EFFICACY OF COGNITIVE BEHAVOURAL THERAPY AND LOGOTHERAPY IN REDUCING RISKY SEXUAL BEHAVIOUR AMONG IN-SCHOOL ADOLESCENTS IN BENIN METROPOLIS EDO STATE, NIGERIA

Abstract

The study investigated the efficacy of Cognitive Behaviour Therapy and Logotherapy in reducing risky sexual behaviours among in-school adolescents in Benin Metropolis, Edo State. Four research questions were raised and formulated to hypotheses to guide the study. A Quasi-experimental design, using pre-test-post-test, and non-equivalent control group was adopted. The population of the study consisted of twenty thousand, four hundred and twenty SS ll students. The sample consisted of one hundred and thirty five participants, which was selected through multi-stage sampling technique. Three schools were randomly selected from thirty one mixed public Senior Secondary Schools. One school was selected from each Local Government Area that made up the Metropolis. School A served as the experimental group for Cognitive Behaviour Therapy, comprising fifty five participants. School B served as the experimental group for Logotherapy, comprising thirty six participants. School C served as the control group, comprising forty four participants. The Adolescent Sexual Behaviour Inventory was used for both the pre-test and post-test. The reliability coefficient of 0.926 was obtained on the instruments. The data collected were analysed, using various inferential statistics. The findings showed that Cognitive Behaviour Therapy and Logotherapy were both efficacious in reducing risky sexual behaviours among in-school adolescents in Benin Metropolis. The study recommended that counselling psychologists and school counsellors should be well trained in the use of CBT and LT in addressing risky behaviours, especially among the adolescents.

Keywords: Cognitive, Logotherapy, Sexual Risks, Adolescence, Behaviour.

Introduction

Adolescence, is a period when the growing children experience considerable acceleration in their growth sequence. This stage is associated with physical, mental, social and psychological development in which adolescents usually notice both external and internal changes in their bodies such as secretion of hormones and physical maturity (Egbochuku, 2008). In-school adolescents like others out of school, may make poor decision. It therefore becomes a problem, especially when poor decisions lead them to engage in risky and negative behaviours, such as sex risk-taking, use of drugs and drinking of alcohol, examination malpractice , smoking among others. Adolescents' sexual urge and interests sometimes predispose them to participate in sex risky behaviours, such as; having multiple sex partners, premarital sex, rape, early sex, among others. During this period, adolescents

may desire to explore and experiment into why things change and happen to the pigment of their adolescent imaginations. They may like to practice, experiment what the adults are doing. This process of discovery may lead them to engagement in risky behaviours, self-destruction and compromise, vulnerability, self-destruction and compromise which can affect their lives forever.

Risk-taking is a way of involving oneself in behaviours that are potentially harmful or dangerous but could provide the opportunity for some kind of outcomes with temporary pleasure and the momentary positive feelings (Saxena & Puri, 2015). Risk taking behaviours are the activities or behaviours that can have adverse effects on the overall development and wellbeing of a person. Such risky behaviours might prevent the individual(s) from reasonable and objective thinking, thus disrupting them from realizing the meaning and purpose of their life existence (Akpan & Akpanudo, 2017).

Adolescents may respond to impulse rather than deep thinking and consider the temporary benefits they may enjoy rather than the unintended consequences of their decisions. The forms of risky behaviours perpetrated by adolescents are numerous and include risky sexual behaviours, which is the focus of this study.

In Nigeria, especially Edo State, it is a common knowledge that many adolescents engage in unprotected sex and kissing, without thinking about the consequences of their action, as they may only weigh the rewards of their actions such as getting money or gift in return, especially female adolescents as a result of the lingering poverty due to economic downturn in the country. The adolescent children may suffer gloom of an ugly consequences of their early sexual escapades. Many adolescents may not be readily aware of the consequences of their early sexual adventures. They may not be aware that their unguarded risky sexual behaviours could result in unwanted pregnancies, abortion, and other sexually transmitted

diseases (STDs); which can preclude them from enjoying typical adolescent events. Such events include attending and graduating from schools and developing close friendship with peers. All these consequences are likely to affect the lives of adolescents and hinder them from achieving the purpose and meaning of their lives. More so, the adolescents' physical, social, psychological wellbeing as well as their education may be seriously affected temporarily or permanently. Such situation may affect their mind; and sometimes stricken with stress, depression, and other psychological troubles that may need an objective cure from a psychotherapist (Egbochuku, 2012).

