetunji, Arafat, Famori, Akinboyewa, Afolami, Ajayi and Kar (2021), suicide reports were highest among students as observed in the analyses of 10 online newspapers between January 2010 to December 2020. The World Health Organisation (WHO) gives a global report that suicide is the second leading cause of death among people within the age group of 15–29 years (WHO, 2014). The spate at which adolescents commit suicide is becoming a worrisome development that leaves questions in the mind of people as to the reason a promising set of individuals would commit such acts. In the words of Chikezie and Ebuanyi (2014), “Young people are full of

expectations and are more likely to take very drastic actions if things are not going the way they expect”(p.4). Also, the adolescent is experiencing mental, biological, physical, emotional and social transition from childhood to adulthood and may be deficit in problem solving skills when faced with real life issues.

According to Alabi, Alabi, Ayinde and Abdulmalik (2014), suicide occurs as a result of an interaction of many factors and not a single reason. They presented a modification from World Health Organisation’s (2012) publication showing a classification of the causes of suicide into individual, socio-cultural and situational factors. Individual reasons include feelings of hopelessness, isolation and absence of social support, mental disorder, aggressive tendencies, impulsivity, substance abuse, history of abuse, chronic illness, severe emotional distress, family history of suicide and earlier suicide attempt. Socio-cultural reasons for committing suicide are: belief of suicide as a noble way to escape shame and difficulties, stigmatization, influence of print and electronic media, absence of access to healthcare services and influence of others who died by suicide. Situational causes of suicide are financial challenges, loss of significant social or emotional relationships, stressful life events and access to lethal means. This exposition has provided manifold considerations in understanding the causes of suicide regardless of gender, age, economic status or level of educational exposure.

The factors as spelt out by Alabi et. al (2014) can also be seen in the light of factors that make one prone to attempt suicide. For example, an adolescent who has experienced frequent academic failure, the loss of a loved one or significant social relationship may exhibit severe emotional distress, depression, feelings of hopelessness and be impulsive, which may predispose or place him or her at risk to attempt suicide. Suicide does not just occur suddenly. It takes time and an interplay of experiential, and situational considerations. It can therefore be deduced that not one factor and all factors can place a person at risk to attempt suicide. An assessment is therefore crucial in identifying specific factors that makes one prone to attempt suicide. It entails an investigation of the interplay of past and current factors in a person’s life that makes one likely to kill self. It encompasses a comprehensive inquiry of the aforementioned risk factors mentioned by Alabi et al (2014). The aim of assessment is to determine the level of proneness to suicide at a given time and provide the suitable care and management (NSW, Department of Health, 2004).

It shouldn’t stop at assessment alone. Timely and appropriate management protocols are needed in saving the lives of adolescents prone to suicide. The first thing to consider in managing persons prone to suicide is the decision on appropriate treatment to deal with distressing symptoms and the treatment setting (NSW, Department of Health, 2004). The treatment and setting is important because not all persons prone to suicide require drugs and hospitalization. Selection and administration of treatment should be determined by a careful investigation of symptoms, client’s mental status and general medical conditions (Osuch & Marias, 2012). Persons prone to suicide that need to be hospitalized may be managed using pharmacotherapy with the use of drugs like Atypical antidepressant, Selective Serotonin Reuptake Inhibitors (SSRIs), Tricyclic Antidepressants (TCAs), Monoamine Oxidase Inhibitors (MAOIs) and Serotonin-Noradrenaline Reuptake Inhibitors (SNRIs) (Osuch et. al, 2012).

To assist adolescents whose distressing symptoms do not require the use of drugs, the field of counselling psychology affords a management option that involves the application of empirical proven psychotherapeutic interventions. Some psychotherapeutic interventions available include Dialectical Behaviour Therapy (DBT), Cognitive Behaviour Therapy, Mode Deactivation therapy (MDT), Interpersonal Therapy for Adolescents (IPT-A), Problem Solving Therapy (PST), Mentalisation Therapy and Home Based Family Interventions. To boost confidence in the use of psychotherapy over pharmacotherapy, Markowitz and Weissman (2004) has this to say:

*“Antidepressant medications work for most patients, and work for as long as those patients continue to take the medications, but all treatments have limits. A significant proportion of medication responders have residual symptoms that predispose to recurrence or relapse of their mood disorders. Other patients do not respond to medications, refuse to take them, or in many areas of the world simply cannot afford them. For all of these patients, psychotherapies may have utility (pp. 136)”*

This excerpt has given credence to the fact that although pharmacotherapy could be effective in treating adolescent's depressive symptoms, it is cost unfriendly and may not have an enduring effect when compared to psychotherapy. To this end, management after early identification of adolescents at low or moderate risks to suicide is necessary in preventing an escalation to attempted or eventual suicide. Application of proven interventions like Dialectical Behaviour Therapy and Interpersonal Therapy to maladaptive behaviours resulting from emotional fallout of unpleasant life experiences could be helpful in assisting adolescents prone to suicide. This is important because the therapist doesn't have control over client's unpleasant life experiences, but can help to manage the emotional and behavioural fall-outs like depression and suicide ideation.

