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EDITORIAL**Moving from an Email Attachment to an Open Journal System**

Tesfaye Gebeyehu

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Since 1914, the Ethiopian Journal of Social Sciences and Language Studies (EJSSLS) has been accepting manuscripts from authors and sending to reviewers and editors as an email attachment. Accepted articles have been uploaded on the University's server being managed from the office of Public Relations and External Relations. This system does not give the editor - in-chief and the managing editor of the journal a privilege of managing publications online and uploading issues in or on time. Nevertheless, such a system is not convenient for archiving submitted, pending and rejected manuscripts. This calls for transforming from an email attachment to an open journal system (OJS) practices. Open Journal Systems is open-source software for the management of peer-reviewed academic journals.

OJS (software) has several advantages over an email attachment. The software, unlike to an email attachment, archives lists of authors, reviewers, editors, submitted, assigned, unassigned, accepted, pending and rejected manuscripts. This enables the editor-in-chief or/and the managing editor to manage the publications effectively. Further, it enables the peer review processes to undergo online. It shows the stage of the review process and the date on which the activity is performed. Furthermore, upon acceptance, the editor-in-chief and/or the managing editor of EJSSLS can immediately upload the publications without the help or permission of Public Relations and External Relation office. On top of that, it allows researchers to access, to build on the findings of other researchers, and to reuse publications without restrictions like payments.

Therefore, to achieve its vision, being one of the most preferable journals especially in Africa, or to become a competent journal, EJSSLS needs transforming from an email attachment to an open access journal practice. To do so, the editor-in-chief has taken training on how to operate on the software (OJS). The other editors will also take the training. Now, an attempt of migrating previous publications from the server to the OJS is going on. We are also trying uploading the current issue (Vol 5.No.1) on the system. However, OJS is not without limitations. The editorial of the next issue (Vol.5 No.2) will present the challenges that affect the promotion of best practices of OJS as well as the alternatives.

The editor

FULL LENGTH ARTICLE**The Effect of Explicit Reading Strategy Training on Students' Reading Comprehension Achievement and Reading Self-Efficacy: Grade 11 Students at Jimma Preparatory School, Ethiopia, in Focus**

Rahel Getachew¹, Tekle Ferede², Alemayehu Negash³

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Abstract

This study examined the effect of explicit reading strategy training on the reading comprehension achievement and reading self-efficacy of Grade 11 students at Jimma Preparatory School. The study employed quasi-experimental design through the use of reading comprehension test and structured questionnaire as tools of data collection. The subjects of the study were 100 grade eleven students. From these students, 50 students participated in the experimental group, and another 50 students involved in the control group. Quantitative method of data analysis (mean scores and independent sample t-test) was used to analyze the data. The finding of the study revealed that while both the experimental group (who received explicit reading strategy training) and control group (who received implicit reading strategy training) benefited from reading strategy training, the students in the experimental group outperformed those in the control group in reading comprehension achievement and reading self-efficacy scores after the experiment. This shows that explicit reading strategy training helped the experimental group students to significantly improve their reading comprehension ability and reading self-efficacy. Thus, the study concluded that explicit reading strategy training has more positive effects on reading comprehension achievement and reading self-efficacy than implicit reading strategy training. It is, thus, recommended that teachers of English in the Ethiopian context need to focus more on explicit reading strategy in their strategy-based reading instruction.

Key words: /English/Reading comprehension/ Reading strategy /Self-efficacy/

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1. Introduction

1.1. Background of the Study

Reading in English is crucial for academic success in Ethiopia where English is used as a foreign language (EFL). In the Ethiopian context, English is learned as a subject and used as a medium of instruction in most subjects in secondary schools and higher institutions. Secondary school students are, therefore, required to develop their reading skills along with their reading self-efficacy to successfully tackle their academic readings in their current and future academic endeavours. Studies also show that the reading skill is highly important for obtaining information which is vital for effective functioning in the contemporary societies (Anderson, 1999).

Improving reading abilities also helps secondary school students in the Ethiopian context to succeed in national exams such as the Ethiopian General School Leaving Certificate Examination (EGSLCE) and University Entrance Examination (UEE). Thus, it is necessary that students be trained to use effective reading strategies to improve their reading comprehension achievement and reading self-efficacy.

The goal of reading is comprehension while reading strategies are a means to this end (Bra°ten & Samuelstuen, 2004). Comprehension is conceptualized as an ability to go beyond the words, to understand the ideas in a text and to discover the relationships that exist between these ideas (McNamara, 2007). Therefore, students should possess several sub-skills of reading which they apply to comprehend leveled texts (Dole, Duffy, Roehler & Pearson, 1991). In addition, Alfassi (2004) points out that to achieve comprehension effectively, students should work out the meaning of a text, critically evaluate the message, remember the content and apply the newly acquired knowledge flexibly. All these require effective reading strategy use and appropriate perception of one's reading ability, both of which can be boosted through strategy-based reading instruction.

Reading strategy can be conducted in two different ways. One way is informing students directly about the types of reading strategies, their components and their applications (Guthrie et al., 2004). This is called explicit reading strategy training. The second way is called implicit reading strategy training. In this type of training, unlike in explicit reading strategy instruction, students are not openly told the types of reading strategies, their components and their specific characteristics. Rather, they are exposed to reading tasks and activities in which various strategies are embedded. The expectation in this case is that by doing such tasks and activities, which demand the application of various reading strategies, students can implicitly master the desired reading techniques. It is on this ground that this study was conducted on the effect of explicit reading strategy training on students' reading comprehension achievement and reading self-efficacy.

1.2. Statement of the Problem

Lenski, Wham, Johns & Caskey (2007, p.1) describe, "Reading is one of the fundamental skills for the 21st century". Reading includes not only recognizing and decoding letters and producing phonics, but it also entails comprehension which calls for the application of various reading strategies (Bouchhard, 2005). Reading comprehension

strategies are operations or comprehension techniques that readers apply as they read to understand a text (Afflerbach, Pearson & Paris, 2008). These strategies are used selectively and flexibly according to the readers' aims, the type of texts and the reading contexts (Macaro & Erler, 2008). For example, reading academic texts requires awareness of reading goals with the view of applying appropriate reading strategies (Aebbersold & Field, 1997).

Reading strategies relate to how readers conceive a task, what textual clues they should attend to, how they make sense of what they read and what they need to do when they do not understand what they are reading. Reading strategies range from simple fix-up strategies such as simply rereading difficult segments and guessing the meaning of unknown words from context, to more comprehensive strategies such as summarizing and associating what is being read to a reader's background knowledge. Skilled readers actively and strategically interact with texts (Akkakoson, 2013). Studies indicate that reading strategies are teachable. Reading strategy instruction helps students to enhance their performance on tests which involve reading comprehension (Fielding & Pearson, 1994). Studies also document that strategy-based reading instruction has a positive effect on learners' reading comprehension ability and their awareness of reading comprehension strategies (Kern, 1989; McNamara, 2007).

Reading strategy training can be explicit or implicit. Students in Ethiopia where English is learned as a Foreign Language (EFL) may need more explicit reading strategy training supported with appropriate practice to raise their awareness of the strategies and enhance their abilities to apply them. It can also be the case that implicit practice in the use of reading comprehension strategies can suffice to make direct lecture less important. In fact, there are a number of studies which have been conducted on the effect of teaching reading strategies on students' reading comprehension in other countries. Just to mention two studies, Vafaeeseresht (2012) has conducted a study on 'The Impact of Reading Strategy Training on the Reading Comprehension of Iranian EFL Learners'. The study found that preparatory students who participated in reading strategy training courses differed significantly from those who did not. Soleimani and Hajghani (2013) also investigated 'The Effect of Teaching Reading Comprehension Strategies on Iranian EFL Pre-University Students' Reading Comprehension Ability'. The study showed that while reading strategy training appeared to raise students' awareness of reading strategies and could encourage strategy use by some students, the reading strategy training was not able to enhance the students' reading performance. From this, one can reasonably conclude that reading strategy instruction still needs further studies, particularly in the Ethiopian context where there is a shortage of studies in the area.

Explicit reading strategy training can also increase other areas related to reading such as self-control and self-efficacy (Haller, Paris, Wixson & Palincsar, 1986; Child & Walberg, 1988; Bandura, 1995). However, it seems that studies which compare the effect of explicit reading strategy training with that of implicit reading strategy training on students' reading comprehension achievement and reading self-efficacy in the Ethiopian context are lacking. Thus, this study investigated the effect of explicit reading strategy training on Grade 11 students' reading comprehension achievement and their reading self-efficacy with specific focus at Jimma Preparatory School. Accordingly, the following research questions were addressed:

1. What is the level of reading comprehension of the target students before and after receiving reading strategy training?
2. How do the students perceive their reading self-efficacy before and after receiving reading strategy training?
3. Do students who receive explicit reading strategy training significantly outperform reading comprehension than those who receive implicit reading strategy training?
4. Is there a statistically significant difference in reading self-efficacy between students who receive explicit reading strategy training and those who receive implicit reading strategy training?

2. Review of Related Literature

2.1. Reading Strategies

Reading strategies are defined as the actions chosen and controlled by the reader to reach the goal of reading (Carrell, 1998). Researchers agree that there is a relation between reading strategy use and reading achievement in foreign language learning. Put differently, reading strategy use has a positive effect on students' skills to comprehend what they read (Anderson, 1999; Koda, 2007). Thus, reading strategies are reading techniques for reasoning about how to remove blockages to meaning that can be applied thoughtfully, consciously and adaptively (Duffy et al., 1986). In using reading strategies, readers conceive of a reading task, use different techniques to extract meaning from texts and take corrective measures when comprehension fails (Weinstein & Mayer, 1986). Reading strategies fall into the categories of cognitive strategies (scanning for specific details, using context clues to work out meanings of new words, skimming for main ideas, using prior knowledge, using images to make sense of texts, making notes or summarizing key points, reading to get questions answered or expectations confirmed, etc), meta-cognitive strategies (techniques of monitoring comprehension, evaluating one's reading progress and reflecting on strategy use) and social strategies (discussing and cooperating with others in the dealing with reading tasks) (Bouchard, 2005).

Reading strategy training has been given emphasis to enhance students' strategic reading. Training which emphasizes the coordinated utilization of multiple reading strategies helps to negotiate the meanings of texts in more efficient ways (Bouchard, 2005). According to Grabe (2004), effective strategy instruction focuses on Experiencing Text, Question–Answer–Response, Directed Reading, Thinking Activities, Reciprocal Teaching Procedure (RTP), Collaborative Strategic Reading, and Direct Explanation, Questioning the Author, Transactional Strategies and Concept-Oriented Reading Instruction. Some of these approaches involve four to eight major strategies, whereas others tend to incorporate more than eight strategies. The strategies that are commonly included in these approaches are summarizing, clarifying, predicting, imaging, forming questions, using prior knowledge, monitoring comprehension, evaluating one's reading comprehension, etc.

Studies have reported positive results regarding effective combined-strategies instruction that improve learners' reading comprehension (Macaro & Erler, 2008). That

is, less successful readers can be taught new strategies to help them to become better readers. Reading strategy training is based on the belief that learning strategies are teachable and that learners can benefit from being coached in acquiring relevant strategies (Pressley, 2009). For example, English language teachers can train students to develop meta-cognitive skills of monitoring and controlling their comprehension processes (Anderson, 1999). That is, students can be directed to focus their attention on monitoring what occurs to achieve effective comprehension. When they become aware of their own reading strategies, students can consciously decide how to improve their reading comprehension (Bouchard, 2005).

As indicated before, reading strategies help readers to conceive a task, decide what textual cues they should attend to, make sense of what they read and take corrective actions when comprehension fails. The literature indicates that reading strategies range from simple fix-up strategies such as simply rereading difficult segments and guessing the meanings of an unknown words from context to more comprehensive strategies such as summarizing and relating what is being read to the readers' background knowledge. Therefore, training on reading strategy use helps students to enhance their performance on reading comprehension tests by enhancing their reading abilities and strategic awareness (Janzen, 1996). Reading strategy training can be explicit or implicit. Explicit reading strategy training involves direct awareness-raising on reading comprehension strategies and their applications followed by tasks and exercises designed to enable students to apply these strategies. On the other hand, in implicit reading strategy training, students are not directly told about the nature and application of the strategies but are exposed to reading tasks and activities which help them to apply reading strategies.

2.2. Reading Strategy Training

Pressley (2009) emphasizes the value of strategy-based reading comprehension instruction. In other words, informed instruction in the classroom could enhance awareness and comprehension skills. Different studies suggested that reading strategy training needs to be conducted in conjunction with the regular course of instruction over an extended period of time. This suggests that teachers should conduct reading strategy training to equip students with necessary reading skills which improve their reading comprehension achievement.

One of the best tools available to educators is explicit instruction, a structured, systematic and effective methodology for teaching academic skills. It is called explicit because it is an unambiguous and direct approach to teaching that includes both instructional design and delivery procedures. Explicit instruction is characterized by a series of supports or scaffolds, whereby students are guided through the learning process with clear statements about the purpose and rationale for learning the new skill, clear explanations and demonstrations of the instructional target and supported practice with feedback until independent mastery has been achieved. Marcahnd-Martella and Martella (2008) consider this form of reading instruction a systematic method of teaching which proceeds in steps, checking for student understanding and achieving their successful participation.

Elements of explicit reading instruction have been identified (Solity et al., 2000). These instructional elements are listed and briefly described below.

1. **Focusing instruction on critical content:** Teaching skills, strategies, vocabulary terms, concepts, and rules that will empower students in the future and match the students' instructional needs
2. **Sequencing skills logically:** Considering several curricular variables such as teaching easier skills before harder skills, teaching high-frequency skills before less frequent skills in usage, ensuring mastery of prerequisites to a skill before teaching the skill itself, and separating skills and strategies that are similar and thus may be confusing to students.
3. **Breaking down complex skills and strategies into smaller instructional units:** Teaching in small steps, segmenting complex skills into smaller instructional units of new material addressing concerns about cognitive overloading, processing demands and the capacity of students' working memory.
4. **Designing organized and focused lessons:** Making sure that lessons are organized and focused, to make optimal use of instructional time; organizing lessons on relevant topics and sequencing them well.
5. **Beginning lessons with a clear statement of the lesson's goals and expectations:** Telling students clearly what is to be learned and why it is important.
6. **Reviewing prior skills and knowledge before beginning instruction:** Providing a review of relevant information and verifying that students have the prerequisite skills and knowledge to learn the skill being taught in the lesson, i.e., linking the new skill with other related skills.
7. **Providing step-by-step demonstrations:** Modeling the skill and clarifying the decision-making processes needed to complete a task or procedure by thinking aloud as one performs the skill; clearly demonstrating the target skill or strategy in order to show students a model of proficient performance.
8. **Providing adequate range of examples:** Providing examples illustrating situations when the skill will be used or applied so that students do use it as they read a range of texts.
9. **Providing guided and supported practice:** Engaging students in adequate practice, regulating the difficulty of practice through systematic guidance which decreases as students master the skill.
10. **Requiring frequent responses:** Planning a responsive high level interaction using questioning; having the students respond frequently (i.e., oral responses, written responses, or action responses) to help them focus on the lesson content and strategy.
11. **Monitoring student performance closely:** Carefully watching and listening to students' responses, verifying mastery, making timely adjustments in instruction if students are making errors and closely monitoring their progress.
12. **Provide immediate affirmative and corrective feedback:** Following up on students' responses as quickly possible, providing immediate feedback to students about the accuracy of their responses.
13. **Delivering the lesson at a brisk pace:** Delivering instruction at an appropriate pace to optimize instructional time, amount of content that can be presented and on-task behaviour; using a rate of presentation that is brisk but includes a reasonable amount of time for students' thinking/processing, especially when they are learning new material
14. **Helping students organize knowledge:** Using teaching techniques that make connections of learning experience more apparent or explicit to transfer well-organized

and connected information which makes it easier for students to integrate new skills with previously experienced ones.

15. Providing distributed and cumulative practice: According to Solity et al. (2000), Distributed (vs. massed) practice refers to multiple opportunities to practise a skill over time. Cumulative practice is a method for providing distributed exercise by including practice opportunities that address both previously and newly acquired skills.

2.3. Reading Self-Efficacy

In addition to skills to comprehend texts, reading needs positive self-efficacy which has been proven to improve learning (Zimmerman, Bonner & Kovach, 1996). That is why scholars give a considerable emphasis to the role of self-efficacy in learning reading. Schunk and Rice (1993) accordingly consider that reading self-efficacy is an important area for educators to consider.

Self-efficacy perception has an important role to play in the development of reading skills (Combs, 2012). It is, thus, not possible for students to develop effective text comprehension abilities if they do not have positive reading self-efficacy. In other words, to become readers, students should also develop positive perceived reading ability and risk-taking skills. As Lawrence (2008) emphasizes, students who have poor self-efficacy beliefs do not think that they are capable of improving their reading skills and are not motivated to read. As a result, they do not engage in reading if they are not coerced to read. Therefore, it can be argued that strategy-based reading instruction should foster students' reading self-efficacy (perceived reading ability and challenge-facing/risk-taking behaviour) which help them to improve their reading comprehension achievement since for most of our day-to-day activities are efficacy-driven (Bandura, 1995).

3. Research Methodology

3.1. Design of the Study

The research design employed in this study was quasi-experimental. Quasi-experimental research design uses treatment group and non-treatment or comparison group. The two groups are similar in terms of the baseline or pre-intervention characteristics. The treatment group captures the outcome, i.e. the effect of the independent variable on the dependent variable. Quasi-experimental design is often described as non-randomized design, for it depends on intact groups and lacks randomization (Morgan, 2000). Despite its drawbacks, quasi-experimental design was chosen in this study to collect data from existing groups without disrupting the groups already arranged by the school.

3.2. Population and Sampling

The population for this study was Grade 11 students at Jimma Preparatory School. Grade 11 was selected purposefully, for one of the researchers was teaching English to grade 11 students at the school, and it was believed that the study could be conducted easily. According to the information obtained from Jimma Town Educational Office, the

number of Grade 11 students in this school in the 2015/16 academic year was 800. These students were distributed to 16 classes. Of these, two classes were taken from the natural science stream. The natural science stream was chosen because the numbers of students in classes of social science stream were small. The two classes were selected using lottery method because the method gives an equal chance of being selected to the other classes of natural science stream, and one was assigned as experimental group while the other one was selected as control group through lottery draw. After the classes were identified, all the students in the experimental group (N=50) were included in the study using compressive sampling technique, for the number of the students was relatively small. The same sampling technique was used to include all students in the control group (N=50) of the study. Therefore, the study employed both probability (lottery) and non-probability (purposive and compressive) sampling techniques.

3.3. Data Collection Instruments

Two data collection tools, i.e. reading comprehension test and structured questionnaire were used in this study.

Reading comprehension test. Since one of the objectives of this study was to identify the effect of explicit reading strategy training on students' reading achievement, tests were used as data collection instruments. Thus, a reading comprehension test adapted from TOEFL sample test from online sources was used for this purpose. This test had five parts: true/false, multiple-choice and open-ended items which were taken from two passages entitled '*Running water on mars*' and '*Dodder plant*'. After it was adapted and assembled carefully, the test was given to an experienced Grade 11 English language teacher for comments. The teacher provided critical comments which helped to improve the difficulty level, the face validity and the content validity of the test. After this, a pilot-test was conducted with 50 Grade 11 students in a preparatory school other than the target school. On the basis of the results of the pilot-test, items which had poor difficulty level and discrimination power were modified before the test was administered in the main study. This last version of the test was then administered before (pre-test) and after (post-test) uniformly to both the experimental and the control groups.

3.3.1. Questionnaire

A Likert scale type questionnaire consisting of ten closed-ended items was used in this study to collect data to address the research questions regarding the students' reading self-efficacy. The questionnaire was adapted from the Motivation for Reading Questionnaire (MRQ) developed and validated by Wigfield and Guthrie (1997). The MRQ measures reading efficacy beliefs in terms of the dimensions of reading self-efficacy and challenge/risk-taking. Five of these items measure reading self-efficacy, while the remaining five measure challenge/risk-taking. Therefore, these ten items of the MRQ were considered appropriate for this study and used with some modifications.

Firstly, two new items were added to the three items on reading self-efficacy to make this part more comprehensive. However, the five items which measure challenge/risk-taking were found sufficient and no item was added to them. Secondly, slight modifications were made on some of the items to make them contextually fit and easier to understand. After these adaptations, the questionnaire was pilot-tested on other

50 grade 11 students who have not been included in the final study at the school. Since the pilot study showed acceptable internal consistency of the items (Crombach's alpha coefficient = 0.79), the questionnaire was administered to the experimental and the control groups before and after the experiment in a face-to-face administration modes.

3.4. Data Collection Procedure

The following steps were undertaken during data collection. After the test and the questionnaire were prepared, piloted and made ready for administration, the experimental and control groups were identified. Then, training was given to the English teacher who later conducted strategy training under regular supervision and assisted in data collection. The training focused on strategy-based instruction in general and strategy-based reading instruction in particular, the components of reading strategy and the contents of the instruments along with their administration procedure. Following this, in collaboration with the trained teacher, the pre-test was administered, followed by the administration of the questionnaire before the experiment.

Afterwards, the experiment was commenced. During the experiment, the experimental group received explicit reading strategy training in ten lessons (45 minutes each), while the control group received implicit reading strategy training for the same period of time. In other words, the students in the experimental group were informed about the characteristics and application of specific reading strategies. They were also exposed to reading comprehension exercises which required them to apply the various reading strategies they were made aware of. On the other hand, the students in the control group practiced applying the same reading strategies in dealing with the same reading comprehension activities. However, direct awareness raising about the characteristics and application of the reading strategies was not done for this group. After the ten lessons, the post-test was given to both experimental and control groups followed by the second-step questionnaire administration.

Students' reading comprehension achievement and their reading self-efficacy are influenced by a host of factors. One of such factors is reading strategy training. The other possible extraneous factors or variables have been controlled in the study by assigning the experimental group and the control groups through lottery draw to control subject related attributes such as intelligence, age, gender etc. The temperature of the room and the time of the experiment were also taken into account in administering the reading comprehension test and structured questionnaire.

3.5. Method of Data Analysis

Quantitative data which were collected using tests and structured questionnaire were used in this study. Therefore, quantitative method of data analysis was used to analyze the data. In the data analysis, on the one hand, mean scores were used to describe the students' (experimental group and control group) reading comprehension achievement and reading self-efficacy. On the other hand, independent sample t-test was conducted to test differences between the students in the experimental group and those in the control group in their reading comprehension achievement and perceived reading

ability. In this case, p -values < 0.05 were considered statistically significant. The Statistical Package for Social Sciences (SPSS) version 20 software was applied to analyze the data.

3.6. Ethical Considerations

In this study, appropriate steps were taken to meet ethical requirements. Firstly, to obtain permission to conduct the study, an official cooperation letter written from the Postgraduate Programs and Research Coordinating Office of the College of Social Sciences and Humanities at Jimma University was submitted to the Administration of Jimma Preparatory School. Secondly, consent form was prepared and distributed to students to enable them to express their willingness to participate in the study. All the students in both groups expressed their consent and were in effect included in the study. This was possible because they were briefed about the purpose of the study, assured that the tests would not affect their grades and informed that anonymity will be kept.

