

# Journal of **Education and Practice** (JEP)

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Counselling on the Study Behaviour of College of Education Students in  
Ghana**



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## **Gender Influence on the Effects of Study Skills and Self- Reinforcement Counselling on the Study Behaviour of College of Education Students in Ghana**

 <sup>1</sup>Gladys Abena Amuaful, <sup>2</sup> Godwin Awabil, <sup>3\*</sup> Sylvia Eyiah-Bediako

<sup>1</sup>Headmistress, Mozano Senior High School, Gomua Essiem.

<sup>2</sup>Lecturer, Counselling Centre, University of Cape Coast, Cape Coast

<sup>3</sup>Lecturer, Department of Guidance and Counselling, University of Cape Coast, Cape Coast

<https://orcid.org/0009-0005-4034-0848>

*Accepted: 1<sup>st</sup> May, 2025, Received in Revised Form: 1<sup>st</sup> June, 2025, Published: 1<sup>st</sup> July, 2025*

### **Abstract**

**Purpose:** The study examined the gender influence on the effects of study skills and self - reinforcement counselling on the study behaviour of College of Education students (CoE) in Ghana

**Methodology:** Quasi-experimental design with a control group that was tested before and after the study's main group was used for the study with sixty (60) participants used surveyed for this study. The instrument used in the pre-test-post-test was a structured questionnaire known as Study Behaviour Inventory (SBI) which was adapted from the Study Habit Survey (SHS) form B developed by Essuman (2006). Data were analysed using descriptive statistics (means and standard deviation) and inferential statistics (two-way analysis of covariance (ANCOVA) one-way multivariate analysis of covariance (MANCOVA).

**Findings:** The study revealed that male and female participants did not respond differently to either study skills counselling or self-reinforcement counselling. That is gender of students do not determine their study behaviour when exposed to study skills and self-reinforcement counselling interventions. Again, study revealed that study skills counselling and self-reinforcement counselling have significant effects on the study behaviour of students with regard to time management, concentration, consultation, note taking, reading and library use skills.

**Unique contribution to theory, practice and policy:** the study recommended to counselling coordinators and management of the various colleges to ensure that study skills and self-reinforcement counselling interventions are regularly provided as (considered) intervention tools for improving the five (5) dimensions of study behaviour of College of Education students in Ghana irrespective of their gender.

**Keywords:** *Gender, Study behaviour, Study skills counselling, Self-reinforcement counselling*



## Introduction

Studying is considered as observable behaviour and behaviour can be understood as a predisposition that has been developed through a long and complex process (Bashir & Mattoo, 2012). Study behaviour is termed as the methods of study of students. It produces positive academic performance while inefficient study behaviour refers to a student's way of studying, whether systematic, efficient or inefficient (Ayodele & Adebisi, 2013).

For several decades, there has been study behaviour and academic performance disparities among students. These disparities may be caused by factors that are social, psychological, cultural, and economic in nature (Nwani, 2016; Reilly, 2014). With effective preparation of students, institutions can help boost students' study behaviour, which in the long run will help enhance their academic performance. One way to look at the educational preparation of students is to focus on their study skills, self-reinforcement and study behaviours (Rumfola, 2017).

Through effective counselling strategies, teachers and counsellors can help modify the study skills and study behaviours of students, to ensure their educational achievement (Rumfola, 2017). Therefore, it is appropriate for researchers and practitioners in the educational sector to give scholarly attention to the effects that study skills and self-reinforcement counselling can have on the study behaviour of students.

## Background to the Study

Study behaviour is termed as the methods of study of students. It produces positive academic performance (Ayodele & Adebisi, 2013). Students may occasionally experience some changes in their academic work which may be due to a change in their study behaviour. Effective study behaviour, therefore, offers great possibilities for successful achievement in studies. It is an important motivator which affects students' studies. It can, therefore, be seen as a composite strategy which promotes internalisation of knowledge and breeds genuine intellectualism. Effective study behaviour is very essential if the overall goals of the students are to be achieved (Atsiyasiahi & Maiyo, 2015). Productive study skills include effective listening, thinking, asking questions, observing, note-taking, and presenting ideas, regarding discovering new information (Sherafat & Murthy, 2016). Developing the professional aspects of initial teacher education is high on the teacher training plans of many countries and especially in Ghana where teacher education programmes and teacher education institutes are being reviewed regularly to meet the current demands and needs of the profession (National Development Planning Commission [NDPC], 2018).