Adolescents could be assisted to change their maladaptive behaviours in order to meet the challenges of life, remove distorted thinking and assist them to achieve their purpose and meaning of existence and to live a fulfilled life. Numerous counselling therapies that can enhance adaptive behaviours and eliminate maladaptive ones such as unnecessary feelings, emotion, attitudes, neurosis and irrational thoughts or fundamental faulty thinking abound in the field of psychology. Among them are Cognitive Behaviour Therapy (CBT) and Logotherapy (LT).

Cognitive Behaviour Therapy is a form of talking therapy that combines cognitive therapy and behaviour therapy. Aaron Beck was one of those who, in the 1960s expounded the Cognitive Therapy. His approach to this therapy lies within the group of Cognitive Behaviour Therapies. Cognitive therapy makes use of various techniques (processes), chief among them is Cognitive Restructuring (CR), which was adopted in this study. It focuses on how one thinks about things going on in his/her life, thoughts, image, belief and attitudes (his/her cognitive processes) and how this impacts on the way one behaves and deal with emotional problems. It also helps one to change negative patterns of thinking or behaviour that may cause difficulties. Beck (2011) opined that the client's cognition had an enormous impact on his feelings and behaviour. The goal of CBT therapy is to teach the clients (adolescents) that

even though they may not have control over every aspect of the world around them, they can take control over the way they interpret their thoughts and deal with things in their environment.

On the other hand, Logotherapy is a meaning-centred approach to psychotherapy, and it is to some extent compatible with Cognitive Behaviour Therapy (Ameli & Datilo, 2013). Logotherapy is one of the psychotherapies grouped under existential psychotherapy. Frankl (1988) pointed out that logotherapy is a therapy through meaning (Fabry 1987, 1981 and Grumbaugh, 1988) described it as treatment through finding meaning and purpose in life. LT involves integrated psychological techniques, employed in the process of helping people to find meaning to their lives. Frankl (1959) had revealed that meaning can be found in three different dimensions of participating in life by being creative, making constructive contributions through experience.

Thoughts and beliefs of an individual could be adaptive or maladaptive, and it may emanate from certain life experiences. The adaptive or maladaptive thoughts are likely to be detrimental to the social and psychological wellness of individual. Cognitive Behavioural Therapy and Logotherapy as interventions may be effective in reducing or eliminating risk-taking behaviours, in particular the risky sexual behaviours among adolescents. However, the efficaciousness of these interventions requires an in-depth investigation. This justifies the essence of this study, which intends to investigate whether Cognitive Behaviour Therapy and Logotherapeutic techniques would be effective in reducing risky sexual behaviours among the in-school adolescents.

Statement of the Problem

Risk taking behaviours among adolescents in today's world involves unprecedented intercourse, unprotected sex, early sexual activities, multiple sex partners, high risk partners, rape, and prostitution. These seem to be prevalent among the adolescents of school going age in Nigeria, in particular Edo State, with the headquarters in Benin City, which has become a metropolitan centre. A study by the National Population Commission (NPC) in 2009 in some parts of Nigeria had revealed that sexual interactions of various dimensions among the youths and adolescents have been on the ascendancy. Similarly, the Nigeria Centre for Disease Control and Prevention (2011 and 2012) also raised an alarm over the increase in sexually transmitted diseases (STD), owing to prevalence of sexual activities and risk behaviours among young people, especially the adolescents. Furthermore, a study conducted by Omagie and Omagie (2013) on 24 focused discussion groups, in Oredo Local Government of Edo State showed that despite continuous education and awareness programmes, the rate of increase in youths' and adolescents' involvement in unsafe sex and other related practices that could expose them to infections and other sexually related danger is escalating.

