Effect of Cognitive Behaviour Therapy on Self-Efficacy of Students of Agricultural Education Programme in Nigerian Universities

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ABSTRACT
This study determined the effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of students of Agricultural Education programme in Nigerian Universities. Three research questions were raised and two hypotheses formulated for the study. The study employed quasi-experimental design of non-randomized control group, pre-test and post-test design. The population of the study comprised all students of Agricultural Education in Nigerian Universities offering Agricultural Education degree programme in 2015 and 2016. Convenience purposive simple random sampling technique was adapted for the study. Three sets of instrument namely; Agricultural Education Self-efficacy Questionnaire (AESQ), Cognitive Behaviour Therapy Self-efficacy Training Programme (CBTSTP) and Conventional Counselling Self-efficacy Training Programme (CCSTP) were developed by the researchers and used for the study. The instruments were validated by 3 experts to establish the face and content validity of the AESQ items. Cronbach Alpha reliability method was applied to determine the internal consistency of the instrument. A reliability coefficient of 0.81 was obtained. The University Counselors served as research assistants in the study. The mean posttest score of the experimental group was statistically compared with the mean posttest score of the control group using analysis of covariance (ANCOVA). It was found that CBT has effect of enhancing students’ self-efficacy in Agricultural Education programme and CBT has effect of improving the male and female students’ self-efficacy in Agricultural Education programme without a statistical significant difference in the effect of CBT on the male and female students’ self-efficacy in Agricultural Education programme in Nigerian Universities. It was therefore, recommended among others that University Psychologists and Counsellors should regularly apply Cognitive Behaviour Therapy in enhancing students’ self-efficacy in Agricultural Education in Nigerian Universities.

Keywords: Agricultural education, cognitive behaviour therapy, conventional counselling, effect, gender, self-efficacy,

INTRODUCTION
Agricultural education is one of the measures used by government to enhance food production in the country. Its introduction as an aspect of education was a strategy to ensure effective transmission of cultural practices in agriculture to future generation for sustainable food security. In the submission of Osine (2008), it is a process of imparting knowledge, skills and attitudes in agriculture to the learner at any level. It is an important school programme that is offered at all levels of education ranging from home to the school and the community. Ukonze and Olaitan (2010) defined Agricultural Education as a programme designed for preparing or equipping learners with knowledge, skills and attitude in teaching and technical areas of agriculture to enable them impart the same to students in

schools and colleges. Barrick in Asogwa, Wombo and Ugwuoke (2014) defined Agricultural Education as the scientific study of the principles and methods of teaching and learning as they pertain to agriculture. It refers to those activities directed at the preparation of teachers of Vocational Agriculture. Asogwa, Wombo and Ugwuoke stated that Agricultural Education involves equipping individuals with pedagogical and technical competence in agriculture that will enable them to prepare others as teachers or train others to enter into agriculture, stay and progress in the occupation. The philosophy of Agricultural Education varies with levels of education. In universities, the philosophy of Agricultural Education programme is to train and provide students with the opportunities to develop:

1. professional skills needed as (proficient) teachers for Schools, Colleges and Tertiary institutions;
2. understanding of the roles of Agriculture and rural development in the country’s accelerated drive towards food and fiber, self-reliance and self-sufficiency, economic reconstruction and social justice, thereby enabling agriculture to fulfill its mission in the country’s overall economic growth;
3. production-oriented practical skills in students, on farm production and management, through a combination of production-oriented course, internship and community based attachment to small-scale, medium-scale and large-scale farms and
4. effective cumulative techniques of disseminating information on new technologies to farmer, agro-industries and consumers (Federal University of Agriculture, Makurdi, 2011).