Teacher quality and effectiveness have been seen as the most essential school-related factor impacting on student achievement (Bliss & Mueller, 2017; Tollefson, 2017). Globally, 18 million new primary teachers will be needed in the next seven years just to achieve universal primary education (Anane, 2014). According to Anane, teachers and teacher quality matter and indeed, the quality of teacher education has become a vital issue in recent years. Issues concerning teacher

competence, effectiveness, resilience and other dispositional abilities feature prominently in teacher education literature.

Simon (2015) viewed study skills as the techniques and strategies that help a person read or listen for specific purposes with the intent to remember. Study skills are competencies that help the students for acquiring, organising, synthesising, recalling, and using the ideas and information. These skills included a range of skills and synchronised cognitive processes that play a role in increasing the effectiveness and efficiency of learning. Study skills are therefore, approaches applied to learning. They are generally critical to students' success in school. Also, they are considered essential for helping students to acquire good grades, and also useful for students to learn throughout their (Jones & Slate, 2018). Planning and organising study time, taking notes, utilising a library, and maintaining focus for long periods of study are all essential study abilities (Awabil, 2013).

According to Armstrong (2014), the acquisition and application of good study skills, primarily in the form of reading and note-taking skills became important issues for educators as far back in the early 1900s. According to Kerka (as cited in Awabil, 2016), study skills are learning strategies that help students to organise, process and use information effectively. Some of the important study skills include planning and organising time for study, note taking, use of library, and concentrating during hours of study (Awabil, 2013).

According to Aluede and Onolemhemen (2011), counselling is a process that is designed to help an individual solve some of his/her problems or assist the individual in planning the future. Corey (2012) equates counselling to helping, suggesting that prospective counsellors can be drawn from professional, semi-professional and layman populations; hence counselling is a specialised and professional activity. Gibson and Mitchel (2013) argue that professional counselling involves an interpersonal relationship between someone actively seeking help and someone willing to give help to be given and received. They further add that the process of counselling is directed towards people who experience difficulties as they live through the normal stages of life-span development. This shows that counselling includes work with individuals and with relationships which may be developmental, crisis support, psychotherapeutic, guiding or problem solving with the aim of giving the client an opportunity to explore, discover and clarify. Counselling is also viewed as a special kind of helping relationship, as a repertoire of interventions, as a psychological process, or in terms of either its goals, or the people who counsel, or its relationship to psychotherapy (Shertzer & Stone, 2014).

Study skills counselling involves providing systematic coordinated instructions to students and teaching them how to get greater access to learning materials and developing better study skills (Unachukwu & Igborgbor, 2013). This counselling may include helping students develop an awareness of their beliefs about their abilities and the role they play in choosing to learn or not to learn. Counselling activities that will contribute to helping children develop their awareness include thinking journals, graphic organisers, peer interviews, and group discussions (Barki & Mukhopadhyay, 2014). Study skills counselling involves the process of providing coordinated

teaching on skills to be applied in studying (Simon, 2015). According to Kabate (2016), study skills counselling is the process of providing systematic coordinated instructions and teaching how to obtain greater access to learning materials and developing better study skills. These are usually done in sessions with each session aimed at assisting students to identify the skills they wish to utilise to succeed in their academic life and beyond. During such counselling sessions, the students will learn about time management and its value, concentration, consultation, teaching on making time table for studying, home works and assignment, note taking and forming special notes reading and library use when need arises.

Self-reinforcement involves recognition and appreciation for actions that lead to better performance. In order for self-reinforcement to lead to positive outcomes, people must be critical of their own performance. By learning to recognise faults in their work practice, they can gain increased knowledge of their work and recognise appropriate study behaviour for success (Belle, Colette, & Ellemers). In some cases, self-reinforcement can lead to negative outcomes. Lack of honest self-evaluation and the presence of personal and situational rationalisation processes might lead to continued engagement in negative behaviour that can ultimately lead to disaster (Wunnia, 2017). According to Awabil (2016), through study skills counselling, students become more efficient, thoughtful and independent learners. Likewise, students who are able to develop study skills on their own have the opportunity to learn more effectively and efficiently through explicit instruction. Awabil added that study skills instruction has been identified to enhance academic performance and strategic knowledge. Self-reinforcement involves recognition and appreciation for actions that lead to better performance. In order for self-reinforcement to lead to positive outcomes, people must be critical of their own performance. By learning to recognise faults in their work practice, they can gain increased knowledge of their work and recognise appropriate study behaviour for success (Belle, Colette, & Ellemers). In some cases, self-reinforcement can lead to negative outcomes. Lack of honest self-evaluation and the presence of personal and situational rationalisation processes might lead to continued engagement in negative behaviour that can ultimately lead to disaster (Wunnia, 2017).