4. Findings

The findings of the study are presented and interpreted in two parts. The first part deals with the findings pertaining to reading comprehension test which tried to answer the research question about the participants' reading comprehension abilities and the one which focuses on differences in reading comprehension achievement between the experimental and control groups. On the other hand, the second part pertains to the findings from the data collected through a structured questionnaire to answer the research question regarding the effect of explicit reading strategy training on students' reading self-efficacy.

Table 1: Scores of comprehension before the experiment

	N	Mean	SD	Sig.
Exp. group	50	31.92	18.051	.001
Control group	50	29.48	10.731	

Pre-test was conducted to check whether the two groups (experimental and control) were equivalent on mean scores of comprehension before the experiment. As indicated in Table 1, the mean score on comprehension for students who were assigned in the experimental group was higher (Mean=31.92) than the one for students who were assigned in the control group (Mean=29.48). Similarly, the independent sample t-test revealed that the observed mean difference for the experimental and the control groups was statistically significant ($t(98) = .841$, $p = .001$). Two things can be observed from these results. On the one hand, the mean score for the experimental group (Mean=31.92) and the control group (Mean=29.48) are much less than the minimum average result, i.e.

50%, in most tests marked out of hundred. This shows that students in the two groups performed poorly in the pre-test. On the other hand, the fact that the observed difference between the two groups in the mean scores of reading comprehension test was statistically significant demonstrates that a marked difference found after the experiment (on the post-test) were the result of the experimental treatment.

Table 2: Scores of comprehension after the experiment

	N	Mean	SD.	Sig.
Exp. group	50	68.60	17.169	.000
Control group	50	31.93	10.749	

As indicated in Table 2, the mean score on comprehension for students who were assigned in the experimental group was much higher (Mean=68.60) than the one for students who were assigned in the control group (Mean=31.93). The independent sample t-test also revealed that the observed mean difference for the experimental and the control group was statistically significant ($t(98) = 14.899, p = .000$). These findings indicate that explicit reading strategy training helped the experimental group students to improve their mean score (Mean=68.60) and significantly outperform the control group students in the post-test.

Table 3: Perceived reading ability before the experiment

	N	Mean	SD.	Sig.
Exp. group	50	3.376	.750	.066
Control group	50	3.068	.901	

As indicated in Table 3 above, the mean score on perceived reading ability for students who were assigned in the experimental group was slightly higher (Mean=3.376) than the one for students who were assigned in the control group (Mean=3.068). The independent sample t-test, however, revealed that the observed mean difference for the experimental and the control groups was not statistically significant ($t(98) = 1.857, p = .066$). That means, the findings revealed that the students in the experimental group and those in the control group had nearly comparable perceived reading abilities before the experiment.

Table 4: Scores of challenge-facing (risk-taking) before the experiment

	N	Mean	SD.	Sig.
Exp. group	50	3.172	.856	.066
Control group	50	3.124	1.011	

Similarly, as indicated in Table 4, the mean score on challenge-facing (risk-taking) for students who were assigned in the experimental group was slightly higher (Mean=3.172) than the one for students who were assigned in the control group (Mean=3.124). The independent sample t-test, nevertheless, revealed that the observed mean difference for the experimental and the control groups was not statistically significant ($t(98) = 1.857, p = .066$). In other words, the two groups were nearly similar in challenge-facing (risk-taking) before the experiment.

Table 5: Scores of perceived reading ability after the experiment

	N	Mean	SD	Sig.
Exp. group	50	4.080	.374	.000
Control group	50	3.172	.615	

After the experiment, post-test was conducted to see whether the treatment resulted in differences on mean scores of perceived reading ability between the experimental and the control groups. As indicated in Table 5, the mean score on perceived reading ability for students who were assigned in the experimental group was higher (Mean=4.080) than the one for students assigned in the control group (Mean=3.172). The independent sample t-test also revealed that the observed mean difference for the experimental and the control groups was statistically significant ($t(98) = 8.911, p = .000$). This means that the two groups differed significantly in perceived reading ability because of the experimental treatment (explicit reading strategy training offered to the experimental group).

Table 6: Scores of challenge-facing (risk-taking) after the experiment

	N	Mean	SD.	Sig.
Exp. group	50	3.972	.679	.000
Control group	50	2.796	.662	

Similarly, as indicated in Table 6, the mean score on challenge-facing (risk-taking) behaviour for students who were assigned in the experimental group was higher (Mean=3.97) than the one for students who were assigned in the control group (Mean=2.80). The independent sample t-test also revealed that the observed mean difference for the experimental and the control groups was statistically significant ($t(98) = 8.76, p = .000$). Thus, it can be concluded that the observed significant differences in challenge-facing (risk-taking) behaviour was the result of the explicit reading strategy training offered to the experimental group students.

5. Discussion

Training on reading strategy use can be either explicit or implicit. This study investigated the effect of explicit reading strategy training on Grade 11 students' EFL reading comprehension achievement and their reading self-efficacy with a particular focus on Jimma Preparatory School in the Ethiopian context in the 2015/16 academic year. Here, the discussion of the main findings is presented.

Firstly, this study found that both the experimental group (those who received explicit reading strategy training) and the control group (those who received implicit reading strategy training) students had low reading comprehension achievement in the pre-test. However, while the students in the experimental group considerably improved their reading comprehension achievement on the post-test, those in the control group improved their achievement on the same test only slightly. This reveals that explicit reading strategy training helped students to improve their reading comprehension achievements. On the other hand, a statistically significant difference (favouring the experimental group) was found in reading comprehension achievement after the experiment (in the post-test). That is, explicit reading strategy training enabled the experimental group students to significantly outperform their counterparts in the control group in the post-test; explicit reading strategy training had a higher positive effect on reading comprehension achievement than implicit reading strategy training.

The slight improvement in the post-test among the control group students and the significant improvement in achievement on the same test among the experimental group students are in line with what is described in the literature. It has been documented that reading comprehension strategy training separates unskilled readers from skilled readers in that the latter interact with texts more effectively and, in effect, achieve better in reading comprehension tasks (Carrell, 1998). This means that reading strategy training helps students to enhance their achievement in reading comprehension tasks such as reading comprehension tests (Fielding & Pearson, 1994). Similarly, other studies (e.g. Mills, Pajares & Herron, 2007) revealed that explicit reading strategy training has a positive effect on students' reading comprehension ability and awareness of reading comprehension strategies.

Secondly, the findings of the study revealed that the students in both the experimental and control groups had average reading self-efficacy before the experiment. However, the mean score for the experimental group students and the one for the control group students improved in the post-test. Statistically significant differences in reading self-efficacy (perceived reading ability and risk-taking), favouring the experimental

group, were also observed after the experiment. This suggests that whereas strategy-based reading strategy brought about positive changes in students' reading self-efficacy, the explicit strategy training which the experimental group students received had a stronger positive result in this regard.

Generally, this study proved that explicit reading strategy training improved students' reading comprehension achievement and reading self-efficacy. From this, it can be inferred that students who obtain reading strategy training do better on reading comprehension tests and become more self-efficacious in reading than students who do not receive reading strategy training. The findings of the study also demonstrated that explicit reading strategy training had a more positive effect than implicit reading strategy training on students' reading comprehension achievement and reading self-efficacy. This implies that explicit reading strategy training interventions should be given more attention than implicit strategy training, taking account of the particular context of EFL reading instruction.

This study has its own limitations. Firstly, its scope was limited to two groups of students in one preparatory school. Thus, the findings of the study may not reflect the situations in other preparatory schools in the country. Secondly, a pre-test and post-test quasi-experimental design, which lacks the characteristics of randomization, was used. Thirdly, the experiment was conducted using only ten reading lessons which could have affected the quality of the findings.

5. Conclusions

Based on the findings of the study, the following conclusions can be drawn:

- The mean score for both the experimental group and the control group in the pre-test were found to be low. This shows that the students in both groups performed poorly before explicit reading strategy training. However, the experimental group significantly improved their mean scores of reading comprehension achievement and reading self-efficacy after the experiment (in the post-test). This indicates that reading strategy training helped the experimental group to enhance their reading comprehension achievements and reading self-efficacies.
- Significant differences were identified between the experimental group students and the control group students, favouring the former, in mean scores of reading comprehension achievement and reading self-efficacy in the post-test. In other words, the students who received explicit reading strategy (experimental group) had significantly higher mean scores than those who received implicit reading strategy training (control group) on the treatment variables. It can, therefore, be concluded that explicit reading strategy training had a much better positive effect than implicit reading strategy on reading comprehension achievement and reading self-efficacy.

6. Recommendations

The findings of this study generally found that the benefits of explicit reading strategy training outweighed those of implicit reading strategy training. Therefore, it would be better if teachers of English in the context of this study focus more on explicit reading strategy in their strategy-based reading instruction. It is also advisable that syllabus designers and materials writers focus more on explicit reading strategy training. However, further studies are needed for context-specific interventions.

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Full Length Article**Number and Numeracy in Aari**Fekede Menuta¹

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Abstract

Number here refers to a grammatical category as it is reflected in nouns, adjective and verbs. On the other hand, numeracy refers to a lexical entity that helps to count as in cardinal numerals, and to order as in ordinal numerals. The objective of this article was to describe number and numeracy in Aari thereby shows how both number and numeral are largely associated with *human body* and the *participants* in communication (the persons) in a given interaction. The research followed structuralism approach and qualitative methodology. Linguistic data were collected from five key informants who are native speakers of the language. The data were described as they were produced, however, by reducing them to the phonemic level. IPA and Leipzig's morpheme-by-morpheme glossing rules were used for transcription and glossing, respectively. The finding showed that nouns and adjectives uniformly use {-na} to show plural, and the singular is not marked. This morpheme is not associated with body or person. On the other hand, numbers in verbs are marked with person agreement morphemes: the first person singular is {-it-}², and the plural is {-ot-}; the second person singular is {-aj-}, and the plural is {-at-}; and the third person singular is {-ø-} which means not marked, and the plural is {-ek-}. Numerals in Aari are quite unique; the numbers 1-7 and 10 are basic, and are not strictly associated with body. Numerals 8 and 9 are compound that are derived by mathematical computation, that is, by subtracting two and one from 10, respectively. Numerals from 20 and above are based on human body. For instance, 20 is boonda literally 'one full person', and 30 is *e-wolexbab its-ke afe-tema* [full- one. person eat- and mouth-ten] which again literally means 'a full person and ten mouths ready to eat'. Ordinal numeral basically operate only for numbers 1-10, and it is shown with {-si}. The complex numeral systems are recently modified for pedagogical reason. This may endanger the pre-existing counting system as children will have the access only for the modified forms.

Key Words: *Aari/ Computation/Number/ Numeracy/ Omotic/*

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² Note that the morphemes indicated with morpheme boundary (-) before and after does not imply infix, it rather shows that the morpheme is preceded by verb root and followed by other agreement affixes. In fact, the concept of infix applies only when an affix is inserted penetrating the root as in 2.1.1 9(ii), possessive pronouns.

1. Introduction

1.1. Background

Aari sometimes spelt as Ari refers the people and place where East Omotic language speakers live in the South Omo Zone of the Southern Nation Nationalities and Peoples Regional State (SNNPRS). The South Omo Zone borders with Bench Maji Zone in the South East, Kafa and Gamo Goffa Zones, Konta special district and Basketo Special district in the South; Derashe special district in the North West, Konso district, which was called special district but now became part of Segen Hizboch Zone, and Oromiya region in the West and Kenya in the North. The administrative town of South Omo is Jinka, situated at about 525 km from Hawassa, the capital city of the SNNPRS, and 750 km from Addis Ababa, the capital city of Ethiopia.

South Omo Zone administratively, and of course linguistically, is divided into eight districts; namely, Male, Salamago, Benna-Ts'emay, Hammer, Nyangatom, Dassench, North Aari and South Aari. The administrative town of each district is Lemo-Gento, Hanna, Qey-Afer, Dimeka, Kangaton, Omorate, Gallia and Gather, respectively.

Aari language speakers are found in two districts of the Zone- in North Aaria and South Aari. The people of Aari are also organized into two main clans: the Indi or Sozma and Ashenda or Zera. Though currently the people are ruled by government assigned district authorities, there are nine traditional leaders who are chiefs of the villages they live in. According to 2007 census, the population of Aari is 280, 187; of which, 212,389 and 67,798 live in the South and the North Aari districts, respectively. The Aari people are farmers producing maize, sorghum, teff, Cardin, coffee, and root crops, such as ensete (*Ensete Ventricosum*) out which they prepare *Waashi*, their staple food. The people of Aari are polygamous whereby a man can marry any number of women as far as he has resources that sustain their lives. The marriage has to be arranged between distant kinships. Though all the tribes in Aari may intermarry, people from low classes cannot marry from the high classes. The people are mainly Christian and Islam. There are also some traditional religion followers.

The language of Aari is called *Aaraf* 'the mouth of Aari' by the speakers. The language is introduced into school system in the lower primary (1-4), and is used to broadcast community radio and TV programs for a few hours a day. Most of the Aari people are bilinguals of Basketo, Dime, Gofa, Konso, and Wolayta. Aari has four different dialect clusters; namely, Gayil, Sido, Baaka and Wubamer. Gayil has two sub-varieties: Bargid and Ub; and Sido has three sub-varieties: Shangama, Layda and Biyo (cf. Fekede, 2011).

The people of North and South Aari are less intelligible compared to their intelligibility with different dialects within their respective districts. Some dialects, such as Wubamer share the features of both North and South Aari varieties; hence, are intelligible to both the north and south Aari people. The intelligibility level becomes less among the Aari people living in areas where other Omotic languages are in contact. Languages in contact with Aari are Basketo and *Ats'i* which are spoken within and outside Aari; Male, Goffa, *Oyida*, Dime, *Mursi*, *Body* and *Benna* which are spoken outside Aari but are in contact with Aari.

The classification of Omotic languages from which Aari branches out from is shown below:

Proto- Omotic:

West Omotic: Maji

Kafa-Gimojan³

East Omotic: Aroid: Hamer-Banna

Dime

Aari: Bakka, Shengama, Laydo, Sido,
Seyki, Mura, Ubamer, Zeddo, Gayl

Adapted from (Ayyalew, 1995; Fekede, 2011)

For the sake of consistency in presentation and exclude dialect variations, which in fact affect both form and meaning, the present study is based on the Sido variety of South Aari. It has been chosen because it is relatively shared among wider villages of Aari speakers, and is intelligible to most of the Aari dialects. The lexical comparison by (Fekede, 2011) which is based on 275 lexical items shows that Sido is highly shared with Baaka (94.9%) and Wuba (84.3%), but is less shared with Gayil (50.5%).

1.2. Statement of the problem

The number and numerals system of Aari have been partly discussed from comparative perspective by Fekede (2011). He found that there is difference in number system between Gayil and Sido. According to Fekede (2011), Gayil marks plural with {-nakes} whereas the Sido variety with {-na}. Singular is not marked in both varieties. The counting system conceptually is similar in the two dialects though there are difference in the morphemes and the shapes of some numerals. A different scenario is that the counting system has been changed since 2016 by simplifying it for a pedagogical reason. The introduction of the language into the school system also required the introduction of mathematical computation system, which has not been looked into in the previous studies. This article, therefore, attempts to provide comprehensive account of the number and numeracy system, the modifications made since 2016 in the counting system, and the ways mathematical computations are made in the language to fill into the existing gap.

1.3. Objective

The aim of the study is to describe the number system and numeracy in Aari. It specifically aims to: describe the way number is expressed in nouns, adjectives, pronouns and verbs; the way numeracy is conceptualized and computed.

³ Gimojan may currently is best represented by BenoYem (Benchnoon and Yemsa)

1.4 Significance

The study can help the native speakers in preparing teaching materials as the language is already introduced into school system; it can help for comparative study of Omotic languages in particular and Afro-asiatic in general; and it can contribute for linguistic study as a reference and /or typological study.

2. Review of Related Literatures

2.1. Previous Studies

There are a few linguistic works in Aari, in fact not specific to Sido variety. Tsuge (2006) offers 417 word lists of Gayil dialect of Aari. He claims that most dialects of Aari share 85% of their vocabulary one another, but Gayil shares with other varieties only between 67.5%~79.5%. Fekede (2011) who compared 275 lexical items, however, reduces the shared vocabulary to the range between 44.7%-62.5%.

Tsuge (2005) discusses modality and aspect, which is not distinguished from tense in the study. He lists *{-maj-}*, *{aj}* or *{-ki}* as negative markers in Aari. The morpheme *{-maj-}* is preceded by a verb root and followed by the copula *{-ee}*; hence, *{-majee}*. The morpheme *faal* 'be able,' a loan from Amharic, expresses possibility. The morpheme *{-er}* shows an 'affirmative' action in the future. It often follows the future tense markers *{-t}*, *{-st}* in the plural forms. He considers *{-(s)t}* and *{-er}* aspect and modality markers, respectively. He lists *{-s(is)}*, *{-ar}/{-er}*, *{-im}*, and *{-a(a)ro}* as causative, passive, reflexive and 'iterative action markers, respectively. The morpheme *{-dakki}* functions as negative copula or existential verb. As to Tsuge (2005), it is a combination of *{da-}* and *{-ki}*, existential and negative markers, respectively. This morpheme, *{dakki}*, can occur as *dakkidajk*, where *{-dajk}* has the meaning 'because,' and as *dakka(a)b*, 'has not' / 'without' as in:

- a) *afa dakkaab*
mouth has.not 'dumb'
- b) *k'aami dakkab*
ear has.not 'deaf'
- c) *aaḫi dakkaab*
eye has.not 'blind'

I consider the morpheme *dakkaab* as a sequences of two morphemes: *{dakk-}* 'exist'; or has', and *{-aab}* 'not'.

Daniel (1993) reviews inflectional and derivational affixes, and then describes the complements of verbs in Aari using generative approach. He characterizes Aari nouns as ending with vowels *-i* or *a*. Though this is true for most nouns, Fekede (2011) provides counter evidence showing that nouns may end with consonant across the dialects of Aari.

According to Daniel (1993), derivational affixes *{-mi}* and *{-inti}* show verbal and gerundive noun, respectively. He distinguished *{-m}*, *{-t(a)}* and *{-o}* as morphological case markers of accusative, genitive and vocative, respectively. Nominative case is considered to be syntactic, not morphological. Fekede (2011) shows

that nominative is both morphological, expressed with {-a}, and syntactic-expressed by syntactic position.

Daniel (1993) distinguishes gender markers prefixed and suffixed to a noun. The prefixes that show masculine and feminine gender is {aŋ-} and {ma-}, respectively. The suffixes {-si} or {-i} and {-t} or {-a} show masculine and feminine, respectively. Fekede (2011) argues, and provides evidences that the morphemes {-i} and {-a} mark gender in a few, but not in all nouns.

Daniel (1993) distinguishes {-a} as plural marker. Fekede (2011) dismisses this showing that both singular and plural nouns can end with -a. The latter shows that a singular nouns is not marked for number, but the plural is shown with {-na} in Sido and with {-nakes}, also shortened as {-nkes}, in the northern Aari dialects, such as Gayil.

Fekede (2011) provides a comparative grammatical description of a South and North Aari dialects. He provides the phonological description, nominal and verbal morphology, morphology of adjectives, and a sketchy description of its syntax. To make readers acquainted with the sounds of Aari which will be used in the transcription of the data, we have provided the phonemic chart of Aari adapted from Fekede (2011, p.15):

Table-1: Consonant Phonemes of Aari

	Bilabial		Alveolar		Palatal		Velar		Uvular	Glottal
Stops	p	b	t	d			k	g		ʔ
Implosives		ɓ		ɗ						
Ejectives	p'									
Fricatives	f		s	z	ʃ	ʒ		χ ⁴		h
Affricates			ts		tʃ					
Ejective-affricates			ts'		tʃ'					
Nasals		m		n		ɲ				
Lateral				l						
Trill				r						
Glides		w				j				

⁴ It is uvular voiceless fricative sound. Tsuge (2006:94) uses the symbol /h/ for it though the sound does not appear in his word lists. Ford (1985) describes this sound as voiceless uvular /q/ with two variants: pharyngeal fricative [ħ] and glottal implosive [q]. Tsuge (2006) representation of the sound cannot be accepted as the sound is not found in his word list, and no minimal contrast or distribution is provided. Ford (1985) explanation is not plausible since interpreting the same sound as voiceless [ħ] and voice [q] with different air mechanism, egressive and ingressive, respectively seems implausible. What is more, Fekede (2011) found only bilabial and alveolar, but not velar implosives as shown in the phonemic chart.

The language has six vowels which contrast in length. These are: i (ii), u (uu), e (ee), o(oo), ε (εε) and a (aa).

3. Methodology

The methodology is qualitative description following structuralism approach. The data source for this study comes from my previous study conducted from 2010-2011, and new data collected during 2016/2017 from Aari native speakers, Birhanu Beyeko and Manahil Tilahun, who were studying linguistics for the masters of Arts in Linguistics and Communication at Hawassa University, Ethiopia. The data were collected with linguistic questionnaire which was prepared in English. Data elicitation, however, was made with a contact language Amharic, the language of wider communication and official language of the Federal government of Ethiopia. The Key informants were bilinguals of Aari and Amharic. The collected data were transcribed phonemically and glossed following Leipzig (2015) morpheme-by-morpheme glossing rule. The phonemically transcribed data were analyzed largely based on structuralism approach or theory.

4. Presentation of Result

4.1 Number

Number is grammatical category used to show singular, plural and dual. Most languages distinguish singular and plural only. There are languages which have three ways number distinctions: singular, plural and dual. Other concepts related numbers are: *singulative* which singles out an individual or entity as in Highland East Cushitic languages and collective *plural* as in Amharic *inə-t'ot'a* (CPL-monkey 'monkey and others') and Gurage *nə-g^wəntfə* (CPL-hyena 'hyena and others').

