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## **Relative Efficacies of Individual Psychology and Cognitive Behavioural Therapy in the Reduction of Suicide Ideation among Undergraduate Students in the University of Cape Coast, Ghana.**

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### **Abstract**

**Purpose:** The purpose of the study was to find out the relative efficacies of Individual Psychology (IP) and Cognitive Behavioural Therapy (CBT) in the reduction of suicide ideation among undergraduate students of University of Cape Coast, in the Central Region, Ghana.

**Methodology:** It was a quantitative study using the quasi-experimental research design, specifically, the pre-test, post-test and control group design. A total of 30 undergraduate students from four colleges of the University were non-randomly assigned to two treatment groups (IP and CBT) and one control group. The Beck Scale for Suicide Ideation was used for data collection. Both the descriptive (frequency and percentage) and inferential (independent samples *t*-test) statistics were used to analyse the data at .05 alpha level.

**Findings:** The results revealed that both therapies are effective in reducing suicide ideation among undergraduate students, with CBT being slightly more effective than IP.

**Unique Contribution to Theory, Policy and Practice:** It was recommended that screening for suicide ideation, spearheaded by the Counselling Centre of the University, should be carried out on a regular basis among students of the University. This is with a view to achieving a drastic reduction in suicide ideation, and by implication, suicide itself.

**Keywords:** *Cognitive Behavioural Therapy, Counselling, Individual Psychology, Suicide ideation, Suicide, Undergraduate students.*

## Introduction

When students enter tertiary level of education, especially, the university, they go through several changes (Arslan et al., 2009) and these changes and experiences can expose them to situations which have both positive and negative impacts on their lives (Tosevski, Milovancevic, & Gajic, 2010).

A suicide by a loved one is an incredibly traumatic and painful life occurrence that affects many people. Ghana alone records about 1,500 suicide cases annually; that is a suicide rate of more than four persons in a day. In the 2010 census, *Ghana Statistics Service* reported 3,705 suicides, and given that suicidal deaths are commonly underreported (Goldney, Clary & Snyder, 2010), the actual annual figure is likely to be higher. Furthermore, Dzorgbo (2014) indicated that scientific statistics of suicide in Ghana is hard to come by, but agreed that the trend is increasing at a fast rate in the country.

Suicidality or suicidal behaviour occurs in a spectrum that ranges from the concept or intentions of suicide (ideation), to conversations linked to suicide, suicide attempts and eventually suicide (CDC, 2012). Suicide ideation is a critical part of the suicide process; it precedes both suicide attempt and completed suicide (Harris & Barraclough, 1997). It is therefore essential to identify this early step in the suicide process, so as to stop its progression into suicide plan or attempt (Arria et al., 2009; Harris & Barraclough, 1997). Thus, suicide ideation plays an important role in detecting and preventing suicidal behaviour. According to Oppong Asante et al. (2017), Ghana has recorded few data where information on suicide ideation and suicidality among university students could be obtained. Also, a search through the various counselling centers of the University of Cape Coast including the hospital, 45 cases of attempted suicides were recorded within a span of three years (2015 – 2018).

Research highlights the importance of designing and implementing efficient methods for evaluation, prevention and care. Theoretical structures form the basis for empirical studies from which successful methods develop. The Interpersonal Suicide Theory (Joiner, 2005) provides the most up-to-date studies in the area of risk evaluation and management of suicides. This theory posits that risk factors for suicidal desire are two painful interpersonal states consisting of low belonging and misperceptions of becoming a burden. The risk for suicide is greatest when these two psychological states occur concurrently in a person capable of lethal self-injury. This theory's unique strength lies in distinguishing between those who want suicide but do not attempt suicide and those who make a serious attempt to execute lethal self-harm.

Adler (1937) developed the theory of Individual Psychology emphasizing the importance of viewing the individual holistically. His view is succinctly expressed in Carlson and Maniaci (2012): “to us Individual Psychologists, the whole tells much more than the analysis of the parts” (p. 48). The essay on suicide by Alfred Adler in 1937 underlined the value of interpersonal traits such as social alienation and feelings of inferiority. Adler recognized that the origins of suicide were complex and both distal and proximal variables

were accounted for. The Adlerian Therapy, more popularly known as Individual Psychology, involves growing social interest and questioning the private reasoning and mistaken convictions of a person. Current suicidal behaviour study supports many of the claims made by Adler almost a century ago.

