

Self-Regulation and Academic Engagement among Undergraduate Students in Public Universities in Anambra State, Nigeria

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Abstract: *This study examined the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State, Nigeria. The study aimed to determine the levels of self-regulation and academic engagement among students and to establish whether a significant relationship exists between the two variables. Three research questions guided the study while one null hypothesis was tested at 0.05 level of significance. The theoretical framework for this study is grounded in two complementary perspectives: Albert Bandura's Social Cognitive Theory (SCT) and Wilmar Schaufeli's Theory of Engagement. A descriptive correlational research design was adopted, and data were collected from 1,777 undergraduates using standardized instruments. Findings revealed that only 13 students (0.7%) exhibited low self-regulation, 496 (27.9%) demonstrated moderate self-regulation, while the majority, 1,268 (71.4%), showed high self-regulation. Similarly, 473 students (26.6%) displayed moderate academic engagement, while 1,304 (73.4%) exhibited high engagement levels, with no respondents recording low engagement scores. The correlation analysis yielded a coefficient of $r = 0.428$ with a p -value of 0.000, indicating a statistically significant moderate positive relationship between self-regulation and academic engagement. The study concludes that self-regulation plays a crucial role in enhancing academic engagement among undergraduates. Based on the findings, it was recommended that universities should incorporate structured programmes that teach students goal-setting, time management, and self-monitoring strategies. These can be embedded into general studies or first-year orientation courses to help students develop effective learning habits early.*

Keywords: Self-regulation, Academic engagement, undergraduates, motivation, learning behaviour, Anambra State.

INTRODUCTION

In recent years, educators and researchers have increasingly recognised academic engagement as a vital measure of learning quality. However, many students struggle with meaningful participation in their educational activities, leading to a concerning trend of disaffection and boredom in the classroom. This disengagement not only hampers individual learning but also affects overall classroom dynamics and academic achievement. Despite various strategies to improve student involvement, issues such as lack of motivation and inadequate support for active participation continue to challenge educators. As a result, many students remain uninvolved in school-related activities, which can hinder their academic achievement and personal development. This scenario raises significant concerns about the effectiveness of current educational approaches and highlights the urgent need for interventions that can enhance academic engagement among students.

Engagement refers to the level of attention, interest, curiosity, and involvement individuals show towards an activity or task. It encompasses a range of emotional, cognitive, and behavioural dimensions that reflect the degree to which individuals are actively participating and investing effort in their activities (Fredricks, Blumenfeld, and Paris, 2014). In the educational context, engagement is defined by Azevedo (2015) as the extent to which students are actively involved in and committed to their learning processes. This includes their participation in classroom activities, completion of assignments, and the overall effort and persistence they display towards their educational goals. In academic contexts, engagement is crucial for preventing student dropout and fostering high levels of academic success (Lei et al., 2018). This understanding has spurred a significant increase in research on academic engagement over the past decade. Thus, academic engagement extends the concept of engagement, and it refers to the degree to which students engage in educational learning tasks, such as school-related coursework and learning activities, in the process of formal education (Okafor, 2021). It is the combination of behavioural and emotional involvement in learning activities, which includes behaviours such as attendance, participation in class, completion of assignments, and the emotional investment in learning, such as interest, enthusiasm, and a sense of belonging (Fredricks, Blumenfeld, and Paris, 2014). Therefore, academic engagement in the context of this study refers to a student's feelings of interest, enjoyment, total involvement in learning activities and the willingness to exert effort to understand complex ideas.

Academic engagement, characterized by the extent to which students are actively involved in their learning processes, is a critical determinant of academic success and overall student development. However, in many public universities, particularly in Anambra State, Nigeria, there is a pervasive issue of low academic engagement among undergraduates. This problem manifests in various forms such as poor attendance, lack of participation in class activities, minimal interaction with academic content outside the classroom, and overall low academic achievement. These symptoms highlight a significant gap in the educational experience that can have far-reaching consequences on students' academic and personal development.

