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# COMPARATIVE EFFECTS OF COGNITIVE RESTRUCTURING AND SELF-MANAGEMENT TECHNIQUES ON ACADEMIC PROCRASTINATION AMONG UNDERGRADUATE STUDENTS IN NIGER STATE, NIGERIA

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## Abstract

*This study compared the effectiveness of cognitive restructuring technique and self-management technique on academic procrastination among undergraduate students in Niger State, Nigeria. One objective guided the study and one null hypothesis was formulated and tested at 0.05 levels of significance. Quasi-experimental design involving pre-test post-test experimental groups design was adopted for the study. The population of this study comprised of one hundred and seventy-nine (179) male and female undergraduates identified with academic procrastinating behaviour in three sample departments in Federal University of Technology, Minna, Ibrahim Badamasi Babangida University, Lapai and Abdulkadir Kure University, Minna. A total sample of forty (40) male and female participants were selected through purposive sampling technique to participate in the study, with twenty (20) assigned to the cognitive restructuring technique experimental group and twenty (20) assigned to the self-management technique experimental group. Academic Procrastinating Observational Scale (APOS) and Students' Academic Procrastinating Behaviour Questionnaire (SAPBQ) were used for data collection, and the instruments were validated by three experts from the Department of Counselling Psychology, IBBU Lapai. Test re-test method was used to obtain the reliability coefficient and a co-efficient value of 0.79 was observed. The data collected were analyzed through the use of Statistical Package for Social Sciences version-24 (SPSS-version 24). Frequency counts and percentage were used to present the demographic information of the participants, and independent sample t-test was used to test the hypothesis at 0.05 levels of significance. The findings of the study revealed that there is no significant differential effect of cognitive restructuring technique and self-management technique on academic procrastination among undergraduate students in Niger State. Based on this finding, the researcher concluded that both cognitive restructuring technique and self-management technique are equally effective intervention techniques for helping students overcome academic procrastination. The researcher recommended among others that professional university guidance counsellors should be encouraged to use either cognitive restructuring technique or self-management technique, or a combination of both, in reducing academic procrastination among undergraduate students, since neither technique showed superiority over the other.*

**Keywords:** Academic, Cognitive, Comparative, Effectiveness, Procrastination, Restructuring, Self-Management, Techniques.

## Introduction

Higher education plays a vital role in developing the knowledge, skills, and competencies required for individual advancement and national development. However, undergraduate students often encounter academic demands such as assignments, examinations, projects, lectures, and other competing responsibilities that require effective time management and self-regulation. When students experience difficulty managing these demands, they may postpone important academic activities despite knowing that such delays can negatively affect their academic outcomes. This behaviour is commonly referred to as academic procrastination, which involves the unnecessary or repeated delay of academic tasks until a later time. Academic procrastination can contribute to poor study habits, increased academic stress, missed deadlines, and reduced academic achievement among undergraduates. In Niger State, where undergraduate students in universities and other tertiary institutions face various academic and personal challenges, addressing procrastination is important for improving students' academic functioning.

Academic procrastination, the tendency to voluntarily and irrationally delay academic tasks despite an awareness of the negative consequences that will likely follow, remains one of the most persistent behavioural challenges confronting undergraduate students globally (Steel, 2017). It manifests in delayed assignment submission, last-minute examination preparation, and avoidance of academic responsibilities, and it has been consistently linked to poor academic performance, heightened stress, anxiety and diminished self-esteem among students (Balkis, 2016). In Nigerian public universities, informal reports from academic advisers and counsellors suggest that a considerable proportion of undergraduates habitually postpone coursework, a pattern that has continued to attract the attention of counselling psychologists and educational researchers.

The university years are arguably the first period in which students are exposed to the highest level of independence from parents and other adults (Santrock, 2020). This new independence comes with responsibilities that are largely determined by the extent to which students effectively utilize their time for competing demands, including academic, social, personal and spiritual obligations. Because these students are relatively free to choose how and when to spend their time, many drift into procrastination, particularly with academic-related tasks (Vargas, 2017). Vargas (2017) observed that procrastination behaviour is a very common and serious problem, estimating that between 75% and 90% of university students engage in academic procrastination to varying degrees, while Klassen et al. (2019) found that more than half of undergraduate participants in

their study reported spending three or more hours a day procrastinating on academic tasks. The consequences of academic procrastination are well documented. Hussain and Sultan (2020) note that these consequences include low academic achievement, examination failure, heightened anxiety, a sense of inferiority, discontinuation of study, and outright dropout from academic programmes. Psychological intervention techniques such as cognitive restructuring, which helps students identify and replace unhelpful thoughts that contribute to procrastination, and self-management, which emphasizes goal setting, self-monitoring, time management, and self-reinforcement, may provide useful approaches for reducing procrastinating behaviours. Therefore, comparing the effects of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State, Nigeria, is important for identifying intervention approaches that can support students in developing more effective academic behaviours.