Cognitive Behaviour Therapy (CBT) encourages people to consider the feelings and emotions that affect behaviour. Individuals learn how to identify and modify self-destructive patterns of thought that affect actions negatively. CBT seeks to teach a person that while what happens in his/her world cannot be controlled, one can control how she/he interprets and reacts to what happens. As a suicidal ideation counselling technique, CBT helps to identify, question and change harmful thoughts and observe certain thoughts without believing or acting on them.

According to World Health Organization's (WHO, 2014) estimates, each year approximately one million people die from suicide and 10 to 20 times more people attempt suicide worldwide. This represents one death every 40 seconds and one attempt every 3 seconds. More people are dying from suicide than in all of the several armed conflicts around the world. As indicated earlier, in Ghana, it is estimated that 1,500 people commit suicide annually, in spite of this high rate of suicide in Ghana, there is however a paucity of data of suicide mortality in Ghana ( Dzorgbo, 2014).

A previous study by Adom-Mensah, Omotosho, Otopa and Fiah (in print) has established IP and CBT as efficacious in reducing suicide ideation. This current study therefore sought to find the relative efficacies of Individual Psychology (IP) and Cognitive Behavioural Therapy (CBT) in reducing suicide ideation among undergraduate students of University of Cape Coast, Ghana.

In view of the above, the current research focused on testing the following hypothesis in order to guide the conduct of the study:

*H<sub>0</sub>* 1: There is no significant difference in the efficacies of IP and CBT in reducing undergraduate students' suicide ideation.

*H<sub>A</sub>* 1: There is a significant difference in the efficacies of IP and CBT in reducing undergraduate students' suicide ideation.

## **Methodology**

The research paradigm used for this study was positivism. Positivism is a philosophical approach based on experience and empirical knowledge of natural phenomena. Positivism represents a view that the goal of knowledge is to provide a depiction of the situation people have been through and the purpose of science which can be observed and measured (Trochim, 2006). Positivists believe that reality is out there and can be tested. Positivists prefer to use quantitative data for their research and often conduct experiments, surveys and use statistics. They test hypotheses by carefully analysing numbers from the measures they employ. Thus, they depend mainly on figures and numbers that have been scrutinized and critiqued. This philosophy was applicable to this study since it aided the

researchers to test the efficacy of the two theories (Individual Psychology, IP and Cognitive Behavioural Therapy, CBT) in reducing suicide ideation among undergraduate students of the University of Cape Coast.

The research approach adopted for the study was quantitative approach. The goal in conducting quantitative research study is to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) within a population (Babbie, 2010).

Furthermore, the study employed the quasi-experimental design with the pre-test, post-test and control group which helped to establish the most efficacious therapy for reducing to suicide ideation. Lastly, it was by the use of Beck's Scale for Suicide Ideation (BSSI) that data were collected for the study. The BSSI has an internal consistency of 0.89 which was deemed high enough because it surpassed the .70 consistency recommended by Devellis (2012) as the minimum expected.

Beck Scale for Suicide Ideation was adopted for use in measuring the suicide ideation of undergraduate students of the University of Cape Coast. It is a 19-item instrument that evaluates the presence and intensity of suicidal thoughts. The Beck's Scale for Suicidal Ideation (BSSI) was designed to quantify the intensity of current conscious suicidal intent by scaling various dimensions of self-destructive thoughts or wishes. The items assessed the extent of suicidal thoughts and their characteristics as well as the respondent's attitude towards them; the extent of the wish to die, the desire to make an actual suicide attempt and details of plans, (if any). Per the manual for scoring for Beck's Scale for Suicide Ideation, each item consists of three alternative statements graded in intensity from 0 to 2. The instrument's total score is the sum of the individual item scores and may range from 0 (low ideation) to 38 (high ideation). In other words, a positive rating (>1) on any of the ideation scale's 19 items is considered as a potential indicator of suicide ideation. A score ranging from 0 to 19, indicates a low ideation while a score from 20 to 38 also indicates high ideation.