Recent studies highlight the increasing interest in this field and the substantial body of literature that has emerged on the issue of students' academic engagement (Boulianne and Theocharis,

2020; Jansen et al., 2019; Myint and Khaing, 2020). These studies collectively highlight the vital role of engagement in student retention and achievement, encouraging educators and researchers to devise strategies to boost student engagement in various educational settings. Many students face challenges such as large class sizes, limited resources, and socio-economic constraints. These factors can significantly impact behavioural engagement, such as class attendance and participation. Emotional engagement, including students' interest and enthusiasm for their studies, can also be adversely affected by these challenges (Okafor, 2021). Thus, addressing both behavioural and emotional aspects of academic engagement is essential in this context.

Addressing the problem of academic engagement is crucial because low engagement can be linked to poor academic achievement. Students who are not actively engaged are less likely to understand and retain course material, leading to lower grades and higher dropout rates. Moreover, engagement in academic activities is also associated with better psychological well-being, higher self-esteem, lower levels of stress and anxiety and fosters important life skills such as critical thinking, problem-solving, and effective communication (Babalola, Adewunmi and Okunola, 2023; Ekpenyong, Adediran and Adeyemi, 2019). These skills are essential for personal and professional success beyond the university.

Engaged students are more likely to develop essential life skills such as critical thinking, problem-solving, and emotional intelligence. These skills are crucial for their future personal and professional success. Thus, promoting academic engagement can lead to the development of well-rounded graduates who are better prepared to contribute to society. Among undergraduates in public universities, various psychological and social factors play significant roles in determining the extent of academic engagement. These psychological and social factors can include self-regulation.

Self-regulation as defined by Zimmerman (2000) refers to the process by which individuals control their behaviour, emotions, and thoughts towards achieving long-term goals. It involves setting goals, monitoring progress, and making adjustments to behaviours and strategies as needed to reach these goals (Odalonu and Anyamene, 2023). In learning contexts, self-regulation is defined as the ability of students to actively manage their own learning processes through planning, monitoring, and evaluating their understanding and performance (Ekpenyong, Adediran and Adeyemi, 2019). This involves adapting strategies to improve learning and maintain motivation. Therefore, in the context of this study, self-regulation is the process by which individuals control their behaviour, emotions, and thoughts towards achieving long-term goals by setting goals, monitoring progress, and adapting strategies to improve learning and maintain motivation.

Self-regulation is a critical factor in academic engagement, as evidenced by various studies. For example, Ekeke and Telu (2017) reported that cooperative and self-regulated learning styles positively impact students' achievement in biology, demonstrating the vital role of self-regulation in academic success. Ekpenyong, Adediran, and Adeyemi (2019) further supported this by highlighting the influence of self-regulation and social competence on the academic achievement of lower primary school pupils in Osun State, Nigeria. Babalola, Adewunmi, and

Okunola (2023) also identified self-regulation as a predictor of psychological well-being among undergraduates in Southwestern Nigeria, highlighting the broader impact of self-regulation beyond academic performance. Similarly, Ononuju et al. (2023) found a correlation between students' self-regulation and their academic achievement in biology in public secondary schools in Imo State, Nigeria, reinforcing the idea that self-regulation is essential for academic success.

Understanding and promoting self-regulation can lead to improved academic outcomes, better emotional stability, and overall positive student development. Students who are adept at self-regulation can manage their time efficiently, stay focused on tasks, and persist through challenges, all of which can contribute to better academic engagement. Furthermore, self-regulation can also help in maintaining emotional stability, as students learn to manage their stress, anxiety, and emotions which could likely lead to a more conducive learning environment and positive personal development. It is evident that a student's social environment and interactions play a significant role in their academic engagement. A positive social orientation, characterized by supportive relationships with peers and teachers, can enhance a student's motivation and commitment to academic tasks. When students feel connected and supported within their educational community, they are more likely to engage actively in their learning process. This sense of belonging and support fosters a positive social orientation, which can strengthen self-regulatory behaviours. When students feel socially connected and supported, they are more motivated to set and work towards academic goals, monitor their progress, and adjust their strategies in response to feedback and challenges.