The researchers however observed that a few of the graduates of Agricultural Education programme leave the profession for other types of occupation which are not related to their field of training/study. In an interview with 8 graduates who are within 5 years of graduation, it was discovered that they actually have the competence in the career but lack confidence to enter into practicing the profession. Some recalled that they never applied for the programme in their Joint Admission and Matriculation Board Examinations only to be given admission to study Agricultural Education. Being offered a course you never dreamt of reading may affect the attitude and performance of students. The fact is that the self-efficacy of most students of Agricultural Education programme is questionable.

Self-efficacy is one’s conviction or opinion about one’s capabilities to produce effects in a particular field. Bandura (1997) explained that perceived self-efficacy is personal judgment of one’s capabilities to organize and execute courses of action to attain designated goals, and he sought to assess its level, generality and strength across activities and contexts. Schwarzer and Luszczynska (2003) noted that general self-efficacy assesses a broad and stable sense of personal competence to deal effectively with a variety of stressful situations. Self-efficacy influences the processes of planning, taking initiative, maintaining behaviour change, and managing relapses (Luszczynska & Schwarzer, 2003; Marlatt, Baer, & Quigley, 1995). The capability that is most "distinctly human" is that of self-reflection, hence it is a prominent feature of social cognitive theory (Bandura in Zimmerman, 2000). Through self-reflection, people make sense of their experiences, explore their own cognitions and self beliefs, engage in self-evaluation, and alter their thinking and behaviour accordingly. The author continued that self-efficacy beliefs provide the foundation for human motivation, well being, and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties. Much empirical evidence now support Bandura's contention that self-efficacy beliefs touch virtually every aspect of people's lives- whether they think productively, self-debilitatingly, pessimistically or optimistically, how well they motivate themselves and persevere in the face of adversities, their vulnerability to stress and depression, and the life choices they make. In this study, self-efficacy is the judgment of students of Agricultural Education programme about their capabilities to take up occupation, stay and progress in their field of career after graduation. Self-efficacy influences how students feel, think, motivate themselves, behave, during and after their programme of study. The observation of one of the researchers is that the self-efficacy of the students of Agricultural Education programme is very low compared to their counterparts in other disciplines like, Economics, Medicine, Law, Mass
Communication, Computer Science, Chemistry, Pharmacy, among others. Nationally, it is on record that not up to 7 persons have obtained First Class Honours in Agricultural Education programme since its introduction into the curriculum of Nigerian Universities. This is as a result of low self-efficacy because Schunk (1989) and Maddux (1993) found that self-efficacy predicts such outcomes as cognitive skill learning, smoking cessation, pain tolerance, athletic performance, career choices, assertiveness, coping with feared events, recovery from heart attack, and sales performance. A strong sense of efficacy enhances human accomplishment and personal well-being. Bandura (1997) posited that people with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engagement in activities. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. Therefore, the question now is: How could a curved fish or bent stick be straightened, to save the future graduates from the same situation? This condition of low self-efficacy could be redeemed with the use of Cognitive Behaviour Therapy (CBT) on the students to restructure their psychology on the programme before graduation.