Gender differences in enhancing senior secondary school students' study habits through reading and group counselling found that there was no significant difference between male and female students in their study behaviour. A study conducted by Simon's (2015) revealed that there is significant difference between poor study habits of male and female respondent. On average, girls are more motivated than boys to perform well in school, at least during elementary school. By the time girls reach high school, however, some may try to down play their own academic ability in order make themselves more likeable by both sexes (Davies, 2005).

### **Statement of the Problem**

Several factors are responsible for poor academic performance worldwide. According to Institute of Education (IoE), UCC (2018), causes of withdrawal from CoE include weak entry characteristics and low academic performance of some students in some courses especially English, Science and Mathematics. Other factors include lack of well-resourced library facilities,

poor study behaviours, low motivation for learning, financial difficulties and emotional problems (Agi, 2017; Atsiayasiah & Maiyo, 2015; Tollefson, 2017). Of all the factors stated as being related to poor academic performance, poor study behaviour has been generally recognised as the most dominant factor (Awabil, 2013; Sherafat & Murthy, 2016).

In Ghana, the core mandate of Colleges of Education (CoE) is to train human resources specifically teachers, for national development (IoE, UCC, 2017). Teacher trainees also derive personal benefits from this education since it equips them with important knowledge, skills, values, attitudes and behaviours which enable them to teach after school and adjust well in society. Unfortunately, according to statistics section of IoE, UCC, there is a high withdrawal and non-completion rate of students in the CoE in Ghana. In every academic year a number of students, especially in level 100, are withdrawn from the colleges due to poor academic performance, even though they have the potential capacity for academic success (IoE, UCC, 2017; 2018). At the end of 2014/2015 academic year, 807 level 100 students were referred for failing one (1) to 11 credits hour in their course study of either the first, second or both semesters. Similarly, 1,310 students were made external students (IoE, UCC, 2016). Worst of all, some of the students were continuously withdrawn from the colleges every academic year due to poor grade. This may mean that withdrawal of students due to poor academic performance is still a challenge facing the various CoE in Ghana. Egbo (2015) conducted a study in Enugu State, Nigeria and found that poor study behaviour ranked highest when compared with other factors contributing to poor academic performance of students.

Although, the CoE have counselling units, anecdotal evidence indicated that, in practice there are no specific counselling intervention programmes for first year students that help boost their study behaviour. It also appears no study has been conducted in the area of the effects of study skills counselling on CoE students' study behaviour. These gaps in actual practice and in the literature that this current study seeks to investigate the effects of study skills counselling and self-reinforcement counselling on students' study behaviour in CoE in Ghana.

### **Purpose of the study**

The purpose of the study was to investigate gender influence on the effects of study skills and self-reinforcement counselling on the study behaviour of college of education students in Ghana

Specifically, the study sought to:

1. Ascertain gender influence on the study behaviour of students in study skills counselling and self-reinforcement counselling.
2. Examine the effects of study skills counselling and self-reinforcement counselling on the study behaviour dimensions (time management, concentration consultation, note taking, reading and library use).

## Research Hypotheses

Based on the purpose of the study, the following research hypotheses were formulated to guide the study:

$H_{01}$ : There is no statistically significant difference in the study behaviour of participants exposed to (a) study skills counselling (b) self-reinforcement counselling and control group on the basis of gender.

$H_{A1}$ : There is statistically significant difference in the study behaviour of participants exposed to (a) study skills counselling and (b) self-reinforcement counselling and control group on the basis of gender

$H_{02}$ : There is no statistically significant effect of study skills counselling and self-reinforcement counselling on each of the dimensions of study behaviour (time management, concentration, consultation, note taking, and reading and library use).

$H_{A2}$ : There is a statistically significant effect of study skills counselling and self-reinforcement counselling on each of the dimensions of study behaviour (time management, concentration, consultation, note taking, and reading and library use).