4.1.1. Number in pronouns

Pronouns in Aari distinguish singular and plural in first, second and third person. The distinction is made in subject and object pronouns. Verbs also show number difference with pronominal affixes attached as a subject or object agreement markers. Demonstrative pronouns distinguish singular and plural as well. The number system in different types of pronouns, nouns, verbs and adjectives is discussed below.

i) Number in subject pronouns

Table-2: Number in Subject Pronouns

Person	SG	PL
1	it-a	wo-ta
2	aan-a	jε-ta
3M	n-o-o	kε-ta
3F	n-a-a	kε-ta

The person markers are completely different in first and second person. First person is {it-} in singular and {wo-} in plural, and second person is {aan-} in singular and {jɛ-} in plural. Person marker in third person singular is {n-} with masculine marker {-o-} and feminine marker {-a-}, each of which followed by case marker, attached to it, and it is {kɛ-} in the plural. Feminine, is thus marked only in third person singular, which is neutralized in the plural form of the same person. The vowel {-a} in the pronouns shows nominative case; note that it is raised to [-o] in 3M.SG in harmony with gender marker. When we consider number marking, the focus of this study, the singular is not marked; hence, it is zero {-∅}. The plural is marked with {-ta} uniformly, and the last vowel of the plural morpheme at the same time marks nominative. One may like to represent the plural with {-t-} and {-a} as nominative marker. Considering the plural as {-ta}; however, seems more plausible in comparative term as this morpheme is used as plural marker in other Omotic languages, such as Konta (Fekede, 2015, p.56).

ii) Number in possessive pronouns

Number in possessive pronouns is marked by the same pronominal affixes used for object pronouns except that an additional possessive marking affix {-te} or {-ta} is suffixed. The number system in possessive pronouns is shown in Table-3:

Table-3: Number in Possessive Pronouns

Person	SG	PL
1	is-ta	won-te
2	an-te	jɛ-te
3M	ki-te	kɛ-te
3F	ko-te	kɛ-te

The possessive pronoun behaves partly like subject pronouns and partly like object pronouns formally. First person possessive singular *ista* is similar to first person singular subject pronoun *ita* except that the possessive form infixed -s-. Similarly, First person possessive plural *wonte* is similar to the first person plural subject pronoun *wota* except that the former again in-fixed -n- and has changed its terminal vowel from -a to -e. The third person possessive forms are exactly similar to object pronouns except that the former affix the possessive marking morpheme {-te}.

iii) Number in demonstrative pronouns

Aari distinguishes two distance references relative to the location of the speaker, that is, close and far references as shown below:

Table-4: Number in Demonstrative Pronouns

Reference	SG	PL
'close'	kona	kona
'far'	keena	keena-kɛs

In close reference, singular is distinguished from plural by vowel length short -o- of singular *kona* becomes long -oo- in the plural. In the far reference, the singular is zero { \emptyset }, but the plural is shown with {-kəs}.

iv) Number in isolative, inclusive and exclusive pronouns

Selective pronouns single out an individual person or item from many others persons or things. Non-selective pronoun expresses the inclusion of everyone in a group where as exclusive pronoun expresses the exclusion of everyone from a group. Since inclusion and exclusion is about singling out or adding, it is concerned with number system as shown in Table-5:

Table-5: Number in Isolative, Inclusive and Exclusive Pronouns

Person	selective (singled out)	Non-selective (inclusive)	Exclusive (omission of all)
1	<i>woləxa-wont</i> one-us 'one of us'	<i>wota- muudena</i> we -all 'all of us'	<i>aa-j-wo- tere</i> [<i>aa-bere</i>] NEG-1PL-FOC 'none of us'
2	<i>woləxa-jent</i> one-you 'one of you'	<i>jeta- muudena</i> you-all 'all of you'	<i>aa-j-jen-tere</i> NEG-2PL-FOC 'none of you'
3	<i>woləxa-ket</i> one-them 'one of them'	<i>keta- muudena</i> they-all 'all of them'	<i>aa-j-ket-tere</i> NEG-3PL-FOC 'none of them'

We observe from the examples that the semantics of isolating and including is made possible through lexical entities *woləxa* 'one' and *muudena* 'all', respectively. In both the isolative and inclusive pronouns, the forms are basically plural forms, yet they differ in two perspectives. Formally, the isolative pronouns assume object forms and the inclusive pronouns take the subject forms. Syntactically, isolative pronouns follow the singling out noun *woləxa* 'one' whereas the inclusive pronouns precede the inclusive form *muudena* 'all'. In exclusive pronouns, the plural forms of the pronouns are {-wo-} 'us', {-jen-} 'you (ACC), and {-ket-} 'them'. It is worth to note again that the exclusive forms differ formally with isolative forms though syntactically both are in accusative form. In syntactic structure, the exclusive forms are enclosed unlike the suffixes and prefixes in the isolative and inclusive forms, respectively.

4.1.2. Number in verb agreement pronoun

Verbs in Aari agree with their subject and object. The agreement is marked by the verb through inflectional affix. The affixes attached to the verb can show both the number of the subject and object noun or pronoun.

i) *Number in object agreement pronouns of verbs*

Object agreement pronouns of verbs in Aari are prefixed to the verb. The prefixes seem to be parts of subject pronouns. Below in Table-8 are the object agreement pronouns:

Table-6: Number in Verb Agreement Object Pronouns

Person	SG	PL
1	i-	wo-
2	a-	jɛ-
3M	ki-	kɛ-
3F	ko-	kɛ-

The object pronouns are dependent morphemes, and occur with verbs as an agreement marker. The forms are partly similar, with some reductions, to subject pronouns except in third person singular where the third person marker of subject pronoun {n-} changes to {-k-} in object pronoun. What is more, the gender markers changes where {-o} of masculine marker changes to {-i}; and {a-} of feminine marker becomes {o-} which marked masculine in subject pronoun. This implies that the consonants and vowels of person and gender markers should be used together than in isolation both in subject and object pronouns to avoid semantic confusion. The examples below show the forms of object pronouns in sentences:

	SG	PL
1	<i>noo i-n-keze</i> he 1SG.O-ACC-tell.PST 'he told me'	<i>noo wo-n-keze</i> he 1PL.O-ACC-tell.PST 'he told us'
2	<i>keta a-n-keze</i> they-2SG-ACC- tell.PST 'They told you'	<i>ite jɛ-n-kezite</i> I 2PL-ACC tell.PST 'I told you'
3M	<i>keta ki-m-keze</i> they-3SMO-ACC-told 'they told him'	<i>naa ke-n-keze</i> she 3PL.O-ACC- tell.PST 'she told them'
3F	<i>wota ko-n-keze</i> we 3SFO-ACC-told 'we told her'	<i>wota ke-n-keze</i> we 3PL.O-ACC- tell.PST 'we told them'

ii) *Number in subject agreement pronouns of verbs*

Table-7: Number in Verb Agreement Subject Pronouns

Person	SG	PL
1	-it-	-ot-
2	-aj-	-ɛt-
3M	-∅-	-ɛk-
3F	-∅-	-ɛk-

Example sentences demonstrating the verb agreement subject pronouns are given below:

	SG	PL
1	<i>ita mawak fɛn-t-it-e</i> I cow buy-PERF-1SG-PST 'I bought a cow'	<i>wota mawak fɛn-t-ot-e</i> we cow buy-PERF-1PL-PST 'We bought a cow'
2	<i>aana mawak fɛn-t-aj-e</i> you cow buy-PERF-2SG-PST 'You(s) bought a cow'	<i>jɛta mawak fɛn-t-ɛt-e</i> you cow buy-perf-2PL-PST 'You(pl) bought a cow'
3M	<i>noo mawak fɛn-t-e</i> he cow buy-PERF-PST 'He bought a cow'	<i>kɛta mawak fɛn-t-ɛk-e</i> they cow buy-PERF-3PL-PST 'They bought a cow'
3F	<i>naa mawakan fɛn-t-e</i> she cow buy-PERF-PST 'She bought a cow'	<i>kɛta mawak fɛn-t-ɛk-e</i> they cow buy-PERF-3PL-PST 'They bought a cow'

4.1.3. Number in nouns

Singular nouns in Aari is not marked for number. Plural is productively formed from the singular nouns by adding the morpheme {-na} as shown in the examples in Table-8:

Table-8: Number in Nouns

Gloss	SG	PL
'house'	eeha	eeha-na
'child'	jintsi	jintsi-na
'boy'	aɲins	aɲins-i-na
'bird'	afti	afti-na
'horse'	faras	faras-na
'lion'	zoob	zoob-na
'dog'	aaksi	aaksi-na
'rat'	uuntin	uuntini-na
'cow'	manwak	manwak-na
'woman'	maa/maana	maana-na

In *aɲins-i-na*, the vowel between the singular form and the plural marker {-na} is an epenthetic vowel inserted to avoid impermissible three consonant sequences.

It is important to note that plural interacts with definiteness in Aari. Most count nouns which are definite have {-na} even when they are not plural. For instance, *ets* refers to 'a man', *eed* 'man' collective form and *eedsi-na* 'the man'; *maa* 'woman' collective, *maana* 'a woman' and *maaji-na* 'the woman' (cf. *maana-na* 'women'). In fact this interaction has been noticed by Hyward 1990:442-445 as cited in Corbett, 2000:278).

It was found that nouns related to time exceptionally form their plural with {-bedi} as in *bon* 'year' versus *bon-bedi* 'years' and *sats* 'a day' versus *sats'a-bedi* 'years'.

4.1.4. Number in adjectives

Adjective like nouns add {-na} to show plural. The singular is not marked. Table-9 shows the singular and plural forms:

Table-9: Number in Adjectives

SG	Gloss	PL	Gloss
gaʒmi	'tall'	gaʒmi-na	'tall ones'
ts'edi	'short'	ts'edi-na	'short ones'
uuzmi	'beautiful'	uuzmi-na	'beautiful ones'
geʎta	'old'	geʎta-na	'old ones'

4.2. Numerals

Numerals categorically are nouns and sometimes behave like adjective because they are used to quantify a noun. There are two types of numerals: cardinal and ordinal; each of this is discussed below.

4.2.1. Cardinal numeral

Cardinal numerals are numbers used to count an entity, such as 1, 2, 3, etc. In Aari, cardinal numerals can be grouped into two based on their form: basic (simple) and divided (complex) as discussed below.

i) Simple basic numerals

Simple or basic numerals are the numbers from one to seven and number ten. The following are list of cardinal numerals representing 1-10:

1	woleʎa
2	kasken
3	mekan
4	ojidi
5	doŋ
6	laa
7	tɛbaz
8	<i>kasken-tema-rs</i> two- ten- for 'two more for ten'
9	<i>wolʎan-tema-rs</i> one –ten-for 'one more for ten'
10	tema

Number eight and nine are derived by mathematical operation, that is, by subtracting from ten. Thus, eight is combination of *kasken* 'two' and *tema* 'ten' joined

with the affix {-rs} ‘for’, and number nine is the combination of *wolqan* ‘one’ and *təma* ‘ten’. Note that /q/ in *wolqan* becomes fricative between vowels as in *woləχa* ‘one’.

ii) Derived numeral

Cardinal numerals from eleven to nineteen are derived by combining *təma* ‘ten’ with other numerals of one to nine in the manner shown below:

11	<i>təma woləχo</i> ten-one	'eleven'
12	<i>təma kəsten</i> ten two	'twelve'
13	<i>təma məkən</i> ten three	'thirteen'
14	<i>təma ojidi</i> ten four	'fourteen'
19	<i>təma olχan təmers</i> ten one-ten-for	'nineteen'

The numerals from 11-20 are just combinations of ‘ten’ followed by the numerals ‘1-9’. Number 19 is complex, consisting of three words because number 9 itself is derived through computation (one more for ten).

Numerals from twenty to nine hundred ninety-nine have quite different ways of derivation process. The counting is done with the help of ‘human body’. Fingers of human body are used for counting the numerals. ‘Twenty,’ for example, refers to ‘one whole person’ or ‘a whole body’. This means that one person’s hands fingers and legs toes are counted together. So, *boonda* is ‘one full person’ implying ‘twenty’ since a healthy person- a person without disability in his fingers and toes has 10 fingers and 10 toes, total 20. The numbers 21-29 are based on *boonda* ‘twenty’. A few examples of the numbers 20-100 and the possible combinations to derive the number between 20 and 30, 30 and 40, etc. and their transliterations are given below:

20	<i>Boonda</i> full.person 'a full person'	'twenty'
21	<i>boonda-k woləχ</i> full.person-and one 'a full person and one'	'twenty-one'
29	<i>boonda-k wolχan təmε-rs</i> full.person-and one ten-for 'a full person and nine'	'twenty-nine'
30	<i>e-woləχ bab-its-ke afe-təma</i> full-one person- eat-and mouth-ten 'a full person eaten and a mouth to eat ten more'	'thirty'
31	<i>e-woləχ bab-its-ke afa-təma woləχa</i> full-one person-eat-and mouth-ten one	

38	'a full person eaten and a mouth to eat eleven more' <i>e-woleχ bab- its-ke afe-tema keskan teme-rs</i> full-one person-eat-and mouth-ten eight ten-for	'thirty-one'
40	'a full person eaten and a mouth to eat eight more' <i>e-χesten bab- its</i> full two person- eat	'thirty-eight'
42	'two full persons eaten' <i>e-χesten bab-its-ke afa-χesten</i> full- two person- eat-and mouth-two	'forty'
50	'two full persons eaten and a mouth ready to eat two' <i>e-χesten bab-its-ke afa-tema</i> full- two person- eat- and mouth-ten	'forty-two'
57	'two full persons eaten and a mouth ready to eat ten' <i>e-χesten bab-its-ke afe-tema tebza</i> full- two person-eat-and mouth-ten seven	'fifty'
60	'two full persons eaten and a mouth to eat seventeen' <i>e-merken bab-its</i> full-three person-eat	'fifty seven'
66	'three full persons eaten' <i>e-meken bab-itsi-ke afa-laa</i> full-three person-eat-and mouth-six	'sixty'
70	'three full persons eaten and a mouth to eat six' <i>e-meken bab-itsi-ke afa-tema</i> full-three persons-eat-and mouth-ten	'sixty-six'
73	'three full persons eaten and a mouth to eat ten' <i>e-meken bab-itsi-ke afa-tema mekan</i> full-three persons-eat-and mouth-ten three	'seventy'
77	'three full persons eaten and a mouth to eat thirteen' <i>e-meken bab-itsi-ke afa-tema tebza</i> full-three person-eat-and mouth-ten seven	'seventy-three'
80	'three full persons eaten and a mouth to eat seventeen' <i>(ed) ojidi bab-its</i> four person-eat	'seventy-seven'
90	'four (full) persons eaten' <i>ojidi bab-itsi-ke afa-tema-k</i> four person-eat-and mouth-ten with	'eighty'
99	'four persons eaten and a mouth left with eating ten' <i>ojidi bab-itsi-ke afa-tama wolχan-teme-rs</i> four person-eat-and mouth-ten one- ten-for	'ninety'
100	'four persons eaten and a mouth to eat nine' <i>doη bab-its</i> five person- eat	'ninety-nine'
101	'five persons eaten' <i>doη bab-itsi-ke afa-woleχa</i> five person- eat-and mouth- one	'hundred'

1000	'five persons eaten and a mouth to eat one <i>fije</i>	'hundred and one' 'thousand'
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The morpheme {-k(e)} is used as 'and' and {-ka} as 'with' in combining the numerals. As the speakers use 'as if they are eating the person' they are talking about, they use 'a person is eaten', such as 'a whole person is eaten and a mouth waiting to eat another P' where the P is the remaining person or entity to be eaten in addition, hence, representing the number added. Consider the following example:

e-meken bab-itsi-ke afa-laa
full-three person-eat-and mouth- six
three full persons being eaten and a mouth waiting to eat another six = '66'

This mathematically mean, 3 full persons x 20 (fingers and toes) plus 6 (entity that a mouth aspires to send it to the mouth to be eaten) which is equal to 66.

iii) Change of numeral patterns over time

With the introduction of Aari language to the school system, the derived numerals are simplified. One modification is the omission of the morpheme -k 'and' that was used to link the compound numerals. Consider the following:

The actual	The modified
boonda-k woleχ	boonda woleχ
full.person-and one	full.person one
'twenty-one'	'twenty-one'

Another change is the total omission of the concept of eating, and the body's action as in making the hand ready to feed the moth all together. This is found to be too complex for the students to learn. Thus, the simplified numeral representation is just combining the numerals 1-9 with numbers having the 10th values, such as 20, 30, 40 ... 100, etc. Compare the modified patterns in the examples below:

10	<i>tema</i>	ten	'ten'
20	<i>bonda</i>	twenty	'twenty'
21	<i>bonda woleχo</i>	twenty one	'twenty-one'
30	<i>mekan tema</i>	three ten	'thirty'
31	<i>mekan tema woleχo</i>	three ten one	'thirty-one'
40	<i>ojidi tema</i>		

	four ten	'forty'
50	<i>doṅ tema</i> five ten	'fifty'
60	<i>laa tema</i> six ten	'sixty'
70	<i>tebaz tema</i> seven ten	'seventy'
77	<i>tebaz tema tebaz</i> seven ten seven	'seventy-seven'
80	<i>kasken-tema-rs tema</i> two-ten-for ten (eight ten)	'eighty'
90	<i>wolḥan-tema-rs tema</i> one -ten-for ten	'ninety'
100	<i>teman tema</i> ten ten	'hundred'
101	<i>teman tema woleḥ</i> ten ten one	'hundred-one'

The new number system has also introduced the concept of zero (0), which is termed *guri* 'null'.

With the new pedagogical approach to numbers, the complex system of counting with body part is completely avoided. One has to simply follow syntactic order of the numbers to combine them. The numbers 1-7 and 10 are the simple un-combined forms. *Bonda* '20' is no more conceptualized as full persons, rather it is lexicalized like *tema* 'ten', so is simple. Number eight, nine and all numbers above 10, except 20, are then derived from ten by combinations. It is an opportunity for the kids who will learn with the simplified forms of the numbers in Aari, but it is demise to the heritage of the pre-existing number system as the children will completely forget them.

4.2.2 Ordinal Numeral

Ordinal numerals are expressed by adding a morpheme {-si} to the cardinal numerals. Number one does not take this morpheme rather it uses different lexical item *birena* 'first', which is different from the cardinal numeral *woleḥa* 'one'. The cardinal numerals add the ordinal marking morpheme only from number two to number ten. It may be the case that the concept of ranking is made only up to ten. In case there is the need to rank above ten, the cardinal numerals play both the counting and ranking roles without change in form. The examples below show the derivation process:

Ordinal numeral	Gloss
<i>birena</i>	'first'
<i>kəstim-si</i>	'second'
<i>mekim-si</i>	'third'
<i>ojit-si</i>	'forth'
<i>doṅ-si</i>	'fifth'

laa-si	‘sixth’
teṗ-si	‘seventh’
kaskan temer-si	‘eighth’
wolχen temer-si	‘ninth’
tem-si	‘tenth’
temawolχek	‘eleventh’
bonda	‘twentieth’

As can be seen from the examples, 11th and 20th do not take the ordinal marking morpheme. Ordinal numerals 12-19 are not in the example for they have the same form as the cardinal numerals.

4.3. Computation in Aari

Though Aari has its own conceptualization of numerals and systematic computation that largely depends on human body, mainly the mouth-hands and legs and the activity of human body, such as eating and being ready to eat, there is no symbol to represent the numerals. Thus, with the introduction of modern education into Ethiopia in general and Aari in particular, the people have learnt to use Arabic symbol to represent their numerals and to compute mathematical operations.

Key terms used for computation are: *guḍḍa* 'add', *zokfi* 'minus', *kafi* 'divide' and *batsi* 'multiply'. Let us consider a few examples of computations:

- i) a) *kasken-zen kasken guḍḍa-r sink?*
two-and two added-while how.much?
'How much is two plus two?'
- b) *jeka madda ojidi*
equal happen four
'It is equal to four'
- ii) a) *mekan tema-zen guri guḍḍa-r sink?*
three ten-and null added-while how.much?
'How much is thirty plus zero?'
- b) *jeka madda mekan tema*
equal happen three ten
'It is equal to thirty'
- iii) a) *tema woleχ-zen bonda woleχ (guḍḍa-r sink?)*
ten one-and twenty one (added-while how.much?)
'How much is eleven plus twenty-one?'
- b) *jeka madda mekan tema kasken*
equal happen three ten two
'It is equal to thirty-two'
- iv) a) *ojida-zank kasken zokfa-r sink?*
four from two minus-while how.much
'How much is four minus two'
- b) *jeka madda kasken*
equal happen two

- 'It is two'
- v) a) *ojida kasken-kan kafa-r sink?*
four two to divide-while how.much
'How much is four divided by two?'
- b) *jeka madda kasken*
equal happen two
'It is equal to two'
- vi) a) *ojida kasken-k batsa-r sink?*
four two-by multiply-while how.much
'How much is four multiply by two?'
- b) *jeka madda kasken-tema-rs*
equal happen two ten-for
'It is equal to eight'

Note that the postpositions affixed to numbers in operation are *zen* 'and' or 'plus'; *zank* 'from'; *kan* 'to' ; {-k} 'by' and {-rs} 'for'. The morpheme {-r } attached to the verbs such as add, subtract, divide and multiply has the sense of 'while' or 'when'.

5. Summary and Discussion

5.1 Summary

Number in Aari is expressed in pronouns, nouns, adjectives and verbs as an agreement. In pronouns, singular and plural is distinguished in first, second and third persons. The person marks in nominative pronouns are formally different in all the three people's singular and plural forms. The same holds true for possessive pronouns. In demonstrative pronouns, close reference singular is distinguished from plural with vowel length where the former has short and the latter long vowel, respectively. In far reference, the plural form adds {-kes} to the singular form. This morpheme is mainly marker of plural in north Aari, but in this case introduced to South Aari dialect. In isolative pronoun *woləxa* 'number one' and plural forms of object pronouns 'us', 'you' and 'them' are used. In inclusive pronouns, plural forms of subject pronouns and *muudena* 'all' are used to express inclusion of everyone. Exclusion of everyone is expressed with negative prefix *aaj-*, followed by plural forms of pronouns and *tere* that marks a focus. Number in verbs is expressed with shortened forms of singular and plural pronominal affixes that mark agreement of a verb with its subject and objects. Singular in nouns and adjective is not marked, but the plural is shown with {-na} in both categories.

Numerals have been discussed following the established approach as cardinal and ordinal. Cardinal numerals in Aari are simple and derived. The simple numerals are those lists from 1-7 number ten, and twenty. Others are relatively derived. Number eight and nine are derived by subtracting two and one from ten, respectively. Numerals from 11 are derived by adding the numerals one to nine to 10; numeral 21-29 are derived by adding numerals one to nine to twenty, and so on. Note that numeral 20 and above are traditionally counted using body parts, such as *bonda* 'whole body' which is twenty implying that all toes and fingers of a person are counted. The number system has been

recently changed for pedagogical reasons. It seems that the concept of counting with body parts is avoided considering its complexity. Ordinal numeral is marked with {- (im)si} added to the cardinal numerals. It is found that this morpheme is added to numbers 2 to 9 only. For someone or something first, Aari uses *birena* 'first' which is different from *woləxa* 'one'. Terms used for mathematical computation in the language are: *gudza* 'plus', *zokfi* 'minus', *kafi* 'divide' and *batsi* 'multiply'. The concept of zero is expressed with *guri* 'null'.

5.2 Discussion

The present finding with regard to singular nouns, which is not morphologically shown, conforms to the Daniel (1993) and Fekede (2011) findings. As to the plural marking, it differs with Daniel (1993) who claims that plural nouns end in {-a} but conforms to Fekede (2011) who states the plural in South Aari dialects, such as Sido and Baka is marked with {-na}, which is augmented with *-kes*; hence, becomes {-nakes} in the northern Aari dialects, such as Gayil. With regard to the counting system and ordinal numeral derivation, the present finding is partly similar to the Fekede (2011) findings. However, the present finding also differs in this regard as the counting system is significantly modified for pedagogical reason since 2016. The computation system has not been described in the previous studies since it was introduced only recently with the launch of mother tongue education program in 2016.