The terms Cognitive Therapy (CT) and the generic term Cognitive Behaviour Therapy (CBT) are frequently used to describe psychotherapies based on the cognitive model. The term CBT is also used for a group of techniques in which a cognitive approach and a set of behavioural procedures are combined. According to Knapp and Beck (2008), Cognitive Behaviour Therapy is a form of psychotherapy that emphasises the important role of thinking on how one feels and what one does. It is based on the cognitive model; the way we perceive situations that influences how we feel emotionally. Beck and Rector (2005) explained that CBT is a form of talking therapy that combines cognitive therapy and behaviour therapy. It focuses on how one thinks about the things going on in one’s life, that is, one’s thoughts, images, beliefs and attitudes (one’s cognitive processes) and how this impact on the way one behaves and deal with emotional problems. It then looks at how the person can change any negative pattern of thoughts or behaviour that may be causing him difficulties. Gilbert (2007) expressed that CBT is a talking therapy which can help people look at the different situations that they find themselves and to understand their thoughts, emotions and behaviours. The idea is that our thoughts, emotions, physical symptoms and behaviour can all influence one another and therefore help to maintain unhelpful moods such as, low mood. In the view of the National Alliance on Mental Illness (NAMI, 2015), CBT is a form of treatment that focuses on examining the relationships between thoughts, feelings and behaviours. By exploring patterns of thinking that lead to self-destructive actions and the beliefs that direct these thoughts, people with mental illness can modify their patterns of thinking to improve coping. It is a type of psychotherapy that is different from traditional psychodynamic psychotherapy in that the therapist and the patient will actively work together to help the patient recover from their mental illness or challenges. Leahy (2001) noted that CBT is a general classification of psycho-therapy, based on social learning theory, which emphasizes how our thinking interacts with how we feel and what we do. It is based on the view that when a person experiences depression, anxiety, or anger that these stressors can be exacerbated (or maintained) by exaggerated or biased ways of thinking and that these patterns can be modified by reducing erroneous and maladaptive beliefs. CBT argues that it is the individual’s interpretation or view of that event or situation which causes the emotional distress. CBT works by focusing on the negative thoughts and learning how to challenge them, as well as learning how to change unhelpful behaviours such as avoidance.

On the importance of CBT, British Columbia Ministry of Health (2007) stressed that it attracts increasing levels of self-efficacy from health care professionals, consumers and families. This implies that CBT could be utilized to increase the self-efficacy of students of Agricultural Education for enhancing their achievement in the programme and keeping them in the profession after graduation. Hassell and Gevirtz (2009) observed that CBT assumes that changing maladaptive thinking leads to change in affect and behaviour. Therapists use CBT techniques to help individuals challenge their patterns of thoughts and beliefs and replace "errors in thinking such as over generalizing, magnifying
negatives, minimizing positives and catastrophizing” with “more realistic and effective thoughts, thus decreasing emotional distress and self-defeating behaviour”. Kanter, Schildcrout and Kohlenberg (2005) said that CBT helps individuals replace “maladaptive... coping skills, cognitions, emotions and behaviours with more adaptive ones” by challenging an individual’s way of thinking and the way that they react to certain habits or behaviours. Modern forms of CBT include a number of diverse but related techniques such as: exposure therapy, stress inoculation training, cognitive processing therapy, cognitive therapy, relaxation training, dialectical behaviour therapy and acceptance and commitment therapy. Besides, Knapp and Beck (2008) added that CBT can be organized in three major divisions: coping skills therapies, which stress the development of a repertoire of skills designed to give the patient the instruments to cope with in a variety of problem situations; problem-solving therapies, which emphasizes the development of general strategies to deal with a broad range of personal difficulties; and restructuring therapies, which emphasize the assumption that emotional problems are a consequence of maladaptive thoughts, being the goal of treatment to reframe distorted thinking and to promote adaptive thoughts. Therefore, the researchers are of the view that problem-solving therapies could have effect on the self-efficacy of students of Agricultural Education with the view to restructure their psychology towards taking up teaching of Agricultural Science in secondary schools after graduation. Though, there is no empirical evidence of the effect of CBT on the self-efficacy of students of Agricultural Education available to the researchers at present to proof or disproof the claim of the researchers.

Effect, in the submission of Moerman and Jonas (2002), means a change that results when a client is treated with placebo. It is the ability of the placebo to influence or produce a result in a client. Therefore, they continued that placebo effect is the therapeutic effect produced by [things] objectively without specific activity for the condition being treated. In this study, effect is the change that results in the self-efficacy of students after being exposed to Cognitive Behaviour Therapy (treatment) in relation to taking up their profession on graduation. This is a measure of the potentiality of CBT to influence students’ self-efficacy in Agricultural Education and making decision to enter in teaching profession, stay and progress in it. The effect is calculated by subtracting the mean of the pre-test score from the mean of the post-test score after the student’s exposure to cognitive behaviour therapy. Researchers have been concerned about gender-based differences in self-efficacy beliefs of students of Agricultural Education. The term gender refers to socially constructed relationship between men and women in the society (Bent, 2005). Gender issues and self-efficacy belief are fundamental concerns for CBT. Blenco (2005) carried out a study on gender and self-efficacy belief of College students. It was found that women showed lower dissatisfaction and improvement possibility. Ariel (2004) investigated gender differences in perceived self-efficacy and CBT of students using test anxiety. The female students had significantly lower self-efficacy in test anxiety than the male students. Whether gender influences self-efficacy belief of Agricultural students on their CBT is yet to be explored in this study. Thus, this study determined the effect of cognitive behaviour therapy on self-efficacy belief of students in Agricultural Education in Nigeria. It also explored the effect of gender on self-efficacy belief of Agricultural students