## **Population**

The total number of regular undergraduate students of the University of Cape Coast is 18,699. This includes students in four colleges of the University, viz: College of Humanities and Legal Studies, College of Health and Allied Sciences, College of Education Studies and College of Agriculture and Natural Sciences. The target population was undergraduate students from the four colleges of the University of Cape Coast and the accessible population was those who answered the screening inventory.

The multi-stage sampling technique was employed for selecting the sample for the study. In the first stage, the purposive sampling was used to select the University of Cape Coast for the study. From the five colleges in which undergraduate students are enrolled in the University, the researchers purposively selected four of the five colleges of regular undergraduate students leaving out the undergraduate students of CODE, the fifth College, whose students do not stay on campus but are scattered nationwide, making access to them extremely difficult or impossible. From the remaining four colleges, one faculty each was

purposively selected. Also, using purposive sampling method, one department was chosen from each faculty. The targeted students from each of the departments were subjected to the screening of the Beck's Scale of Suicide Ideation. A non-random criterion was then used to select 30 respondents, which means not every individual had the chance of being included in the study, from the various colleges based on the students that responded to the items on the Beck's Scale for Suicide Ideation. A non-random criterion was then used to select 30 respondents from the various colleges based on the students that responded to the items on the Beck's Scale for Suicide Ideation. The total sample size was 30.

The inclusion criteria were as follows:

1. The student should be an undergraduate regular student of the University of Cape Coast.
2. The student could be at any level in his / her study.
3. The student could be of either gender.
4. The student should undergo screening to obtain a total score ranging from 19-38 to qualify for the intervention.

The distribution of the respondents is presented in Table 1.

**Table 1: Distribution of the Population and Sample**

College	Male	Female	Total	Sample
College of Agriculture and Natural Sciences	2806	835	3641	8
College of Education Studies	2985	2196	5181	8
College of Health and Allied Sciences	1478	1103	2581	8
College of Humanities and Legal Studies	4199	3097	7296	6
<b>Total</b>	<b>11486</b>	<b>7231</b>	<b>18699</b>	<b>30</b>

For the data collection to be done in an ethically sound manner, an introductory letter was taken from the Department of Guidance and Counselling which helped the researchers introduce themselves to the undergraduate students of University of Cape Coast and explain the purpose of the study to them. This gave us access to some students who went through the various treatments for the study.

For the sessions, the groups met to agree on the time for the meeting so as to avoid disruption of the participants regular lecture times and campus activities since they were all students. They met twice in a week for an hour each for the eight weeks intervention. Mondays and Thursdays were scheduled for meeting days at 6:45pm – 7:40pm at an agreed venue. Since all participants were presents to decide on the time schedule, their participation in the sessions was good. Per the focus, Siegel, Carter and Thase (2006) proposed a 16-session therapy as adequate to achieve this focus and that informed the researcher to plan the 8 weeks intervention schedule to help reduce suicide ideation among participants. The assistants used both the question-and-answer method as well as the discussion method of teaching to enhance the interest of participants and also to ensure they contribute effectively to make each session a good one.