Cognitive restructuring technique is a counselling intervention that helps clients understand the influence of their thoughts and feelings on behaviour, guiding them to replace negative, irrational thoughts and beliefs with more positive, rational ones (Ali, 2023). Its theoretical foundation lies in Ellis's (1962) Rational Emotive Behaviour Therapy, which holds that it is not an activating event itself that produces an emotional or behavioural consequence, but rather the belief the individual holds about that event; where such beliefs are irrational, they generate maladaptive consequences such as academic procrastination, and disputing these beliefs produces more rational, adaptive outcomes.

Self-management is a psychological intervention technique which emphasizes goal setting, self-monitoring, time management, and self-reinforcement, may provide useful approaches for reducing procrastinating behaviours. Self-management technique is a strategy through which an individual is trained to take personal responsibility for regulating his or her own behaviour using skills such as goal-setting, self-monitoring, self-instruction, self-control and self-reinforcement (King-Sears, 2016; Egbochuku et al., 2019). Its theoretical foundation lies in Bandura's (1986) Social Cognitive Theory, which emphasises self-regulation, the capacity of an individual to observe his or her own behaviour, judge it against an internal standard, and administer self-produced consequences. Rather than depending on an external authority to enforce discipline, self-management technique gradually transfers responsibility for behavioural change from the counsellor to the client.

Although both techniques have independently demonstrated effectiveness in reducing academic procrastination and related maladaptive behaviours among students (Oguzie, Obi & Nnadi, 2019; Frayne & Geringer, 2023; Fitri, 2023), comparatively few studies have directly compared the two techniques against each other within the same study to determine whether one offers a distinct advantage over the other. This gap is of practical significance to counselling psychologists and university guidance counsellors, who must often choose between multiple available techniques when designing intervention programmes, frequently without empirical guidance on which technique, if either, produces superior outcomes.

The available comparative evidence outside Nigeria remains mixed. Rozental et al. (2015) found that cognitive behavioural therapy components, including cognitive restructuring, and behavioural self-regulation strategies both significantly reduced procrastination with no statistically significant difference in overall effectiveness, while Steel (2017), in a meta-analytic review, concluded that no single intervention type consistently outperforms others in reducing procrastination. On the contrary, other researchers have suggested that cognitive-based interventions may hold a relative advantage over purely behavioural self-management approaches, particularly where the procrastination is driven by deep-seated irrational beliefs rather than a lack of organizational skill. This lack of consensus, combined with the scarcity of Nigerian-based comparative studies, provided the motivation for the present study, which directly compared the effectiveness of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State, Nigeria.

**Statement of the Problem**

University education is intended to equip students with the knowledge, skills, competencies and attitudes required for academic excellence, personal development and effective participation in the future workforce and leadership of society. However, the achievement of these objectives is increasingly threatened by academic procrastination among undergraduate students**.** Academic procrastination refers to the persistent and unnecessary delay in initiating or completing important academic tasks despite being aware that such delay may result in undesirable consequences. Among undergraduate students, this may manifest in postponing reading, assignments, project work, examination preparation, research activities and other academic responsibilities until the available time becomes insufficient.

The researcher has observed that some undergraduate students spend considerable amounts of time on social activities, entertainment, smartphones, social media, online chatting, gaming and other non-academic engagements at the expense of their academic responsibilities. Consequently, academic tasks that ought to be completed progressively are frequently postponed until deadlines are imminent. Such behaviour may result in inadequate preparation for examinations, late submission of assignments, poor-quality academic work, reduced academic engagement and unsatisfactory academic performance. Persistent procrastination may also expose students to unnecessary academic pressure, anxiety, stress, guilt and feelings of inadequacy, thereby undermining their confidence and ability to regulate their academic behaviour effectively.