## Research Methods

A well-structured adapted questionnaire was employed for the data collection. The instrument used in the pre-test-post-test was a structured questionnaire known as Study Behaviour Inventory (SBI) which was adapted from the Study Habit Survey (SHS) form B developed by Essuman (2006). The inventory comprised two main sections (A & B). Section A was used to collect data on the background characteristics of the respondents namely age, gender, college, and programme of study. Section B was used to collect data on study behaviour of respondents. In all, 40 items were used to collect data in section B. Responses on each of the items were rated on a scale of 1 to 5, such that one (1) represents the strongest disagreement to the items while five (5) represents the strongest agreement to the items. Five dimensions of study behaviour were used. These dimensions were: Time management, Concentration, Consultation, Note Taking, and, Reading and Library Use.

This research used a Quasi-experimental design with a control group that was tested before and after the study's main group. Sixty (60) people were surveyed for this study. The (60) participants, was comprised of study skills training and a control group. Pre-tests were given to participants in all two groups. The students who were assigned to the "study habits" group were given a series of 8 sessions of study habits counselling. While those in the control group continued their daily routines. Data were analysed using descriptive statistics (means and standard deviation) and inferential statistics (two-way analysis of covariance (ANCOVA) one-way multivariate analysis of covariance (MANCOVA).

## Results

Gender influence on the effects of study skills and self-reinforcement counselling on the study behaviour of college of education students in Ghana

$H_{01}$ : There is no statistically significant difference in the study behaviour of students exposed to (a) study skills counselling and (b) self-reinforcement counselling and control group on the basis of gender.

The aim of the first research hypothesis was to determine the influence gender had after participants had gone through the experimental conditions. To test this hypothesis, two-way between groups ANCOVA was performed to examine the gender influence on the groups. Two-way ANCOVA is a test that is performed to compare scores on two independent variables on a dependent variable that is continuous in nature. The dependent variable was the post-test scores of the respondents with regard to study behaviour. The independent variables were groups and gender. Groups had three levels: control group, study skills counselling group, and self-reinforcement counselling group. Gender also had two levels: male and female. The results of the test are presented in Table 1.

**Table 1: ANCOVA Test for Difference in Study Skills and Self-reinforcement Counselling with respect to Gender (N = 60)**

| Source          | Df | Mean Square | F      | Sig. | Partial Squared ( $\eta_p^2$ ) | Eta |
|-----------------|----|-------------|--------|------|--------------------------------|-----|
| Corrected Model | 6  | 6112.35     | 61.85  | .000 | .875                           |     |
| Intercept       | 1  | 5599.17     | 56.66  | .000 | .517                           |     |
| Pre-test        | 1  | 26.44       | .27    | .607 | .005                           |     |
| Group           | 2  | 16595.50    | 167.93 | .000 | .864                           |     |
| Gender          | 1  | 70.86       | .72    | .401 | .013                           |     |
| Group * Gender  | 2  | 254.33      | 2.57   | .521 | .113                           |     |
| Error           | 53 | 98.82       |        |      |                                |     |
| Total           | 60 |             |        |      |                                |     |
| Corrected Total | 59 |             |        |      |                                |     |

Source: Field work (2018) (N = 60) \*Significant at .05 level

As depicted in Table 1, there was no statistically significant interaction between the groups and gender,  $F(2, 53) = 2.57$ ,  $p = .521$ ,  $\eta_p^2 = .11$ . There was statistically significant main effect (group),  $F(2, 53) = 167.93$ ,  $p < .001$ ,  $\eta_p^2 = .86$ . There was, however, no main effect of gender,  $F(1, 53) = .72$ ,  $p = .401$ ,  $\eta_p^2 = .01$ . The result implies that gender explained 1% of the variance in the post-

test scores. This showed that both therapies equally worked for male and female. Table 2 shows the adjusted means for the groups based on gender.

**Table 2: Adjusted Means for Groups Based on Gender**

| Group              | Gender | Mean                | Std. Error |
|--------------------|--------|---------------------|------------|
| Control            | Male   | 140.26 <sup>a</sup> | 3.333      |
|                    | Female | 129.94 <sup>a</sup> | 3.032      |
| Study skills       | Male   | 88.42 <sup>a</sup>  | 3.006      |
|                    | Female | 94.54 <sup>a</sup>  | 3.322      |
| Self-reinforcement | Male   | 78.75 <sup>a</sup>  | 3.088      |
|                    | Female | 76.39 <sup>a</sup>  | 3.356      |

Source: Field work (2018)

(*N* = 60)

a. Covariates appearing in the model are evaluated at the following values: Pre-test = 131.7167.