Major depressive disorder simply called “depression” is a mood disorder that presents distressing symptoms that affect an individual's feelings, thoughts and engagement in daily activity for at least two weeks (National Institute of Mental Health, 2018). It is somewhat different from other forms of depression like premenstrual dysphoric disorder, postpartum depression, bipolar disorder and seasonal affective disorder that develop under unique circumstances. According to Mba (2010) depression transcends its synonym explanation of being unhappy or hopeless. It is a state of heavy sadness, low spirit and isolation which could elicit suicidal ideation. Long lasting sadness and mood swings can be symptoms of depression and a major risk factor for suicide. A person with depression may experience few or much of the following symptoms most of the day, nearly every day and for at least two weeks: persistent sadness, loss of interest in usually enjoyed activities, fatigue, restlessness, hopelessness, irritability, appetite loss or overeating, sleep disorder, suicide ideation and pains without any obvious physical cause (NIMH, 2018). Aluh, Anyachebelu, Anosike and Anizoba (2018) explained that untreated mood disorders like depression may result in a variety of negative consequences, with suicide being the most grave.

Depressed adolescents may have suicidal ideations and attempt suicide. Suicidal ideation is simply gestures, thoughts and plans about suicide which serve as one precursor to suicide attempt or completed suicide (Mba, 2010). According to Omigbodun, Dogra, Esan and Adedokun (2008), Nigerian adolescents have one of the highest rates of suicidal ideation and attempts found in research. Suicidal ideations and behaviours are common among adolescents in low and middle income countries in particular the African region, with females having higher ideations than males (Uddin, Burton, Maple, Khan and Khan, (2019). There also seems to be a prevalence of 7.28% of suicidal ideation in Lagos state with female gender as one of the variables associated with it (Adewuya, Ola, Coker, Atilola, Zachariah, Olugbile, Fasawe & Idris, 2016). According to Omigbodun et. al (2008), adolescents whose parents are divorced or separated and those from polygamous homes have higher rates of suicidal ideation. They further added that being a victim of physical attack and sexual abuse, involvement in physical fights, socio-economic deprivation and absence of family cohesion is associated with suicidal ideation among adolescents. Pandey, Bista, Dhungana, Aryal, Chalise, and Dhimal (2019) also revealed that adolescents who experience food insecurity, loneliness, anxiety and drug use are more likely to have suicide thoughts, with females at higher risks. It is important that adolescents experiencing them should be assisted to overcome through appropriate empirical proven therapy.

One treatment that has gained popularity in addressing the emotional distress commonly observed in persons prone to suicide is Dialectical Behaviour Therapy. Dialectical behaviour therapy (DBT) is a form of Cognitive Behavioural Therapy (CBT) developed by Dr. Marsha Linehan, a psychologist in the early 1990s to initially treat women with borderline personality disorder (BPD) that are parasuicidal (Linehan, 1993). While CBT aims at reducing maladaptive behaviours by attacking faulty thinking process, DBT modifies unwanted behavioural characteristics resulting from the individual's inability to regulate emotions using radical acceptance and change (dialetics). DBT achieves this using four treatment components; individual therapy, skills training in group, telephone crisis coaching and consultation team, but may be modified or adapted so far as the core principles and treatment is retained as done by Miller, Rathus, Linehan, Wetzler and Leigh in 1997 (Klein & Miller, 2011).

Individual therapy with clients is aimed at achieving the following in this order: reducing life threatening behaviours, non-collaborative behaviours, quality of life interfering behaviours and to increase the mastery of DBT skills. Group skills training sessions provide an avenue to inculcate new behavioural skills for regulating emotions such as core mindfulness, interpersonal effectiveness, emotion regulation and distress tolerance. Walking the Middle Path is an added skill used in Miller and colleagues' adaptation of DBT treatment for adolescents (Hollenbaugh & Lenz, 2018). Telephone crisis coaching affords clients the opportunity to call the therapist when faced with crisis or how to apply what is learnt in everyday life, while the consultation team provides support to therapist in their work and ensure strict adherence to DBT's tenets.