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FULL LENGTH ARTICLE**Returnee Emigrants: The Case of Mekelle City, Ethiopia**

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Abstract

Migration has a great economic, cultural, social and political consequence in both sending and receiving country. However, information about the demographic and socio-economic status of international Ethiopian migrants is limited. This study was aimed to assess the demographic and social-economic status of returnee emigrants from the Gulf States within 2010-2015, the main causes of emigration, problems faced by returnees and intention to migrate again. Survey was conducted using mixed research design in Mekelle City, Ethiopia. Both primary and secondary data were collected from a total of 200 randomly selected returnees, government offices and members of different civic societies. Structured questionnaire and interview guides were used to collect data. It was found that 98.5% of the returnee emigrants were in the age group of 18-45. Majorities were literate (96.5%). The main reason reported for their emigration was poverty as 62.0% of the respondents put their responses. They have experienced physical, sexual abuse during the journey and at the place of destination. More than three in ten (35.5%) returnees had the intention to migrate again. Female sex [AOR=0.46, (95% CI: 0.25-0.85)] and currently married [AOR=0.42, (95% CI: 0.21-0.85)] were negatively associated with wanted to migrate again. To sum up, productive and literate people had been migrated to the Gulf States because of economic reasons. To address the issue of return migration, focus should be given to unmarried people and male sex.

Key words: /Emigration/ Ethiopia/Gulf States/ Mekelle/ Returnees/

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1. Introduction

Migration is the movement of people from one place to another place either for permanent or temporary settlement within the country and/or abroad (IOM 2011). It could be voluntary or involuntary because of push factors (poverty, war, conflict) or pull factors (the need to have high payment/ job opportunities and better living conditions)(IOM 2011). There are an estimated 232 million in 2013(United Nations 2013), and 244 million international migrants in 2015 (United Nations 2016) worldwide. And, 48% of total migrants were women. Asia, Europe, Latin America and the Caribbean and Africa share an estimated 43%, 25%, 15% and 14% of international migrants, respectively. In 2015, about 1.1 million Ethiopians were abroad (migrated internationally); of these 49% were females (United Nations 2016). Gulf States are one of the main destinations countries that most Ethiopians migrate (ILO, 2014).

Migration is one of the factors that cause changes in a given population. The changes in size and sample of migration have a great consequence in both areas of origin (the place where people are leaving) and destination (the place where people entering); influencing in the economic, cultural, social and political relationship of a society (Gartaula 2009). And, the lack of respect for the human rights of migrants, trafficking of human beings and irregular migration are the main challenges in international migration (Zentella & Schiesser, 2005). Evidence shows that the majority of the victims are women and children. Women who migrate for domestic labor, or to work in the entertainment and sex industries and those trafficked women are particularly at risk to abuse and also face specific health- related risks, such as AIDS (IOM, WHO, and UN, 2013). In addition to this, since the emigrants are relatively young, the sending countries lose productive people (Alonso, 2011).

Scholars agree that migration presents meaningful opportunities to fulfill social needs such as education and health and in the formation of human capital to build origin (United Nations, 2016), and destination country economies. For developing countries with a large quantity of poorly educated people, internal and international migration into low-skilled jobs could bring about huge poverty-reduction and development benefits (Department for International Development, 2007). The increase in the total number of migrants increased the flow of formal remittances from migrants to their relatives in their country of origin. These financial flows help to assist investment (International Labour Organization 2010).

Globally, people migrate due to economic, social and political reasons. The main causes of migration are poverty, unemployment, social and health problems (Department for International Development 2007), the difference in income rate between countries (Massey et al., 1993), the difference between places in access to income rate and standard of life and natural disaster and conflict (Richard,2002). In developing countries, changing labor markets and globalization has forced people to migrate (Emebet, 2002).

Like other developing countries, Ethiopia is known by the inefficiency of the labor market. Therefore, individuals who have an economic problem also decide to leave their country in the expectation of better job and education so as to be competent in the labor market and support their families. As to an unpublished report of Tsegaye (2013), productive people of Ethiopia who are unemployed because of high population growth and demand for cheap labor are forced to leave their country in need for job opportunity. Further, Ethiopians migrate mainly because of poverty (unemployment, economic) and drought (Yimer, 2016). These migrants are exposed to abuses and exploitation as they often involved in illegal migration (Department for International Development, 2007; Yimer, 2016). For instance, physical and human right abuse even death in some cases. As the migrants are living under the management of their employers, the Universal Declaration of Human Rights (UDHR) Article 2 and 7 and the constitution of the Federal Democratic Republic of Ethiopia (FDRE), that guarantees human rights, could not guarantee the human rights of the migrants. Hence, they develop psychological fear and inferiority because of daily shame and embarrassment.

Although scholars and organizations, such as (IOM, 2011; Martin, 2013; Sprenger, 2013) studied about migration in different regions of the world, still there is lack of availability of databases for the flow of migration. Moreover, most migration studies in Ethiopia are focused on internal migration, the information about international Ethiopian migrants is limited. As far as the researchers' knowledge is concerned, studies held on international migration of Ethiopian migrants are scanty (Berhe, 2011; Teshome et.al., 2013; Yimer, 2016; Balayneh & Sagar 2016). So, it is very important to study demographic and socio-economic status of the returnee emigrants who were in the Gulf States, factors which forced them to emigrate, the problems they faced while they were at journey and at the destination, post rehabilitation process, and ingredients of migration policy so as to understand their role in the development of the country. This paper, therefore, explores the demographic and socio-economic status, the main causes, the challenges returnee emigrants faced, the current status of returnee emigrants with respect to post-return rehabilitation and integration process, and recommends policy issues that enable returnees who were in the Gulf States to be integrated into migration policy.

2. Objectives

2.1. General objective of the study

To explore the demographic and socio-economic status, the main causes, the challenges returnee emigrants faced, the current status of returnee emigrants with respect to post-return rehabilitation and integration process, and to recommend policy issues that enable returnees who were in the Gulf States to be integrated into migration policy.

2.2 Specific Objectives of the Study

1. To assess the demographic and socio-economic characteristics of returnee emigrants from Gulf State who are residing in Mekelle city.
2. To identify the causes of Emigration to Gulf States.
3. To examine the problems returnee emigrants faced while they were at the journey and in the Gulf States.
4. To assess the current status of returnee emigrants with respect to post-return rehabilitation and integration process.
5. To recommend policy issues that enable returnees who were in the Gulf States to be integrated with migration policy.

2. Review of Related Literature

2.1. Theoretical Framework

The relationship of migration with individual characteristics, the social networks, and the opportunity structure is presented in Figure 1 (at the end of this section). Several scholars have presented the possible explanation about the causes and consequences (the opportunities and challenges) of migration. Migration has evidenced to be caused by differences in income in the sending and receiving countries. Labor tends to flow from low-income areas (with a high labor supply and a shortage of capital) to high-income areas (with a shortage of labor but an excess of capital). Migration is evidenced to be caused by push (unfavorable conditions-such as poverty) and pull factors (attractive factors) (Haas, 2010; Alonso, 2011). The developed countries require low-skilled workers from developing countries which again attracts individuals to migrate (Jennissen, 2007).

It is also evidenced that migration occurs because of social networks between individuals at origin and destination. New migrants who are members of networks get information about migration easily (Berhe, 2011). Further, the human capital theory underlines that the linkage between migration and investment in human capital. It states that people who migrate to get job opportunity by giving their skills and pay the fee of moving before they migrate abroad in the expectation of success (Sprenger, 2013). The New Economics of Labor Migration theory states that the roles of family in letting the individual decides to migrate so as to develop their income. Then, the individuals help their families to cover migration cost and when they face economic problem (Berhe 2011).

Migration can also be explained in three levels such as micro-level, macro-level and meso-level. Micro-level indicates that the degree of freedom to migrate or not that potential migrant has. It indicates individual values and expectancies in improving and securing survival, wealth and motivation (Teshome et al., 2013). Micro (individual) level, demographic characteristic such as sex, age, marital status, family size at the sending area affect the decision to migrate. Single and young people are more likely to migrate than older age people with family. An estimated 48 per cent of migrants are women, and in some regions there are clearly more women than men migrants (Zentella & Schiesser, 2005). As demography affects migration, migration decreases the population at the place of origin and increases the population of at the destination (Richard, 2002).

Macro-level shows that the economic, political and social relationships between the origin and destination countries. It indicates opportunity structures such as economies, politics and cultural setting. Economic expresses income and unemployment differentials; politics shows regulation of spatial mobility through regional states and international government-political operation and religious conflicts (Teshome et al. 2013). At macro- level, migration affects population growth, fertility and mortality of the origin and destination. In the origin, there will be high supply of labor work and young people. Demographic change in demographic dynamics, which is decreasing in population growth and fertility, can affect migration. This condition causes shortage of young emigrants (Skeldon, 2013). These groups of countries and communities influence future migration, trade and investment flows of both sending and receiving countries (Zentella & Schiesser, 2005; Melde, 2012).

Meso-level indicates collective and social networks that ties families and households and organizations such as NGOs which help in migration and settlement in transaction of information (Teshome et al., 2013). Social network provide a significant information and migrants who are member of social network can be more beneficiary than those who are not. Social relation makes people feel safe and part of the community where they live.

3.2. The Challenges and Opportunities of International Migration

Disadvantage of migration is the limitation of migrants' rights, particularly labour rights. But the most important emerging challenge lies in defining the relationship between migration and security (Melde, 2012). Poorer people in the world are unable to migrate internationally thus they are unable to share in any benefits of international migration. Moreover, even when they migrate, they have often limited ability to benefit their home communities and families. Migration to developing world including Africa has given rise to new challenges in the countries as they have limited infrastructure or policies to deal with immigrant rights and integration (Martin, 2013). However, migration also leads to great opportunities. International migration has been one of the most forceful in the development of modern states and societies, including economic

success (Melde, 2012). Similarly, in countries where integration has been successful, immigrants have been noted to make significant contributions to the economic, social and cultural development of the societies in which they have settled. The opportunity to travel through legal channels can significantly increase the benefits of migration. On the other hand, the risks of migration are greatly increased when people move on an irregular basis (channels that are neither recognized nor legal) (DFID, 2007). The migration of highly skilled professional that is called the Brain-Drain has a number of positive aspects. It is through skilled migration programs that migrants are given an opportunity to acquire or improve skills and experience abroad (Dustmann, 2011).

The sending and receiving countries gain through the flow of remittances –money and goods which sent back by the migrants to their relatives or friends (Richard & Page 2005). Remittances are the main way of reducing poverty. They are used to fulfill basic needs such as food, shelter and cloth as these cover more than 60% of the total. The rest of the total remittances used to run small business, for education and health care. Globally, migrant workers transferred 397 billion dollars to their home country in 2008. Therefore, remittances facilitate better life standards and development of individuals (Beets & Willekens, 2009).

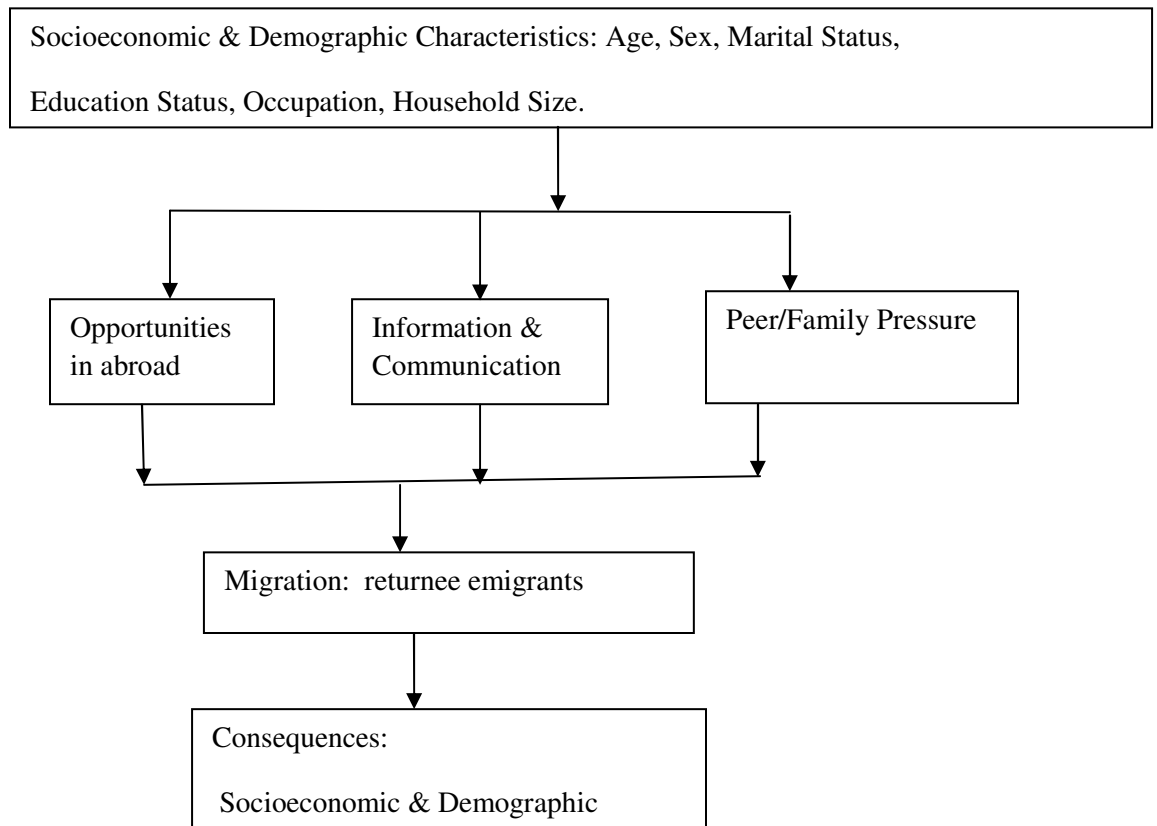


Figure 1. The conceptual model of Migration (Source: Teshome et al., 2013).

3. Methods

3.1. Description of Study Area

This research mainly focused on the assessment of demographic and socio-economic status of returnee emigrants who were in the Gulf States (in Bahrain, Saudi Arabia, United Arab Emirates, Lebanon, Kuwait, Oman, and Qatar) and returned within the last five years and are residing in Mekelle city. Mekelle, the capital city of Tigray regional state, is located in the Northern Ethiopian high lands at 783 km away from Addis Ababa. The total area of the city is about 80 km². It is one of the rapidly growing cities in terms of human settlement, industrial and institutional establishment (Mekelle City Administration, 2014). It has an estimated total population of 241,332 (CSA, 2012) residing in seven sub-cities, that is Adihaqi, Hawlti, Semien, Hadinet, Kuiha, Ayder and KedamayWeyane.

4.2 Data

To provide an accurate and valid image of the variables to assess the demographic and socio-economic status of returnee emigrants, mixed research design (quantitative & qualitative research method) was employed (Creswell, 2014). Both primary and secondary sources of data were used. Primary data were collected through written questionnaire, focused group discussion, and oral interviews. Secondary data were collected from unpublished sources such as reports, plans, and recordings about problems migrants faced (Sapsford & Jupp, 2006).

For quantitative data: According to the establishments of Mekelle City Administration Revised Proclamation No. 251/2012, Mekelle city has seven sub-cities. From these sub-cities, three sub-cities (Hawalty, Kuiha and Hadinet) were selected purposively as they have more returnee emigrants-according to the recent data obtained from an unpublished report of the office of youth and sports affairs of Mekelle in 2014. From each sub-city, returnee emigrants were selected based on their size of emigrants (Kothari, 2004). The sample size was estimated using a single population proportion – the proportion of returnees that have intention to re-migrate. Accordingly, a pilot study was done outside the selected sub-cities and the proportion of migrants who had intention to re-migrate was 85%. Thus, the total of 206 study sample was estimated by considering a 95% level of confidence and 5% contingency for non-response. Therefore, a total of 206 participants were recruited consecutively until required sample size is attained. A structured questionnaire was prepared for returnee emigrants to let them answer the questions. Illiterate respondents were helped in reading the questions and writing their responses by the data collectors. The quantitative data were analyzed using STATA version 13. Frequency and percentages were used to describe the study variables. Logistic regression model was fitted to assess factors that have an association with migrating again.

For qualitative data: Two focused group discussions (FGD) –one for each sex were conducted. Four people (from each three sample area) who were members of different civic societies from the community were selected- making up a total of 12 members- for a FGD (Babbie, 2008). After the arrangement of time and place, the selected participants for the FGD were invited for discussion. The discussion was facilitated by the researcher, tape recorded and notes were taken. Six key informants who were in the position of leaderships working on emigration issue (Office of Youth and Sports Affairs, the Office of Women's Affairs, Office of Labor and Social Affairs, Office of Youth Association, and Micro and Small Enterprise Agency) from sample area were also selected purposively. An interview guide was used to elicit demographic and socio-economic status of returnee emigrants, major causes of emigration, problems that the returnees faced implementation of the post-rehabilitation process and solutions can be done to develop migration policy. The questionnaire was reviewed and analysed for repeatability and internal consistency aspects using Cronbach alpha coefficient, which was 0.85 that is considered excellent.

5. Results

5.1 Socio-demographic Characteristics of the Respondents

All the study participants were illegal migrants to Gulf States. Out of 206 estimated samples, 200 were willing to participate in this study that makes up a response rate of about 97%. Almost all (99%) returnee emigrants were young adults (18-45 years) (Table 1). Higher proportions (55%) of the respondents were female. The majority of emigrants (96.5%) were literate. Unmarried returnee emigrants take the highest share (59.5%) followed by married (30%), and widowed/separated (10%) (Table1). Similarly, according to the data obtained from focused group discussion, most of the returnee emigrants were single as the demand of currently married women workers is very low at the destination (Gulf States). The percent of returnee emigrants who used to live in small house, semi-detached and compound house before immigrating to the Gulf States was 43.5%, 28.5%, and 21%, respectively. Higher proportions (75.5%) of the houses in which the returnee emigrants used to live in (at their home land) were rented (Table 1). Regarding source and flow of information, this study showed that 93% of returnee emigrants got the information about the destination (Gulf States) from their friends and returned migrants (Table 1). The findings showed that 75.5% of them said that the information they got was partially correct. While a significant proportion (52.5%) of those involved in this study funded their journey by their relatives, 29% of them covered by themselves, 18.5% of the respondents covered through credit from microfinance and loan from other people (Table 1). Regarding travel period of time, this study revealed that 30.5%, 28% and 27.5% of the returnee emigrants took them 16 - 30 days, more than 30 days and 1 – 7 days, respectively (Table 1). Returnee emigrants of the sample area used different means of transportation to go to the Gulf States and because of this, the period of time they used to travel differ from person to person.

Table 1: Socio-demographic and Economic Characteristics of the Returnee Emigrants in Mekelle City, Northern Ethiopia, 2016 (n=200).

Variables	Frequency	%
Age group (in Years)		
18-29	136	68.0
30-45	61	30.5
46-65	3	1.5
Sex		
Male	90	45.0
Female	110	55.0
Educational status		
Illiterates	7	3.5
Primary	66	33.0
Secondary	95	47.5
College & above	32	16.0
Marital status		
Unmarried	119	59.5
Married	60	30.0
Widowed/separated	21	10.5
Religion		
Orthodox	158	79.0
Muslim	36	18.0
Others	6	3.0
Housing situation before migrated		
Small house	87	43.5
Semi-detached	57	28.5
Compound house	42	21.0
Individual villa	14	7.0
Housing occupancy status		
Rented	151	75.5
Other	49	24.5
Before you went to abroad, who told you information about the country?		
Friends and returned emigrants	186	93.0
Other source(self & smugglers)	14	7.0
Before you first moved to abroad, what kind of information about the country did you have?		
Job opportunities	103	51.5
Better living condition	97	48.5
How correct was the information?		
Partially correct	151	75.5
Correct	49	25.0
Who covered the cost of your travel?		
Myself	58	29.0
Relatives	105	52.5
Credit & Loan from other people	37	18.5
How many days does it take you to reach destinations?		
1-7days	55	27.5
16-30 days	61	30.5
More than 30 days	56	28.0

5.2 Occupational Status before Migration and after Returned Home

More than half (53.5%) were jobless before leaving for the Middle East, and 18% were students (Table 2). After they returned 48% of the respondents were still jobless and facing the problem of low income. Of the total, 29% and 3% were engaged in micro and small enterprises and were students, respectively. According to this study, though the research respondents migrated in the assumption of high-income rate at the destination, they had no capital potential to run business and to lead their life. The proportion of participants within the categories of occupational status of returnee emigrants before migrating and just after returned home was almost same.

Table 2: Occupational Status of Returnee Emigrants before Migration and after Returned Home, Mekelle city, Ethiopia, 2016

Occupational status	Before they went abroad		After they returned home	
	Number	Percent	Number	Percent
Student	36	18.0	6	3.0
Jobless	107	53.5	96	48.0
Daily laborer	20	10.0	6	3.1
Micro & small enterprise	16	8.0	58	29.0
Employed	11	5.5	9	4.7
Others (Merchants, farmer.)	10	5.0	25	12.5

5.3 Causes for Migration to the Gulf States

Regarding main causes for emigration, the present study revealed that 62.0% of returnee emigrants were forced to migrate because of poverty (Table 3). Based on the information obtained through key informant interview, supporting this quantitative finding, the main cause for emigration to the Gulf States is poverty (economic problem) though the returnee emigrants did not acquire any new skills. In addition to this, false information from persons and other nearby people about the worth of migration made them migrate.

5.4 Consequences of Migration and Problem Faced by Emigrants

This study revealed that 43% of the total respondents increased capacity to help their family/relatives, 25.5% expressed better employment as a positive consequence of migration, and 14% developed a coping strategy of living. On the other hand, 14% of the returnee emigrants had gained nothing from migration (Table 3). Returnee emigrants who had no access to skill in the destinations were 85%. Among 30 participants who developed skill, the kind of skill they developed was cooking (n=20, 66.7%) and awareness (know how to do something) (n=10, 33.3%).

Overall, out of 200 returnees, 79% had faced challenges. When the returnee emigrants express the problems they experienced, 41.8% of the sample faced physical attack, 34.2% faced joblessness, 17.7% faced health problems and 6.3% experienced sexual attack (for female) (Table 3). This data agreed with the idea of the focused group and key informants. Both the focused group and key informants expressed their idea regarding the returnee emigrants faced problems while they were on the journey and at the destination (Middle East). They said, 'the respondents experienced the physical and mental attack, even death, prison, discrimination and rape (for female, whether they are married or single)'. Moreover, video recorded by the Youth and Sports Affairs Bureau of Tigray (2014) showed that the illegal emigrants were facing different problems at the journey.

The present finding also showed that the way the emigrants used to overcome the challenges they faced at the place of destination differs from person to person according to their exposure. Regarding this, the present study showed that 79% of the totals were used mechanisms to overcome the challenges until they get a solution, 37.3% tolerate the problems faced, 28.5% tried to solve by asking for help either relatives or embassy, and 21.5% by returning to their home country.