Research has shown that social competence and supportive social interactions are linked to better academic outcomes. Ekpenyong, Adediran, and Adeyemi (2019) highlighted the influence of self-regulation on the academic achievement of lower primary school pupils. This indicates that students who are socially competent are more likely to engage in self-regulated learning behaviours. Similarly, the positive effects of self-regulated learning techniques on academic achievement were demonstrated in the work of Wul'an, Kazi, and Ariya (2023), whose findings suggest that fostering a positive social environment can enhance self-regulation, leading to better academic engagement and outcomes among university undergraduates. However, among students in Anambra State, Nigeria, especially the undergraduates, promoting self-regulation can be particularly beneficial. By creating an environment where students feel valued and supported, universities can foster self-regulatory behaviours that enhance academic engagement and emotional well-being. This holistic approach to student development can address academic challenges and promotes overall positive growth, preparing students for future academic and personal success.

The problem of academic engagement among undergraduates in public universities in Anambra State, Nigeria, is a critical issue that needs to be addressed to ensure the academic success and personal development of students. Studies such as Abubakar (2018), Mordi and Onoyase (2023) and Olubunmi and Kolawole (2023), have extensively explored the constructs of self-esteem, self-regulation, and social orientation in various educational contexts, both within and outside Nigeria, emphasising their significant roles in academic success and overall student development. Despite these insights, there remains a notable gap in understanding how self-

regulation specifically impact academic engagement among university undergraduates in Anambra State, Nigeria. While the importance of self-regulation has been highlighted in various educational settings, the unique context of public universities in Anambra State has not been adequately studied. This gap is critical because the socio-cultural and educational dynamics in Anambra State may present unique challenges and opportunities for fostering academic engagement. Therefore, this study aims to fill the gap by the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State, Nigeria.

Statement of the Problem

Academic engagement is a pivotal component of student success in higher education, having the tendency to influencing both academic performance and personal development. However, in public universities in Anambra State, Nigeria, there is a noticeable concern regarding low levels of academic engagement among undergraduates. This issue is characterized by inadequate participation in academic activities, lack of motivation, and poor academic performance. Poor academic engagement among university undergraduates can have significant consequences, both immediate and long-term. Academically, it can lead to lower grades, missed learning opportunities, and a higher likelihood of failing courses or dropping out. Disengaged students may feel isolated, miss out on collaborative learning experiences, and struggle to build supportive peer networks. Lack of engagement can contribute to feelings of frustration, stress, and diminished self-esteem, potentially leading to mental health challenges. In the long term, poor academic engagement can limit career prospects, reduce employability, and hinder personal and professional development, ultimately affecting the individual's quality of life.

While academic engagement has increasingly become a focal point in educational research globally, empirical studies that critically examine how individual and interpersonal factor such as self-regulation, shape academic engagement remain scarce within the Nigerian context, particularly in Anambra State. Existing literature offers limited insight into how these factors shape students' academic involvement. Although the construct have been recognized independently in broader academic discussions, its relationship with academic engagement has not been sufficiently tested empirically within the unique institutional framework of public universities in Anambra State. More specifically, the literature lacks understanding of how this variable functions collectively to enhance or hinder students' academic behaviours in local higher education settings. This omission presents a critical gap and seems to limit the capacity of educators, administrators, and policymakers to design evidence-based strategies tailored to the needs of university students in the region. Consequently, this study sought to fill this significant gap by investigating the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State, Nigeria.

Purpose of the Study

The main purpose of this study was to investigate the relationship among between self-regulation and academic engagement among undergraduates in public universities in Anambra State, Nigeria. Specifically, this research aimed to achieve the following:

1. Determine the self-regulation scores of undergraduates in public universities in Anambra State.
2. Determine the academic engagements scores of undergraduates in public universities in Anambra State
3. To examine the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State.

Research Questions

The following research questions guided the study:

1. What are the self-regulation scores of undergraduates in public universities in Anambra State?
2. What are the academic engagements scores of undergraduates in public universities in Anambra State?
3. What is the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State?

Hypotheses

The following null hypothesis was tested at 0.05 level of significance.