One of the researcher observed that a percentage of the graduates of Agricultural Education find it difficult to embark on their profession after graduation. They leave the profession for other types of occupations which are not related with their field of training/study and not better than their trained occupation. In an interview with 8 graduates who are within 5 years of graduation, it was discovered that they actually have the competence in the career but lack self-efficacy to enter into practicing the profession. Some recalled that they never applied for the programme in their Joint Admission and Matriculation Board Examinations but only to be given admission in the field. “Having no other alternative, I had to take up the course so as to become a University graduate”, one of the graduates expressed. A further enquiry from 21 final year students of Agricultural Education in two Universities, confirmed that about 77% of the students did not actually apply for the course but were offered admission into Agricultural Education programme. They said nature has a way of distributing people to different profession irrespective of one’s inclination or choice. But the question now is:
How could a dried fish or a bent stick be straightened? What could be done to save the future graduates from lack of self-efficacy such Agricultural Education students would be confident to profess after four years of training in a University? Based on empirical evidence available to the researchers in similar situations, they are of the belief that the condition could be arrested by the use of Cognitive Behaviour Therapy (CBT) on the students to restructure their cognition which could enhance their self-efficacy towards their programme of study before graduation. CBT has been shown in other fields to help individuals challenge their patterns and beliefs and replace "errors in thinking such as self-defeating behaviour" hence, the need to determine the effect of CBT on self-efficacy of students in Agricultural Education programme in Nigerian Universities.

The purpose of the study was to ascertain the effect of Cognitive Behaviour Therapy on self-efficacy of students of Agricultural Education programme in Nigerian Universities. Specifically, the study sought to determine the:

1. effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of students in Agricultural Education programme.
2. effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of male students in Agricultural Education programme.
3. effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of female students in Agricultural Education programme.

Research Questions

1. What is the effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of students in Agricultural Education programme?
2. What is the effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of male students in Agricultural Education programme?
3. What is the effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of female students in Agricultural Education programme?

Research Hypotheses

1. There is no significant difference in effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of students of Agricultural Education programme exposed and not exposed to the therapy in Universities.
2. There is no significant difference in effect of Cognitive Behaviour Therapy (CBT) on self-efficacy of male and female students of Agricultural Education in Nigerian Universities.

METHODOLOGY

The study is a quasi-experimental design of the effect of cognitive behaviour therapy on self-efficacy of students of Agricultural Education programme exposed and not exposed to the therapy in universities. The design is non-randomized control group, pre-test and post-test design, which allows maximum control for extraneous variables. The subjects’ are randomly assigned to the experimental and control groups. This design is appropriate for this study because it establishes cause and effect relationships between the independent variable and dependent variable. The study was carried out in Benue and Abia States, Nigeria.

The population of the study comprised all students of Agricultural Education in Nigerian Universities offering Agricultural Education degree programme in 2015 and 2016. Convenience purposive simple random sampling technique was adapted for the study. Because of the nature of the research design, two Federal Universities; Federal University of Agriculture, Makurdi, Benue State and Michael Okpara University of Agriculture, Umudike, Abia State, were sampled using convenience sampling technique. In the Universities, purposive sampling technique was used to sample only the final year class since they have already been exposed to more than 75% of the course content and probably have a clear view of Agricultural Education programme. Simple random sampling technique was used to assign the Universities into experimental and control group.