Table 3: Causes, Consequences of Migration and Problem faced by Returnee Emigrants in Mekelle City, Ethiopia, 2016

Variables	Frequency	Percent
Reason for migration		
Poverty	124	62.0
Unemployment	40	20.0
Peer pressure	16	8.0
Expectation of better job	20	10.0
Positive consequences of migration		
Better employment	51	25.5
Develop a coping strategy of living	28	14.0
Increased capacity to help family/relatives	86	43.0
Nothing	28	14.0
Better health	7	3.5
At the time you were abroad, have you developed your skill		
Yes	30	15.0
No	169	85.0
Kind of skill developed(n=30)		
Cook & others (driving.)	20	66.7
Awareness	10	33.3
Faced challenges		
Yes	158	79.0
No	42	21.0
The challenges or problems they faced(n=158)		
Physical attack	66	41.8
Joblessness	54	34.2
Sexual attack (for female)	10	6.3
Both physical and mental health problem	28	17.7
What mechanism have you used to overcome the challenge(n=158)		
Return to home country	32	21.5
By asking for help	45	28.5
Tolerating	59	37.3
Paying Money	20	16.7

5.5 Occupation of Emigrants when they were in the Gulf States

More than half (58%) of the returnee emigrants were domestic workers, while 33.5% of them were daily laborer (Table 4). And, 52.9% of them were helped to be employed by the smugglers and 37.8% of them by the help of migrants. The expected stay of returnee emigrants at the destination (in the present study) indicated that 55.5% from 2-4 years, 16% stayed 5 years and above and 15.5% of them stayed from 1-2 year

(Table 4). Based on the living environment at the destination, 33%, 27%, and 24.5% of the respondents said, not this match, bad and very bad, respectively (Table 4).

Table 4: Occupation of Returnee Emigrants in the Gulf States, Mekelle City, Ethiopia, 2016

Variables	Frequency	Percent
When you were the Gulf States, your occupational status		
Domestic /Household/worker	116	58.0
Daily laborer	67	33.5
Driver	4	2.0
Jobless	13	6.5
Who helped you to be employed(n=177)		
Migrant	65	37.8
Smuggler	91	52.9
Others	16	9.3
How long have you stayed there		
<1 year	26	13.0
1 - <2 year	31	15.5
2-4 years	111	55.5
5 years & above	32	16.0
Living environment		
Good	31	15.5
Not this much	66	33.0
Very bad	49	24.5
Bad	54	27.0

5.6 Intention of Returnee to Migrate again and Post-return Rehabilitation and Integration

5.6.1 Intention of returnee emigrants to migrate again

Of a total 200 returnees, 71(35.5%) had the intention to migrate again. When the returnee emigrants asked their intention to migrate again, 71.8% (n=51) of them said that "I do not find any job here" (Table 5). Similarly, regarding different reasons to migrate

again, as it is identified from FGD of the current study, the returnee emigrants those who had the intention to re-migrate were among those who had not fulfilled their aims. Likewise, the key informant interviewees also responded that returnees who did not fulfill their aims have the intention to re-migrate. Returnees who had succeeded their aims and run their living standard never migrate again. The returnee emigrants who have the intention to migrate again are those who have not achieved their plan and who are not in a good condition. The returnees may have a social problem with non-migrants and their family. They may have doubts about themselves since their families and non-migrants assume them as wealthy. In addition to this, the migrants' expectations from their society never match with the grass root level. In either case, intention to migrate again occurs when the migrants want to live in the first destination since they already know and have no future plan in their home country.

Table 5: Intention of Returnees to Migrate again in Mekelle City, Ethiopia 2016 (n=200)

Variables	Frequency	Percent
Would you like to migrate again?		
Yes	71	35.5
No	129	64.5
If Yes, What is your intention to leave your country again?(n=71)		
I don't get any job here(in my country)	51	71.8
New job opportunity abroad	6	8.5
I cannot adapt myself here	8	11.2
I know the emigration country and would like to stay there	6	8.5

5.6.2 Factors forcing to migrate again to the Gulf States

Among the socio-demographic variables, sex and marital status were statistically significantly associated with migrating again whereas educational status and age were not. Being female [AOR=0.46, (95% CI: 0.25, 0.85)] was negatively associated with wanting to migrate again. Likewise, marriage [OR=0.42, (95% CI: 0.21, 0.85)] was negatively associated with wanting to migrate again in which respondents who are married were 58% less likely to migrate again than their unmarried (single) counterparts (Table 6).

Table 6: Socio-demographic Factors Associated with Wanted to Migrate again among Returnee Emigrants in Mekelle city, Ethiopia, 2016.

Variables	Would you like to migrate again		AOR(95% C.I)	P-value
	Yes (%)	No (%)		
Sex				
Male	39(43.3)	51(56.7)	1	
Female	32(29.1)	78(70.9)	0.46(0.25, 0.85)	0.01
Marital status				
Not married	56(40.0)	84(60.0)	1	
Currently married	15(25.0)	45(75.0)	0.42(0.21, 0.85)	0.01

5.6.3 Returnee emigrants' post-return rehabilitation and integration process

The returnee emigrants were asked to give their opinion whether they get any follow up from their sub-city, support from the community and kind of support they got. The present study (Table 7) showed that 61.5% of the returnee emigrants said that "there is no follow up mechanism in their sub-city". Among those who have said, 'yes there is follow up', 61% of them said, 'the office of youth and sports affairs take care of us.' In the case of support that returnee emigrants had, this study revealed 44.8% of them have gotten a facility of credit and saving, whereas 56.5% of them did get none of the facilities. And, 70.5% of the respondents never got support from the community.

According to the information obtained from focused group discussion and key informants, the support facilitated by sub-city administration to the returnee emigrants has no sustainability. In addition to this, the support so as to rehabilitate them never addressed all of the returned. All concerned bodies/stakeholders never participated in the post-rehabilitation program rather the office of Youth and Sports Affairs, the office of Women's Affairs and the office of Labor and Social Affairs of the sub-cities. They added that the parents and families of the returnees never treated the returned.

Regarding public meeting, 68% of the returnee emigrants have not ever attended a public meeting on the issues of migration. Based on the information obtained from the report of Office of Youth and Sports Association of Mekelle city (OYSAM) 2014, a public meeting was held on the migration issue with the returnee emigrants and community. According to the response of the respondents, it had no consistency.

Table 7: Returnee Emigrant Post-return Rehabilitation and Integration, Mekelle City, Ethiopia, 2016(n=200)

Variables	Frequency	Percent
Support from respective sub-city		
Yes	87	43.5
No	113	56.5
If Yes, kind of support (n=87)		
Credit & Saving	39	44.8
Training	24	27.6
Working Shade	10	11.5
Welcome & Others	14	16.1
Is there any follow-up mechanism in your sub-city in order to maintain your sustainability?		
Yes	77	38.5
No	123	61.5
Who actively participated so as to rehabilitate you? (n=77)		
Office of Youth and Sport Affairs	47	61.0
Office of Women Affairs	11	14.3
Office of Labor and Social Affairs	4	5.2
All the above	15	19.5
Do you have support from community members		
Yes	59	29.5
No	141	70.5
If Yes, What kind of support? (n=59)		
Moral	55	93.2
Fund	4	6.8
Attended public meeting/s on the issues of migration		
Yes	45	22.5
No	136	68.0
Not sure	19	9.5

5.7 Returnee Emigrants’ Perception and Policy Recommendations about Migration

Regarding the perception of the returnee emigrants about migration phenomena, 51% of them said that it is both an opportunity and a threat, 39% said it is a threat. And, 81% of them said that they would stop migration if they had alternative opportunities to work within their communities of origin (Table 8).

The returnee emigrants required to forward their opinion about ingredients that help to develop emigration policy. Accordingly, 35.5% of the respondents said facilitating job or mobility is needed, 29% said the way of increasing awareness of migrants and people have to be included. Returnee emigrants who have said, ‘improving data on migration’, and ‘allowing safe and affordable mechanisms’ were 13.5%, and 11.5%, respectively (Table 8). Based on the information obtained from the focused group discussion and key informants, the participants recommended that the government has to strengthen the migration policy, facilitate legal migration, has to have clear data about emigrants and has to focus on making awareness to the community and returnees.

Table 8: Returnee emigrants’ perception and policy recommendations about migration, Mekelle city, Ethiopia, 2016 (N=200)

Variables	Frequency	Percent
How do you perceive the migration phenomenon		
As a threat	78	39.0
Both an opportunity and a threat	102	51.0
If you had the chance, would you stop migration or would you encourage it		
I would stop it	162	81.0
I would encourage it	16	8.0
I don’t mind	22	11.0
What should be considered in the policy?		
Increasing awareness of migrants and people	58	29
Improving data on migration	27	13.5
Facilitating job or mobility	71	35.5
Over regulation	14	7
Allowing safe and affordable mechanisms	23	11.5
Job opportunity for youth	4	2

6. Discussion

This study showed almost all returnees were young and illegal migrants. In line with this, based on the qualitative findings, the participants forwarded as most of the returnee emigrants were at the young age because they are eager to take the risk for the better living standard. This is similar to the previous studies conducted in Ethiopia and other developing nation (Kok et al., 2006; Teshome, Kanko et al., 2013; Balayneh & Sagar, 2016; Yimer, 2016). This study also showed that females were more likely to migrate. In line with this finding, Fransen and Kuschminder (2009) stated that one of the current international migration flows is Ethiopian women migrating to the Middle East as domestic workers. According to Ministry of Labor and Social Affairs of Ethiopia, 85% of migrants in 2012 were female students (Wakgari 2014). The majority of emigrants (96.5%) were literate, indicating that less skilled and skilled people are migrating. This finding was also supported by the members of focused group discussion and key informants. As the destination countries only hire unskilled workers, irrespective of qualification, but attract both types of workers as the unskilled salary of a foreign country is higher than the skilled salary of the home country, which reduces incentives to acquire more education. In line with the current finding, a study by (Balayneh & Sagar, 2016) showed about 90% of migrants are educated and students. So, this condition may demotivate the young learners and could cause less achievement in their education.

This study also uncovered that higher proportions of unmarried people migrated. This is supported by Gebrehiwot and Fekadu(2012), Teshome, Kanko et al. (2013) who reported that most of the migrants are single. Hence, the finding might indicate that migration decision of an individual is influenced by marital status. Majorities of returnee emigrants got the information about the destination (Gulf States) from their friends and returned migrants. In line with this finding, Teshome, Kanko et al. (2013) states that an interaction between migrants and their friends, families, and neighbors who are living in their home country facilitates the opportunity to migrants, such as in financial support, in finding a job and in exchanging information. About three-fourth study subjects were funded their journey by their relatives and loan from microfinance. In line with this finding, the migrants often have a loan to cover their travel cost (Luckanachai & Rieger, 2010).

The number of people who engaged in the micro and small enterprise after they return was higher than before they emigrated. This might indicate that the returnee emigrants brought attitudinal change. This finding is consistent with evidence such that migration presents meaningful opportunities to fulfill social needs such as education and health and in the formation of human capital to build origin (Louka, Katseli et al., 2006). Occupational status of returnee emigrants before migrating and just after returned home was almost the same indicating that the returnee emigrants come back empty handed or not succeeded their aims. In the current study, migration was primarily motivated by poverty. In line with this, different literatures stated that the main causes of migration are poverty, unemployment, social and health problems (Zentella & Schiesser, 2005;

Department for International Development, 2007; Sprenger, 2013; Obokata et al. 2014; Yimer 2016).

In this study, though higher proportions (43%) of migrants increased capacity to help their family/relatives and 25.5% of them expressed better employment as a positive consequence of migration, 14% of the returnee emigrants had gained nothing from migration. As stated by Mulatu (2011), the female migrants' expectation and what they have faced at the destinations are unbalanced. In addition to this, Yimer (2016) stated that migration does not provide the solution to all problems and not all the time it has positive effects; migration has positive and negative consequences. The positive consequences include reducing unemployment in the origin, and remittance flows while negative consequences include the shortage of labor, public investment in education and training (Luckanachai & Rieger, 2010; Melde 2012).

It has been found that returnee migrants play a crucial role in enhancing human capital endowment (Melde, 2012). In contrast, the current study revealed that 85% returnee emigrants hardly had any access to skill in the destinations. Our finding is consistent with another similar study done in Ethiopia by Yimer(2016). Most of the migrant women's work experiences in a foreign country may not add anything above the experiences of similar types of works at home. Because the returnee emigrants are engaged in a work which does not need any skill, both skilled and non-skilled migrants could do the job, therefore they could not gain any skill from emigration.

The returnee emigrants of the current study have faced different and serious challenges such as abuses, health problems and joblessness during the journey and at the destination (Gulf States). In line with this, Yimer (2016) expressed as the illegal migrants faced severe problems at the journey and destination such as poor legal service and less support. They also faced physical, sexual and emotional abuse and human rights violation. Similarly, Gebrehiwot and Fekadu(2012) pointed out that illegal migrant to Saudi-Arabia experience high risk. Migrants work for long hours in harsh weather. They are not allowed to change jobs and are oppressed by brokers and agents indicating migration is not a solution of all problems and has no always positive consequences. However, it is evident that the opportunity to travel through legal channels can significantly increase the benefits of migration, whereas, the risks of migration are greatly increased when people move on an irregular basis – through channels that are neither recognized nor legal (Department for International Development, 2007). Furthermore, members of focused group discussion and key informants agreed that emigrants faced shortage of food and water during the journey; in most cases, returnee emigrants get back to their country empty handed; they experienced unhealthy mentally and physically. But, their parents and families never believe this conditions that the returnee emigrants faced. They only assume that the returnee emigrants had a lot of money. In line with this, as it is stated by Yoseph et al. (2010), the money the returnee emigrants saved never changes their lives and then forced to migrate again. And, migrants faced transformation of social interaction, religious and culture.

Almost all of emigrants were employed by the help of smugglers and other migrants at the destination. This is supported by IOM (2009) that reported as migration network can be expressed in terms of migrants' interaction with their family, friend, smugglers, and traffickers so as to exchange information and get financial help. Migration occurs because of social networks and the importance of social networks in decreasing cost and risk, and increasing income and getting shelter at the destination (IOM 2009). New migrants who are members of networks get information about migration easily. This indicates that members of the social network were beneficial. Most of the returnee emigrants were temporary labor migrants (i.e. migrants who have completed their short-term job contracts and come back to their place of origin).

The majority (85%) of the emigrants reported that the living environment of the destination country was not good. The intention to stay at the destination either temporarily or permanently implies negative and positive factors. The negative factors are not having a job, good standard of living, human right, and discrimination while the positive factors are having found a job, having good living standard and reward. As the migrants are living under the management of their employers, the Universal Declaration of Human Rights (UDHR) Article 2 and 7 and constitution of the Federal Democratic Republic of Ethiopia (FDRE) that guarantees human rights could not guarantee the human rights of the migrants (Mulatu, 2011). This could be the reason for emigrants to live in the unsuitable environment as findings from the present study.

The returnee emigrants those who have the intention to re-migrate were among those who have not fulfilled their aims such as getting money to help themselves and family. So, the focus should be placed on helping individuals to create conditions in which people are not forced to leave their homes again. The present study showed that being female and having marriage are prohibiting factors of return migration. However, the researchers recommend further study on the reason why these groups have a negative relationship with intention to migrate again.

The follow-up of returnee emigrants from the community and governmental organizations was reported as not sustainable and there is no follow-up mechanism in their sub-city. Moreover, they reported as the support did not address all returnees and even the parents and families of the returnees never treated the returned. In line with this, (World Bank, 2009) showed that challenge of integration is most a key in cities. Migration motivated by less support of a community of origins. To address the integration problem, the return is becoming burning issue throughout the world and is included into governments' management policies. To strengthen this, frame works, such as rehabilitation, reintegration, reconstruction and repatriation has been developed by United Nations High Commissioner for Refugees (UNHCR). And, this frame work stresses on an integrated approach. Hence, the government and other actors on the issue of migration are better to use this framework. Consequently, the return to home country can be encouraged. This is further explained by Oomen (2013):

Return is most sustainable when coupled with assistance mechanisms which support the creation of socioeconomic opportunities and prevent the exclusion and separation of returnees and non-migrant communities. Besides the economic aspects of reintegration, the sustainable return is also based on returnees' degree of social and political reintegration. Many policies which have been considered 'best practices' aim to link pre-departure and post-arrival situation in order to provide adequate assistance (p.18).

The policy of Ministry of Youth, Sport and Culture (MYSC) stated that support for youth should be facilitated to help them so as to play their role in creating new jobs and could benefit from (Federal Democratic Republic of Ethiopia 2004). However, in implementing this support at the grass root level seems minimal according to the response of the returnee emigrants. But, if support and other integration problems are addressed, returnee emigrants will play an important role within their community. Therefore, it is necessary to investigate the post-return rehabilitation and integration process of returnee emigrants to understand the situation in the country of origin.

The meeting on issues of migrants was reported as minimal. So, it needs concentration so as to make the society aware. In the youth and economic development policy of MYSC (Federal Democratic Republic of Ethiopia, 2004), youth have the right to participate in the plan, implementation and evaluation of national policy, strategy and programs. Based on this right of youth, letting the emigrants participate in the public meeting and make them aware is mandatory.

Generally, the study subjects recommended that the government has to strengthen the migration policy, facilitate legal migration, have clear data about emigrants and focus on making awareness to the community and returnees.

7. Conclusions

This study revealed that many young people are becoming victims of illegal migration. Though Ethiopian government is taking measures to secure emigrants' life and return them to their home country, still the returnees have the intention to migrate again. The main reason to have intention to re-migrate was they fear joblessness in their country.

Most of the returnee emigrants were literate and young. Further, currently married subjects and females have lower odds to migrate again than unmarried ones and males, respectively. The flow of young people shows that labor tends to flow from low-income areas to high-income areas according to neoclassical theory (Haas, 2010). Likewise, in the current study, the respondents migrated to the Gulf States because of economic problem and to improve their living standards and help their family. Even if, economic problem is the main cause of emigration, in addition to this, because of lack of awareness, the young people exposed to false information about migration and migration risk. Returnee emigrants experienced abuses and exploitation while they were on the journey and in the Gulf States. It is therefore recommended that the causes of irregular

emigration should be addressed well. Moreover, though the returnees' family and the community are welcoming them, it lasts for short period of time, and they had non-sustainable support from concerned bodies and community. Therefore, all stakeholders should focus in designing and implementing sustainable programs such as post – rehabilitation counseling and set up support for returnees. In addition, strengthen the way of facilitating business and skill development training; making awareness about the micro and small enterprises for returnees and public/community so as to facilitate most advantageous employment of returnees for the society benefit. To address the issue of return migration, the focus should be given to unmarried people and male sex. Otherwise, according to the knowledge of the researcher, since there is limited research regarding demographic characteristics and socio-economic status of returnee emigrants, it should be conducted in other cities of the region so as to generalize and describe comparative analysis for the whole region, and to lessen illegal migration.

Operational Definition

Returnee emigrants: People who migrated to abroad (Gulf States), returned and residing in Mekelle city.

Return migration: 'movement of emigrants back to their homeland to resettle' (Oomen, 2013).

Return of failure: indicates migrants who have failed to overcome problems they faced in the place of destination and who return home country quickly (Adamnesh, 2006).

Temporary labor migrants: This indicates that migrants who have completed their short-term job contracts and come back to their place of origin (Foulkes, 2015).

Forced migration: is involuntary movement of people from one place to another place because of push factors including man-made and natural or environmental disasters (IOM 2011).

Push factor: A factor that force people to migrate from a place of residence whereas a pull factor is a factor which attract people to a new destination (Alonso, 2011).

Gulf States: Gulf State countries include Saudi Arabia, United Arab Emirates, Kuwait, Oman, Bahrain, Qatar, Iraq, Iran and Lebanon (<http://www.britanica.com/bps/dictionary>).

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FULL LENGTH ARTICLE**Prevalence of Depression, Anxiety and Stress among Criminal Detainees: With Reference to Mizan Teferi Criminal Correction Center, South West Ethiopia**Addisalem Taye¹

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Abstract

The main objective of this study was to assess the prevalence of depression, anxiety and stress among prisoners in Mizan Teferi criminal correction center. To achieve the stated objectives, mixed research design particularly triangulation approach was used. For this reason, questionnaire, in-depth interview and FGD guides were used to collect quantitative data from a random sample of 372 prisoners, qualitative data from 20 interview and 16 FGD participants. To analyze the quantitative data, percentage, mean, standard deviation, independent t-test and ANOVA were used; whereas the qualitative data were transcribed and interpreted using thematic analysis and direct quotation. The results indicated that the prevalence and severity of depression, anxiety and stress were high among prisoners. Symptoms of depression, anxiety and stress were more prevalent among prisoners who were serving less than one-year period than those who stayed for long period of time. Depression, anxiety and stress were more prevalent among female prisoners than their male counter parts. Isolation from immediate family members, the living situation in the prison center, guilty feeling for committing crime, absence of freedom and isolation from the social gathering were identified as the major common reasons for mental health problem in prison center. Improving the availability and quality of mental health services in prison center and awareness creation programs is recommended to deliver adequate care to this group.

Key words: /Anxiety /Causal factors /Depression /Ethiopia /Prisoners /Stress/

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1. Introduction

An estimated 450 million people worldwide suffer from mental or behavioral disorders (World Health Organization Report, 2001). These disorders are prevalent especially in prison populations. The disproportionately high rate of mental disorders in prisons is related to several factors. Many of these disorders may exist before admission to prison and further exacerbate by the stress of imprisonment. However, mental disorders may also develop during imprisonment itself as a consequence of prevailing conditions and also possibly due to torture or other human rights violations (Brinded, Simpson, Laidlaw, Fairley & Malcolm, 2001).

Offenders have very high rates of mental ill health with recent estimates suggesting that up to 90% of individuals serving custodial sentences have some form of diagnosable mental health condition. Research has shown that inmates exhibit higher levels of anxiety and depression than the general population, along with lower levels of self-esteem, specifically among certain groups of inmates (Castellano & Soderstrom, 1997).

National studies conducted in New Zealand in (2005), on all female prisoners and male prisoners as well as a cohort of 18 percent of sentenced male prisoners from every prison, showed markedly elevated prevalence rates for major mental disorders in prisoners compared to community samples. Common disorders included substance use disorders, psychotic disorders, major depressive disorder, bipolar mood disorder, obsessive-compulsive disorder and post-traumatic stress disorder. Significantly, the study also showed that a large proportion of those found to be depressed or psychotic were not receiving treatment.

Butler et al. (2005) in New South Wales, Australia, screened both sentenced and reception prisoners and found that 43% of those prisoners screened had at least one of the following mental diagnoses: psychosis, anxiety or affective disorders in the past 12 months. A study in Canada which compared the prevalence of mental disorders in prisoners and the community found a very high rate of Axis 1 disorders (depression, anxiety, posttraumatic stress disorder and substance use disorder) among prisoners. Prisoners had a 91.7% lifetime prevalence of psychiatric disorders while 76.7% showed symptoms in the past six months. This study also found a high rate of co morbidity with substance use disorders.

Factors in prisons that may adversely affect mental health include overcrowding, dirty and depressing environments, inadequate health care, and physical or verbal aggression. Lack of purposeful activity, lack of privacy, lack of opportunities for quiet relaxation and reflection aggravate mental distress. Reactions of guilt or shame, anxiety of being separated from family and friends and worries about the future also compound such mental distress. Timely identification, treatment and rehabilitation are almost non-existent in many prisons, particularly in the developing countries (Birmingham, 2004; Gunter, 2004; Drapalski, Youman, Stuewig, & Tangney, 2009; Lafortune, 2010).