The consequences of risky sexual behaviour are worrisome, they include unwanted pregnancies among adolescent female; untimely drop out from school among adolescent students; abortion, which could lead to death or permanent deformity; sexually transmitted diseases and infections; disturbance in school attendance; and subsequent withdrawal from school. These can truncate a child's life pursuit and derail the purpose of his/her life. In most cases, adolescents may not readily understand the consequences of their actions apart from the immediate pleasure they derive. Since mere awareness programmes seem not to be adequately effective in reducing the growing tendency of adolescents' involvement in sex risky behaviour in the country, it is therefore, imperative to explore the efficaciousness of some psychotherapeutic interventions, such as CBT and LT in reducing this psychosocial problem. The problem is therefore, on whether the two therapies could be efficacious in

reducing sex risk-taking behaviour among the in-school adolescents. In other words, could CBT and LT be efficacious in sex risk-taking behaviour among adolescents?

Research Questions

To guide this study, the following research questions were raised

1. Is there a difference in risky sexual behaviour reduction at pretest and post test for in-school adolescents treated with Cognitive Behaviour Therapy?

2. Is there a difference in risky sexual behaviour reduction at pretest and post test for in-school adolescents treated with Logotherapy?

3. Is there a difference in risky sexual behaviour reduction at pretest and post test for in-school adolescents in control group (treated with placebo)?

4. Is there a difference in risky sexual behaviour reduction for in-school adolescents treated with Cognitive Behaviour Therapy, Logotherapy and the control group at post-test?

Hypotheses

1. There is no significant difference in risky sexual behaviour at pretest and post test for in-school adolescents, treated with Cognitive Behavioural Therapy.

2. There is no significant difference in risky sexual behaviour at pretest and post test for in-school adolescents, treated with Logotherapy.

3. There is no significant difference in risky sexual behaviour at pretest and post test for in-school adolescents in control group.

4. There is no significant difference in risky sexual behaviour of in-school adolescents, treated with Cognitive Behavioural Therapy, Logotherapy and the control group at post-test.

Purpose of the Study

The study investigated the efficacy of two Cognitive Behaviour Therapy and Logotherapy in reducing risky sexual behaviour among the in-school adolescents in Benin Metropolis, Edo State. Specifically, the study was to find out:

- if there is be a difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with Cognitive Behaviour Therapy;
- if there is be a difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with Logotherapy;
- if there is be a difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated in control group;(treated with Placebo).
- if Logotherapy and Cognitive Behaviour Therapy will reduce risky sexual behaviours among in-school adolescents in Benin Metropolis.
- if there will be difference in the group treated with Logotherapy, Cognitive Behaviour Therapy and the control group in risky sexual behaviour reduction after treatment;

Methodology

The study adopted a quasi-experimental design, using pre-test post-test, non-equivalent control group. The treatment levels were Logotherapy, Cognitive Behavioural Therapy for the experimental groups; and a Non-attention treatment for the Control Group. The target population of this study was twenty thousand, four hundred and twenty from SS II students in the thirty one mixed public senior secondary schools in Benin Metropolis, Edo State. This group of students was considered appropriate for the study, because it is believed that students of this class are mainly adolescents that have reached puberty and who could be vulnerable to taking risky sexual behaviours. Furthermore, this population is chosen because Senior School students largely share similar sexual behavioural characteristics. The sample

for this study consisted of one hundred and thirty five participants drawn from the intact classes.

The study adapted the "Adolescent Sex Behaviour Inventory'' developed by Friedrich (2004). The questionnaire consisted of forty two items, self-report standardized instrument, developed to measure sex related behaviours, which could require therapeutic intervention. It measured risky sexual behaviours, non-conforming sexual behaviours, sexual interest and sexual discomfort in adolescents. The instrument was validated and subjected to test-retest reliability method. Pearson's r coefficient statistics was used and gave a r coefficients of 0.926.