Katz, Cox, Gunasekara and Miller (2004), evaluated the feasibility of Dialectical Behaviour Therapy (DBT) for suicidal adolescents inpatients. They also compared its effectiveness with treatment as usual (TAU). They hypothesized that DBT would be effectively applied in treating suicidal adolescents in a general child and adolescent psychiatric inpatient unit and would produce more result when compared to TAU. A sample of 62 adolescents comprising 10 boys and 52 girls between the ages of 14 to 17 years was used in this study. Participants were not randomly assigned to groups because groups were assigned based on bed availability at the time of admission. Patients in one unit was given a two-week modified DBT while patients in unit 2 TAU. A battery of self-report measures targeting suicide risk factors like Beck depression inventory, Kazdin hopelessness scale for children and Reynolds suicidal questionnaire was used to gather both pre-treatment and post-treatment data. Also incident reports filed by nurses during the period were also assessed. After one year follow-up assessment was also done. Using 2 x 2 analyses of variance was used to analyse pre-treatment and post-treatment outcomes. The result revealed that DBT significantly reduced depressive symptoms at one year and follow-up. Hence, DBT can be effectively used in a child and adolescent inpatient unit.

Lenz and Del Conte (2018), investigated the efficacy of Dialectical Behaviour Therapy for adolescents (DBT-A) in a partial hospitalization program. This quasi-experimental investigation compared the efficacy of DBT-A and treatment as usual (TAU) among adolescents in reducing psychiatric symptoms like anxiety, depression, hostility and interpersonal sensitivity. A sample of 103 adolescents comprising 63 females and 40 males, between the ages 12 and 18 years were used in the study. The sample was exposed to treatment for 6 hours for 5 days a week over a 6 week period. They hypothesized that no significant difference would exist between treatment groups on psychiatric symptoms of depression, anxiety, hostility and interpersonal sensitivity. Separate univariate analysis of variance (ANOVA) was used to compute for each dependent variable. The result revealed that participants receiving DBT-A experienced a decrease or reduction in depression when compared with participants exposed to TAU programs.

A quasi experimental study comparing the effectiveness of an adaption of Dialectical Behaviour Therapy (DBT) and treatment as usual (TAU) for suicidal adolescents was conducted by (Rathus & Miller, 2002). They hypothesized that DBT would be more effective in reducing suicide attempts and psychiatric hospitalizations than TAU. They also hypothesized that participants exposed to DBT would experience a decrease in suicidal ideation, emotional distress and borderline symptoms. The sample of the study consist 111 outpatient adolescents from a depression and suicide program (ADSP) that took place at a medical centre in New York, USA. Out of the 111 participants, 29 students received DBT, while the remainder received TAU for 12 weeks. Participants were not randomly assigned to groups, hence the two groups differed at pre-treatment on some variables. Suicide ideation was measured using beck's scale for suicide ideation. Chi-square analysis revealed that there is no significant difference in suicide attempts by participants in the two groups during treatment. There was also significant reduction in suicidal ideation, psychiatric and borderline symptoms.

Geddes, Dziurawiec, & Lee (2013) conducted a pilot study in a Community-Based Child and Adolescent Mental Health Service on the efficacy of Dialectical Behaviour Therapy on emotion dysregulation and trauma among self-injurious and suicidal adolescent females. They predicted that participants exposed to the 26-week DBT treatment will report a decrease in trauma-based symptoms, self-injury and suicidal thoughts. A sample of 6 female adolescents with a mean age of 15.1 years, participated in this study. They also had one of their parents attend the family skills-training component of the treatment. The DBT treatment package was for 26 weeks comprising 8 weeks of engagement and commitment to the therapy and 8 weeks for the treatment proper. There was also a 3-month follow-up exercise. Self-harm or suicidal thought questionnaire was used to assess suicidal behaviour. Wilcoxon signed-rank test was used to analyse the data. The result revealed adolescents who were exposed to DBT-A had reduction in self-injury and suicidal thoughts.

Interpersonal Therapy (IPT) is also another therapy that can be employed in the management of adolescents prone to suicide. It is a time-limited treatment developed by Myrna Weissman, a social worker and Gerald Klerman, a psychiatrist in the 1970's for treating major depression in patients (Wilhelm & May, 2017). IPT can be administered alone or with drug therapy. Weissman and Klerman believed that depression is triggered and maintained by unresolved interpersonal conflict. They classified these interpersonal conflicts associated to the onset of depression into four domains. They are grief, interpersonal disputes, role transition and loneliness or social isolation. Thus, the goals of Interpersonal Therapy are to reduce depressive symptoms, orientate clients to understand the link between their depression and relationship issues and to improve interpersonal skills.