As contained in Table 2, the adjusted mean for males within study skills group was 88.42 while that of females was 94.54. The adjusted mean for males in the self-reinforcement group was 78.75, while that of females was 76.3. Based on the findings, the study failed to reject the null hypothesis which states that there is no statistically significant difference in the study behaviour of participants exposed to study skills counselling, self-reinforcement counselling and control group on the basis of gender.

### **Effects of Study Skills and Self-reinforcement counselling with respect to the Dimensions of Study Behaviour**

H<sub>02</sub>: There are no statistically significant effects of (a) study skills counselling and (b) self-reinforcement counselling on each of the dimensions of study behaviour (time management, concentration, consultation, note taking, and reading and library use).

The second research or null hypothesis sought to determine the effect of study skills counselling and self-reinforcement counselling on each of the five dimensions of study behaviour of participants (time management, concentration, consultation, note taking, reading and library use). To test this hypothesis, one-way MANCOVA was used to compare the post test scores of the groups on the five dimensions of study behaviour while controlling for their pre-test scores. Tables 3 and 4 present the results.

**Table 3: ANCOVA Test for Study Skills and Self-reinforcement counselling with respect to the Dimensions of Study Behaviour (N = 60)**

| Source    | Dependent Variable | Df | Mean Square | F     | Sig.  | Partial Squared ( $\eta_p^2$ ) | Eta |
|-----------|--------------------|----|-------------|-------|-------|--------------------------------|-----|
| Intercept | Time Management    | 1  | 265.35      | 16.94 | .000  | .232                           |     |
|           | Concentration      | 1  | 116.95      | 10.97 | .002  | .164                           |     |
|           | Consultation       | 1  | 335.94      | 17.53 | .000  | .238                           |     |
|           | Note Taking        | 1  | 247.67      | 17.32 | .000  | .236                           |     |
|           | Reading & Library  | 1  | 206.12      | 16.06 | .000  | .223                           |     |
| Pre-test  | Time Management    | 1  | .13         | .01   | .927  | .000                           |     |
|           | Concentration      | 1  | 23.37       | 2.19  | .144  | .038                           |     |
|           | Consultation       | 1  | 5.71        | .30   | .588  | .005                           |     |
|           | Note Taking        | 1  | .45         | .03   | .860  | .001                           |     |
|           | Reading & Library  | 1  | 5.01        | .39   | .535  | .007                           |     |
| Group     | Time Management    | 2  | 474.81      | 30.32 | .000* | .520                           |     |
|           | Concentration      | 2  | 725.95      | 68.12 | .000* | .709                           |     |
|           | Consultation       | 2  | 801.70      | 41.83 | .000* | .599                           |     |
|           | Note Taking        | 2  | 1094.63     | 76.56 | .000* | .732                           |     |
|           | Reading & Library  | 2  | 433.74      | 33.79 | .000* | .547                           |     |
| Error     | Time Management    | 56 | 15.66       |       |       |                                |     |
|           | Concentration      | 56 | 10.66       |       |       |                                |     |
|           | Consultation       | 56 | 19.16       |       |       |                                |     |
|           | Note Taking        | 56 | 14.30       |       |       |                                |     |
|           | Reading & Library  | 56 | 12.84       |       |       |                                |     |

Source: Field work (2018) \*Significant at .01 level (Bonferoni's adjustment)

Results from Table 3 show that there was a statistically significant difference in the post-test scores of notes taking among the three groups,  $F(2, 56) = 76.56$ ,  $p < .001$ ,  $\eta_p^2 = .73$ . The result implies that group accounted for 73 percent of the variance in note taking. Lastly, the results revealed a statistically significant difference in the post-test scores of reading and library,  $F(2, 56) = 33.79$ ,  $p < .001$ ,  $\eta_p^2 = .55$ . The result implies that group explained 55 percent the variance in reading and library. A post hoc analysis was performed to determine differences in the dimensions of study behaviour among the three groups. Table 4 presents the results.

Results from Table 4, with regard to time management dimension of study behaviour, there is a significant difference in the mean score for the control group and that of the study skills counselling

group (Mean Difference = 5.344,  $p < .001$ ). Similarly, there was a statistically significant difference in the mean score for control group and self-reinforcement counselling group (Mean Difference = 10.261,  $p < .001$ ). The result further showed a significant difference between the mean score of study skills group and self-reinforcement group (Mean Difference = 4.918,  $p < .001$ ).