A research conducted at Jimma prison center (Zakir et al., 2018) found that, 41.9% of participants among prisoners had depression and having family history of mental illness, chronic physical illness, history of previous incarceration, lifetime alcohol use, thinking life to be a difficult one after release from prison, having age between 21 and 25 years, and having poor social support had significant association with depression.

Another research conducted in Amhara (Abel et al., 2016) regional state which aims to assess the prevalence of anxiety also revealed that, the prevalence of anxiety was found to be 36.1 % and anxiety was associated with current smoking and having had a dissatisfying life.

Those research works conducted in Ethiopia focused on assessing the prevalence and associated factors of depression or anxiety separately at different part of the country. However, on this research the researcher tried to assess prevalence of depression, anxiety and stress all together in one research. This research also addressed the issue of stress in prison center which was unnoticed by other researchers. Mostly, this paper aimed to answer the following research questions.

- 1) What is the prevalence of depression, anxiety and stress among prisoners?
- 2) Is there statistically significant difference in prevalence of depression, anxiety and stress among prisoners based on time spent in prison?
- 3) Is there significant gender difference in prevalence of depression, anxiety and stress among prisoners?
- 4) What are the risk factors of mental health in prison center?

2. Review of Related Literature

This article has summarized findings of different scholarly researched articles across the globe on the issues of mental health of prisoners.

Prison is the place where prisoners especially those who have committed grave crimes such as murder, sexual assaults, robbery have to be there for long time. Jail is not a pleasant place to live in because no matter how well disciplined and managed it alienated prisoners from their families, friends, outer world and society. Alienation from the family and society is the most prominent cause to damage the wellbeing of prisoners (Mackenzie & Mitchell, 2005) it causes stress and other mental health related problems in prisoners (Rutherford & Duggan, 2009).

It has been reported in different studies and review of meta-analysis that criminals are more liable for mental disorder as compared to non-criminal population. The common psychiatric disorder prisoners suffer from includes anxiety, depression, psychoses, personality disorder and substance misuse; and it also elevates suicide risk in criminals (Baillargeon, Binswanger, Penn, Williams & Murray, 2009; Fazel, Cartwright, Norman-Nott & Hawton, 2008).

Inmates have greater physical and mental health needs compared to the general population (Hammett et al., 2001). The prevalence of mental disorders in prison's is high, but access to services to treat them is often very low (Fazel & Danesh, 2002; Taylor, 2010).

A systematic review by Fazel and Danesh of 62 studies from 12 countries, in 2002, included 22790 inmates. The overall prevalence of psychiatric disorders in prison populations was as follows: 3.7% of men had psychotic illnesses, 10% major depression, 65% a personality disorder; 4.0% of women had psychotic illnesses, 12% major

depression, and 42% a personality disorder (Fazel & Danesh, 2002). The rate of current serious mental illness for male inmates was 14% and for female inmates it was 31% (Steadman et al., 2009).

In an Australian study, the 12-month prevalence of any psychiatric illness in the previous year was 80% in inmates and 31% in the community. Substantially more psychiatric morbidity was detected among inmates than in the community group after accounting for demographic differences, particularly, symptoms of psychosis, substance use disorders and personality disorders (Butler, Allnut, Cain, Owens & Muller, 2005).

Depression, in general, is more common in females; however incarcerated women were 50% more likely to suffer depression than women not imprisoned. After further exploration, the case in which jailed mothers were separated from their children proved to be a major link. Younger women without children seemed to have lower rates of depression than those who were parents. Other influences on depression in the jail setting included how many visits inmates received and if they took advantage of activities hosted by the prison, such as parenting classes or bible clubs (Conklin, 2000).

The episodes of depression are usually related to the experience of sudden or prolonged stressful events (Gunter, 2004; Drapalski et al., 2009). It is common for newly admitted inmates to suffer from depression for certain period of time due to shock or stress of the new environment (Piselli, Elisei, Murgia, Quartesan, & Abram, 2009). In addition, stress and depression among inmates have often be related to the risk of self-harm and suicide in prison (Ireland & York, 2012), which obviously are costly to the prison institutions (Toch, 1992).

In developing countries, the prevalence rates of depression are higher. This may be so because the health systems in developing countries is poorly organized and poorly funded, as compared with the health care system in industrialized countries. Environmental factors that contribute to the genesis of depressive disorders are greater in developing countries. These include high rates of poverty, a lack of social welfare and high rates of endemic infectious diseases, to mention just a few (World Health Organization, 2007).

Inadequate attention to the human rights of persons in prison, including the right to decent living, clean and congenial existence, speedy trial, information and communication and the right to health care, particularly psychiatric health care, further aggravates the situation (Lori Kepford, 1994)

According to Birmingham (2004), Gunter (2004), Drapalski et al. (2009), and Lafortune (2010), stress and depression are very frequently experienced by prison population. Some other problems in prison which deteriorate prisoners psychological wellbeing include overcrowding (Nurse et al., 2003), unhygienic cell environment, delay in legal proceedings (under trial cases), physical and mental suffering by prison officials and group clashes and conflict among prisoners group. Once they get punishment by court, they get stigmatized as offender by society. This stigmatization worries them about their future after release from the prison and leaves most damaging effect on offenders (Schnittker & John, 2007). Prisoners who adapt the circumstances become capable to adjust in prison but those who find themselves unable to adjust with the jail environment start feeling guilty, show aggression, suicidal behavior and develop stress and depression, anxiety and other psychiatric problems (Dye, 2010).

According to research conducted in Ethiopia by Zakir, Teshome, Lamessa, Workinesh and Mubarek (2018), to assess the prevalence and associated factors of depression among prisoners in Jimma Town Prison center, the prevalence of depression was found to be 41.9% (three in every seven). These study also revealed that among the total number of participants 13% had mild, 20% had moderate, and 9% had severe depression. This research found out that, being female, being in the age group between 21 and 25 years, previous history of imprisonment, thinking life to be a difficult experience after release from prison, lack of opportunity for job in the prison, type of criminality, presence of family member with mental illness, presence of chronic physical illness, past mental illness, and poor social support were associated with depression.

Another research conducted in Amhara regional state of Ethiopia, which assesses the prevalence of anxiety among prisoners, found that the prevalence of anxiety was 36.1%. The research identified that leading unhappy life before imprisonment, current cigarette smoking, and place of imprisonment had a significant association with anxiety (Abel, Berihun, Teresa, Nigussie, & Telake, 2016).

3. Methods

3.1. Study Area/Research Site

The study was conducted in South Western region of Ethiopia, Bench Maji Zone Mizan Teferi criminal's correction center, which is found in Mizan Teferi Town. Mizan Teferi criminal's correction center, which was established in 1936, is the second criminal correction center in Benchi- Maji zone administration. When this study was being conducted, the center was administrating 3569 criminal offenders. The correction center had 69 police officers, 14 administrative workers, 23 contract employees and 15 teachers.

According to information from the center, the number of criminals joining the center was increasing at an alarming rate and this outnumbered those who released from the center by completing their sentence period. Large numbers of juveniles between age ranges of 15-18 were also found in Mizan Teferi Prisoner correction center.

The center was not well built and lacks facilities including living rooms, dining area, recreation centers, work shop areas and other basic necessities which help prisoners to engage themselves in meaningful activities. Very large numbers of prisoners were found in small rooms due to lack of living spaces. Some female prisoners were living with their children in a very difficult condition (Bench- Maji zone criminal's correction center, 2018).

3.2. Research Design

A cross - sectional survey design was employed by using questionnaire, interview and focus group discussion as data gathering instrument. Emphasis was given to quantitative data whereas, qualitative data was used to support the finding obtained through questionnaire. The qualitative approach was used to achieve an intimate and richer understanding of the problems whereas data obtained through quantitative approach was analyzed using quantitative method. Finally, the result of both finding were discussed

3.3. Sample Size and Sampling Techniques

Participants of the study were selected through systematic random sampling technique by making use of a table of random numbers. The reason why this method was applied was to give equal chance to all population under study and to avoid selection bias. Participants of this study were selected from a total of 3569 prisoners found in Mizan Teferi criminal correction center.

The sample size of this study was determined using the following assumptions: 95% level of confidence ($95=z$) and a 5% margin of error ($m= 0.05$). $p= 50\%$ was taken as prevalence of depression, anxiety and stress among prisoners. Based on this assumption, the actual sample size for the study was computed using the formula for single population proportion as indicated below.

$$n = \frac{z^2 \times p(1-p)}{m^2}$$

Description:

n= required sample size

z = confidence level at 95% (standard value of 1.96)

p = estimated prevalence of the variable within the research population (50%)

m = margin of error at 5% (standard value of 0.05) (Cochran, 1963)

According to the formula, if the study population is above 10,000, the required sample size would be 384. However, in this study, the population was 3569 (less than 10,000), the required sample size was therefore calculated using the Finite Population Correction for Proportions formula (Cochran, 1963, 75)

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Where, n = the desired sample size when population $< 10,000$

- n_0 = the desired sample size when population is $> 10,000$.
- N = the estimated study population 3569 in this study.

This gave a sample size of 347

In addition to 347 randomly selected participants, 20 (4 prison police officers, 15 prisoners and the prison administrator) were interviewed and Sixteen (16) prisoners were involved on FGD.

3.4. Data collection

Data were collected by using questionnaire, which includes two parts (the socio demographic characteristics and standardized questionnaire which was used to assess depression, anxiety and stress), interview and focus group discussions (FGD). The questionnaire was translated to Amharic language and back translated to English to check its consistency. Finally, it was pretested and used after thorough revision was made.

3.5. Instruments

Data was collected using the following basic instruments:

a. Depression Anxiety and Stress Scale (DASS)

The DASS is a measure of mental health focusing on the three traits of depression, anxiety and stress. The DASS was designed by Syd Lovibond and Peter Lovibond at the University of New South Wales in 1995. The DASS-21 consists of three self-reported scales designed to measure clinical levels of depression, anxiety, and stress. Seven questions were asked in each category about symptoms experienced over the past week and were scored on a four-point scale (Did not apply to me at all=0, Applied to me to some degree, or some of the time=1, Applied to me to a considerable degree, or a good part of the time=2, Applied to me very much, or most of the time=3). The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious effect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. The reliability scores of the scales in terms of Cronbach's alpha indicate that scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items. The original reliability of the instrument shows that Cronbach alpha score rate for Depression was 0.91, for the Anxiety scale 0.84 and for the Stress scale is 0.90 in the normative sample.

b. Interview

Since participants are not similar in terms of educational qualification, age and experience, the researcher designed appropriate tools suite the target group. Thus, both structured and unstructured types of interview were used. Moreover, unstructured interview was employed for an in depth interview. On the other hand, the structured interview was designed to collect information from illiterate participants and relatively younger adolescents. Accordingly, interviews were carried out with 4 prison polices officers, 15 prisoners and a prison administrator; a total of 20 peoples participated in the interview.

c. Focus Group Discussion

Focus group discussions were done to triangulate, supplement, and enrich the results of the finding that obtained through interview and questionnaire. Key questions were prepared and two different focus group discussions consisting combination of male and female prisoners were conducted consisting 8 individuals in each group. Sixteen (16) prisoners were involved in FGD and the two FGD sessions was run by the researcher.

3.6. Data Collection Procedure

Ethical clearance was obtained from Research and Community Support Office of Mizan Tepi University. Written permission was obtained from the Prison Administration. Data collection process was carried out by the researcher together with four other trained data collectors (3 of them selected from the prisoners and 1 nurse from the correction center). First hand data was collected from prisoners speaking the local language using research assistant who speak the local language, via close supervision of the researcher. This is due to the fact that the researcher cannot speak the local language of the indigenous people.

a. Pilot study

All questionnaires and interview questions were translated to Amharic language after they have been prepared and checked for their appropriateness. The lecturers, from English Department of Mizan Tepi University, did the Amharic version translation. Finally, after correcting minor mismatches in forwarding and back warding translation, the items were pre-tested on 40 consenting inmates, who met the inclusion criteria but were not included in the final study. The purpose of the pilot testing was to help the researcher to determine recruitment rates, retention rates, and eligibility criteria, clarity in determining who meets and who does not meet the eligibility requirements, and to check whether the translated instruments measure their intended construct and their internal consistency. Accordingly, the reliability of the instrument after pre-test shows that Cronbach alpha score rate for Depression was 0.87, for the Anxiety 0.88, and for the Stress scales 0.79.

3.7. Methods of Data Analysis

The data entry and analysis was done using Statistical Package for Social Sciences (SPSS) version 20. After completing and cross checking the data, they were organized in line with the objectives and research questions of the study and analyzed quantitatively employing descriptive and inferential statistics. Prevalence and risk factor of depression, anxiety and stress was analyzed using frequency distributions. T-test was used to see if there was gender difference in prevalence of depression, anxiety and stress. ANOVA was carried out to answer difference on the level of depression, anxiety and stress across year spent in prison center. Furthermore, data collected through the qualitative tools were organized and presented in a narrative form after transcribe for and triangulated with the quantitative data.

4. Results

This section deals with the findings of data gathered from the research participants in the prison center. Analysis was made based on data collected from 372 participants. The findings include the following major areas of concerns: prevalence of depression, anxiety and stress in prison center, differences in prevalence of depression, anxiety and stress based on time spent in prison, gender difference in depression, anxiety and stress, causes of mental health problem in prison center.

a. Socio- demographic Characteristics of Participants

The total sample size of prisoners involved in the study was 347. Out of this, 336 properly responded and returned the questionnaire producing an overall 96.8% valid return rate. Among the remaining (eleven), five of them did not return the questionnaire and the others were dropped due to incomplete responses that might affect the study adversely.

Table 1: Respondents' Socio-demographic Characteristics

Variable	Labels	Frequency	Percentage %
Sex	Female	87	25.9
	Male	249	74.1
	Total	336	100.0
Age	15-20	63	18.8
	21-30	141	42.0
	31-40	89	26.5
	41-50	26	7.7
	Above 50	17	5.1
	Total	336	100.0
Year served in prison	less than a year	130	38.7
	2-5years	122	36.3
	above 5 years	84	11
	Total	336	100.0

Regarding sex, about 87(25.9%) were female prisoners while the rest 249 (74.1%) are male. Concerning age of participants, their age ranged from 15 to 63 years with $M=27$ and $SD=5.2$. Of the participants, 26.5% were between 31 to 40 years, whereas 63 (18.8%) of them were between 15 to 20 years. Majority of respondents 141 (42%) were between 21-30 years. In terms of year of stay in prison center, 130 (38.7 %) of them served less than a year while 122 (36.3%) of them stayed for about 2 to 5 years. The remaining 84 (11%) were in prison for more than 5 years.

b. Prevalence of Depression, Anxiety and Stress among Prisoners

The study was aimed to assess the prevalence of depression, anxiety and stress among prisoners who are in prison at Mizan Teferi criminal correction center. The

prevalence of depression, anxiety and stress level was measured by 21-item DAS scale and data obtained from the survey conducted was presented in Table 2.

Table 2: Prevalence of Depression, Anxiety and Stress

Variables	Levels of symptoms	Frequency	Percentage %
Depression	Normal/ 0-9/	77	22.9
	Mild /10-13/	91	27.1
	Moderate /14-20/	80	23.8
	Severe /21-27/	61	18.2
	Profound above 28	27	8.0
	Total	336	100.0
Anxiety	Normal /0-14/	157	46.7
	Mild /15-18/	73	21.7
	Moderate /19-25/	49	14.6
	Severe /26-33/	33	9.8
	Profound /above 34	24	7.1
	Total	336	100.0
Stress	Normal /0-7/	136	40.5
	Mild /8-9/	54	16.1
	Moderate /10-14/	51	15.2
	Severe /15-19/	49	14.6
	Profound / above 20	46	13.7
	Total	336	100.0

According to data obtained from the center, and presented on table-2 above, 27.1% of prisoners had mild depression whereas 23.1% and 18.2% of prisoners reported to have moderate and severe depression respectively. Moreover, 8% of respondents had profound depression.

With respect to level of anxiety, 21.7 % of prisoners had mild anxiety whereas 14.6% and 9.8% of prisoners reported to have moderate and severe anxiety respectively. Regarding the prevalence of stress, 16.1% of prisoners had mild stress whereas 15.2% and 14.6% of prisoners reported to have moderate and severe stress respectively. The remaining 13.7% of respondents reported profound stress level.

Finding from FGD conducted and interview carried out at the center, majority of prisoners are suffering from depression, anxiety and stress. Discussants indicated that symptoms like being sleeplessness, loneliness, pessimism, inability to concentrate, and restlessness, crying a lot of time, fearfulness and change in appetite are majorly found among prisoners. Majority of interviewed prisoners and police officers also share the same idea with FGD participants. The following statement was taken from an interview of 42 years old prisoner.

I feel like a man without hope and future bright. I always worry about my age at which I become free of prison. I will get older and there is nothing that I contribute to my family and my community. I lost my energy and strength and these makes me think negative which makes me feel hopeless, non- interactive and lose interest in every activities.

c. Year of Stay in Prison and Level of Depression, Anxiety and Stress

Levels and severity of psychological problems are thought to be varied across time spent in prison center. This research also assessed the severity and levels of depression, anxiety and stress in comparing with time spent in the prison center. Year of stay/time spent/ in prison center was categorized in to three different sections and analysis of variance was carried out to see the significant difference between the groups.

Table 3: Time Spent in Prison and Level of Depression, Anxiety and Stress

Variables	Categories	N	Mean	Std. Deviation	Df	F	P-Value
Depression	less than a year	130	20.35	8.045	333	11.452	.000
	2-5years	122	16.06	8.186			
	above 5 years	84	15.57	9.211			
Anxiety	less than a year	130	13.03	6.620	333	8.327	.000
	2-5years	122	10.01	6.732			
	above 5 years	84	9.98	6.540			
Stress	less than a year	130	22.13	9.901	333	7.881	.000
	2-5years	122	18.43	9.583			
	above 5 years	84	17.17	9.709			

*. The mean difference is significant at 0.05 level.

Statistically significant difference was observed in depression, anxiety and stress between prisoners who served in jail for more than one year and less than one-year. This implies that the severity and level of depression, anxiety and stress score was influenced by time spent in prison center. Close investigation of post-hoc ANOVA analysis was needed to identify which mean group contribute more relative to others. Post-hoc comparison using the Tukey HSD test also computed and the result indicates that there is statistically significant difference in depression, anxiety and stress among prisoners who stay in prison for less than one year and above one year. Accordingly, prisoners who stayed in prison for less than a year showed greater symptom of depression ($F(333) = 11.452$ $P < 0.001$), anxiety ($F(333) = 8.327$ $P < 0.001$) and stress ($F(333) = 7.881$ $P < 0.001$) than those who served the prison life for about 2-5 years and above 5 years. However, the post hoc comparison using the Tukey HSD test did not indicate significant difference in depression, anxiety and stress among prisoners who served prison life for about 2-5 years and above 5 years.

Interview and FGD participant also revealed that majority of mental health problems majorly occur on first time admitted prisoners and prisoners who were waiting for trial. According to the information obtained from the participants, the first one month in prison is the hardest period to cope feeling of anxiety, depression and stress. Discussant prisoners revealed that prisoners who were waiting for trial think about the upcoming trial and become stressful when they think of what will happen during trial.

The following extract was taken from police officer who worked in the center for more than ten years.

The situation of first time admitted prisoners is very dangerous. They feel being in prison is like an end of life. They show disturbed emotions for at least four or five months. Prisoners start to get relaxed and adjust themselves to the situation when they start to be mentored by other senior prisoners. This situation is highly persistent on prisoners with high criminal profiles. When prisoners stay in prison they start to form friends and social circles, which will help them to overcome those emotions.

d. Gender and the Severity of Depression, Anxiety and Stress

Another focus of this research is to find out which group of prisoner is majorly affected by mental health problem in prison center. Accordingly, level of depression, anxiety and stress was assessed between male and female (Table4).

Table 4: Depression, Anxiety and Stress across Gender

Variables	Sex	N	Mean	SD.	t-test		
					value	df	P-Value
Depression	Female	87	21.32	7.91	2.915	334	.000
	Male	249	18.14	9.22			
Anxiety	Female	87	10.46	5.82	2.762	334	.006
	Male	249	8.47	5.77			
Stress	Female	87	18.46	9.39	2.914	334	.004
	Male	249	14.76	10.46			

*P<0.05

Statistically significant difference in depression, anxiety and stress was observed among male and females prisoners. The mean score of male in depression (M= 18.14, SD = 9.224) is lower than that of female prisoner (M=21.32, SD = 7.91), (t=2.915 p=< 0.01). This implies that female prisoners showed more depressive symptom than their male counter parts.

A Significant difference in level of anxiety was also observed among male (M=8.47, SD=5.77) and females prisoners (M=10.46, SD= 5.82), (t=2.762 p=< 0.01) which imply that female prisoner showed higher level of anxiety symptom than their male counter parts. Accordingly, the mean of stress score among female prisoners (M=18.46, SD=9.39), (t=2.914p=< 0.01) is higher than males (M=14.76, SD= 10.46) which shows higher level of stress among females.

Discussants of FGD and interviewed participants of the study also highlighted that the psychological burden of being in prison is highly prevalent among females than male prisoners. Among listed causes of psychological burdens, according to them, are being head of households, feeling of guilty for crime committed, worrying about family members, thinking about little children who are living in the center together with mothers make the situation worse for female prisoners. The following extracts were taken from

35 years old female interviewed prisoner depicting the presence and severity of psychological problem.

I have been here for the last two years. I blame myself for committing crime. I lost everything including my friends, children, and relatives. My little son was living with me here in the prison center. I feel disturbed when I think about my future life. I become hopeless and it seems like my life will be ended up here in the prison center.

e. Risk factors of Mental Health Problem among Prisoners

Assessing causes of mental health problem will help to take corrective action and minimize the burden of mental health issue in prison center. Therefore, this research also attempted to assess major risk factors (causes) of mental health issue. Accordingly, the following basic data was obtained.

Table 5: Risk Factors of Mental Health Problem among Prisoners

Variables	Frequency	Percentage	Rank
Being isolated from immediate family members	105	31.25	1
The living situation in the prison center	84	25	2
Guilty feeling for crime committed	71	21.13	3
Absence of freedom	45	13.4	4
Isolation from the social gathering	31	9.22	5
Total	336	100	

To further explore issues related to causes of depression anxiety and stress in prison center, prisoners were asked to rank different reasons thought to be causal factors of psychological health problems in prison centers. Accordingly, the most common causal factor of psychological burden of prison center is identified. Based on the result obtained, isolation from immediate family members (31.25%), living situation in the prison center (25%), feeling of guilty for crime committed (21.13%), absence of freedom (13.4%) and isolation from the social gathering (9.22%) are identified as the most common reasons for mental health problem in prison center.

Interview and FGD participants were also asked to discuss causes of different psychological health problems in prison population. Accordingly, FGD discussants pointed out limited access to freedom, overcrowdings in the prison center, difficulty to cope up behaviors of different prisoners, feeling of guilty for ones crime as causes of mental health problem in prison center. A 45 years old prisoner who participated on the FGD tells:

The situation that you face when you come to prison center is very different from the outside world. I myself suffered too much when I first came to the center. It took me years to have stabled emotion here in the center. The living situation, overcrowdings, absence of personal freedom leaves you in trouble unless you adjust yourself well.