1. There is no significant relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State.

Theoretical Framework

The theoretical framework for this study is grounded in two complementary perspectives: Albert Bandura's Social Cognitive Theory (SCT) and Wilmar Schaufeli's Theory of Engagement. These theories provide a comprehensive explanation of how self-regulation influences academic engagement among undergraduate students. Social Cognitive Theory posits that learning and behaviour are shaped through the dynamic interaction of personal factors, behaviour, and environmental influences, a process known as triadic reciprocal determinism. Within this framework, students are viewed as active agents who regulate their thoughts, emotions, and actions. Central to SCT is self-efficacy, which influences motivation, persistence, and academic behaviour. Self-regulation, involving goal-setting, self-monitoring, and self-evaluation, enables students to manage their learning effectively. The theory also highlights the role of observational learning and social influences in shaping behaviour. In

educational contexts, students with strong self-efficacy and self-regulatory skills are more likely to demonstrate adaptive learning behaviours and sustained academic engagement.

Complementing SCT, the Theory of Engagement conceptualizes engagement as a positive psychological state characterized by vigor, dedication, and absorption. Vigor reflects students' energy and resilience in academic tasks, dedication represents their emotional commitment and sense of purpose, while absorption denotes deep concentration and immersion in learning activities. This theory emphasizes that engagement is driven by both personal and environmental resources and is distinct from the absence of burnout. Together, these theories explain that self-regulation enhances students' ability to remain motivated, focused, and emotionally invested in their studies, thereby fostering higher levels of academic engagement.

METHOD

Research Design

The study adopted a correlational research design to examine the relationships among self-esteem, self-regulation, social orientation, and academic engagement among undergraduates in Anambra State, Nigeria. This design was suitable for determining both the direction and strength of relationships between the study variables (Nworgu, 2015).

Area of the Study

The research was conducted in Anambra State, located in Nigeria's South-East geopolitical zone. The state comprises three senatorial zones: Anambra North, Central, and South and six education zones. It hosts two major public universities: Nnamdi Azikiwe University (NAU), Awka, and Chukwuemeka Odumegwu Ojukwu University (COOU), Igbariam. The diverse student population in these universities provided a rich background for the study.

Population and Sample

The population comprised 61,321 undergraduates enrolled in the two public universities during the 2024/2025 academic session—45,657 from NAU and 15,664 from COOU. A sample of 1,840 students (3% of the total population) was drawn, with 1,370 from NAU and 470 from COOU. Sampling involved a combination of simple random and proportionate stratified random techniques to ensure equal representation across faculties and departments.

Instrument for Data Collection

Two standardized instruments were utilized to collect data for this study. The Self-Regulation Questionnaire (SRQ), developed by Gauner and Noonan (2018), is a 15-item self-report instrument designed to measure an individual's ability to regulate their own behaviour and actions across different domains, including academics, personal goals, and daily activities. The SRQ focuses on three key components of self-regulation: Goal-setting, planning and self-monitoring. Respondents typically rate each item on a 5-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree." Higher scores indicate stronger self-regulatory

abilities, reflecting better goal-directed behaviour, disciplined planning, and consistent self-monitoring. The scale has internal consistency coefficient (Cronbach's alpha > 0.76).

Academic Engagement Scale (AES) – Veiga (2016): The Academic Engagement Scale is a multidimensional instrument designed to measure the extent to which students are emotionally, cognitively, behaviourally, and proactively involved in their learning. It consists of items structured around four dimensions: Cognitive engagement, affective engagement, behavioural engagement and agentic engagement. The AES uses a 5-point Likert scale, typically ranging from Strongly Disagree (1) to Strongly Agree (5). Higher scores indicate greater academic engagement across the four dimensions. The scale has been validated in several studies and demonstrates strong psychometric properties; including high internal consistency (Cronbach's alpha > 0.80).

Data Collection Procedure

Data were collected by the researcher and five trained assistants over a two-week period. Questionnaires were administered and retrieved on-site to ensure completeness and data integrity.

Method of Data Analysis

Data were analysed using SPSS version 23. Descriptive statistics (means, ranges, frequencies, and percentages) were used to answer research questions 1–4. Pearson Product Moment Correlation Coefficient (PPMCC) was applied to research questions 5–7, while multiple regression analysis was used for question 8. Hypotheses were tested at a 0.05 significance level. Correlation coefficients were interpreted according to Nworgu's (2015) strength classification, ranging from very weak ($r = 0.00-0.19$) to very strong ($r = 0.80-1.00$).