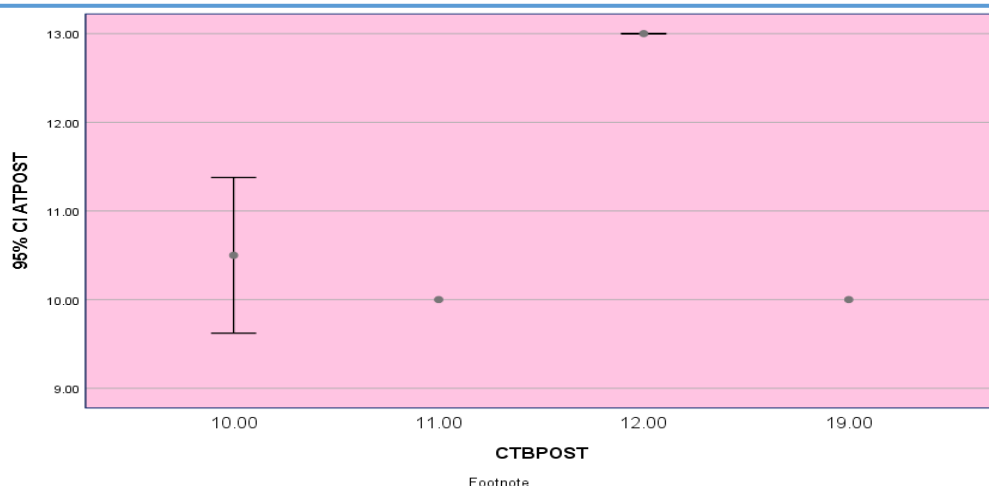
The focus of the intervention sessions was on teaching and helping participants on the techniques and strategies of IP and CBT and how these strategies can help them to reduce suicide ideation. For the IP group, the techniques used were Push Button, Encouragement and Paradoxical Intention. Thought Stopping, Cognitive Rehearsal and Thought Recording were the techniques used in the CBT group. They were given homework after each session, which enabled them to practise what they were taught at each session and bring feedback to the next meeting day.

Data from the field were cleaned, coded appropriately to make meaning out of them. Coding was done to facilitate data entering and analysis. With the aid of Statistical Package for Social Sciences (SPSS 25), descriptive statistics such as frequencies, percentages were used to analyse the data.

## **Results**

At the confidence level of .05, Hypothesis One was tested to find out whether any significant difference exists in the reduction of suicide ideation between IP and CBT. To assess the differences, independent samples t-test was deemed suitable. The assumption for an independent samples t-test is that a continuous or ordinal scale matches the measurement scale applied to the data obtained, such as the scores for an independent group. The collection of data from a representative, randomly selected portion of the total population results in a standard (bell-shaped) curve distribution when plotted.

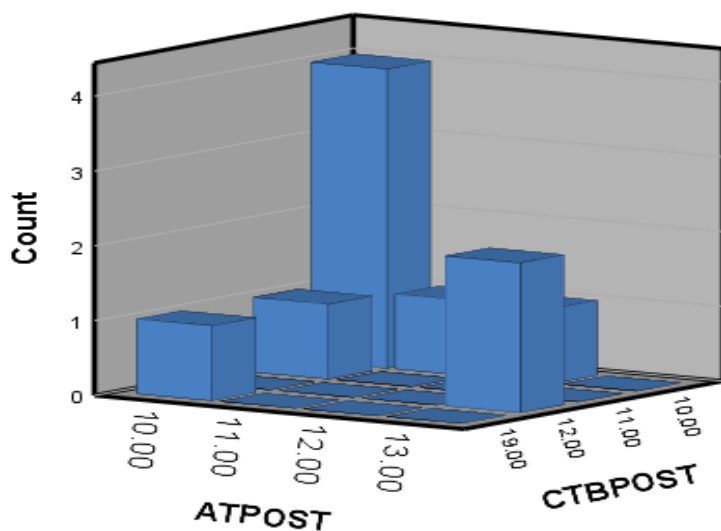
Often, when a normal distribution is assumed, a level of probability (level of significance) may be defined as an acceptance criterion. A 5 percent worth can be expected in most situations. The final hypothesis is homogeneity of variance. Homogeneous or equivalent variation occurs when the reference sample deviations are roughly equal to the standard sample deviations. To attain the scores for the analysis, the responses on the Individual Psychology and Cognitive Behavioural Therapy were transformed into a single variable using the SPSS Software, Version. 25. Before running the independent samples t-test, the normality assumptions were tested. Figure 1 presents the results of the normality assumption.



*Figure 1: Homoscedasticity Normality Assumption*

Source: Field Data (2020)

Figure 1 shows that the mean plot of standardised predicted indicates that the data were assumed normal and as such independent samples t-test could be performed.



*Figure 2: Homoscedasticity Normality Assumption on Efficacies of IP and CBT in Reducing Suicide Ideation*

Source: Field Data (2020)

Figure 2 shows the results on efficacies of IP and CBT in reducing undergraduate students' suicide ideation. It can be seen that the cluttering of the bars indicate that the data were normal and as such independent samples t-test could be performed. Table 2 presents the results of homogeneity of variance test.