**Table 5: Pairwise Comparisons for Groups on the Dimensions of Study Behaviour (N = 60)**

| Dependent Variable      | (I) group          | (J) group          | Mean Difference (I-J) | Std. Error | Sig. |
|-------------------------|--------------------|--------------------|-----------------------|------------|------|
| Time Management         | Control            | Study skills       | 5.344*                | 1.253      | .000 |
|                         |                    | Self-reinforcement | 10.261*               | 1.321      | .000 |
|                         | Study Skills       | Control            | -5.344*               | 1.253      | .000 |
|                         |                    | Self-reinforcement | 4.918*                | 1.300      | .000 |
|                         | Self-reinforcement | Control            | -10.261*              | 1.321      | .000 |
|                         |                    | Study skills       | -4.918*               | 1.300      | .000 |
| Concentration           | Control            | Study skills       | 9.864*                | 1.034      | .000 |
|                         |                    | Self-reinforcement | 11.485*               | 1.089      | .000 |
|                         | Study skills       | Control            | -9.864*               | 1.034      | .000 |
|                         |                    | Self-reinforcement | 1.620                 | 1.072      | .136 |
|                         | Self-reinforcement | Control            | -11.485*              | 1.089      | .000 |
|                         |                    | Study skills       | -1.620                | 1.072      | .136 |
| Consultation            | Control            | Study skills       | 10.042*               | 1.387      | .000 |
|                         |                    | Self-reinforcement | 12.305*               | 1.461      | .000 |
|                         | Study skills       | Control            | -10.042*              | 1.387      | .000 |
|                         |                    | self-reinforcement | 2.262                 | 1.438      | .121 |
|                         | Self-reinforcement | Control            | -12.305*              | 1.461      | .000 |
|                         |                    | Study skills       | -2.262                | 1.438      | .121 |
| Note Taking             | Control            | Study skills       | 13.112*               | 1.198      | .000 |
|                         |                    | Self-reinforcement | 13.121*               | 1.262      | .000 |
|                         | Study skills       | Control            | -13.112*              | 1.198      | .000 |
|                         |                    | Self-reinforcement | .010                  | 1.242      | .994 |
|                         | Self-reinforcement | Control            | -13.121*              | 1.262      | .000 |
|                         |                    | Study skills       | -.010                 | 1.242      | .994 |
| Reading and Library Use | Control            | Study skills       | 5.060*                | 1.135      | .000 |
|                         |                    | Self-reinforcement | 9.811*                | 1.196      | .000 |
|                         | Study skills       | Control            | -5.060*               | 1.135      | .000 |
|                         |                    | Self-reinforcement | 4.751*                | 1.177      | .000 |
|                         | Self-reinforcement | Control            | -9.811*               | 1.196      | .000 |
|                         |                    | Study skills       | -4.751*               | 1.177      | .000 |

Source: Field work (2018)

Based on estimated marginal means \*The mean difference is significant at the .01 level (Bonferoni's adjustment).

In relation to concentration dimension of study behaviour, there is a significant difference in the mean score for the control group and that of the study skills counselling group (Mean Difference = 9.864,  $p < .001$ ). The results also showed a significant difference in the mean score for control group and self-reinforcement counselling group (Mean Difference = 11.485,  $p < .001$ ). The result, however, revealed no statistically significant difference in the post-test scores of study skills counselling group and self-reinforcement counselling group (Mean Difference = 1.620,  $p =$

.136). This shows that study skills and self-reinforcement counselling interventions are able to boost the concentration of students.

In terms of consultation, the result from Table 5 shows that there was a statistically significant difference in the mean scores of control group and study skills group (Mean Difference = 10.042,  $p < .001$ ). A significant difference also exists in the mean score of control group and self-reinforcement group (Mean Difference = 12.305,  $p < .001$ ). On the contrary, no significant difference exists in the mean score of study skills group and self-reinforcement counselling group (mean difference = 2.262,  $p = .121$ ). This implies that both study skills counselling and self-reinforcement counselling are effective in enhancing students' consultation, and they equally worked in that respect.

With regard to note taking, again there was a statistically significant difference in the mean scores of the control group and study skills counselling group (Mean Difference = 13.112,  $p < .001$ ). The result further showed a statistically significant difference between the mean score of the control group and self-reinforcement counselling group (Mean Difference = 13.121,  $p < .001$ ). There was, however, no statistically significant difference between the mean scores of study skills group and self-reinforcement counselling group (Mean Difference = .010,  $p = .994$ ). From the results of the study, both study skills counselling and self-reinforcement counselling are effective in enhancing students' note taking, and they equally worked.