The instrument was administered to collect data at the pre-test to find out the initial equivalence of the groups to determine if there was a difference between the pre-test risky sexual behaviour and post-test risky sexual behaviours after treatment. This was followed by the treatment using a verified package. The researcher was assisted by trained research assistants to concurrently treat the three groups in their separate schools, to avoid participants' interaction. At the end of the treatments, both the experimental and the control groups were post-tested, using the same instrument that was used for the pre-test. The completed copies of the instrument were instantly retrieved. Inferential statistics. The t-test and Analysis of Variance (ANOVA) were used to test the hypotheses.

Results

Hypothesis 1: There is no significant difference in risky sexual behaviour at pre-test and post-test for in-school adolescents, treated with Cognitive Behaviour Therapy.

Data analysis for testing this hypothesis is presented in Table 1.

Table 1: t-test of Risky Sexual Behaviour at pre-test for CBT group

Group	Risky Sexual Behaviour	Mean	Standard deviation	t	Sig.
Cognitive Behaviour Therapy	Pre-test	67.87	16.81	1.11	.27
	Post-test	64.09	16.64		

Table 1 shows the mean and standard deviation of risky sexual behaviour at pre-test for Cognitive Behavior Therapy (Mean= 67.87, Standard deviation = 16.81); post-test (mean = 64.09, Standard deviation = 16.64). The t-value and p-value are 1.107and .273 respectively. Since the alpha level (0.05) is less than the p-value of .273. Therefore the hypothesis that states that ‘‘there is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with Cognitive Behaviour therapy’’ is retained. This is to say that there is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with CBT, even though the mean of the post-test is lower showing a likely effect of the treatment.

Hypothesis 2: There is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with Logotherapy.

The data testing this hypothesis are presented in Table 2.

Table 2: t-test of Risky Sexual Behaviour at pre-test for Logotherapy group

Group	Risky Sexual Behavior	Mean	Standard deviation	T	Sig.
Logotherapy	Pre-test	67.14	16.61	1.55	.13
	Post-test	62.00	16.34		

Table 2 shows the mean and standard deviation of risky sexual behaviour at pre-test for Logotherapy (Mean= 67.14, Standard deviation = 16.61); post-test (mean = 62.00, Standard deviation = 16.34). The t-value and p-value are 1.550 and .130 respectively. Since the alpha level (0.05) is less than the p-value of .130. Therefore, the hypothesis that states that 'there is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with Logotherapy'' is retained, even though the mean of the post-test is lower. This is to say that there is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents treated with LT.

Hypothesis 3: There is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents in Control Group.

Table 3: t-test of Risky Sexual Behaviour at pre-test for Control group

Group	RiskySexual behavior	Mean	Standard deviation	T	Sig.
Control	Pre-test	68.00	11.39	-2.399	.021
	Post-test	75.05	19.72		

Table 3 shows the mean and standard deviation of risky sexual behaviour at pre-test for control group (N= 55, mean= 68.00, Standard deviation= 11.39); post-test (mean = 75.05, Standard deviation = 19.72). The t-value and p-value are -2.399 and .021 respectively. Since the alpha level (0.05) is greater than the p-value of .02. Therefore, the hypothesis that states that 'there is no significant difference in risky sexual behaviour at pretest and post-test for in-school adolescents in control group' is rejected. This could therefore imply that without treatment, the situation with the adolescents taking risky behaviour could get worse.

Hypothesis 4: There is no significant difference in risky sexual behaviour among in-school adolescents treated with Cognitive Behaviour Therapy, Logotherapy and the Control Group at post-test.

Table 4: Descriptive Statistics of CBT, LT and Control Group on reduction of Risky Sexual Behaviour at Pre-test

		Pre-test	
Group	**N**	**Mean**	**Std. Deviation**
Cognitive Behavioural Therapy	55	67.87	16.81
Logotherapy	36	67.13	16.61
Control	44	68.00	11.38
Total	135	67.71	15.09

Table 4 shows the mean and standard deviation of the pre-test for the three groups. For the Cognitive Behaviour Therapy group (N= 55, mean= 67.8727, Standard deviation= 16.81386); the logotherapy (N= 36, mean = 67.1389, Standard deviation = 16.61351) and the Control Group (N= 44, mean=

68.0000, Standard deviation =11.38951). To test if there is a significant difference in the pre-test among the three groups, the one-way ANOVA statistic was used.

