EFFECT OF COGNITIVE RESTRUCTURING COUNSELLING TECHNIQUE ON SELF-CONCEPT OF SECONDARY SCHOOL UNDERACHIEVERS IN ILORIN METROPOLIS, NIGERIA

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Abstract
This study investigated the effects of cognitive restructuring counselling technique on self-concept of secondary school underachievers in Ilorin metropolis, Nigeria. Quasi-experimental design involving pre-test post-test control group with one experimental group and one control group was adopted for the study. A purposive sampling procedure was used in selecting two senior secondary schools out of 56 within Ilorin metropolis. Out of 39 SSII low self-concept underachievers, fifteen (15) were purposively selected from each school, making total number of thirty (30) respondents. Academic self-concept scale developed by Liu and Wang (2005) was the instrument adapted for the collection of data in this study. The ANCOVA statistical tool was used to test two hypotheses raised. The findings showed a significant effect of cognitive restructuring technique (F = 722.256, p = 0.000) in enhancing self-concept of secondary school underachievers. The result found no significant differential effect of cognitive restructuring technique (F = .909, p = 0.359) in improving self-concept of male and female secondary school underachievers in Ilorin metropolis. Based on the findings, the researcher recommended that school counsellors, psychologists and the teachers should be encouraged to use cognitive restructuring counselling technique in improving self-concept among secondary school underachievers. The school counsellors, psychologists and the teachers should be encouraged to use the technique in improving self-concept of male and female senior secondary school underachievers.

Keywords: Cognitive restructuring, counselling technique, self-concept, underachievers

Introduction
Self-concept is the image that people have of themselves. This image is formed in a number of ways, but is particularly influenced by interactions with important people and events in life. Many scholars described self-concept in different ways such as the perception or image of one’s abilities and uniqueness. At first, one's self-concept is very general and changeable... as one grows older, these self-perceptions become much more organized, detailed, and specific (Pastorino & Doyle-Portillo, 2013). According to Abdulkadir (2011), self-concept may be high or low. It refers to a man’s nature or personality, image or the qualities that makes up the individual. Ajoku (1998) pointed out different
terminologies used to represent self-concept such as self-esteem, self-image, self-identity, self-perception, self-acceptance and self-worth. In this study, self-concept comprises among others the above terminologies.

Research conducted by Marsh (2004) has established that there is close relationship between self-concept and academic achievements of students. Students with high self-concept participate enthusiastically in the learning process. Such students are more confident, active and motivated towards learning and perform better in examination as compared to those students with low self-concept because self-concept is the significant tool that differentiates between academic achiever and underachiever students. The lower the self-concept, the lower the aspiration for academic success; because the lower the aspiration, the lower the achievement and vice versa. This situation occurs because the students’ action was influenced by their self-concept as it is the basis for all motivated behaviour (Ahmad, Zeb, Ullah, & Ali, 2013). Gender has also been identified to influence academic self-concept and academic achievement in various studies carried out on gender, self-worth, and academic achievement among students. (Lanza, Osgood, Eccles, & Wigfield, 2002; Sar-Abadani-Tafreshi, 2006).

Achievement can be described as something which someone has succeeded in doing. In education, the term academic achievement refers to the performance or accomplishment of students in academic or learning task (Ngwoke, Numonde, & Ngwoke, 2013). It is used to indicate the degree of success attained in some general or specific area of academic task (Enyi, 2009). Academic underachievement can be defined as a discrepancy between the child’s school performance and some index of his/her actual ability. That is, one whose achievement score is lower than his/her ability score. Ability may be measured by test scores or even by observing the child at home or at school. Underachievement is most commonly defined as a discrepancy between potential (or ability) and performance (or achievement).

A student who appears capable of succeeding in school but is nonetheless struggling is referred to as an underachiever (Coil, 2010; McCoach & Siegle, 2001). Based on the definitions, underachievers can be described as students who, in a significant way, are not working up to their potential. These students often see ‘YOU CAN DO BETTER’ written boldly in red on homework, test papers, and report cards and receive this message in many other ways, both verbally and nonverbally. For a variety of reasons they continue to do much less than they are capable of doing.