Results

Data from the field of study were analysed and presented in tables as follows:

Research Question 1: What are the self-regulation scores of undergraduates in public universities in Anambra State?

Table 1: Self-Regulation Scores of Undergraduates in Public Universities in Anambra State

Range of Scores	Frequency	Percent	Remark
15 – 29	13	.7	Low
30 – 44	496	27.9	Moderate
45– 60	1268	71.4	High
Total	1777	100.0	Total

Table 1 showed that out of the 1,777 respondents, only 13(0.7%) students fell within the low self-regulation category. A total of 496(27.9%) students demonstrated moderate self-regulation, while the majority, 1,268(71.4%), students exhibited high self-regulation. This

indicates that a substantial proportion of undergraduates in the study possess strong self-regulatory abilities, with very few recording low levels.

Research Question 2

What are the academic engagements scores of undergraduates in public universities in Anambra State?

Table 2: Academic Engagements Scores of Undergraduates in Public Universities in Anambra State

Range of Scores	Frequency	Percent	Remark
30 – 44	473	26.6	Moderate
45– 60	1304	73.4	High
Total	1777	100.0	

Table 2 showed that out of the 1,777 respondents, 473 (26.6%) students scored within the moderate academic engagement range, while the majority, 1,304 (73.4%) students, fell within the high academic engagement range. This indicates that most undergraduates in the study demonstrated a high level of academic engagement, with no respondents recording low engagement scores.

Research Question 3

What is the relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State?

Null Hypothesis 1

There is no significant relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State.

Table 3: Pearson r on the Relationship between Self-Regulation and Academic Engagement among Undergraduates in Public Universities in Anambra State

Source of Variation	N	Self-Regulation r	Academic Engagement r	Pvalue	Remark
Self-Regulation	1777	1	.428	0.000	Significant
Academic Engagement	1777	.428	1		

The result in Table 3 showed a correlation coefficient of $r = 0.428$, indicating a moderate positive relationship between self-regulation and academic engagement. This suggests that higher levels of self-regulation among students are associated with higher levels of academic engagement.

Analysis in Table 6 further revealed a p-value of 0.000. Since the p-value is less than the 0.05 level of significance, the null hypothesis was rejected. This result indicates a statistically significant moderate positive relationship between self-regulation and academic engagement, suggesting that students with higher self-regulation tend to exhibit higher levels of academic engagement.

DISCUSSION

The findings of this study showed that most undergraduates demonstrated strong self-regulatory abilities and high academic engagement. This suggests that many students are capable of setting goals, managing their learning, and maintaining focus on academic tasks. The high level of self-regulation may be due to students' awareness of personal responsibility and the influence of modern learning environments that encourage autonomy and digital learning (Zimmerman, 2000; Okolocha & Nwaukwa, 2020). These results align with Babalola, Adewunmi, and Okunola (2023) and Ononuju, Eze, and Ejiogu (2023), who found that self-regulated learners tend to perform better academically and show stronger motivation. The strong academic engagement observed supports the view of Fredricks, Blumenfeld, and Paris (2014) that engagement involves behavioural, emotional, and cognitive participation in learning. This finding is consistent with Lei, Cui, and Zhou (2018) and Azevedo (2015), who linked engagement and self-regulation to improved academic performance. Similarly, Odalonu and Anyamene (2023) and Wul'an, Kazi, and Ariya (2023) confirmed that self-regulation enhances motivation and resilience. Differences from Mordi and Onoyase (2023), who reported low motivation among undergraduates, may reflect variations in institutional support and learning environments. Overall, self-regulation and engagement appear to reinforce each other, contributing to effective learning among undergraduates.

The study also found a statistically significant moderate positive relationship between self-regulation and academic engagement among undergraduates in public universities in Anambra State. This means that students with higher levels of self-regulation; the ability to plan, monitor, and adjust their learning behaviour, tend to demonstrate greater involvement, persistence, and enthusiasm in academic tasks. This finding is logical because self-regulated learners typically set clear academic goals, manage their time effectively, and maintain focus despite distractions. Such students are more likely to engage deeply with learning materials, participate actively in class, and persist through challenges. In the Nigerian university setting, where students often face resource limitations and large class sizes, the ability to self-regulate can make a substantial difference to how consistently they engage with their studies.