Three sets of instruments were developed by the researchers from literature reviewed. They are a 25-structured item questionnaire titled: Agricultural Education Self-efficacy Questionnaire (AESQ),
Cognitive Behaviour Therapy Self-efficacy Training Programme (CBTSTP) and Conventional Counselling Self-efficacy Training Programme (CCSTP). The AESQ was based on a four point rating scale of High Self-efficacy (HS), Average Self-efficacy (AS), Slight Self-efficacy (SS) and Low Self-efficacy (LS) with corresponding values of 40, 30, 20, and 10 respectively. The CBTSTP and CCSTP were developed by the researcher from literature with the help of experts in Guidance and Counselling and Educational Psychology for the purpose of training to restructure the self-efficacy of students to enable them analyze their negative thought patterns, irrational beliefs and negative misinterpretation of experiences and events about Agricultural Education programme and the occupation on graduation. This was to enable them cope with challenges and have more positive approach to Agricultural Education as a profession. In developing the programme, the researchers identified and stated the specific objectives to be achieved, activities of the trainers and trainees, strategies to be adopted and the evaluation process. Both the CBTSTP and CCSTP were designed to last for three days. The programmes were divided into 3 days, with each session lasting for 45 minutes. The instruments were validated by 3 experts to establish the face and content validity of the AESQ. One expert was from the Department of Agricultural Education programme, one from the Department of Educational Psychology (Guidance and Counselling unit) and the other from the Department of Science Education (Measurement and Evaluation unit), all form Federal University of Agriculture, Makurdi. Each validate was given a copy of the AESQ to critically scrutinize the relevance of the content on self-efficacy, the content coverage, language suitability and correctness of the wordings. The comments and suggestions of the experts were used to improve the original draft of the instrument to the present form that was used for data collection.

Trial testing was conducted involving students of Agricultural Education programme in Kogi State University, Anyigba, who were not part of the sample for the study. Cronbach Alpha reliability method was applied to determine the internal consistency of the instrument. A reliability coefficient of 0.81 was obtained which means that the questionnaire items were valid and reliable for the study. The rationale for the use of Cronbach alpha was because the AESQ items have no right or wrong answers, as they were not dichotomously scored. Besides, it was considered appropriate as it ensures the homogeneity of the items on the clusters. The researchers being lecturers in the Universities involved tactfully fixed a suitable time for the training programmes without actually announcing the existence of such research in the Universities. The reason was to enable the researchers obtain unbiased result from the natural setting. Since the training was to be done by the school counsellors who were the researcher’s assistants, there was no need for introduction of any of the lecturers to the University administration.

The researchers briefed the school counsellors who served as research assistants the purpose of the study. The researchers used Cognitive Behaviour Therapy, Self-efficacy Training Programme (CBTSTP) and Conventional Counselling Self-efficacy Training Programme (CCSTP) prepared for the study to train the counsellors for the experimental and control groups respectively. The researcher made sure that the counsellors acquired the necessary competencies in their different areas before the commencement of the actual programme through mock session with the students who were not part of the study. At the beginning of the treatment, Agricultural Education Self-efficacy Questionnaire (AESQ) was administered on the students on both groups as pre-test. At the end of the treatment programme, one week gap was given and then, the AESQ was administered to students again in both experimental and control groups as posttest. The mean posttest score of the experimental group was statistically compared with the mean posttest score of the control group using analysis of covariance (ANCOVA). Mean was used to answer the research questions while ANCOVA was used to test the hypotheses at 0.05 level of significance.

In answering the research question, the effect of CBT was determined as follows.