5. Discussions

The objective of the study was to assess the prevalence of depression, anxiety and stress among criminal detainees. In the above section, the major findings were presented and interpreted in line with the stated objectives of this research and this section discusses the result of the study in line with the literature reviewed.

a. Prevalence of Depression, Anxiety and Stress among Prisoners

The result of this study revealed that prisoners are suffering from mild, moderate and severe depression, anxiety and stress. Feeling of hopelessness, fearfulness, absence of concentration, loneliness, pessimism, restlessness and loss of appetite are among the major symptoms of depression, anxiety and stress identified. The presence of these symptoms indicates how much anxiety, depression and stress are prevalent in the prison center.

This idea is consistent with a study conducted by Zakir et al (2018), which assess the prevalence and associated factors of depression among prisoners in Jimma Town Prison Center, which revealed that the prevalence of depression was found to be 41.9%. The study indicated that among the total number of participants 13% had mild, 20% had moderate, and 9% had severe level of depression.

Another study conducted by Abel et al. (2016), in Amhara regional state of Ethiopia, also share the same idea that the prevalence of anxiety among prisoners was 36.1 % which indicated more than one third of the prisoners have an anxiety disorder.

Study conducted in Port Harcourt Prison, by Nwaopara and Stanley in 2015, to assess prevalence of depression using Beck depression inventory scale also identified that 14.8% of mild, 14.2% of moderate and 6.2% of severe depression.

b. Year of Stay in Prison and Level of Depression, Anxiety and Stress

This study revealed that the episodes of depression, anxiety and stress in prison center is associated with time spent in prison and experience of sudden or prolonged stressful events. The study indicated that prisoners who stayed in prison for less than a year showed greater symptom of depression, anxiety and stress than those who stayed for longer period. It is common that prisoners who join the center for the first time suffer from depression, anxiety and stress when compared to those who stayed in prison for long period of time. Tearfulness, dizziness, fearfulness and pessimism are among the feelings that are encountered most of the time by newly admitted prisoners and those waiting for trial.

This idea is consistent with a study conducted by Gunter (2004) and Drapalski et' al. (2009), which states that the most stressful period, is when the inmate first encounters prison life. First-time offenders are particularly vulnerable due to the loss of liberty and separation from friends and family. This stage is often characterized by feelings of denial followed by anxiety and depression, although other emotions such as shock, fear, isolation, grief, and anger are also reported frequently. The adjustment period typically lasts for the first 4–6 weeks of confinement. It is at this stage that many suicide attempts are made.

Another study conducted in Brazil by Constantino et al. (2016), which aimed to assess the mental health status of inmates and people in custody, revealed that lengths of time spent in prison have its own effect on prisoner's mental health status. According to this study, prisoners who had been in prison for between one and nine years are 0.55 times less likely to experience stress symptoms than those who had been in prison for less than a year.

c. Gender and the Severity of Depression, Anxiety and Stress

This study also identified that mental health problems like depression, anxiety and stress are highly prevalent among female prisoners when compared to the male counterparts. Being a parent, particularly a mother, is indeed a stressful condition for the inmates; thus their imprisonment became an additional burden to the existing parenting. These included restricted contact with child (or children), loss control over parental role, and many other issues that could arise for being imprisoned mother. In addition, women are more likely than men to experience childhood trauma and sexual assaults. The living condition in an over-crowded prison center is not comfortable for female prisoners than male prisoners in different aspects. The condition is very difficult for females to keep their own personal hygiene; some female prisoners come to prison centers having small children to be taken care off. Living in prison center with small children makes their life more depressed, anxious and stressful than ever.

This finding agrees with a study conducted by Gunter, (2004), Hammen, (2005), Fountoulakis, (2006), and Reed et al., (2009), which indicated that women often have more sources of stress such as socioeconomic problems, family affairs, and educational restraints. These circumstances are even more significant among inmates who are being imprisoned and restricted from accessing freedom and achieving something like those outside the prison wall. When married women's are jailed most of the time they had a family and most probably with a child or children. The burden of being separated from their child (or children) especially a young one(s) could become a major source of stress among them (Houck & Loper, 2002; Gunter, 2004).

This study is also consistent with research conducted in Brazil by the year 2016, which aimed to assess the mental health status of inmates and people in custody in the state of Rio de Janeiro using the Beck Depression Inventory and the Lipp Stress Symptom Inventory for Adults which revealed that 39.6 % women showed symptoms of severe depression, as opposed to 24.8 % of men. Whereas, the results of the Lipp Stress Symptom Inventory for adults showed that 35% of men and 57% of women suffered from depression accordingly (Constantino et al, 2016).

d. Risk Factors of Mental Health Problem among Prisoners

This study revealed that mental health problems in prison centers are caused due to different factors. Alienation from the family and society, delay in legal proceedings, isolation from immediate family members, the living situation in the prison center, guilt feelings, inability to cope up behaviors of other prisoners are among the most common reasons identified as risk factors of mental health problem in prison center.

This finding also goes in line with study conducted by Birmingham, (2004); Gunter, (2004); Drapalski et.al., (2009); and Lafortune, (2010), which state that alienation from the family and society, problem of overcrowding, unhygienic cell environment, delay in legal proceedings (under trial cases), physical and mental suffering by prison officials and group clashes and conflict among prisoners exaggerate the mental health problems of prisoners.

Another study, which agrees with the current finding, conducted by Schnittker and John in (2007), identified those prisoners who find themselves unable to adjust with the jail environment start feelings of guilt, show suicidal behavior and aggression, and develop stress and depression, anxiety and other psychiatric problems.

6. Conclusions

The results of the study provided that the prevalence of depression, anxiety and stress were higher in prison center. The nature of the prison center and absence of basic facilities contribute to the presence of mental health problems in prison center. Similar to the results of the survey in the general population, females in prison centers are also prone to higher mental health problems when compared to their male counterparts. The finding of this research also shows higher level of depression, anxiety and stress among prisoners who stay in a prison for less than one year period of time than those who stayed more than two years. Many risk factors have been raised to exacerbate and initiate mental health problems in mental health setting including isolation, crowdedness and feeling of guilty. Generally, this study has found out and contributed the following conclusions for the existing research literature.

- Majority of prisoners had mild, moderate and severe depression, anxiety and stress.
- Symptoms of depression, anxiety and stress was highly prevalent among prisoners who are serving less than one year period than those who stayed for long period of time.
- According to the survey-conducted depression, anxiety and stress were more prevalent among female's prisoners than their male counter parts.
- Isolation from immediate family members, the living situation in the prison center, feeling of guilty for committing the crime, absence of freedom and isolation from the social gathering were identified as the most common reasons for mental health problem in prison center.

7. Recommendations

The following recommendations are suggested based on the findings of the study:

- Mental health problem, which is prevalent in prison center, needs to be addressed by collaboration of concerned bodies like ministry of health, federal prison administration and others. Prison center needs to have mental health professionals who deal with the issue of mental health. Therefore, the center needs to give due emphasis in recruiting and offering counseling services for prisoners.

- The situation of prisoners who came to prison center for the first time and waiting for sentence is critical when it comes to mental health issue. Those prisoners lack experience to adjust themselves with the situation and this makes them stressed. Therefore, mental health screening and treatment needs to be given for new entry prisoners before they suffer from mental health problems.
- The study revealed that females are more prone to depression, anxiety and stress than their male counterparts. This can be due to the factor that females are living in the center with their children in a difficult condition. Therefore, better care is needed for female prisoners who live with their little children in the center.
- Awareness creation trainings including life skill and conflict resolution are also needed concerning the issue of mental health. Therefore, prison administrators have to collaborate with mental health professionals to combat the issue.
- The center has lack of sanitation, living rooms, recreation areas, vocational trainings, health facilities and the like. The cumulative effect of these needs may results in depression or stress. Therefore, the administration has to think on fulfilling such issues to help prisoners to stay mentally health.
- Training on mental health issues should be provided to all people involved in prisons including prison administrators, prison guards and health workers. Training should enhance staff understanding of mental disorders, raise awareness on human rights, challenge stigmatizing attitudes and encourage mental health promotion for both staff and prisoner.
- Future research is also needed to make clear to what extent the high psychiatric morbidity are causes, consequences or both of imprisonment. Further, research detailing the mental health care services currently available for prisoners should be undertaken and any disparity between mental health care needs and services should be investigated.

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FULL LENGTH ARTICLE**The Effect of Interactive Teaching Approaches on Gender-Based Academic Achievement Disparity Alleviation: The Cases of Colleges of Teachers Education in Oromia National Regional State, Ethiopia**Bahiru Haile¹

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Abstract

This study was conducted in Jimma and Nakamte College of Teachers Education. It was set to identify ranges of interactive teaching approaches that maximize students' learning engagement so as to alleviate gender-based academic achievement disparities. Three hundred twelve first year students were selected from colleges of social sciences and natural sciences. A two-way (two-by-three levels, which forms six combinations) factorial experimental research design was employed to investigate combinations of the approaches that enhance gender-based academic achievement parity. Each sampled class was randomly assigned to one of the combinations. Teacher trainers who had been offering courses for the selected classes were trained intensively on those intervention variables to maximize its effects. The study indicated that post-test average scores of male and female students significantly increased. Yet, females were more facilitated than males under these teaching approaches. Scheffe's post hoc tests verified that cooperative learning-small group seating, gender responsive pedagogy-small group seating, gender responsive pedagogy-whole class seating and teacher immediacy behaviour-whole class seating related combinations were found better effective approaches to improve learning engagement and then to combat gender-based academic achievement disparity. Therefore, teachers are needed to maintain balance and to deepen their skills of gender responsive pedagogy. Besides, cooperative learning, teachers' immediacy behaviors, classroom setting and management need critical attention to alleviate gender-based academic achievement disparity.

Key terms: /cooperative learning & classroom setting/Gender responsive pedagogy/ Teachers' immediacy behavior/

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1. Introduction

1.1. Background to the Study

Education is a basic human right which is exercised by everyone irrespective of any background to excel in career competencies. It is often regarded as a systematic action of imparting relevant knowledge, skills and attitude to learners in their preparation for meaningful life and contribution to better society. In this regard, girls' education is a key to enhance their personal and family life as well as the social and economic development of the entire nation (UNESCO, 2015).

The educational millennium development goals require all ratifying countries to eliminate gender academic disparity at all levels of education by 2015 (Onsomu, *et al.*, 2005). Ethiopia has put different education sector development programmes in place to make education accessible, relevant, equitable and quality to all of its citizens and ultimately aiming to improve school enrollment, retention, and transition and completion rates of the nation. In spite of these programmes, the educational system is still suffering from gender-based academic achievement disparity at all levels. Teaching experiences of the researcher shows that female students often achieve less than males in all courses even though the remedial is given as affirmative action.

Educational scholars have accounted different evidences for the existence of gender differences in school performance. Some have associated gender performance disparities with students' level of participation and engagement in school learning (Zalizan *et al.*, 2013); others relate it to students' low motivation, absenteeism and drop out of school (Finn, 1989; Skinner *et al.*, 2008; Parker & Salmela-Aro, 2011). Still others attribute it to students' learning styles and skills as well as learning strategies that are in favor of some students than others (Lam, *et al.*, 2012). Most scholars agree that the school achievement disparity lies on the learner's experience, and recommend teachers to embrace various teaching methods and classroom settings to address each learner's learning. This implies that effective classroom interaction is among other things that create equal learning opportunity for males and females' to acquire and experience school behaviors, values and skills which are not explained in terms of their initial experiences and knowledge (Nnamani & Oyibe, 2016).

This experimental study, thus, was conducted to investigate combinations of interactive teaching approaches that improve students' engaged time (time on task), allocated time (total time available for learning) and academic learning time (time spend on working quality tasks of an appropriate difficulty), and thereby to alleviate gender-based academic achievement disparity.

1.2. Statement of the Problem

The College of Teacher Education (CTEs) enrolment figures of females have already outnumbered males. At college level, female to male ratio, on average, was 1.18 thanks to affirmative actions (MoE, 2015). However, the situation is grim in terms of academic achievement disparity. The question of gender equality in education means more than access to school for females and males (Amunga *et al.*, 2010). It combines the right to education (access and participation) with rights within education (gender sensitive environments, processes and outcomes) and rights through education, that is,

relevant education that connect outcomes to a wider experience of gender justice in society (*ibid*). Gender parity and equality is a key indicator of progress made towards global achievement of quality education for all (UNESCO, 2000).

Gender-based academic achievement disparity is even greater at tertiary than at primary and secondary education levels in Ethiopia (Tamirie, 2009). Study undertaken by Metasebia (2013) in three private university colleges in Addis Ababa identifies that female students' attrition is higher than that of males'. She attributes home chores pressure and sexual harassment as major attributing factors for gender-based academic achievement disparity. Congruently, the stress and the anxiety about insecure school climate cause females' mental attention, energy and efforts to be defused between protecting their psyches from attack and attending academic tasks. Other scholars have linked the higher disparity to gender irresponsive pedagogy used by the teachers to teach adult learners (Adunola, 2011). Teachers call on males more frequently, wait longer for them to respond to questions, give males students more eye contact, ask males higher-order thinking questions than females do. Grace and Gravestock (2009) also indicated that gender stereotyping was a core obstructing factor for engagement of females in learning. Male students are better in asking instructors for clarification inside and outside classroom than female students do. As a result, they have better GPA than that of females. Teshome (2007) links the disparity with costs of schooling, limited employment opportunities, socio-economic status, the economic value of girls and the level of parental education and their attitudes. Furthermore, Wakgari and Teklu (2012) observe in their findings that females are less achievers than males in CTEs. Gender stereotype and institutional satisfaction of students were chanted to be the major attributing factors for the disparity.

As to solutions, Metasebia (2013) suggests hiring more female instructors, opening gender office, giving parent awareness and orienting college life as strategies to minimize gender academic achievement disparity. The suggestions she made are all mainstreamed in the study CTEs except the first point. Despite the gender parity in access to education and recommended alternatives by scholars, the researcher's college teaching experience shows that female students have continued holding the lowest academic scores, highest course repetition and college dropout, least proportion in exit examination (COC) and leading group work activities including group discussion, assignment and project works and presentation. Thus, this study was carried out to investigate alternative interactive teaching methods and classroom settings to alleviate gender-based academic achievement gap focusing on the first-year regular students in Jimma and Nakamte CTEs.

1.3. Objectives of the Study

The study was specifically sought to:

1. Identify classroom arrangement types that could cause gender-based academic achievement parity.
2. Evaluate interactive teaching methods that enhance gender-based academic achievement parity.
3. Discuss the extent that interactive teaching and classroom setting alleviate gender-based academic achievement equity.
4. Appraise whether the achievement gap gets narrowed following the intervention or not.

1.4. Research Hypothesis

1. H_0 : Classroom arrangement has no impact on gender-based academic achievement parity;
2. H_0 : Interactive teaching has no effect to alleviate gender-based academic achievement differences;
3. H_0 : Interactive teaching and classroom setting have no significant impact on gender-based academic achievement; and
4. H_0 : the range of gender-based academic achievement gap hasn't narrowed after the intervention.

1.5. Significance of the Study

Sustaining engaged time of all students, particularly that of females' is vital as CTEs welcome more females than male trainees as would be primary school teachers. If these trainees are made competent in their teaching profession, they will contribute their part in maximizing retention, minimizing dropout, and maximizing completion of their respective school students. Besides, gender academic achievement equity enhances the effort to achieve accessible, relevant and quality education for all nations. Thus, this study helps learners to improve their learning performances, aids teacher trainers to employ alternative teaching approaches and assists college administrators to take corrective measures to alleviate gender-based academic achievements.

2. Review of Related Literature

There are several contemporary theories that have moved away the explanations for educational achievement differences between boys and girls from primordial classic biological to social insights. Psycho-social and structuration theories are among the others which could put this study into their nutshell. The biological theory explanations for the educational achievements of girls and boys lay on brain size and development which glimpse internal factors and sluggish traditional teaching methods. Contrary to these, the social theories explain the achievement differences in terms of external factors including primary socialization patterns and differential experiences offered to males and

females by the family and the organization or teachers-students-students interactions in school. The first theory attributes the variance of achievement to sex of children while the later denounces engendered classroom learning strategies and school stratification. Sex refers to the biological division into male and female; gender to the parallel and socially unequal division into femininity and masculinity (Oakley, 1981). Gender is a strong predictor of human conduct and many differences have been documented on attitude and behavior that affect academic performance between male and female (Block, 2006).

According to the structuration theory, the social world is composed of social systems (family, peer groups, class and patriarchy) and structures including the rules, resources, and social relationships that actors produce and reproduce through social interaction across time and space. Everyone still continues to live a local life, and the constraints of the body ensure that all individuals, at every moment, are contextually situated in time and space (Giddens, 1984). For Giddens, structure is more specific and detailed than social system to act upon and alleviate gender academic achievement disparity. Rules and resources are the two primary features of structures which govern position of males and females in educational institutions, market exchange, class structures, political organizations and processes. Interactive teaching approach requires teachers to understand and analyze locally how these rules are enacted and resources are allocated among members of society to implement gender responsive pedagogy in classroom teaching.

Giddens has broadly identified two types of rules and resources— Procedural rules and Moral rules – that implicitly accommodate rules and resources teachers communicate in classroom teaching-learning process. Procedural rules govern how the social practice, norms, mores, customs and language usage is performed. Moral rules refer to appropriate ways of carrying out or enactment of social action and interaction, what is permissible and what is not. Classroom communication between teachers and students during instruction matters energy of a student's engagement and gender academic achievement parity. The second manifestation of structure is resources. Material resources are means of production, income and capital goods while authority resources are related with power and its exercise. As imbalanced allocation of resources among members of society produces social inequalities, teaching methods, materials, rewards and role division which entertain male student is inevitably results in gender academic achievement difference.

According to the psycho-social theory, educational achievements, participations and wastages of boys and girls are determined by socio-cultural and historic attitudes, economic and political decisions, religion and organization and structure of schools (Swainson, 1995). Okoro (2008) observed that males and females show great differences in their interest and career choice which might be attributed to the psychological differences and cultural influences. Similarly, Lie and Syoberg (2004) noticed that invisible rules within the society have provided what is feminine and what is masculine.

Similarly, scholars like Kutnick (1997) identifies four profound issues that encapsulate gender academic achievement disparity in Trinidad and Barbados based on naturalistic classroom observation and ethnographic techniques of reflection. The first is teacher behaviors which are elucidated by general classroom interaction with students and quality and preferences expressed in working with the learners. Teachers are

required to devise clear and well-ordered rules, expectations and self-controlled classes where students would act as autonomous and self-motivated learners. The second is student behavior that is interactions among students' and their reflections on their learning classrooms. Males and females did not interact together unless directed to by their teacher. The third is classroom management strategies, practices undertaken by teachers for control of learners through seating patterns, responses to misbehavior. Classrooms should run in a student-centered, with the teacher at facilitating position. The last is teaching and learning strategies. It is practices that are employed by teachers to promote, support and develop students' learning and observations carried out to make communication between teacher and students effective. Two-way communication between teacher and students and students and students are effective in promoting students' engagement, understanding and participation.

3. Methods and Material

3.1. Experimental Research Design

Two-way, which is two-by-three, factorial experimental research design was employed for this study. Factorial design was preferred to other designs for its greatest flexibility to examine treatment variations, effectiveness to explore interaction effects and efficiency to treat wide range of variables relationship simultaneously. A large number of factors affects the teaching-learning process. Thus, the design contains a complete trial/replication formed by each level of one independent variable with each level of another factor for investigation.

3.2. Experimental Research Procedure

The researcher has requested and obtained permission from the respective college administrators for the participation of their students and teachers in the study. Teacher trainers, who were assigned to teach the selected classes of the respective colleges and assumed research assistants, were given one-day intensive training on the devised interactive teaching methods (treatment variables) package before they embark on offering the second semester courses. After training, the implementation of treatment variables started at respective classrooms and lasted for the span of sixteen weeks which is the normal schedule of the colleges to complete the courses students registered for. The researcher toured the participant colleges to monitor the progress of the study.

Treatment variables that were devised in response to bequeath gender-based achievement gap was arbitrarily assigned among the selected classes. Accordingly, the 1st class was designated for small group seating arrangement-SGS and cooperative learning-CL; the 2nd class was assumed for SGS and gender responsive pedagogy-GRP; the 3rd class was chosen for SGS and teachers' immediacy behaviors-TIB; the 4th class was selected for WGS and CL; the 5th class was delegated for WGS and GRP and the last class for WGS and TIB. Effects of the observed variables were identified using continuous classroom assessments.

3.3. Sample Size and Sampling Techniques

There were 12 CTEs in Oromia National Regional State. They were homogeneous in terms of medium of instruction, teaching materials (centrally prepared modules), student-teacher and student-class ratios, teachers' educational competencies, students' backgrounds, etc. Hence, Jimma and Nakamte CTEs were selected randomly to get sufficient classes. Yamane (1967) formula, $n = N/1 + Ne^2$ (n=sample number, N=target population and e=error margin, $\alpha=.05$), was used to determine the sample size. About six classes (52 students each) with a sum total of 312 students (156 males and 156 females) were recruited proportionally from 1408 first year regular students assigned to social and natural streams of the two colleges.

In this region, students are randomly assigned to their respective CTEs after passing the standardized regional CTEs entrance examination. The study has used the advantage of this randomized students' arrangement in these colleges to ensure the maximum external validity though factorial experiment research design is possible with or without random assignment of the participants. Randomization assures all classes equal chance of being represented prior to the introduction of independent/treatment variables. Thus, it is logically sound to use the already randomized classes as a target population from which representative sample is drawn for the study. For this study, first year regular students were targeted intentionally because they have profound gender-based academic achievement disparity for several reasons when compared to second- and third-year regular students. College teaching-learning environment is different from the general education they have already known, and this needs students much time to deal with the new learning environment. Moreover, all teacher trainers who were offering courses for the selected classes during the study period have become automatically the participants and assistants of the study.

3.4. Data Sources

Primary data sources – students in selected classes, course offering teachers and top college administrators were the primary data sources.

Secondary data sources – grade 8 regional examination, grade 10 national examination and first semester college GPA results of the recruited students were obtained from their respective registrars, converted into the scale of one to ten and used to analyze the trend of gender-based academic achievement disparities. Besides, first semester college assessment results were utilized as pretest and compared with the intervention results (post-test). Pre-test results were assumed valid, because colleges authenticated the contents, faces and codes of the assessments before administration. Pre-college (8th and 10th grades) and college academic achievements of the respondents were also used to see the trend of gender-based achievement gap over the ladder of education. Here, internal validity threats such as maturity, history, testing, instrumentation, selection, mortality, etc. are assumed equal for the two groups, and the difference between the pre-test and post-test explains the effect of intervention alone.

3.5. Tools of Data Collection

Group and individual work projects and assignments as well as classroom quiz masters and final examination were used as data collection tools to find out the extent that treatment variables irrefutably influence the gender-based academic achievement parity. The contents of constructed tools were validated against the taught courses by the respective course offering department teachers before use. Its reliability was also checked with non-participant students, and found to be 0.73 by employing the Alpha Cronbach method. Average learning scores were computed separately for male and female students. Furthermore, semi-structured interview was carried out to obtain opinions of the participants on the used interactive teaching approaches in enhancing their teaching-learning process.

