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Understanding The Relationship Between Gender And Experience In The Self-Efficacy Of Indian Teacher Educators

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Abstract
This quantitative, comparative study aimed to determine if there were significant differences in teachers' self-efficacy for teaching (in terms of efficacy for student engagement, instructional strategies, and classroom management) according to their gender and years of teaching experience in Haryana State, India. The study was conducted on 160 teacher educators. The Teachers' Sense of Efficacy Scale (TSES, Tschannen-Moran & Woolfolk Hoy, 2001) was used to measure teacher educators' self-efficacy levels, including the three subscales (efficacy for student engagement, instructional strategies, and classroom management). Data was collected using random stratified technique and then analyzed using descriptive statistics (means and standard deviations) and statistical hypothesis testing (ANOVA). Observations indicated no significant difference exists between the overall teachers' self-efficacy of teacher educators (in terms of efficacy for student engagement, instructional strategies, and classroom management) according to their gender and teaching experience. Present study results will help in the embellishment of the subject matter.

Keywords: Self efficacy; Teacher educators; Gender; Experience

Introduction

Education is that constructive process that drags a person from darkness to the pool of prosperity and happiness by learning. In pursuing this goal, a teacher reforms students by equipping them with global knowledge and thereby supporting their intellectual and moral development to face this contemporary world. An excellent educator revitalizes the learning desire, nourishes their passion, and helps students achieve their best. Educators teach and nurture students in all aspects, including personal, social, and emotional uplifting. At the same time, teacher educators are the educational professionals who centrally plan and regulate teachers' learning and student teachers. Teacher education can be a decisive factor in student outcomes by controlling the teacher's quality. So these teacher educators are the main connecting link in all kinds of educational reforms such as taking diversity into account, ensuring that students pass high-stakes tests, developing the documentation required by professional accrediting agencies, complying with stringent new regulations, building genuine partnerships with schools or universities, parents, and other stakeholders, and developing curricula (Cochran-Smith, 2003). Moreover, the growing demand for quality

teaching and teachers enhances the responsibility and work of teacher educators as a result, and scant attention has been directed to the preparation of teacher educators (Cochran-Smith, 2003). Teacher's efficacy has been considered a very effective variable in education over the past 25 years

Levels of self efficacy govern teacher effectiveness, that is, teachers' belief about their teaching capabilities (Tschannen-Moran, Woolfolk-Hoy and Hoy, 1998). Undoubtedly, teacher efficacy is a significant factor in improving education in every part of the world. Bandura et al. (1997) defined teacher efficacy as "the extent to which the teacher believes he or she can affect student performance." Self-Efficacy refers to beliefs about one's ability to learn or perform behaviors at designated levels (Bandura, 1997). When teachers are highly efficacious, their students are expected to have a high level of academic achievement, autonomy and motivation, and a firm belief in their efficacy (Lin et al., 2002; Tschamen-Moran and Hoy, 2001). Researchers have pointed out that teacher efficacy belief is a judgment of their capability to influence desired outcomes related to students' performance, behavior, and motivation in the classroom (Tschamen-Moran and Woolfolk, 2001). Likewise, Tschamen-Moran, Woolfolk Hoy, and Hoy, 1998 stated that teachers' beliefs in their capability to organize and execute courses of action required to accomplish a specific teaching task in a particular context successfully". There is evidence that teachers with a high sense of efficacy engage highly in planning and organization (Allinder, 1994). Their high self-efficacy scores are related to their level of professional commitment in elementary and middle school (Milner, Woolfolk Hoy, 2002). A significant number of studies have shown that teachers' self-efficacy plays an influential role in the academic achievements of students (Mojavezi & Tamiz, 2012), learning motivation (Mojavezi & Tamiz, 2012), and students' self-efficacy (Anderson et al.,1988). Previous studies also found that teachers' self-efficacy has been linked to teachers' contentment in the profession (Caprara et al., 2003), career commitment (Makim & Velez, 2015), and better-organized planning and preparation (Allinder, 1994), occupational outcomes like depression and anxiety (Schwarzer & Hallum, 2008), emotional burnout (Betoret, 2009; Skaalvik & Skaalvik, 2007), longevity in the profession (Chesnut, 2017; Chesnut & Burley, 2015), improved instructional practices (Klassen & Tze, 2014), and positive interactions with students in the classroom (Bloom & Peters, 2012; Siwatu & Starker, 2010). In contrast, teachers with low levels of self-efficacy encounter more significant challenges in teaching and are more prone to have work pressure and lower levels of satisfaction in their teaching careers (Klassen et al., 2009).