1. The mean ($X_1$) of pretest scores was calculated for each group of students (treatment and control, male and female).
2. The mean ($X_2$) of post-test scores was calculated for each group of students (treatment and control, male and female).
3. The effect (E) was determined by subtracting the mean (X₁) of pretest from the mean (X₂) of post-test scores of each group. That is, E = X₂ - X₁ (Asogwa, 2014).

The decision was that where E is:

a. positive (+), it indicated that CBT increases students’ self-efficacy in Agricultural Education programme.
b. negative (-), it indicated that CBT decreased students’ self-efficacy in Agricultural Education programme.
c. zero (0), it indicated that the CBT neither increased nor decreased students’ self-efficacy in Agricultural Education programme.
d. Meanwhile, the magnitude of E indicated the extent to which CBT increased or decreased students’ self-efficacy in Agricultural Education programme.

In testing of hypotheses using ANCOVA, the pretest scores were used as a covariate of the posttest scores. Therefore, hypothesis of no significant difference was rejected where the p-value was less than the alpha value of 0.05 while it was not rejected where the p-value was equal to or greater than the alpha value of 0.05.

RESULTS

The results of the study are presented in Tables 1-5 below.

Table 1: Mean and Standard Deviation of Self-efficacy of Students Exposed to Cognitive Behaviour Therapy and Conventional Counselling

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number of students</th>
<th>Pre-test Mean</th>
<th>Pre-test SD</th>
<th>Post-test Mean</th>
<th>Post-test SD</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT</td>
<td>48</td>
<td>24.81</td>
<td>3.55</td>
<td>39.65</td>
<td>2.15</td>
<td>14.84</td>
</tr>
<tr>
<td>CC</td>
<td>75</td>
<td>28.67</td>
<td>2.20</td>
<td>31.71</td>
<td>2.22</td>
<td>3.04</td>
</tr>
</tbody>
</table>

N = Number of Students, SD = Standard Deviation, CBT = Cognitive Behaviour Therapy and CC = Conventional Counselling

Data in Table 1 shows that the effect of cognitive behaviour therapy (CBT) and conventional counselling (CC) on students’ self-efficacy in agricultural education programme in the universities are 14.84 and 3.12 respectively. The CBT increased students’ self-efficacy in agricultural education programme more than CC by 11.72. The implication is that the cognitive behaviour therapy has effect of enhancing students’ self-efficacy in agricultural education programme in the universities.

Table 2: Analysis Of Covariance (ANCOVA) of Effect of CBT And CC on Students’ Self-efficacy in Agricultural Education Programme

<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>225.418</td>
<td>2</td>
<td>112.709</td>
<td>10.458</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>312.613</td>
<td>1</td>
<td>312.613</td>
<td>29.007</td>
<td>.000</td>
</tr>
<tr>
<td>Pretest</td>
<td>155.943</td>
<td>1</td>
<td>155.943</td>
<td>10.758</td>
<td>.000</td>
</tr>
<tr>
<td>Group</td>
<td>39.078</td>
<td>1</td>
<td>39.078</td>
<td>3.626</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>1293.208</td>
<td>120</td>
<td>10.777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>166846.000</td>
<td>123</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1518.626</td>
<td>122</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .148 (Adjusted R Squared = .108), Significant at p ≥ .05.

Data in Table 2 shows a p-value of .00 which is less than the alpha value of .05. This indicates that there was a statistical significant difference in the effect of CBT and CC on students’ self-efficacy in
Agricultural Education programme. Therefore, the hypothesis of no significant difference in the effect of CBT and CC on students’ self-efficacy in Agricultural Education programme was rejected.