Young, Mufson, & Gallop (2010) conducted a randomized trial of interpersonal psychotherapy-adolescent skills training (IPT-AST) in preventing depression among adolescents. This study compared the effectiveness of Interpersonal Therapy and school counselling on depression among adolescents. IPT-AST is a modified form of interpersonal psychotherapy. Schedule for affective disorders and schizophrenia for school-age children (K-SADS-PL), children's depression rating scale (CDRS-R) and children's global assessment scale (CGAS) was used to select participants for this study. 57 adolescents with elevated depression were randomly assigned to interpersonal psychotherapy-adolescent skills training (IPT-AST) or school counselling (SC) treatment groups using a table of random numbers. 36 and 21 adolescents were assigned to IPT-AST and SC respectively. To determine the feasibility of parental involvement in IPT-AST sessions, 21 adolescents out of the 36 assigned to receive IPT-AST received treatment without their parents in sessions, while the remaining 15 had their parents during treatment sessions. Participants were between 13 to 17 years with an average age of 14.51. Assessment

of depressive symptoms was done at baseline, post-intervention, and at 6, 12 and 18 month follow-up. They hypothesized that there would be a significant difference in depressive symptoms between adolescents in IPT-AST and SC. Analysis of covariance was used to examine mean differences between groups. The result revealed that adolescents exposed to IPT-AST had significant reduction in depression symptoms than those exposed to SC at the end of treatment till 12 months of follow-up. By 12 month follow-up the difference in depressive symptoms in the two groups was not significantly different. They concluded that IPT-AST has an immediate effect in reducing depressive symptom, but an inconsistent long-term effect.

Although IPT is initially used to treat depression, a reduction in suicidal ideation may become evident. The understanding of the efficacy of these therapies; Dialectical Behaviour Therapy and Interpersonal Therapy in managing the emotional characteristics of adolescents prone to suicide motivated the researcher to initiate an investigation into assessing and managing proneness to suicide among in-school adolescents in Lagos State.

### **Statement of the Problem**

Depression and suicide ideation are mental and behavioural experiences that generate serious concerns because they trigger suicide attempt in those who experience them. The adolescents are not insulated from the challenges of life as they are faced with the inability to cope with pressures or demands of life, disappointment, sexual assault, bullying, peer pressure, inability to meet up with parental expectations, being jilted by a lover, economic hardship, academic failure, health challenges like, disability, maltreatment by guardian, death of a loved one, peer rejection or social isolation and many more. These may result in depression, feelings of low self-worth causing them to feel hopeless and think of committing or attempting suicide if they act impulsively.

In recent times, there have been global and local measures in place to curb suicide. Globally, the World Health Organization WHO (2013) published a mental health action plan or guide with a target to reduce the rate of suicide to 10% by 2020 in which member states were to adopt or adapt in their various countries. This guide highlighted recommendations in developing national suicide reduction plans in member states like reducing access to lethal means like fire arms, poisonous substance, increasing heights of bridge railings and many more. In Nigeria, few research initiatives and mental health awareness programs by different non-governmental organisations have sprung up and made frantic efforts to combat suicide through awareness campaign on depression and other related mental health issues in schools and the community. Even some secondary schools and universities have posters and banners pasted to create awareness for staff and students not to consider suicide as a solution to their challenges.

Despite all these, suicide stories are still heard. It is doubtful if Nigeria has adopted the WHO's recommendation as bridges with broken or vandalized railings have become a common spot for suicide acts like the third mainland bridge in Lagos state. Also, Sniper has now become a popular suicide aid instead of its primary use as an insecticide and fumigant.

Depression and suicide ideation are sources of great concern because it may lead to suicide leaving those connected to the deceased "suicider" in loss, pain and agony. Suicide causes devastation and a profound grief and loss to family, friends, and other significant persons connected to the suicider, affecting their health and ability to function effectively in well-meaning activities that will add value to their lives. In addition to the agony and loss experienced by the relatives of the suicider, they also suffer stigmatization. For example, some parents for cultural reasons would not allow their children to marry from or have any association with such family.