The low academic achievement of students in external examinations in Nigeria has become a source of great concern to all stakeholders in education. This calls for concerted efforts for remediation (Ngwoke, Numonde, & Ngwoke, 2013). This problem if not urgently addressed usually leads to academic failure during final examinations such as examination conducted by West Africa Examinations Council (WAEC) and the National Examinations Council (NECO). To buttress this, Ali (2009) claimed that most secondary school leavers failed the May-June examinations conducted by (WAEC) and (NECO). Of the candidates who sat for the year 2009 May/June Senior Secondary Certificate Examinations, 84% failed. Also, of candidates who registered for 2013 WASEC (May/June edition), 20.04% obtained
credits in English language, Mathematics and at least three other subjects (Ogundare, 2013). Though not all these failures were underachievers, majority of them may be described as academic underachievers since their failure may not be attributed to any learning disability or difficulty.

For a better clarification of who the underachievers are; here are their major characteristics: irresponsibility, laziness, poor study skills, lower attainment value on learning, and disinterest in school, as well as lower academic self-concept which is the focus of this work. Based on the findings of some researchers, academic underachievement has no gender barrier because it affects both sexes but in different forms and rates. Weiss (its cited in Chukwu-etu, 2009) posited that gender differences affect underachievement, with approximately 25% of females who are above-average in academic performance may be considered underachievers as compared to 50% of above-average males.

Cognitive restructuring was originally developed by Albert Ellis and Arron Beck. It is a psychotherapeutic process of learning to identify and dispute irrational or maladaptive thoughts. That is a coping technique; substituting negative, self-defeating thoughts with positive, affirming thoughts that change perceptions of stressors from threatening to nonthreatening (Dombeck, 2014). In this technique, four major steps are to be followed. They are: identification of problematic cognitions known as "automatic thoughts" which are dysfunctional or negative views of the self, world, or future; identification of the cognitive distortions in the automatic thoughts; rational disputation of automatic thoughts with the Socratic dialogue and development of a rational rebuttal to the automatic thoughts (Hope, Burns, Hyes, Herbert & Warner, 2010).

The researcher’s choice of cognitive restructuring is based on its efficacy in managing both cognitive and behaviour problems as noted by Ekennia, Otta, and Ogbuokiri (2013). The purpose of cognitive restructuring is to widen students’ conscious perspective and thus allow room for a change in low self-concept perception to a positive one because cognitive restructuring has been used to help individuals experiencing a variety of psychological or psychiatric conditions, including low self-concept, depression, substance abuse disorders, anxiety disorders, bulimia, social phobia, borderline personality disorder, attention deficit hyperactivity disorder (ADHD), and gambling, just to name a few (Chronis, Gamble, Roberts, & Pelham, 2006). Cognitive restructuring helps students consider any maladaptive patterns in their thinking-feeling-behaviour cycles.

Statement of the Problem
It is clear that low academic self-concept is one aspect of affective domain that is capable of contributing immensely to the academic failure of secondary school students irrespective of gender or age. In teaching and learning situation students who have positive self-concept are actively involved in learning process, while the others who are quite passive with negative self-concept usually experience academic failure (Wilson, 2009). In this regard, cognitive restructuring counselling technique would be applied and tested if it would be of useful measure to strengthen the self-concept and self-confidence of these secondary school academic underachievers due to its record of efficacy in managing same or related psychological and behavioural problems in the past.
Objectives of the Study
Specifically, the study was to achieve the following objectives:
1. To examine the effect of cognitive restructuring counselling technique on the self-concept of secondary school underachievers in Ilorin metropolis.
2. To examine the differential effect of cognitive restructuring counselling technique on the self-concept of male and female secondary school underachievers in Ilorin metropolis.

Research Questions
Based on the above objectives, two research questions were raised.
1. What is the effect of cognitive restructuring counselling technique on self-concept of secondary school underachievers in Ilorin metropolis?
2. What is the differential effect of cognitive restructuring counselling technique on the self-concept of male and female secondary school underachievers in Ilorin metropolis?

Hypotheses
The following hypotheses guided the study.
1. There is no significant effect of cognitive restructuring counselling technique on self-concept of secondary school underachievers in Ilorin metropolis.
2. There is no significant differential effect of cognitive restructuring counselling technique on the self-concept of male and female secondary school underachievers in Ilorin metropolis.