The problem of academic procrastination may be associated with the way students think about and respond to their academic responsibilities. Some students may hold irrational or unhelpful thoughts such as believing that they must be in the perfect mood before studying, that difficult academic tasks should be avoided, or that they perform better under pressure. Such maladaptive thoughts can encourage avoidance and delay of academic tasks. Similarly, some students may experience difficulties with self-management, including ineffective time management, poor goal setting, inadequate planning, weak self-monitoring and difficulty controlling distractions. These challenges can make it difficult for students to initiate and sustain appropriate academic behaviours.

Although academic procrastination is a significant concern among undergraduate students, merely identifying its existence does not adequately address the problem. There is therefore a need for counselling interventions that can help students modify maladaptive thought patterns and develop effective behavioural self-regulation skills. Cognitive restructuring may help students identify, challenge and replace irrational or counterproductive thoughts that contribute to academic delay, while self-management techniques may enable students to develop appropriate goal setting, planning, time management, self-monitoring and self-reinforcement behaviours necessary for timely completion of academic tasks.

The critical concern, therefore, is whether these counselling techniques can effectively reduce academic procrastination among undergraduate students and whether one technique is more effective than the other. This creates the need for an empirical investigation to determine the

comparative effects of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State, Nigeria**.** The outcome of such a study may provide empirical evidence on an appropriate counselling approach for helping undergraduate students overcome academic procrastination and develop more effective academic self-re

**Objectives of the Study**

Specifically, the following objective guided the study:

1. To find out the differential effect of cognitive restructuring technique and self-management technique on academic procrastination among undergraduate students in Niger State.

**Research Questions**

The following research question was raised to guide the study:

1. What is the differential effect of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State?

**Research Hypothesis**

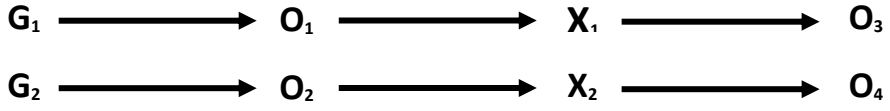
The following null hypothesis was tested at the .05 level of significance:

HO1: There is no significant differential effect of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State.

**Methodology**

Quasi-experimental design involving pre-test and post-test, two experimental groups design was used for the study. According to David and John (2017) quasi-experimental design establishes cause-and-effect relationships. Lambert (2019) indicated that quasi-experimental design involves the manipulation of one or more independent variables but there is no random assignment of participants to conditions. In this design, the experimenter (researcher), under controlled conditions, manipulated the independent variables, which are cognitive restructuring technique and self-management technique, after which their effects on academic procrastination were observed, recorded and compared. The quasi-experimental design involving pre-test and post-test for two experimental groups is graphically represented in Figure 1 as follows:

Figure 1: Pre-Test Post-Test for Two Experimental Groups Design



Where: G1 = Cognitive restructuring technique experimental group; G2 = Self-management technique experimental group; O1 = Pre-test administered to the cognitive restructuring technique experimental group; O2 = Pre-test administered to the self-management technique experimental group; X1 = Treatment using cognitive restructuring technique; X2 = Treatment using self-management technique; O3 = Post-test for the cognitive restructuring technique experimental group; O4 = Post-test for the self-management technique experimental group.

The population of this study comprised of one hundred and seventy-nine (179) undergraduates identified with academic procrastinating behaviour in three sample departments in Federal University of Technology, Minna, Ibrahim Badamasi Babangida University, Lapai and Abdulkadir Kure University, Minna, which were determined through the use of Academic Procrastination Observational Scale (APOS) by Cakici (2003). Both male and female students with academic procrastinating behaviour were involved in this study. For the purpose of this comparative study, a sample of forty (40) male and female undergraduates relevant to the two treatment arms was utilised. Multi-stage sampling procedure was used to select the sample for the study. In the first stage, purposive sampling technique was used to identify undergraduates with academic procrastinating behaviour. In the second stage, simple random sampling technique was used to select one department each from two of the public universities in Niger State for the two treatment groups. In the third stage, purposive sampling technique was used to select twenty (20) male and female undergraduates with academic procrastinating behaviour in each sampled department, making a total of forty (40) male and female students. The selection was based on the students with the highest scores on the Academic Procrastination Observational Scale (APOS). Twenty (20) participants from the Department of Urban and Regional Planning, Federal University of Technology, Minna were assigned to the experimental group 'A', which was exposed to cognitive restructuring technique treatment, while twenty (20) participants from the Department of Science Education, Ibrahim Badamasi Babangida University, Lapai were assigned to experimental group 'B', which was exposed to self-management technique treatment. The selection of twenty (20) participants for each group is in line with the opinion of Ezhumalai (2018), who maintained that for a counselling session to be effective, the group membership need not be too large. Also, Ray (2000), and Cohen and Marison (2000) emphasized that a smaller sample size is most appropriate in counselling interventions.