### Table 3: Mean and Standard Deviation of Effect of CBT and CC on Male Students’ Self-efficacy in Agricultural Education Programme

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number of students</th>
<th>Pre-test Mean</th>
<th>Pre-test SD</th>
<th>Post-test Mean</th>
<th>Post-test SD</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT male</td>
<td>17</td>
<td>25.00</td>
<td>2.95</td>
<td>38.31</td>
<td>2.27</td>
<td>13.31</td>
</tr>
<tr>
<td>CC male</td>
<td>36</td>
<td>25.98</td>
<td>3.75</td>
<td>28.37</td>
<td>2.30</td>
<td>2.39</td>
</tr>
</tbody>
</table>

N = Number of Students, SD = Standard Deviation, CBT = Cognitive Behaviour Therapy and CC = Conventional Counselling

Data in Table 3 shows that the effects of CBT and CC on the male students’ self-efficacy in Agricultural Education programme in the universities are 13.31 and 2.39 respectively. The CBT improves male students’ self-efficacy in Agricultural Education programme more than CC by 10.92. This indicates that CBT has effect on male students’ self-efficacy in Agricultural Education programme in the universities.

### Table 4: Mean and Standard Deviation of Effect of CBT and CC on Female Students’ Self-efficacy in Agricultural Education Programme

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number of students</th>
<th>Pre-test Mean</th>
<th>Pre-test SD</th>
<th>Post-test Mean</th>
<th>Post-test SD</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT female</td>
<td>31</td>
<td>25.23</td>
<td>4.07</td>
<td>39.14</td>
<td>2.30</td>
<td>13.91</td>
</tr>
<tr>
<td>CC female</td>
<td>39</td>
<td>26.20</td>
<td>2.94</td>
<td>30.04</td>
<td>1.98</td>
<td>3.84</td>
</tr>
</tbody>
</table>

N = Number of Students, SD = Standard Deviation, CBT = Cognitive Behaviour Therapy and CC = Conventional Counselling

Data in Table 4 revealed that the effects of CBT and CC on the female students’ self-efficacy in Agricultural Education programme in the universities are 13.91 and 3.84 respectively. CBT increases female students’ self-efficacy in Agricultural Education programme more than CC by 10.07. This means that CBT has effect of improving female students’ self-efficacy in Agricultural Education programme in the Universities.

### Table 5: Analysis of Covariance (ANCOVA) of Effect of CBT on Male and Female Students’ Self-efficacy in Agricultural Education Programme

<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>634.028(^a)</td>
<td>2</td>
<td>317.014</td>
<td>9.272</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>14.710</td>
<td>1</td>
<td>14.710</td>
<td>0.430</td>
<td>.000</td>
</tr>
<tr>
<td>Pretest</td>
<td>330.931</td>
<td>1</td>
<td>330.931</td>
<td>9.680</td>
<td>.106</td>
</tr>
<tr>
<td>Gender</td>
<td>19.731</td>
<td>1</td>
<td>19.731</td>
<td>0.577</td>
<td>.110</td>
</tr>
<tr>
<td>Error</td>
<td>1538.494</td>
<td>45</td>
<td>34.1888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>121216.000</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>2172.522</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) R Squared = .292 (Adjusted R Squared = .216), Significant at p≥ .05.