Many researchers have paid significant attention to measuring teachers' self-efficacy and identifying factors that have overwhelming effects (age, gender, educational background, teaching experience, teaching grade level, and school type). Predominantly, it significantly impacts teachers and students (Cheung, 2008; Htang, 2018; Shazadi et al., 2011).

However, in the literature, there are also many contrasting results regarding factors affecting teachers' self-efficacy, such as teachers' gender (Bilali, 2013; Butucha, 2013; Shazadi et al., 2011), educational background (Shazadi et al., 2011; Shaukat, Vishnumolakala & Bustami, 2019), instructional experience (Cheung, 2008) and teaching grade levels (Cheung, 2008; Htang, 2018). In the Haryana teacher education

context, there is a lack of published research studies on teachers' self-efficacy. Recent studies in education have emphasized areas of school administration and students' learning and academic achievement. Therefore, it can be said that the importance of teachers' self-efficacy remains unnoticed and overlooked in teacher education settings. Consequently, the researchers decided to conduct a quantitative and comparative study to examine if there were significant differences in teachers' self-efficacy for teaching in teacher educators according to their gender and years of teaching experience.

There is empirical support for the link from TSE to teacher-student relationships, where teachers with firmer self-efficacy beliefs are theorized to affect cognitive appraisals of situations and free emotional resources that allows attention to be focused on building supportive and caring relationships with their students (Spilt, Koomen, & Thijs, 2011; Summers et al., 2017; TschannenMoran & McMaster, 2009; Summers, Davis, & Woolfolk Hoy, 2017). Thus, firmer self-efficacy beliefs are likely to strengthen the quality of the relationship teachers have with students. The present study is designed to investigate the perception of self efficacy of general education teachers" based on gender differences in inclusive settings. It could also be the case that gender differences do exist. Still, measurement artifacts such as over-estimation of ability on the part of males are more likely to occur with self-report measures. More research is required to determine whether or not gender differences do exist in SE and can experience also matters for its level. So we planned to study the SE of male and female teacher educators in relation to their experience.

Material and Methods

Research design

Data was collected by a survey method that utilized an expostfacto research type, where questionnaires were used to collect data from the respondent.

Participants and Data Collection

A stratified randomization technique has been employed for the collection of data. In the first phase of the study, two districts, Kurukshetra and Yamunanagar from north Haryana, have selected. In the second phase, 80 male and 80 female teachers were selected, resulting in a sample of 160 teacher educators. These teachers were between the ages of 25 - 50 with 0–20 years of teaching experience. The EI scale was distributed among the participants simultaneously. Participants were given time (15–20 min) to answer these questionnaires and accompanying instructions.

Measurement Scales

The Teacher SE scale by Tschannen-Moran and Hoy (2001) was used to collect the data. The teacher efficacy scale test consists of 24 items. There are no right or wrong answers to the statements. This scale is meant to know the differences in individuals with respect to teachers' SE.

Scoring Procedure

The researcher administered the TSE instrument to the male and female teacher educators involved in this study. The purpose of the study was explained to them before distributing the instrument. The scoring was done on a five-point scale; strongly agree, agree, uncertain, disagree, and strongly disagree with the values 5, 4, 3, 2, and 1, respectively, for all the items.