Academic Procrastinating Observational Scale (APOS) and Students' Academic Procrastinating Behaviour Questionnaire (SAPBQ) were used as instruments for collection of data in this study. Academic Procrastinating Observational Scale (APOS) was adapted from Cakici (2003) and was used to identify students with procrastinating behaviour; it has ten (10) items on characteristics that are expected from an academic procrastinator, structured on a four-point modified Likert scale (Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1). Students' Academic Procrastinating Behaviour Questionnaire (SAPBQ) was adapted from Sabastine (2019) with little modifications to suit the present study, and this instrument was validated by three experts from the Department of Counselling Psychology, IBBU Lapai, while reliability was established through pilot testing. Test-retest method of reliability was used and a reliability co-efficient value of 0.79 was obtained. The instrument has two sections: Section A contains respondents' demographic information (school, level, gender and age), while Section B has twenty-five (25) items on characteristics of academic procrastinating behaviour, structured on a four-point modified Likert scale (Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree, scored 4, 3, 2 and 1 respectively). The SAPBQ was used to collect pre-test and post-test data for both experimental groups. An interval of eight (8) weeks between pre-test and post-test of the sampled groups was employed in order to determine the differential effect of the two independent variables (cognitive restructuring technique and self-management technique) on the dependent variable (academic procrastinating behaviour) among the participants.

The researcher was assisted by two trained research assistants (one from each selected department). The researcher and research assistants administered the Academic Procrastination Observational Scale (APOS) to undergraduates in the sample departments to identify students with academic procrastination. Students with APOS scores ranging from 21 to 40 points were considered as students with academic procrastination, while students who scored 20 points and below were considered as students with occasional academic procrastination and were not included in the study. Subsequently, the Students' Academic Procrastinating Behaviour Questionnaire (SAPBQ) was administered to collect pre-test data for participants in both experimental groups, which was kept and compared with the post-test data obtained after the 8-week treatment sessions. One session was held per week, making a total of eight sessions, and each session lasted between 45 minutes and 1 hour. Experimental group 'A' received the cognitive restructuring technique module, progressing through establishing rapport, identifying negative automatic thoughts, challenging

irrational beliefs, replacing negative thoughts with positive alternatives, planning and goal-setting, developing motivation and reward systems, managing emotional barriers, and a final evaluation and termination session. Experimental group 'B' received the self-management technique module, progressing through establishing rapport, goal-setting, time-management strategies, self-monitoring, self-control and impulse regulation, self-reward and motivation enhancement, structured problem-solving, and a final evaluation and termination session. The data collected for this study was analyzed through the use of descriptive and inferential statistics. Frequency counts and percentage were used to present demographic information of the respondents, and inferential statistics of independent sample t-test was used to test the hypothesis at 0.05 levels of significance.

**Results**

**Table 1: Distribution of Participants by Group**

| Variable | Number | Percentage (%) |
|---|---|---|
| Experimental Group A (CRT) | 20 | 50% |
| Experimental Group B (SMT) | 20 | 50% |
| Total | 40 | 100% |

Results in table 1 revealed that out of forty (40) participants, twenty (20) participants (representing 50%) were assigned to experimental group 'A' (CRT), and twenty (20) participants (representing 50%) were assigned to experimental group 'B' (SMT).

**Table 2: Distribution of Participants by Gender**

| Variable | Number | Percentage (%) |
|---|---|---|
| Male | 18 | 45% |
| Female | 22 | 55% |
| Total | 40 | 100% |

Results in table 2 showed that out of forty (40) participants that participated in this study, eighteen (18) participants (representing 45%) were male undergraduates, while twenty-two (22) participants (representing 55%) were female undergraduates.

**Hypothesis Testing**

In this section, the null hypothesis was tested at 0.05 levels of significance.

HO1: There is no significant differential effect of cognitive restructuring technique and self-management technique on academic procrastination among undergraduate students in Niger State.