The results in Table 5 further revealed that in terms of reading and library use, a statistically significant difference exist in the mean scores of the control and study skills counselling group (Mean Difference = 5.060,  $p < .001$ ). Similarly, there exist a statistically significant difference in the mean scores of control group and self-reinforcement counselling group (Mean Difference = 9.811,  $p < .001$ ). The result also showed a significant difference in the mean scores of study skills group and self-reinforcement group (Mean Difference = 4.751,  $p < .001$ ). The results imply that both study skills counselling and self-reinforcement counselling were very effective in enhancing students' reading and library use. In addition, self-reinforcement counselling was effective than study skills counselling in terms of enhancing students' reading and library use

Table 6 shows the details of the adjusted means. From the results in Table 6, it was evident that both study skills counselling and self-reinforcement counselling were effective in enhancing students study behaviour on all the five dimensions of study behaviour (time management, concentration, consultation, note taking, reading and library use). However, their effectiveness differed in terms of time management and reading and library use. Self-reinforcement counselling was more effective in enhancing time management and reading and library use of the students better than study skills counselling. In terms of concentration, consultation, and note taking both therapies equally worked.

**Table 6: Adjusted Post-Test Means on Study Behaviour Dimensions (N = 60)**

| Dependent Variable      | Group              | Mean               | Std. Error |
|-------------------------|--------------------|--------------------|------------|
| Time Management         | Control            | 26.29 <sup>a</sup> | .90        |
|                         | Study skills       | 20.94 <sup>a</sup> | .89        |
|                         | Self-reinforcement | 16.02 <sup>a</sup> | .92        |
| Concentration           | Control            | 26.90 <sup>a</sup> | .74        |
|                         | Study skills       | 17.04 <sup>a</sup> | .73        |
|                         | Self-reinforcement | 15.42 <sup>a</sup> | .76        |
| Consultation            | Control            | 27.65 <sup>a</sup> | 1.00       |
|                         | Study skills       | 17.61 <sup>a</sup> | .98        |
|                         | Self-reinforcement | 15.34 <sup>a</sup> | 1.02       |
| Note Taking             | Control            | 27.83 <sup>a</sup> | .86        |
|                         | Study skills       | 14.72 <sup>a</sup> | .85        |
|                         | Self-reinforcement | 14.71 <sup>a</sup> | .88        |
| Reading and Library Use | Control            | 25.96 <sup>a</sup> | .82        |
|                         | Study skills       | 20.90 <sup>a</sup> | .81        |
|                         | Self-reinforcement | 16.15 <sup>a</sup> | .84        |

Source: Field work (2018)

a. Covariates appearing in the model are evaluated at the following values: Pre-test = 131.7167.

The results showed that there were statistically significant effects of study skills counselling and self-reinforcement counselling on each of the dimensions of study behaviour (time management, concentration, consultation, note taking, and reading and library use).

## Discussion of Results

### Gender and Study Behaviour

To determine whether significant difference exists in the mean scores on study behaviour in terms of gender, two-way ANCOVA was performed and the result indicates that there is significant difference in mean score of both males and females in the experimental groups as compared to the counterparts in the control group. Similarly, there is a significant difference in the study behaviour between female participants in the control group and male participants in the study skills group.

Also, the result indicates a significant difference in the study behaviour between female participants in the control group and female participants in the self-reinforcement group. These results imply that both study skills and self-reinforcement counselling groups differed from the control group. This could be explained from the fact that participants in the control had not

received no rigorous intervention and for that matter, any little change in the experimental group would attain statistical significance. This finding agrees with a similar finding by Simon (2015) that both male and female participants in the experimental group experienced higher improvement in study behaviour than their counterparts in the control group.

In contrast, the simple effects result shows that there is no significant difference in the mean scores on study behaviour at post- test on the basis of gender. This means that the finding shows that both males and females in each of the treatment groups recorded no significant difference in improvement in post-test study behaviour scores. The implication is that students, irrespective of their gender, can equally benefit from either study skills counselling or self-reinforcement counselling. In other words, gender is not an obstacle to counselling on study behaviour, since neither of the male and female responded differently to the experiment. This result is in line with a study conducted by Awabil (2013) who found that males and females did not differ significantly in their post-test scores on study behaviour. Agi (2017) also found that effective group counselling and self-reinforcement intervention have same effects on study behaviour of students in selected universities in Nigeria. That is, gender had no effect on university students' study behaviour when they were subjected to group and self-reinforcement counselling interventions.