**Table 2: Results of Homogeneity of Variances Test**



Levene Statistic	Df	Cal. t-value	Sig. value	Remarks
3.850	08	.232	.822 (ns)	Equal Variances Assumed

Source: Field Data (2020)

From Table 2, the Levene's test indicated non-significant results of LS (df=08) =3.850, cal. t=.232, sig. =.822,  $p > 0.05$ , 2-tailed) for the study variables. This means that the variances are assumed equal (homogeneous) and as such Homogeneity of Variances Test has not been violated.

Table 3 presents the descriptive results comparing the effectiveness of Individual Psychology and Cognitive Behavioural Therapy. The results show that there were significant differences in the descriptive results of the two therapies. The Individual Psychology produced results of (M=10.9000, Var.= 1.656, Std. Deviation=1.28668, Skewness=1.009, Kurtosis=-.812). The Cognitive Behavioural Therapy, the results are projected as (M=11.4000, Var.= 7.822, Std. Deviation=2.79682, Skewness=2.685, Kurtosis=7.644).

**Table 3: Descriptive Results Comparing the Effectiveness of IP and CBT**

Descriptive		Statistic	Std. Error
IP	Mean	10.9000	.40689
	95% Confidence Interval for Mean	Lower Bound	9.9796
		Upper Bound	11.8204
	5% Trimmed Mean	10.8333	
	Median	10.0000	
	Variance	1.656	
	Std. Deviation	1.28668	
	Minimum	10.00	
	Maximum	13.00	
	Range	3.00	
	Interquartile Range	2.25	

	Skewness		1.009	.687
	Kurtosis		-.812	1.334
CBT	Mean		11.4000	.88443
	95% Confidence Interval for Mean	Lower Bound	9.3993	
		Upper Bound	13.4007	
	5% Trimmed Mean		11.0556	
	Median		10.0000	
	Variance		7.822	
	Std. Deviation		2.79682	
	Minimum		10.00	
	Maximum		19.00	
	Range		9.00	
	Interquartile Range		2.00	
	Skewness		2.685	.687
	Kurtosis		7.644	1.334

Source: Field Data (2020)      \*Significant difference exists at  $p \leq 0.05$ .

Table 4 presents results on independent samples t-test of differences in Individual Psychology and Cognitive Behavioural with respect to the reduction of suicide.

**Table 4: Results of Independent Samples t-test of Differences in Effectiveness of IP and CBT**

Variables	Status	Mean	SD	Cal. t-value	Df	p-value (sig-value)	Remarks
Therapies	IP	10.90	1.286	.232	18	.822(s)	Not. Sig.(no difference)

CBT 11.05 2.796

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Source: Field Data (2020)

From the analysis, Individual Psychology and Cognitive Behavioural Therapy showed no significant differences with respect to their effectiveness. In other words, there is no statistically significant difference in the efficacies of the therapies. For Individual Psychology,  $M = 10.90$ ,  $SD = 1.286$ , and for Cognitive Behavioural Therapy,  $M = 11.06$ ,  $SD = 2.796$ . The results practically imply that both Individual Psychology and Cognitive Behavioural Therapy are equally effective in treating people with suicide ideations but CBT is slightly more effective than IP per the results of the mean and the standard deviations.

### Comparing IP and CBT

From the CBT experimental sessions, one of the techniques used was thought stopping, also known as thought blocking. It is a technique in CBT which helps people to deal with negative thought cycles and constant worrying. The basis of this technique is that once a negative thought arises, the clients should consciously issue a command for the thought to stop. The idea is to replace a negative thought with a more balanced and positive one. It acts as an interaction to the negative thoughts, interrupting obsessive negative thought (Smith, 2018). Participants in this quasi-experiment were therefore able to follow what they were taught and even practiced them for the homework sessions. The feedback they brought helped us to further explain or buttress a point. It was established in an earlier study by Adom-Mensah, Omotosho, Otopa and Fiah (in print) that the use of CBT is efficacious in reducing suicide ideation among undergraduate students in the University of Cape Coast.