The impact of suicide is not only limited to those that are connected with the suicider. The nation also suffers from the loss. This is because every productive citizen in a country contributes in different capacities and capabilities to national growth and development. No country can rise above the level of manpower that she has. Every nation depends on manpower to harness all resources that are needful for national growth and development. Decrease in the manpower of a productive class of citizens as a result of suicide will have if not immediate and direct, but an indirect and negative impact on the country's economic development.

It is because of the aforementioned effect, that proactive measures are needed to identify and manage adolescents with proneness to suicide which Dialectical Behaviour Therapy and Interpersonal Therapy affords. Although, many studies have been undertaken using these therapies outside Nigeria, the few studies on suicide in Nigeria were works on autopsy reports and suicide survivors by medical personnel or clinicians, prevalence and prevention of suicide among undergraduate, causes of depression and suicide ideation, myths and beliefs about suicide with none on preventing suicide attempts using psychotherapeutic interventions like Dialectical Behaviour Therapy and Interpersonal Therapy to manage adolescents with proneness to suicide; the economically productive age group in Nigeria.

These situations painted above necessitated the study of this nature, which is the use of Dialectical Behaviour Therapy and Interpersonal Therapy in managing proneness to suicide among adolescents in Lagos State.

### **Purpose of the Study**

The intent of this study is to examine the effects of Dialectical Behaviour Therapy and Interpersonal Therapy on suicide tendency among Adolescents in Lagos State. Specifically, this study sought to:

1. Examine the difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.
2. Determine the difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.

### **Research Questions**

In line with the stated objectives of the study, the following research questions were answered in the course of this study.

1. To what extent would there be any difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group?
2. What is the difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group?

### **Research Hypotheses**

The following research hypotheses were tested in the study.

1. There is no significant difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.
2. There is no significant difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.

### **Scope of the Study**

This study was limited to adolescents in senior secondary two (SS2) in 3 educational districts in Lagos state. This study assessed and managed adolescents prone to suicide using Dialectical Behaviour

Therapy and Interpersonal Therapy in Lagos State. It covered variables like depression and suicide ideation.

## **METHODOLOGY**

### **Research Design**

This study adopted a quasi-experimental pre-test post-test control group research design. Quasi experimental design was used because it is the only design that allows the effect of a treatment or experimental condition to be observed or evaluated when it is unethically not feasible to conduct a randomized and controlled study on human behaviour. Three groups of participants were used in this study; two treatment groups and one control group. One treatment group was exposed to Dialectical Behaviour Therapy (DBT) while the second treatment group was exposed to Interpersonal Therapy (IPT). Participants in the control group were not subjected to any treatment. Pre-test and post-test was administered to the three groups.

### **Area of the Study**

This study was carried out in Lagos state, Nigeria. This is because Lagos state is believed to be among the top five most densely populated and most stressful cities in the world (Adewuya, Ola, Coker, Atilola, Zachariah, Olugbile, Fasawe & Idris, 2016). Exposure to stressful situations and the inability to manage or cope with the challenges posed by living in a stressful city may cause depression, which may be accompanied with feelings of no self-worth and hopelessness. Suicide thoughts may follow which may lead to an attempt or eventual suicide if the person is impulsive.

### **Population of the Study**

The target population for this study comprised all senior secondary two students that are prone to suicide in public secondary schools in Lagos state. Students in SSS 2 were selected because they are not preoccupied with preparation for West African Senior School Certificate Examinations (WASSCE) and National Examination Council Examinations (NECO) like the SSS 3 students.

### **Sample and Sampling Procedure**

The sample for the study was 66 students, comprising 31 male and 35 female students. Multi-stage sampling procedure using simple random sampling at different stages and purposive sampling was used in selecting sample for this study. At the first stage, three (3) education districts were randomly selected from six (6) education districts in Lagos State using hat and draw method. The three education districts selected are: Education district II, Education district IV and Education district XI. At the second phase, one (1) zone was randomly selected from each of the selected districts using hat and draw method. The three zones are: Ikorodu zone from Education district II, Lagos Mainland zone from Education district IV and Ikeja zone from Education district XI. At the third step, one (1) school was selected from each zone using hat and draw method. At the fourth phase, purposive sampling was used in selecting students prone to suicide through an assessment conducted with all senior secondary two (SS2) students in the three selected public secondary schools using an adapted inventory; The Life Attitude Schedule Short Form (LAS-SF). A total number of one hundred and twenty seven (127) students were identified as adolescents prone to suicide from seven hundred and ninety seven (797) students that took part at this phase. In other words, forty one (41), twenty seven (27) and fifty nine (59) students were identified as adolescents prone to suicide from two hundred and fifty one (251), three hundred and twenty (320) and two hundred and twenty six (226) students assessed in the three schools respectively. The criteria for selection was a score of 65 and below in The Life Attitude Schedule Short Form -LAS-SF. As many that met the selection score qualified for the study. At the fifth stage the schools were randomly assigned to treatment groups. School A forty one (41), comprising twenty six (26) females and fifteen