The current finding that gender has no statistically significant effect on students' study behaviour when they were exposed to study skills and self-reinforcement counselling interventions, however, is contrary to the findings of Simon (2015), Numan and Hasan (2017), Ohanaka and Ofuani (2010), and Ng and Freeman (2018). Simon's (2015) study investigated the effect of study skills training on poor study habits among senior secondary school students in Fagge, Kano State, Nigeria. The findings suggested that study skills counselling had more positive effects on males' study behaviour than females. Perhaps some of the males in the study of Simon had a higher level of motivation to receive counselling on study behaviour than the female and this led to the discovery of significant difference between them.

Furthermore, the finding is incongruent with that of Numan and Hasan who examined the effect of study behaviour on test anxiety and academic achievement of undergraduate students. Numan and Hasan concluded that girls have better study behaviour than boys, as a result, female undergraduate students have higher academic achievement than their male counterpart. Also, Ohanaka and Ofuani (2010) reported that males in the experimental groups experienced greater improvement in study behaviour than their female counterparts when they were exposed to reading and group counselling interventions. Ng and Freeman (2018) also examined the relationship of study behaviour to academic performance, and found that gender of students has no statistically significant impact on study behaviour and academic performance of students when they were exposed to counselling intervention.

Further, the finding that gender has no statistically significant effect on students' study behaviour when they were exposed to study skills and self-reinforcement counselling interventions was congruent with that of Ohanaka and Ofuani (2010) who found that gender was not a significant determinant of respondents' study behaviour at post-test.

## **Study Skills Counselling and Self-reinforcement Counselling and Dimensions of Study Behaviour.**

With respect to the dimensions of study behaviour, the findings that emerged from this study showed that there were statistically significant differences in the mean scores on all the five dimensions of study behaviour among the three groups (study skills counselling, self-reinforcement counselling, and control groups) at post-test.

The findings that study skills counselling and self-reinforcement counselling interventions are able to help boost CoE students' time management, concentration, consultation, note taking, and reading and library use behaviours. These findings support the views expressed by Hazard and Nadeau (2016) who posited that study behaviour dimensions such as time management and note taking have been found to have significant influence on students' study behaviour and success.

The finding that study skills counselling and self-reinforcement counselling interventions have statistically significant effects on the five dimensions of study behaviour (time management, concentration, consultation, note taking, and reading and library use) corroborates with that of Awabil (2013) and Agi (2017). Both researchers found that there were statistically significant differences between the control and the experimental groups in their post-test mean scores of all the five dimensions of study behaviour inventory. This implies that study skills counselling and self-reinforcement skills counselling significantly improved respondents' study behaviour compared to the no-treatment group respectively.

### **Conclusions**

Based on these findings, the conclusions therefore state that; gender of students do not determine or predict their study behaviour when they are exposed to study skills and self-reinforcement counselling interventions therefore irrespective of the gender of the participants, they will all benefit from the two treatments. Study skills and self-reinforcement counselling are both effective at improving time management, concentration, consultation, note taking and reading and library use and can be used to enhance the study behaviour of students in the various CoE in Ghana. However, self-reinforcement counselling can be used in enhancing students with ineffective time management and poor reading and library use better than study skills counselling.

### **Recommendations**

Based on the key findings and conclusions of the study, it was recommended to counselling coordinators and management of the various CoE in Ghana to ensure that: Counsellors in the CoE use study skills counselling and self-reinforcement counselling interventions to help modify and improve the study behaviour of students on individual or group basis irrespective of their gender. Academic advisors and hall tutors should be empowered by the University authorities through workshops and seminars to enable them utilise the knowledge on study skills counselling and self-reinforcement counselling to assist students at the hall and department levels to deal with poor study behaviour. Student of the CoE in Ghana with low level of study behaviour can be assisted through study skills counselling and self-reinforcement counselling to understand learning

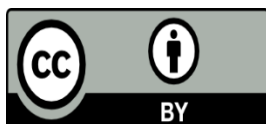
strategies. Students can be assisted through counselling to help them concentrate more and improve their note taking skills. Again, help the students to manage their time effectively and improve their reading and library usage.

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