Some of the techniques used during the experimental session of IP included encouragement, push button and paradoxical intension. According to Watts (2014), encouragement helps clients to recognise their worth. This technique seeks to reorient clients by stimulating the client's courage to change. Students were also assisted in generating perpetual alternatives for discouraging fictional beliefs. In IP, therapists see their clients as discouraged and lack the confidence and the courage to engage successfully in the problems of life. And without encouragement, without having faith restored in oneself, one cannot see the possibility of functioning better (Watts & Pietrzak, 2000).

Students were made to understand their situations, with the help of the homework which included listening to motivational tapes on how people failed in life at a point and they did not terminate their lives but were able to rise up to the task and made it in life. The feedback they brought was encouraging and we saw progress in every bit of their movement. It was therefore evidenced that the use of Individual Psychology was also effective in reducing suicide ideation among undergraduate students of University of Cape Coast.

As it was established in the researchers' earlier study, that both therapies, (CBT and IP) are efficacious in reducing suicide ideation (Adom-Mensah, Omotosho, Otopa and Fiah in print). The purpose of this current study is to find the relative efficacies of IP and CBT. In other words, to find out which of the two (IP and CBT) is more efficacious. From the analysis, per the mean score and the standard deviation score of the IP and CBT, which are  $M = 10.90$ ,  $SD = 1.286$  and  $M = 11.06$ ,  $SD = 2.796$  respectively. It can be deduced that CBT was more efficacious with a mean score of 11.06 than IP with a mean score of 10.90. Considering

the standard deviation values, CBT again has proved to be more efficacious with a value of 2.796 than IP with a value of 1.286.

Therapies are effective methods of intervention used to minimize the idea of suicide. Tarrier, Taylor and Gooding (2008) argued that therapy is more successful when suicidal thoughts and actions are specifically targeted than when treatment is meant to combat mental illness, assuming that benefits also affect suicidal behaviour. Hence, the literature underscores the need for specific and effective interventions targeting suicide ideation and suicidal behaviour.

The results from using CBT are supported by Alavi, Sharifi, Ghanizadeh, and Dehbozorgi (2013), they found that “CBT was effective in decreasing hopelessness and depression” and “that CBT is an effective, appropriate, and acceptable treatment modality for the adolescents with recent suicidal attempts and current suicidal ideas” (p. 471). Pratt (2016) also asserted that CBT helps reduce disorders and improves quality of life.

Some treatments were researched, tested and testified to by other works of science. In Tarrier et. al.'s (2008) study, 28 randomized controlled trials (RCTs) involving adults and teenagers were studied. The researchers concluded that approaches focused on Cognitive Behavioural Therapy (CBT) have shown success in mitigating suicidal behaviour (suicide ideation, suicide plan, suicide attempt). Again, Mewton and Andrews' (2016) systematic review restricted its attention to RCTs exploring the advantages of standard CBT in adults. Their conclusion coincided with Tarrier et al.'s observations (2008).

A second look at both treatments' mean score and standard deviation score suggests a difference in their efficacy, i.e., comparing CBT and IP, CBT is marginally more successful. The efficacy of therapeutic approaches including CBT, Dialectical Behavior Therapy (DBT), and mentalization-based therapy in reducing self-harm in adolescents was confirmed by a meta-analysis by Ougrin et al., (2015). Researchers also concluded per the results of the study and the available literature that CBT has proved to be more efficacious with the reason being that, it has been used more and more commonly in clinical and practical strategies and interventions and in more academic work than the IP.

## **Conclusion**

1. Individual Psychology (IP) and Cognitive Behavioural Therapy (CBT), are both efficacious in reducing suicide ideation among undergraduate students of the University of Cape Coast. However, CBT was more effective than IP.
2. Individuals have the tendency and the tenacity to get rid of irrational thoughts such as suicide ideation as they succumb to treatments.

## **Recommendations**

1. Annual and constant screening of suicide ideation as part of the University's program to be organised by the Counselling Center. This is to help educate and

create more awareness on suicide ideation and bring in more people per the screening to benefit from the therapies.

2. Counsellors and other helping professionals should be encouraged to use either of the therapies, IP or CBT, to help students reduce suicide ideation since the study has proved their relative efficacies.

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