(15) males was assigned to Dialectical Behaviour Therapy. School B twenty seven (27), comprising fifteen (15) females and twelve (12) males was assigned to Interpersonal Therapy. School C fifty nine (59), comprising fourteen (14) females and forty five (45) males were assigned to Control group. Out of the forty one (41), twenty seven (27) and fifty nine (59) students that qualified for treatment in the three schools, thirty three (33), twenty three (23) and thirty (30) students respectively started the treatment procedure. A total of sixty six (66) participants comprising; twenty two (22), twenty one (21) and twenty three (23) completed the treatment in the three schools respectively. Below is a table showing a summary of the explanation on the sample.

**Table 1: Distribution of sample from pre-assessment phase to completion of treatment**

<b>School</b>	<b>No of participants at pre-assessment</b>	<b>No of participants that scored ≤ 65 in LAS-SF</b>	<b>No of participants that started treatment</b>	<b>No of participants that completed treatment</b>
<b>A(DBT)</b>	251(M=117, F=134)	41 (M=15, F=26)	33 (M=14, F=19)	22 (M=3, F=19)
<b>B(IPT)</b>	320 (M=144, F=176)	27 (M=12, F=15)	23 (M=9, F=14)	21 (M=9, F=12)
<b>C(CG)</b>	226 (M=153, F=73)	59 (M=45, F=14)	30 (M=24, F=6)	23 (M=19, F=4)
<b>Total</b>	<b>797</b>	<b>127</b>	<b>86</b>	<b>66</b>

**Research Instruments**

The following research instruments were adapted and used to collect data in this study: The Life Attitude Schedule Short Form (LAS-SF), the Modified scale for suicidal ideation (MSSI) and Beck Depression Inventory II (BDI-II). The adapted LAS-SF, MSSI and BDI had a test retest reliability coefficient of 0.79, 0.60 and 0.62

**Study Procedure**

The study spanned for a period of 9 weeks in three phases as follows

**Phase 1: Pre-treatment Assessment (week 1):**

The researcher with the help of the research assistants administered the Life Attitude Scale-Short Form to the participants in the first week to identify students prone to suicide. The instruments was scored and participants that met up with the inclusion criteria (score of 65 and below on LAS-SF) were selected to take part in the study. After selection, participants were randomly assigned to two treatment groups (Dialectical Behaviour Therapy and Interpersonal Therapy groups) and Control group.

**Phase 2: Treatment Phase (week 2- week 9)**

There were two treatment groups and one control group. The selected schools were randomly assigned to treatment and control group. Group one was exposed to Dialectical Behaviour Therapy, while group two received Interpersonal Therapy for eight weeks. The control group did not receive any intervention.

**Phase 3: Post-treatment Phase (week 9)**

At the end of the treatment, the same questionnaire given to the participant as pre-test was re-administered to participants in the two treatment groups and control group in the last week of the study to derive post-test scores.

**Method of Data Analysis**

All hypotheses were tested using Analysis of Co-variance (ANCOVA) at 0.05 level of significance. ANCOVA was used because it affords testing for significant difference between two or more groups on a dependent variable, with an independent variable of two or more categories, while controlling for the effect of covariates.

## Results

**Hypothesis One:** There is no significant difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.

**Table 1: Descriptive Analysis of Pre and Post-test mean scores on Depression in the Experimental Groups**

Experimental Group	N	Pre-Test		Post-Test		Mean Difference
		Mean	SD	Mean	SD	
Dialectical Behaviour Therapy (DBT)	22	61.23	5.73	33.45	5.77	-27.77
Interpersonal Therapy (IPT)	21	59.52	6.60	38.24	7.07	-21.29
Control Group (CG)	23	60.52	6.58	58.09	5.38	-2.43
<b>Total</b>	<b>66</b>	<b>60.44</b>	<b>6.26</b>	<b>43.56</b>	<b>12.42</b>	<b>-16.88</b>

Descriptive Analysis from Table 1 shows that the pre-test mean scores of depression for DBT, IPT and CG were 61.23, 59.52 and 60.52 respectively. At post-test, the mean score reduced to 33.45 for DBT, 38.28 for IPT and 58.09 for CG. It could be observed that the DBT had the highest reduction of 27.77 followed by IPT with 21.29 and the CG with 2.43. A further computation was done using the Analysis of Covariance to determine the significance of the mean difference. The result of the computation is presented in Table 2.