Table 5: One-way ANOVA of Reduction of Risky Sexual Behaviour for Pre-test

Group	Sum of Squares	df	MS	F	Sig.
Between Groups	16.889	2	8.45	.037	.964
Within Groups	30504.415	132	231.09		
Total	30521.304	134			

Table 5 shows F-value of 0.37 and p-value of 0.964 testing at the alpha level of 0.05. The p-value of 0.964 is greater than the alpha level 0.05, thus no significant difference exists among the groups at the pre-test. Therefore, the result at pre-test showed no significant difference in the three groups risky sexual behaviours.

Table 6: Descriptive Statistics of CBT, LT and Control Groups on reduction of Risky Sexual Behaviour at post-test

Group	Post-test		
	N	Mean	Std. Deviation
Cognitive Behaviour Therapy	55	64.09	16.64
Logotherapy	36	62.00	16.33
Control	44	75.04	19.72
Total	135	67.10	18.37

Table 6 shows the mean and standard deviation at the post-test for the three groups. For the Cognitive Behaviour Therapy group (N= 55, mean= 64.09, Standard Deviation= 16.64); the logotherapy (N= 36, Mean = 62.00, Standard Deviation = 16.33) and the Control group (N= 44, Mean= 75.04, Standard Deviation =19.72). To test if there is a significant difference in the pre-test among the three groups, the one-way ANOVA statistic was used.

Table 7: One-way ANOVA of reduction on Risky Sexual Behaviour at Post-test

Group	Sum of Squares	df	MS	F	Sig.
Between Groups	4212.09	2	2106.05	6.777	.002
Within Groups	41020.46	132	310.76		
Total	45232.55	134			

Table 7 shows an F-value of 6.777 and p-value of 0.002. Testing at the alpha level of 0.05, the p-value (0.002) is less than the alpha level 0.05. Therefore the null hypothesis which states that 'There is no significant difference in risky sexual behaviour for in-school adolescents treated with Cognitive Behaviour Therapy, Logotherapy and the Control Group at post-test'' is rejected. Therefore, there is significant difference in risky sexual behaviour in the treatment groups (cognitive behaviour therapy and logotherapy) and the control group.

In order to know which of the therapies was more effective, a Post Hoc analysis was done, using the Fisher's Least Significant Difference (LSD) test. Table 8 reveals that there was no significant difference in the mean scores between CBT and Logotherapy since the p-value (0.58) was greater than the alpha value. There was a significant difference between the mean scores of the CBT and Control Group; and also, there was a significant difference between Logotherapy and Control Group as their p-value (0.001) is less than 0.05. Therefore, it can be

297 concluded that there is no significant difference between CBT and Logotherapy effectiveness
298 in reducing sex risk taking behaviour among the in-school adolescents.

299 **Table 8: Post Hoc, Fishers' (LSD) Tests on Reduction of Sex Risk Taking Behaviour**

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.
Cognitive Behavioural Therapy	Control	-10.95455*	3.57	.003
Logotherapy	Cognitive Behaviour Therapy	-2.09091	3.78	.58
Control	Logotherapy	13.04545*	3.96	.001

300
301 *There is significant difference
302
303 Table 8 has revealed that CBT and Logotherapy are both effective in reducing sex risk taking
304 behaviours. On the other hand, CBT treated group is more effective than the Control Group;
305 and the Logotherapy treated group is also more effective than the Control Group. Regarding
306 which group is most effective, Table 6 has shown that logotherapy treated group with post-
307 test mean value of 62.00 is most effective, while the control group with post-test mean value
308 of 75.04 is least effective.