Methodology
This study applied quasi-experimental pretest post-test control group research design only. Out of fifty six (56) senior secondary schools within Ilorin metropolis, two that had more records of academic underachievers were purposively selected as sample schools. Out of 39 SSII low academic self-concept underachievement students that constitute the target population for the study, fifteen (15) respondents were purposively selected in each school making total number of thirty (30) samples. To implement the procedure, one school was tag as experimental group while the other school was tag as control group respectively. The researcher administered academic self-concept scale developed by Liu and Wang (2005) after its content and face validation through six experts while its reliability was ascertain through test-retest method with the psychometric property of 0.92 r value for the identification of low academic self-concept underachievement students and to serve as a pre-test instrument for both treatment and control groups. Six weeks treatments procedure of cognitive restructuring counselling technique to the experimental groups was followed while the control group received no treatment. The instrument was re-administered for both groups as post-test. The two results were subjected to statistical tools of Means and standard deviation to answer the research questions and Analysis of Covariance (ANCOVA) to test the hypotheses.

Results
The results were based on the formulated research questions and hypotheses for study.
Research Question One: What is the effect of cognitive restructuring counselling technique on self-concept of secondary school underachievers in Ilorin metropolis?

Table 1 Means and standard deviation of Pretest and Posttest mean scores on self-concept of Underachievers exposed to CRCT and Control

<table>
<thead>
<tr>
<th>Source</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest score</td>
<td>CRCT</td>
<td>15</td>
<td>37.600</td>
<td>1.919</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>15</td>
<td>35.666</td>
<td>3.015</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>36.633</td>
<td>2.671</td>
</tr>
<tr>
<td>Posttest score</td>
<td>CRCT</td>
<td>15</td>
<td>65.800</td>
<td>2.455</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>15</td>
<td>39.933</td>
<td>2.433</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>52.867</td>
<td>13.371</td>
</tr>
</tbody>
</table>

Table 1 shows the pretest and posttest mean scores of subjects exposed to CRCT and that of control group. It reveals that at pretest, students assigned to receive CRCT had a higher mean score \((M = 37.600, SD = 1.919)\) when compared to students in the control group \((M = 35.667, SD = 3.015)\). Conversely, after intervention, students in the CRCT group had a higher mean score \((M = 65.800, SD = 2.455)\) than control group \((M = 39.933, SD = 2.433)\). The result suggested that the treatment had an effect in favour of students exposed to CRCT.

Research Question Two: What is the differential effect of cognitive restructuring counselling technique on the self-concept of male and female secondary school underachievers in Ilorin metropolis?

Table 2 Means and standard deviation of Pretest and Posttest mean scores on self-concept of male and female Underachievers exposed to CRCT

<table>
<thead>
<tr>
<th>Source</th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest score</td>
<td>Male</td>
<td>10</td>
<td>37.400</td>
<td>2.221</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
<td>38.000</td>
<td>1.224</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15</td>
<td>37.600</td>
<td>1.919</td>
</tr>
<tr>
<td>Posttest score</td>
<td>Male</td>
<td>10</td>
<td>65.400</td>
<td>2.716</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
<td>66.600</td>
<td>1.816</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15</td>
<td>65.800</td>
<td>2.455</td>
</tr>
</tbody>
</table>

Table 2 shows the pretest and posttest mean scores of male and female subjects exposed to CRCT. It shows that at pretest, male students assigned to receive CRCT had a mean score of 37.400 and standard deviation of 2.221 compared to female students with a mean of 38.000 and standard deviation of 1.224. After intervention, the mean score for male students rose to 65.400, with a standard deviation of 2.716 while the mean of the female students also increased to 66.600 with a standard deviation of 1.816. This result suggested that the treatment had an effect for both male and female underachievers.