Data in Table 5 shows a p-value of .110 which is greater than the alpha value of .05. This indicates that there was no statistical significant difference in the effect of CBT on male and female students’ self-efficacy in Agricultural Education programme. Therefore, the hypothesis of no significant difference in the effect of CBT on male and female students’ self-efficacy in Agricultural Education programme was not rejected.
RESULTS AND DISCUSSION
The result of this study showed that CBT has effect of enhancing students’ self-efficacy in Agricultural Education programme in the universities. The result also showed that there was a statistical significant difference in the effect of CBT and CC on students’ self-efficacy in Agricultural Education programme. The finding has the support of Yahaya (2006), who investigated the effect of cognitive restructuring on the attitudes of secondary school students in Ilorin towards HIV/AIDS patients. The study revealed that cognitive restructuring strategy was effective in modifying the subjects’ attitudes HIV/AIDS patients. The attitudes of the experimental group were found to be better than that of the control group after exposure to cognitive restructuring strategy. On the hypothesis, there is a contradiction because the present study showed that there was a statistical significant difference in the effect of CBT and CC on the students’ self-efficacy in Agricultural Education programme, while Yahaya found that there was no significant difference in the attitude of the control group at pre-and post test level. Also, Obi-Nwosu (2007) in a study on the effects of Rational Emotive Therapy (RET) and Systematic Desensitization on anxiety among caesarean section (CS) patients, found that both RET and Desensitization groups showed significantly lower anxiety than control but RET did not show significantly reduced anxiety compared with desensitization. The result of the study also revealed that CBT has effect of improving the male and female students’ self-efficacy in Agricultural Education programme in the Universities. Besides, there was no statistical significant difference in the effect of CBT on the male and female students’ self-efficacy in Agricultural Education programme. The implication is that gender is not a significant factor in the effect of CBT on increasing the male and female students’ self-efficacy in Agricultural Education programme in the Universities. The finding of the study is in agreement with Ali and Basavarajappa (2013), in a study on effectiveness of cognitive behaviour therapy on self-efficacy among high school students, where it was found that the comparison of means in post-test showed a significant difference between the scores of subjects in two groups, indicating a significant increase in experimental group rather than the control group in self-efficacy. Meanwhile, the effectiveness of CBT on self-efficacy regarding gender and grades was not significant. Also, Okoye and Adebiyi (2015), in a study on effects of cognitive and rational emotive behaviour therapies on drug abuse of senior secondary school students in Ibadan, found that there was significant main effect of treatment on the ability of student’s to overcome their drug abuse challenges, but further revealed that there was no significant difference in the main effect of age between (younger and older); gender (male and female) on the drug abuse act of student participants. The finding of this study contradicts the findings of Asihka (2014) in a study on the effect of cognitive restructuring on the reduction of Mathematics anxiety among senior secondary school students in Ogun State, Nigeria. The study revealed that male students had more reduction in Mathematics anxiety than female students. The study further disclosed that the effect of cognitive restructuring on gender was statistically significant with male students having more reduction in Mathematics anxiety than female students. The findings of the authors cited helped to add credence to the result of this study.

CONCLUSION AND RECOMMENDATIONS
There is established evidence that a good number of students in Agricultural Education programme in the Nigerian Universities never applied for the course in their Join Admission matriculation Board examination. Their admission into the course was not based on their consent but they had no alternative when the list came out than register to join other students during matriculation in the Universities. As a result, many of the students have no much interest and lack confidence in the course to the extent that they abandoned the profession after graduation. This gave the researchers a concern to find a lasting solution that could boost their self-efficacy in Agricultural Education programme to arrest the situation. Besides, none of the Universities offering Agricultural Education programme has a well-known structured programme of follow-up study for their graduates; they only seek letter of employment from their graduates during accreditation exercise.
Based on the analysis of the data collected and analyzed, it was concluded that CBT has effect of enhancing students’ self-efficacy in Agricultural Education programme in the Universities. It also revealed that CBT has effect of increasing male and female students’ self-efficacy in Agricultural Education programme in the Universities. It was therefore, recommended that:

1. students of Agricultural Education, should always make themselves available to the University Psychologists and Counsellors to benefit from the effect of CBT in enhancing self-efficacy to enable them take up employment in their profession after graduation;
2. the Department of Agricultural Education should organize seminar for their students at least once every session involving the University Psychologists and Counsellors to expose the students to job opportunities in Agricultural Education and also enhance their self-efficacy towards securing one on graduation.
3. school Psychologists and Counsellors should regularly apply Cognitive Behaviour Therapy in enhancing students’ self-efficacy in Agricultural Education in Nigerian Universities;
4. the school Counsellors should use findings of this study to establish a theoretical and empirical basis to adopt CBT as a suitable method of enhancing male and female students’ self-efficacy in Agricultural Education in Nigerian Universities; and
5. researchers in other Departments in Faculties or Colleges of Education in Universities should replicate this study to confirm or disapprove the findings in their field of study in enhancing students’ self-efficacy in their courses.

REFERENCES