309 **Discussion**

310 The mean scores of the pretest and post test for the two treatment groups, which are CBT
311 and LT showed that the posttest scores were lower than the pretest scores. This implied that
312 the therapies were efficacious, though the period of experimentation could have limited the
313 level of efficaciousness, thereby leading to a non-significant difference value. This is
314 deduced from the post-test mean scores of the control group which were higher than the pre-
315 test scores. This could indicate that the significant difference obtained between the pre and
316 post test for the control group was negative, though the participants' risky sexual behaviour

317 increased, probably due to lack of any treatment intervention. This implies that the situation
318 could have been worse for the experimental groups if there was no intervention.
319 Conclusively, it can be inferred that to an extent, LT and CBT were effective in the treatment
320 of risky sexual behaviours of the in-school adolescents.

321 The participating adolescents could have been able to adopt an attitude of self-detachment;
322 directing their awareness towards positive aspects of life by attending to a life full of
323 potential meaning and value during treatments. They could have substituted the right attitude
324 of actualizing personal potentials for wrong activity and change their unrealistic beliefs
325 towards sexual practices that could help them to achieve the meaning and purpose of their
326 life. This outcome supports the findings of Schnell and Becker (2006) in respect to alleviation
327 of symptoms of depression; Wijayanti (2010) who found that LT reduces anxiety; and Koohi
328 (2008) who established the effectiveness of logotherapy in reduction of aggression. Hofmann
329 and Smiths (2008) in their study affirmed the use of CBT in the reduction of anxiety
330 disorders. The finding of this study equally agreed with Oshamehin (2005), who found that
331 logotherapy and cognitive restructuring training were effective behaviour modification such
332 as assisting students to develop unfavourable attitudes towards examination malpractices.
333 Ugwu and Olatunbosun (2016) equally established that CBT had significant efficacy on
334 reducing bullying.

335 However, at the post-test, the F-value of 6.78 and P-value of 0.002 and testing at alpha level
336 of 0.05 as contained in Table 7 showed that there is a significant difference between the
337 treatment groups and the control group in risky sexual behaviours. By implication, the
338 impact of the treatment therapies on the treatment groups could have brought about the
339 difference between them and the control groups without treatment. No wonder the mean
340 scores of the treatment groups reduced at the post-test, while that of the control group
341 increased as contained in Table 4. It can therefore be suggested that the therapies were

largely effective. Therefore, if a disorder is not attended to, it may worsen. This corroborates the findings of Hamideh, Samaliand and Zakieh (2013), where they concluded that when an unhealthy behaviour in an individual is left unattended to in due course, such could lead to a serious lifetime disorder, which could impede the sufferers achieving his or her life purpose.

Furthermore, a post-hoc analysis showed that there was no significant difference in the mean scores effectiveness of CBT and LT, since the p-value of 0.58 was greater than the alpha value as contained in Table 8. This implies that both CBT and LT are effective in the treatment of sex risk taking behaviours among the in-school adolescents. However, analysis showed that the LT treated group's post-test mean score of 62.0 was the least of the three groups, suggesting that logotherapy was most effective.

Conclusion

Based on the findings of this study, it is hereby concluded that Cognitive Behaviour Therapy and Logotherapy as intervention treatment packages were effective in reducing risky sexual behaviours among in-school adolescents. The therapies can actually lower the degree of vulnerability to sex maladaptive behaviours.

Recommendations

Based on the findings and conclusion, the study recommended the following:

- Counselling psychologists and school counsellors should have the knowledge and skill of CBT and LT to assist adolescents resolve challenges of risky sexual behaviours.
- Guidance counsellors are saddled with the responsibility of managing students' maladjustment; therefore, it is pertinent for both Federal and State governments to ensure that they are well trained, especially on how to employ some therapeutic treatments such as Cognitive Behaviour Therapy and Logotherapy.

- Counselling psychologist should familiarize himself or herself with the CBT and LT in treatment packages in assisting the school adolescents' to reduce sex risk-taking behaviour challenges and maladjusted behaviours.

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