Hypothesis one: There is no significant effect of cognitive restructuring counselling technique on Self-Concept of Secondary School Underachievers in Ilorin metropolis.
Table 3 One-way Analysis of Covariance on Effect of CRCT against a Control Group

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>5020.490(^a)</td>
<td>2</td>
<td>2510.245</td>
<td>410.824</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>432.350</td>
<td>1</td>
<td>432.350</td>
<td>70.758</td>
<td>.000</td>
</tr>
<tr>
<td>Pretest</td>
<td>2.356</td>
<td>1</td>
<td>2.356</td>
<td>.386</td>
<td>.540</td>
</tr>
<tr>
<td>Group</td>
<td>4413.175</td>
<td>1</td>
<td>4413.175</td>
<td>722.256</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>164.977</td>
<td>27</td>
<td>6.110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89032.000</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>5185.467</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) R squared = .968 (Adjusted R Squared = .966)

Table 3 shows a one-way analysis of covariance conducted to test the effectiveness of CRCT designed to improve underachievers’ self-concept against an untreated control group. The covariate used in the analysis was the pretest score of both group. After adjusting for the covariate, result shows there is a significant effect of CRCT on Self-Concept of secondary school underachievers when compared to control group on post treatment scores, \(F = 722.256, p = 0.000\). It also reveals that 96.8% of variance in post test score can be explained by the treatment. It can therefore be said that to a large extent, CRCT was effective in improving the self-concept of secondary school underachievers. Therefore, the null hypothesis which stated that there is no significant effect of CRCT on Self-Concept of Secondary School Underachievers was rejected.

Hypothesis Two: There is no significant differential effect of cognitive restructuring counselling technique on Self-Concept of male and female secondary school underachievers in Ilorin metropolis.

Table 4 One-way Analysis of Covariance on the Differential Effect of CRCT on Self-Concept of Male and Female Underachievers

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>7.470(^a)</td>
<td>2</td>
<td>3.735</td>
<td>.583</td>
<td>.573</td>
</tr>
<tr>
<td>Intercept</td>
<td>197.228</td>
<td>1</td>
<td>197.228</td>
<td>30.765</td>
<td>.000</td>
</tr>
<tr>
<td>Pretest</td>
<td>2.670</td>
<td>1</td>
<td>2.670</td>
<td>.416</td>
<td>.531</td>
</tr>
<tr>
<td>Gender</td>
<td>5.830</td>
<td>1</td>
<td>5.830</td>
<td>.909</td>
<td>.359</td>
</tr>
<tr>
<td>Error</td>
<td>76.930</td>
<td>12</td>
<td>6.411</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>65029.000</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>84.400</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) R Squared = .089 (Adjusted R Squared = -.063)

Result on table 4 is a one-way analysis of covariance conducted to test the differential effect of CRCT on Self-Concept of male and female secondary school underachievers. The covariate used in the analysis was the pretest score of both male and female exposed to CRCT. After adjusting for the covariate, finding shows there is no significant differential effect of CRCT on Self-Concept of male and female secondary school underachievers, \(F = .909, p = 0.359\). The result also indicated that only
8.9% of variance in the post test score can be explained by the gender. This means that the effectiveness of the intervention on self-concept of male and female secondary school underachievers were the same. Therefore, the null hypothesis which stated that there is no significant differential effect of CRCT on Self-Concept of male and female secondary school underachievers was retained.

Summary of Major Findings
The findings of the study revealed that:

1. Cognitive restructuring counselling technique is effective in improving the self-concept of secondary school underachievers in Ilorin metropolis \((F = 722.256, p = 0.000)\). This is because their self-concept mean scores after exposure to cognitive restructuring counselling technique significantly improved.

2. Significant difference does not exist between the self-concept of male and female secondary school underachievers exposed to cognitive restructuring counselling technique \((F = .909, p = 0.359)\). This is because both sexes self-concept mean scores were significantly improved.

Discussion
The first finding indicates that cognitive restructuring counselling technique has significant effect in improving self-concept of secondary school underachievers in Ilorin metropolis. It was found that significant difference exists between the pre-test and post-test mean scores of the subjects that were exposed to cognitive restructuring counselling technique. Also, when the mean scores of the subjects exposed to cognitive restructuring technique were compared to that of the control group, significant difference was observed. This shows that cognitive restructuring counselling technique can bring about improvement in the self-concept of secondary school underachievers in Ilorin metropolis. By this the first null hypothesis which stated that there is no significant effect of cognitive restructuring counselling technique on self-concept of secondary school underachievers in Ilorin metropolis was rejected. From the finding, cognitive restructuring techniques can significantly improve low self-concept of secondary school underachievers.