**Table 2: One-Way ANCOVA Result of Depression based on Experimental Groups**

Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8048.067	3	2682.689	83.826	.000
Intercept	289.969	1	289.969	9.061	.004
Covariate(Pre-test depression)	352.899	1	352.899	11.027	.002
Group	7732.252	2	3866.126	120.805	.000
Error	1984.191	62	32.003		
Total	135269.000	66			
Corrected Total	10032.258	65			

Significant at 0.05; df=2 and 62; critical F=3.15; reject  $H_0$ .

The result of the ANCOVA presented in Table 2 shows that a F-calculated value of 120.805 was derived as the difference in the mean score of participants in the respective groups. The value was observed to be greater than the critical value of 3.15 given 2 and 62 degrees of freedom at 0.05 level of significance. Consequently, the null hypothesis was rejected. It was concluded that there is a significant difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. In order to identify the pair that is significant, a pairwise comparison was done to compare the groups in order to know which group differ from the other on the variable, and the trend of the difference. The result is presented in Table 3.

**Table 3: LSD Pairwise Comparison of post-test scores on Depression among Groups**

(I) Experimental Group	(J) Experimental Group	Mean Difference (I-J)	Sig. <sup>b</sup>
Dialectical Behaviour Therapy	Interpersonal Therapy	-5.422*	.003
	Control Group	-24.897*	.000
Interpersonal Therapy	Dialectical Behaviour Therapy	5.422*	.003
	Control Group	-19.475*	.000
Control Group	Dialectical Behaviour Therapy	24.897*	.000
	Interpersonal Therapy	19.475*	.000
Based on estimated marginal means			
*. The mean difference is significant at the .05 level.			
b. Adjustment for multiple comparisons: Least Significant Difference.			

From the result presented in table 3, adolescents exposed to DBT experienced a better reduction in depression than those exposed to IPT. The difference in the groups is significant since the calculated t-value of -5.42 is bigger than the critical value of 2.02 given 41 degree of freedom at 0.05 level of significance. Also, adolescents exposed to DBT experienced a better reduction in depression than those in the control group. This difference is significant because the calculated t-value of -24.89 is greater than the critical value of 2.02 given 43 degree of freedom at 0.05 level of significance. Lastly, adolescents exposed to IPT had better reduction in the level of depression than those in the control group. This difference is significant since the calculated value of -19.47 is greater than the critical value of 2.02, given 42 degree of at 0.05 level of significance. Above all, it can be concluded that DBT was more effective in reducing the level of depression among the participants.

**Research Hypothesis 2:** There is no significant difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group.

**Table 4: Descriptive Analysis of Pre and Post-test mean scores on Suicidal Ideation in the Experimental Groups**

Experimental Group	N	Pre-Test		Post-Test		Mean Difference
		Mean	SD	Mean	SD	
Dialectical Behaviour Therapy	22	30.82	3.14	24.86	2.55	-5.95
Interpersonal Therapy	21	29.33	5.05	24.24	4.46	-5.10
Control Group	23	30.35	4.26	30.87	3.75	0.52
<b>Total</b>	<b>66</b>	<b>30.18</b>	<b>4.19</b>	<b>26.76</b>	<b>4.71</b>	<b>-3.42</b>

Descriptive analysis in Table 4 shows that at pre-test, the mean of DBT was 30.82, IPT was 29.33 and CG was 30.35. However, at post-test the mean for DBT and IPT reduced to 24.86 and 24.24 respectively. The DBT had a better mean difference of -5.95 followed by IPT with -5.10. Besides, the CG had a marginal increase with 0.52. A further computation was done using the Analysis of Covariance to determine the significance of the mean difference among groups. The result of the computation is presented in Table 5.

**Table 5: One-Way ANCOVA Result of Suicidal Ideation based on Experimental Groups**

Source	Sum of Squares	df	Mean Square	F
Corrected Model	947.236	3	315.745	39.398
Intercept	117.306	1	117.306	14.637
Covariate(ideation pre-test)	346.124	1	346.124	43.188
Group	570.453	2	285.227	35.590
Error	496.886	62	8.014	
Total	48698.000	66		
<b>Corrected Total</b>	<b>1444.121</b>	<b>65</b>		

Significant at 0.05; df=2 and 62; critical F=3.15; reject H<sub>0</sub>.