**Table 3: t-test Comparison of the Post-test Mean Scores of Experimental Group 'A' (CRT) and Experimental Group 'B' (SMT) on Academic Procrastination**

| Variable | N | Mean | SD | df | t-value | P-value |
|---|---|---|---|---|---|---|
| Experimental Group A (CRT) | 20 | 35.11 | 4.62 | 38 | 10.49 | 0.094 |
| Experimental Group B (SMT) | 20 | 34.83 | 4.39 | | | |

*Not Significant at 0.05 levels*

The result in table 3 showed the t-test comparison of the post-test mean scores of experimental group 'A' (CRT) and experimental group 'B' (SMT) on academic procrastination among undergraduate students in Niger State. The mean score of the participants in experimental group 'A' (CRT) is 35.11 and standard deviation of 4.62, while the mean score of the participants in experimental group 'B' (SMT) is 34.83 and standard deviation of 4.39. The t-test result was t = 10.49, df = 38 and p = 0.094. Since the p-value is greater than 0.05 levels of significance, it indicated that there is no significant differential effect of cognitive restructuring technique and self-management technique on academic procrastination among undergraduate students in Niger State. Thus, the null hypothesis was retained.

**Discussion of Findings**

The finding of the hypothesis revealed that there is no significant differential effect of cognitive restructuring and self-management techniques on academic procrastination among undergraduate students in Niger State. This finding is supported by empirical evidence suggesting that both interventions are effective in reducing procrastination through different but complementary mechanisms. For instance, Egbunike and Nwankwo (2021) found that cognitive restructuring significantly reduced academic procrastination among students, while similar improvements were also reported through behavioural-based interventions such as study skills training, indicating comparable effectiveness. Likewise, Akinsola et al. (2017) reported that self-management

strategies such as goal-setting and time-management significantly reduced procrastination, producing outcomes similar in magnitude to cognitive-based interventions in student populations. In addition, Onwuegbuzie and Jiao (2020) observed that both cognitive-related and self-regulatory strategies were effective in reducing academic procrastination among university students, with no clear superiority between intervention types.

Similarly, Rozental et al. (2015) found that cognitive behavioural therapy components, including cognitive restructuring, and behavioural self-regulation strategies both significantly reduced procrastination, with no statistically significant difference in overall effectiveness. Zimmerman (2022) also established that cognitive and behavioural self-regulated learning strategies are equally important and mutually reinforcing in improving academic task completion and reducing delay behaviours. In addition, Steel (2017), through a meta-analytic review, concluded that no single intervention type consistently outperforms others in reducing procrastination, as both cognitive and behavioural approaches tend to produce moderate and comparable effect sizes. Collectively, these empirical evidences support the present finding that cognitive restructuring technique and self-management technique do not differ significantly in their effectiveness in reducing academic procrastination among undergraduate students.

Contrary to the present finding, some empirical studies suggest that cognitive-based interventions may be more effective than behavioural self-management approaches in reducing procrastination. For instance, Rozental et al. (2015) found that cognitive behavioural therapy interventions, particularly cognitive restructuring components, produced larger and more sustained reductions in procrastination compared to purely behavioural self-regulation strategies in some samples, indicating a relative advantage of cognitive techniques under certain conditions. Similarly, Steel (2017), in a comprehensive meta-analysis, reported that interventions targeting maladaptive cognitions such as fear of failure and irrational beliefs tend to yield stronger effect sizes than behavioural self-management strategies alone in some contexts, suggesting a possible difference in effectiveness between the two approaches. These empirical evidences collectively suggest that, while the present study found no significant differential effect, the relative effectiveness of cognitive restructuring technique and self-management technique may still depend on contextual factors such as the underlying cause of the procrastinating behaviour, thereby warranting further investigation.

**Conclusion**

On the basis of the findings of this study, it was concluded that cognitive restructuring technique and self-management technique are equally effective in reducing academic procrastination among undergraduate students in Niger State. Neither technique demonstrated a statistically significant advantage over the other, suggesting that university guidance counsellors can rely on either technique, or a combination of both, when designing intervention programmes to address academic procrastination among undergraduates.

**Recommendations**

Based on the findings of this study, the following recommendations were made:

1. University guidance counsellors should be encouraged to use either cognitive restructuring technique or self-management technique, since both were found to be equally effective in reducing academic procrastination among undergraduate students.
2. Counsellors may consider combining elements of both cognitive restructuring technique and self-management technique into a single intervention programme, since the two techniques operate through complementary mechanisms (cognitive and behavioural) that may reinforce each other.

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