Another reason for this result may be that self-regulation is not only a cognitive skill but also an emotional and motivational capacity. Students who can regulate their emotions, manage stress, and sustain motivation are better able to stay engaged even when the academic environment is demanding. Over time, this sustained engagement reinforces their self-regulatory habits, creating a positive cycle between the two constructs. The results agree with Ekeke and Telu (2017), who found that students with strong self-regulated learning styles performed better in biology and showed higher involvement in learning activities. They argued

that self-regulation promotes goal setting and persistence, which are essential for academic engagement. Similarly, Ononuju et al. (2023) reported a significant positive relationship between self-regulation and academic achievement in biology among secondary school students in Imo State. Although their focus was on achievement, they noted that self-regulated learners tend to participate more actively, suggesting an indirect link to engagement.

A comparable pattern emerged in Jansen et al. (2019)'s meta-analysis, which concluded that self-regulated learning interventions improved academic achievement partly through increased engagement. This supports the idea that self-regulation is not only a personal skill but also a process that fosters active involvement in learning tasks. In a more recent study, Babalola et al. (2023) also found that self-regulation significantly predicted psychological well-being among undergraduates in Southwestern Nigeria, indicating that students with higher self-regulation are better equipped to cope with academic demands, which in turn can sustain engagement.

The consistency of these findings across different educational levels and contexts suggests that self-regulation is a robust predictor of academic engagement. However, it is worth noting that the strength of the relationship may vary depending on the learning environment, the nature of the academic tasks, and the level of institutional support available. For example, the use of social software tools, as highlighted by Okolocha and Nwaukwa (2020), can enhance self-regulated learning opportunities, potentially strengthening its impact on engagement.

In contrast, some studies have reported weaker or non-significant relationships between self-regulation and academic engagement. For example, Oparaji and Ugwu (2019) found only a low positive correlation between self-regulated learning and academic achievement among secondary school economics students in Imo State, suggesting that other factors may overshadow the role of self-regulation in some settings. Likewise, Ekpenyong et al. (2019) observed that while self-regulation was associated with achievement among lower primary pupils in Osun State, the relationship was modest, possibly due to the learners' developmental stage and limited capacity to independently manage their learning.

CONCLUSION

The findings of this study revealed that the majority of undergraduates surveyed demonstrated high levels of both self-regulation and academic engagement. The study further established a statistically significant moderate positive relationship between self-regulation and academic engagement. This finding implies that students who can effectively regulate their learning behaviours and emotions are more likely to remain engaged in academic tasks. In other words, self-regulation enhances students' ability to sustain attention, manage time efficiently, and persist through challenges, which in turn promotes deeper involvement in learning.

Recommendations

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

1. Universities should incorporate structured programmes that teach students goal-setting, time management, and self-monitoring strategies. These can be embedded into general

studies or first-year orientation courses to help students develop effective learning habits early.

2. Lecturers should adopt teaching methods that encourage active participation, critical thinking, and independent learning. Approaches such as project-based learning, problem-solving tasks, and reflective journals can strengthen students' self-regulatory skills and academic engagement.
3. University counselling and mentoring units should provide workshops on motivation, stress management, and study skills to help students sustain focus and resilience in their academic pursuits.
4. Institutions should invest in and promote digital learning platforms that enable students to track progress, set academic goals, and access feedback. Such tools can enhance engagement and accountability.

Conflict of Interest Statement

The author(s) declare that there are no conflicts of interest regarding the publication of this study. The research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Additionally, the author(s) affirm that no personal relationships, affiliations, or biases influenced the design, data collection, analysis, or interpretation of the findings.

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Informed Consent

Informed consent was obtained from all participants prior to their inclusion in the study. Participants were adequately informed about the purpose of the research, and their rights to confidentiality, anonymity, and voluntary participation were strictly upheld.

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Ethical Considerations

Participants' confidentiality and anonymity were ensured throughout the study. No harm was inflicted on participants, and they were free to withdraw at any stage without any consequences.

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