The analysis in table 5 revealed that a calculated value of 35.59 was derived as the difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to DBT, IPT and CG. This value of 35.59 is significant since it is greater than the F-critical value of 3.15, given 2 and 62 degrees of freedom at 0.05 level of significance. Thus, the null hypothesis was rejected, while upholding the research hypothesis that a significant difference exists in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the Control group. Based on the significant F value obtained in this analysis, a further analysis using the Least Significant difference (LSD) test was conducted to compare the groups in order to know which group differ from the other on the variable, and the trend of the difference. The result of the computation is presented in Table 6.

**Table 6: LSD Pairwise Comparison of post-test scores on Suicidal Ideation among Groups**

(I) Group	(J) Group	Mean Difference (I-J)	Sig. <sup>b</sup>
Dialectical Behaviour Therapy	Interpersonal Therapy	-.201	.819
	Control Group	-6.268*	.000
Interpersonal Therapy	Dialectical Behaviour Therapy	.201	.819
	Control Group	-6.067*	.000
Control Group	Dialectical Behaviour Therapy	6.268*	.000
	Interpersonal Therapy	6.067*	.000

From the result presented in table 6, adolescents exposed to DBT experienced a better reduction in suicide ideation than those exposed to IPT. However, the difference in the groups is not significant since the calculated t-value of -0.20 is lesser than the critical value of 2.02 given 41 degree of freedom at 0.05 level of significance. In addition, adolescents exposed to DBT experienced a better reduction in suicide ideation than those in the control group. This difference is significant because the calculated t-value of -6.27 is greater than the critical value of 2.02 given 43 degree of freedom at 0.05 level of significance. Lastly, adolescents exposed to IPT had better reduction in the level of suicide ideation than those in the control group. This difference is significant since the calculated value of -6.07 is greater than the critical

value of 2.02, given 42 degree of freedom at 0.05 level of significance. Above all, it can be concluded that DBT was more effective in reducing suicide ideation among the participants.

### **Summary of findings**

Based on the research hypotheses formulated for the study, the findings are summarized as follows:

1. There is significant difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. Adolescents exposed to Dialectical Behaviour Therapy experienced a better decrease in depression than adolescents exposed to Interpersonal Therapy.
2. There is significant difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. Adolescents exposed to Dialectical Behaviour Therapy experienced a better decrease in suicide ideation than adolescents exposed to Interpersonal Therapy.

### **Discussion of Findings**

Hypothesis one states that there is no significant difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. The result of the findings revealed a significance difference in the post-test mean scores on depression among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. Thus, hypothesis one is rejected. This finding is in line with the study carried out by Katz, Cox, Gunasekara and Miller (2004) on the feasibility of Dialectical Behaviour Therapy (DBT) for suicidal adolescents inpatients. They found that DBT significantly reduced depressive symptoms at one year and follow-up. The findings of this study is in agreement with Lenz and Del Conte (2018), investigation on the efficacy of Dialectical Behaviour Therapy for adolescents (DBT-A) in a partial hospitalization program. They also discovered that DBT was efficacious in reducing depressive symptoms. A likely reason for similarities in findings is the nature of the population used. All studies studied adolescents. In this study, Interpersonal therapy was also found to be effective in reducing depression. The study conducted by Young, Mufson, & Gallop supports that IPT-AST has an immediate effect in reducing depressive symptom.

Hypothesis two states that there is no significant difference in the post-test mean scores on suicide ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. The result of the findings revealed a significance difference in the post-test mean scores on suicidal ideation among in-school adolescents exposed to Dialectical Behaviour Therapy, Interpersonal Therapy and the control group. Thus, hypothesis two is rejected. This finding agrees with the study conducted by Rathus & Miller (2002) which observed a significant reduction in suicidal ideation in adolescents exposed DBT. Similarly, a pilot study conducted by Geddes, Dziurawiec, & Lee (2013) reveals the effectiveness of DBT in reducing suicidal ideation. The reason for the similarities in the finding could be the nature of population used; adolescents.

### **Recommendation**

The following recommendations are made:

1. Routine check-up should be conducted frequently in schools so as to identify students with proneness to suicide
2. School Counsellors should acquaint themselves with Dialectical Behaviour Therapy and Interpersonal Therapy in managing depression and suicide ideation experienced by adolescents identified with proneness to suicide.

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