The finding is similar to that of Addison, Antwi and Avonokadzi (2014) who claim that cognitive restructuring significantly enhances student self-esteem and self-concept which in turn improve academic performance. It is also in line with Nwamuo (2005) who claimed that CR technique involves teaching persons or individuals to reduce their negative emotional reactions by getting them to interpret situations with greater accuracy and avoid distorted thinking (negative self-concept) and think rightly (positive self-concept). The finding is also in line with Ngwoke, Numonde and Ngwoke (2013) who claimed that cognitive restructuring is a potential educative strategy for releasing the creative potentials, self-awareness, achievement motivation, personal competencies and interpersonal skills of and at the risk of students who perform consistently below their natural potentials.

This also correlates with that of Ogugua (2010) who finds that cognitive restructuring technique is effective in enhancing students’ Mathematics achievement. The finding of this study is in line with Cognitive Behaviour Therapy (CBT) of Aaron Beck which says CBT combines cognitive and
behavioural therapies, and involves changing the way one thinks negatively (cognitive) (negative self-concept) and how you respond to thoughts (behaviour) (poor academic achievement). It is crystal clear that this finding is real because cognitive restructuring is an effective technique under cognitive behaviour theory which it overall intention is to move away from more extreme and unhelpful ways of seeing things (negative self-concept) to more helpful and balanced conclusions (positive self-concept) (Cooper & Fairburn, 2010; Otte, 2011; Seligman & Ollendick, 2011).

The second finding claims that cognitive restructuring counselling technique has no differential effect in improving self-concept of male and female secondary school underachievers in Ilorin metropolis, because the treatment improves both sexes negative self-concept tremendously. It was found that significant difference existed between the pre-test and post-test mean scores of both males and females that were exposed to cognitive restructuring counselling technique treatment. Also, when the mean scores of males and females exposed to cognitive restructuring technique were compared to that of the control group significant difference was observed. This showed that cognitive restructuring counselling technique can bring about improvement in the self-concept of male and female secondary school underachievers in Ilorin metropolis who were exposed to the treatment. By this, the second null hypothesis which stated that there is no significant effect of cognitive restructuring technique on the self-concept of male and female secondary school underachievers in Ilorin metropolis was retained, because from the finding, cognitive restructuring technique significantly improve low self-concept of both male and female secondary school underachievers tremendously.

The finding is in line with Wilson (2009) who summarized the views of three researchers that used a general measure in studying academic self-concept and found no differences in self-concept between genders. But the finding contradicts Matovu (2012) who contended that on several studies on gender differences in academic self-concept it has been reported that males and females possess different beliefs about their academic competencies with males showing higher academic self-concept than females.

Though the finding of this study, proved that both of them show high improvement in their level of self-concept but the level of self-concept mean score of female is slightly higher than that of male. This agreed with the analysis of Liu and Wang (2005) that academic self-concept has significant main effect on gender with female students having significantly higher perceived academic effort (academic self-concept subscale) than their male counterparts. Therefore, with the application of cognitive restructuring technique the slight difference corroborates Ogugua (2010) who claims that females gain higher mean achievement scores than their male counterparts when cognitive restructuring technique is adopted. Jacob (2002) opined that it has been revealed that girls do better in school, get higher grades and can graduate from high school at a higher level than boys.

Conclusion
Based on the findings of this study, the following conclusions were drawn:
1. It is clearly shown that cognitive restructuring counselling technique had significant effect in improving self-concept among secondary school underachievers due to its ability to improve self-concept mean scores of subjects examined.

2. The result also reveals that cognitive restructuring counselling technique had no gender bias in its effect on self-concept, that is, cognitive restructuring counselling technique can be effectively utilized in improving self-concept amongst both sexes.

Recommendations

The following recommendations were made based on the findings of this study. Based on the findings, the researcher recommended that:

1. The school counsellors, psychologists and the teachers are encouraged to use cognitive restructuring counselling technique in improving self-concept among secondary school underachievers, because of its strength in enhancing self-concept among secondary school underachievers.

2. The school counsellors, psychologists and the teachers should be encouraged to use the technique to improve self-concept of male and female senior secondary school underachievers, because the finding shows that the technique proved efficient in ameliorating self-concept among both sexes.

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