3.6. Data Analyzing Techniques

Tables and graphs were used to demonstrate most of the results. Pretest and post test average achievements of females and males were presented separately using tables for comparisons. Moreover, graphs were employed to show the existence of interaction effects between treatment factors, and the trend of gender-based academic achievement gap from the primary to college education. ANOVA of between-subjects' effects were applied to see variations of the simple main effects of individual treatment on academic scores and interaction effects between factors. Finally, Scheffe's post hoc tests were used to identify combinations of approaches that are better acknowledged to minimize the gender-based academic achievement gap.

4. Results

Post-test and pre-test results of the selected groups were organized, presented and discussed as follow. Table 3.1 indicates that the average post-test results of male students were getting improved overall except for the two groups. One group which was taught by CL-WCS has scored the same post-test means result as pre-test meanwhile the other group that was taught by GRP-WCS has scored post-test mean result lower than the pre-test means.

Table 3.1: Comparison of Pre-test and Post-test Academic Results of Male Students

		<i>Classroom Setting Factor</i>					
		Levels	WCS	SGS		WCS	SGS
<i>Interactive Teaching Factor</i>	CL	60	65		60	75	
	GRP	77	77		75	80	
	TIB	55	65		80	90	
		<i>Pre-test Results</i>				<i>Post-test Results</i>	

NB: WGS = Whole Group Setting, SGS = Small Group Setting, CL= Cooperative Learning, GRP = Gender Responsive Pedagogy and TIB = Teachers' Immediacy Behaviors

Similarly, the average post-test results of female students were substantially improved. All groups of the females taught under different treatments have scored post-test mean results better than their pretest means (See Table 3.2). The result proven that in the absence of damaging stereotypes consequences, female students can build real self-esteem and confidence which inspire them to engage in learning.

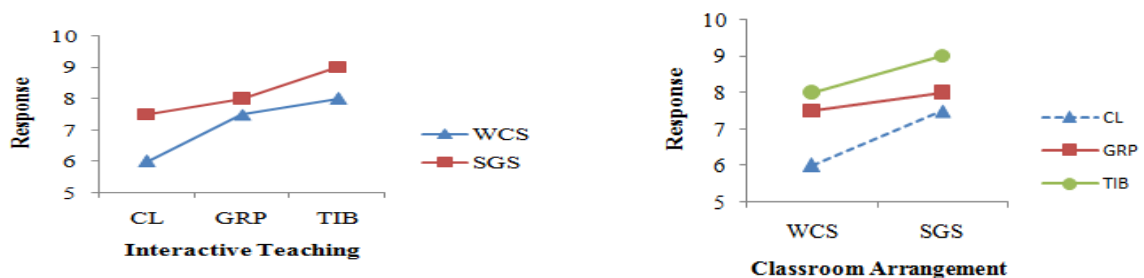
Table 3.2: Comparison of Pre-test and Post-test Academic Results of Female Students

		<i>Classroom Setting Factor</i>					
		Levels	WGS	SGS		WGS	SGS
<i>Interactive Teaching Factor</i>	CL	45	40		60	75	
	GRP	50	55		55	80	
	TIB	50	45		75	85	
	<i>Pre-test Results</i>			<i>Post-test Results</i>			

a. Existence of Interaction Effect (Graphical aid for analysis)

Examining an interaction plot of the cell means is a useful first step in considering an interaction effect of independent variables on the dependent variable (cause-effect relationship). Specifically, an interaction effect exists when the effect of one independent variable on the dependent variable depends on the value of other independent variable included in the factorial research design (Jaccard, 2003).

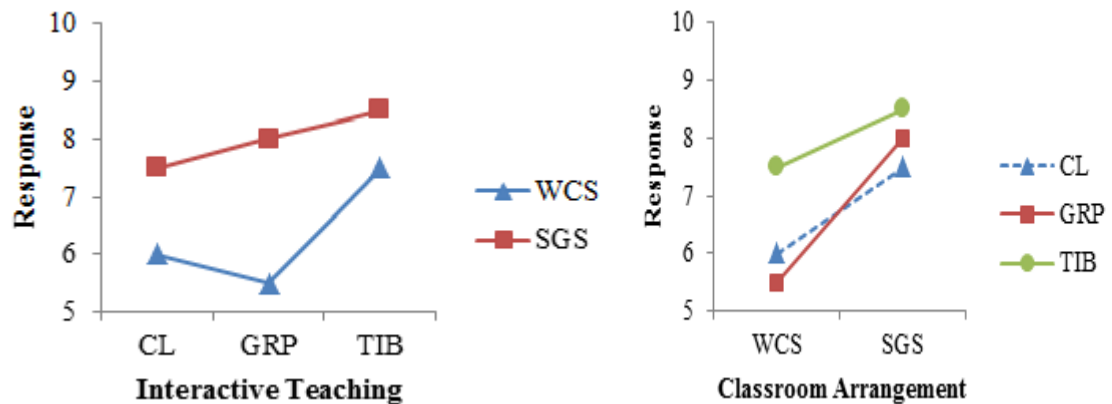
Line graph 3.1 reveals that the lines, which depict interaction effects of classroom arrangement on interactive teaching and vice versa, do not appear to be parallel in the case of male students. The lines were actually converging implying that the effects of levels of interactive teaching factor were not the same for each level of the classroom setting factor and vice versa. The two-way interaction effects of interactive teaching and classroom arrangement show that small group seating has stronger positive effect on students' learning achievement and would address more learning styles than the whole group seating does. Specifically, this small group seating arrangement would be stronger for teachers' immediacy behaviors and gender responsive pedagogy than cooperative learning methods. When a simple main effect for interactive teaching factor was introduced to each level of classroom setting factor, teachers' immediacy behaviors and gender responsive pedagogy would be stronger for small group setting and both would be preferred to alleviate gender academic achievement disparity.



Line graph 3.1: Interaction effects of classroom setting and interactive teaching for male students

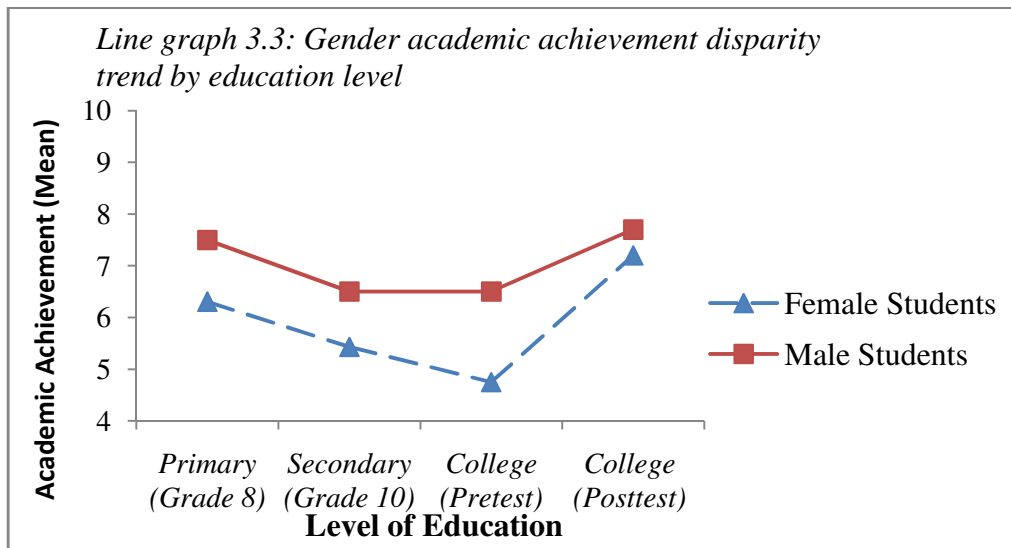
Likewise, the lines representing interaction effects of classroom arrangement on interactive teaching and vice versa were observed to be congregating or intersecting in the case of female students (Line graph 3.2). Levels of classroom setting were also considered at each level of interactive teaching factor for female students, and the interaction effects show that small group seating has stronger effect on students' learning achievement and would address more learning styles than the whole group seating. This small group setting would be also stronger for gender responsive pedagogy and teachers' immediacy behaviors than cooperative learning methods. While levels of interactive teaching factor were brought together with classroom setting factor, teachers' immediacy behaviors and gender responsive pedagogy had stronger interaction effects for small group setting than the whole group setting and they were effective or gender academic achievement parity.

Existence of positive relationship between classroom setting and interactive teaching approaches justifies that improvement in students' learning performances is highly attributed to treatment variables.



Line graph 3.2: Interaction effects of classroom setting and interactive teaching for female students

It was appreciated that both interactive teaching and classroom seating have induced significant effect on the improvement of male and female groups' learning performances. Post-test results of female and male students were also compared to determine the group that has supported more to alleviate academic achievement disparity in this most natural and equity thrived learning environment. Line graph 3.3 compares the pretest and posttest results of the two groups. The line designated by female students has indicated abrupt, radical and prompt changes over the line denoted by male students. It is possible to deduce that females were more supported than males under these circumstances, and they unleashed higher talents and efforts to alleviate the gender academic achievement gap. This line also demonstrates the trend of gender academic achievement disparity. The trend of disparity was getting narrowed following the intervention. The intervention ensures equity to compensate for historical and social disadvantages that prevent females and males from operating on equally leveled playing ground. Equity is equality of opportunity among people where a person's success should be determined primarily by his/her talents and efforts rather than by pre-determined circumstances such as race, gender, social family background (World Bank, 2005).



Source: Calculated based on respondents' College score and grades 8 and 10 exam results

b. ANOVA Tests of interaction effects significance

The two-way analysis of variance was applied to determine whether either of the two independent variables: interactive teaching and classroom arrangement or their interaction (teaching * classroom) have statistically significant effect on the dependent variable (academic achievement) for the groups (Jaccard, 2003). The result of the **tests of between-subjects' effects** shows that there was a significant two-way interaction of interactive teaching * classroom arrangement ($F=18.914, p = .000$ for female students; $F=8.053, p=.000$ for male students). This would suggest that the effect of interactive teaching depended on the classroom setting and vice versa. The pattern of this interaction was that, small group seating made both female and male students more effective than whole group seating, and this effect was stronger for gender responsive pedagogy and teachers' immediacy behaviors groups than for cooperative learning groups. This two-way pattern was also descriptive for each level of interactive teaching. The simple main effects of both interactive teaching and classroom arrangement are also significant for the two groups (*for females: $F=67.551, p=.000$; $F=270.203, p=.000$ and for males: $F=99.315, p=.000$; $F=96.630, p=.000$). The larger sum of squares also tested that academic achievement of female students was highly dependent upon the classroom setting and interactive * classroom interaction while that of male students was highly dependent upon interactive teaching.*

Table 3.3: ANOVA Tests of Between-Subjects Effects
 Dependent Variable: Academic Scores

Gender	Source of variations	Type III Sum of Squares	Degree of freedom	Mean Square	F	Sig.
Female	Corrected Model	17766.667 ^a	5	3553.333	88.627	.000
	Intercept	801233.333	1	801233.333	19984.204	.000
	interactive	5416.667	2	2708.333	67.551	.000
	classroom	10833.333	1	10833.333	270.203	.000
	interactive * classroom	1516.667	2	758.333	18.914	.000
	Error	6014.000	150	40.093		
	Total	825014.000	156			
	Corrected Total	23780.667	155			
Male	Corrected Model	12566.667 ^b	5	2513.333	62.273	.000
	Intercept	916933.333	1	916933.333	22718.864	.000
	interactive	8016.667	2	4008.333	99.315	.000
	classroom	3900.000	1	3900.000	96.630	.000
	interactive * classroom	650.000	2	325.000	8.053	.000
	Error	6054.000	150	40.360		
	Total	935554.000	156			
	Corrected Total	18620.667	155			

^aR Squared = .747 (Adjusted R Squared = .739)

^bR Squared = .675 (Adjusted R Squared = .664)

c. Multiple Comparisons

ANOVA tests merely consider that all the treated groups have different mean responses. Hence, multiple pairwise comparisons are decisive approach to find out significant differences in cell means, and identify factors that produce most desirable results on gender academic achievement parity. This involves determining the mean difference between interactive teaching levels at each classroom setting level and between classroom seating levels for each interactive teaching level. Table 3.4 and Table 3.5 display the results of pairwise comparisons that were obtained using the Scheffe's post hoc tests. Accordingly, there are 30 pairwise comparisons/combinations; of which 10 pairwise are statistically significant (Tables 3.4 and 3.5). The pairwise mean differences of CL-WCS and GRP-WCS were statistically significant and lower than the average means of the interactive teaching and classroom seating factors for female groups at $\alpha = .05$. There were no significant differences when the mean scores of CL-SGS, GRP-SGS, TIB-WCS and TIB-SGS were compared with their respective pairwise for female groups. Here, the upper bound and lower bound intervals have similar either positive or negative signs and contain zeros at 0.05 level of significance. This indicates that WCS was a challenging aspect for females to improve their learning and performances. This is because it entertains a competitive learning environment which allows males to dominate the teaching-learning process. These results suggest that CL-SGS, GRP-SGS, TIB-WCS and TIB-SGS approaches are appropriate methods to teach female groups to alleviate gender-based academic achievement disparity when compared to CL-WCS and GRP-WCS. For this

reason, teachers have to minimize the use of whole class seating arrangement that debilitates the cooperative learning and gender responsive pedagogy environment.

Similarly, the pairwise means differences of CL-WCS and TIB-SGS were statistically significant for male group sat $\alpha = .05$. No significant differences were observed for the remaining groups when their mean scores were compared with their respective pairwise as their intervals also contain zeros. This also suggests that CL-SGS, GRP-SGS, GRP-WCS and TIB-WCS approaches are appropriate methods for male groups' learning. Besides, Scheffe's post hoc tests show that TIB-SGS is suitable teaching approach to combat gender-based academic achievement disparity. Students whose teachers had applied teachers' immediacy behaviors in small group seating received higher scores than students whose teachers had applied teachers' immediacy behaviors in whole group seating. Like female groups, the whole class seating arrangement that totally depends on cooperative learning should be minimized for male groups.

Table 3.4: Multiple Comparisons (gender=female)
Post Hoc Tests: Scheffe

Dependent Variable: Academic Scores

Gender	(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Female	CL-WCS	CL-SGS	-15.0(*)	1.75	.000	-20.92	-9.07
		GRP-WCS	5.0	1.75	.158	-.92	10.92
		GRP-SGS	-20.0(*)	1.75	.000	-25.92	-14.07
		TIB-WCS	-15.0(*)	1.75	.000	-20.92	-9.07
		TIB-SGS	-25.0(*)	1.75	.000	-30.92	-19.07
	CL-SGS	CL-WCS	15.0(*)	1.75	.000	9.07	20.92
		GRP-WCS	20.0(*)	1.75	.000	14.07	25.92
		GRP-SGS	-5.0	1.75	.158	-10.92	.92
		TIB-WCS	0.0	1.75	1.000	-5.92	5.92
		TIB-SGS	-10.0(*)	1.75	.000	-15.92	-4.07
	GRP-WCS	CL-WCS	-5.0	1.75	.158	-10.92	.92
		CL-SGS	-20.0(*)	1.75	.000	-25.92	-14.07
		GRP-SGS	-25.0(*)	1.75	.000	-30.92	-19.07
		TIB-WCS	-20.0(*)	1.75	.000	-25.92	-14.07
		TIB-SGS	-30.0(*)	1.75	.000	-35.92	-24.07
	GRP-SGS	CL-WCS	20.0(*)	1.75	.000	14.07	25.92
		CL-SGS	5.0	1.75	.158	-.92	10.92
		GRP-WCS	25.0(*)	1.75	.000	19.07	30.92
		TIB-WCS	5.0	1.75	.158	-.92	10.92
		TIB-SGS	-5.0	1.75	.158	-10.92	.92
	TIB-WCS	CL-WCS	15.0(*)	1.75	.000	9.07	20.92
		CL-SGS	0.0	1.75	1.000	-5.92	5.92
		GRP-WCS	20.0(*)	1.75	.000	14.07	25.92
		GRP-SGS	-5.0	1.75	.158	-10.92	.92
		TIB-SGS	-10.0(*)	1.75	.000	-15.92	-4.07
	TIB-SGS	CL-WCS	25.0(*)	1.75	.000	19.07	30.92
		CL-SGS	10.0(*)	1.75	.000	4.07	15.92
		GRP-WCS	30.0(*)	1.75	.000	24.07	35.92
		GRP-SGS	5.0	1.75	.158	-.92	10.92
		TIB-WCS	10.0(*)	1.75	.000	4.07	15.92

* The mean difference is significant at the .05 level.

Table 3.5: Multiple Comparisons (gender=male)

<i>Post Hoc Tests: Scheffe</i>			<i>Dependent Variable: Academic Scores</i>				
Gender	(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Male	CL-WCS	CL-SGS	-15.0(*)	1.76	.000	-20.94	-9.05
		GRP-WCS	-15.0(*)	1.76	.000	-20.94	-9.05
		GRP-SGS	-20.0(*)	1.76	.000	-25.94	-14.05
		TIB-WCS	-20.0(*)	1.76	.000	-25.94	-14.05
		TIB-SGS	-30.0(*)	1.76	.000	-35.94	-24.05
	CL-SGS	CL-WCS	15.0(*)	1.76	.000	9.05	20.94
		GRP-WCS	0.0	1.76	1.000	-5.94	5.94
		GRP-SGS	-5.0	1.76	.161	-10.94	.94
		TIB-WCS	-5.0	1.76	.161	-10.94	.94
		TIB-SGS	-15.0(*)	1.76	.000	-20.94	-9.05
	GRP-WCS	CL-WCS	15.0(*)	1.76	.000	9.05	20.94
		CL-SGS	0.0	1.76	1.000	-5.94	5.94
		GRP-SGS	-5.0	1.76	.161	-10.94	.94
		TIB-WCS	-5.0	1.76	.161	-10.94	.94
		TIB-SGS	-15.0(*)	1.76	.000	-20.94	-9.05
	GRP-SGS	CL-WCS	20.0(*)	1.76	.000	14.05	25.94
		CL-SGS	5.0	1.76	.161	-.94	10.94
		GRP-WCS	5.0	1.76	.161	-.94	10.94
		TIB-WCS	0.0	1.76	1.000	-5.94	5.94
		TIB-SGS	-10.0(*)	1.76	.000	-15.94	-4.05
	TIB-WCS	CL-WCS	20.0(*)	1.76	.000	14.05	25.94
		CL-SGS	5.0	1.76	.161	-.94	10.94
		GRP-WCS	5.0	1.76	.161	-.94	10.94
		GRP-SGS	0.0	1.76	1.000	-5.94	5.94
		TIB-SGS	-10.0(*)	1.76	.000	-15.94	-4.05
	TIB-SGS	CL-WCS	30.0(*)	1.76	.000	24.05	35.94
		CL-SGS	15.0(*)	1.76	.000	9.05	20.94
		GRP-WCS	15.0(*)	1.76	.000	9.05	20.94
		GRP-SGS	10.0(*)	1.76	.000	4.05	15.94
		TIB-WCS	10.0(*)	1.76	.000	4.05	15.94

* The mean difference is significant at the .05 level.

5. Discussions

Finding of this study shows that most students could achieve better academic scores after the intervention though females performed better than their male counterparts. The finding corroborates with similar studies which were conducted in Africa, Asia and North America. Findings of Dania (2014) on the gender achievement gap in Social Studies in Nigeria, Eze et al., (2016) on technical colleges in Nigeria, Ann et'al., (2015) on pre-service school counselors and teachers in USA and Amunga et'al., (2010) on gender achievement gap in Science and Mathematics in Kenya assert that

gender academic achievement disparity is certain and concluded that interactive teaching methods have the potential to improve students' academic performance and retention in any subject irrespective of gender. Similarly, the results were verified by preceding related studies carried out in Ethiopia (Teshome, 2007; Wakgari & Teklu, 2012; Metasebia, 2013; Amogne, 2014). Furthermore, this finding was found compatible with case studies conducted in some Asian, Latin American, European and Australian countries. Girls outperformed boys in all subjects as a group in Malaysia, Philippines, Canada, Caribbean, United Kingdom and Thailand (Goolamally & Ahmad, 2011; Torres, 2011).

Semi-structured interview results also show that these learning strategies have unleashed the untapped learning potentials of the slow learners, especially females to feel competent, autonomous and involving. Student engagement in learning is also optimized when the social context fulfills learner's basic psychological needs which include the needs to be competent, autonomous and related to other people (Wentzel, 2009). The need for competence reflects an individual's need to feel that he/she has adequate capability to carry out his/her own learning. It is developed when teachers clearly communicate expectations, frequently provide feedbacks and adjust teaching strategies to student's learning style. Teachers should acquire facilitating behaviors to accomplish the need for competence (Froyd, 2007; James, 2015). The need for autonomy reflects an individual's need to experience windows of opportunities to connect/fit learning with her/his real live activities, interests and preferences. Teachers should acquire immediacy behaviors to accomplish the need for autonomy support instead of forcing students to be cooperative and quiet (Roth, et.al, 2007; Hein, et'al., 2012, Nzoka & Orodho, 2014). The need for relatedness indicates the desire to feel involved or have a sense of belongingness to others including peers and teachers and is fundamental for their learning. Teachers should acquire praising/involvement behavior to accomplish the need for relatedness. Informants were experiencing their teachers as facilitators, egalitarians and praises; all made them engage, feel happier and more enthusiastic in learning. Engaged learners would stay in school longer, learn more, feel better about themselves and continue their lifelong education (Skinner & Belmont, 1993). Moreover, teachers produce students who have high behavioral, emotional and cognitive engagement (Fredricks, 2014).

6. Conclusions

The findings of this study have identified the different learning performances which were observed among competition (WCS) and cooperation (SGS) based learning groups. The goal of learning is to facilitate learners to cultivate knowledge, skills and attitudes. Teachers are expected to enhance cooperative learning which ultimately unleashes students' learning potentials and prepares them to join fair competition. Gender academic performance parity is also a key element in ensuring equal labour market engagement of universal human rights and balancing social, economic and political benefits of the whole nations.

7. Recommendations

Based on the findings of the study, the following recommendations were forwarded.

- Students would learn lessons at equal level when teachers could engage them in learning equally. Thus, teachers are expected to maintain balance and to deepen their skills of gender responsive pedagogy, cooperative learning, teachers' immediacy behaviors and classroom seating and management to the highest quality to alleviate gender academic achievement disparity.
- CTEs should promote gender responsive pedagogies; engage teaching methodologies and participatory classroom arrangement as strategies to alleviate gender academic achievement alongside the endorsement of school-based clubs supporting gender equality; provide remedial courses, and incorporate counseling programs to support learning of females.
- The learner-centered methods have potential to support improved learning outcomes for all students, but particularly females and slow learners who are not excelling under the converging teaching-learning system. Teachers should devise active learning methods that enhance students' participation and learning performance.
- A student-centered learning environment (small group seating) is more efficient than a traditional teacher-centered environment (whole class setting) to produce better learning outcomes for all learners. Therefore, teachers should produce an enhancing ambiance to keep students engaged on-task and motivated throughout the learning process.

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