Statistical Methods

The obtained data were analyzed using descriptive statistical techniques such as

mean and standard deviation and tested to test the distributions' normality. Pearson product-moment correlation was worked out to find the relationship between SE of teacher educators. One-way ANOVA was employed to test the significance of the difference between mean SE scores of teachers in relation to gender and experience.

Results

Teacher education can be a decisive factor in student outcomes by controlling the teacher's quality. Teacher educators are the main connecting link in all kinds of educational reforms such as taking diversity into account, ensuring that students pass high-stakes tests, developing the documentation required by professional accrediting agencies, complying with stringent new regulations, building genuine partnerships with schools or universities, parents, and other stakeholders, and developing curricula (Cochran-Smith, 2003). Moreover, the growing demand for quality teaching and teachers enhances the responsibility and work of teacher educators as a result, and scant attention has been directed to the preparation of teacher educators (Cochran-Smith, 2003). Thus, this is the time to think of the education of teacher educators as a continuous process where teacher educators should explore and reconsider assumptions, family values, and different cultures to construct an appropriate pedagogy.

There is evidence that teachers with a high sense of efficacy engage in a high level of planning and organization (Allinder, 1994). Their high self-efficacy scores are related to their level of professional commitment in elementary and middle school (Milner, Woolfolk Hoy, 2003). Teachers "s efficacy has been considered a very effective variable in education over the past twenty-five years. It strongly impacts student outcomes like students" achievement scores, their participation, and motivation to perform well before. Teacher self-efficacy is meant by the "teacher" s belief in their ability to organize and execute courses of action essential to successfully achieving the specific teaching tasks in particular situations". Table 1 presents the means, standard deviations, and One Way ANOVA analysis for the overall TSE of male and female teacher educators, in which males scored 108.37 with 16.92 S.D while females scored 108.5625 and S.D 17.5. But One Way ANOVA analysis revealed no significant difference between male vs. female Self Efficacy among teacher educators. The mean value also shows only a slight difference which is not substantial for a considerable difference. Thus, results showed no significant difference between male and female teachers' self-efficacy.

Variable	Group	N	Mean	S.D	ANOVA
Teacher's Self-Efficacy	Male	80	108.37	16.92	ns
	Female	80	108.5625	17.5	

Table 1: Overall Teacher's Self Efficacy of male and female teacher educators

In contrast, a study of pre-service teachers by Perry et al. (2004) found that females reported significantly higher SE than males. Interestingly, the sample populations in these studies are relatively typical of many of the studies undertaken in SE research, i.e., university students, more women in the sample than men, and the majority being in

their early twenties (Ciarrochi et al., 2000; Day & Carroll, 2004). Many researchers and authors recommend further studies exploring the relationship between gender and SE (Barchard & Hakstian, 2004; Perry et al., 2004; Schaie, 2001; Rooy et al., 2005). However, this finding was in line with Bilali (2013) studies, in which the researcher found no significant difference in teachers' self-efficacy according to their gender. The researchers assumed that the teaching profession is becoming gender-neutral in today's society.

Here in this study, self-efficacy level was checked in three dimensions: Efficacy in Student Engagement, Efficacy in Instructional strategies, and Efficacy in Classroom management with respect to male and female teachers (Table 2). Results revealed that among studied male and female samples, both scored almost similar in these dimensions of self efficacy and therefore we can speculate that there is no correlation between gender and self efficacy of teacher educators.

Variable	Group	N	Mean	S.D	ANOVA
Efficacy in Student Engagement	Male	80	37.189	1.91859 2598	ns
	Female	80	37.028	1.561	
Efficacy in Instructional strategies	Male	80	37.739	2.051	ns
	Female	80	36.823	0.977	
Efficacy in Classroom management	Male	80	36.867	2.284	ns
	Female	80	36.754	1.352	

Shazadi et al. (2011) found a significant difference in the gender based teacher's self-efficacy analysis, where researchers observed higher self-efficacy in females. At the same time, no significant effect of professional qualification difference was observed on the teachers' self-efficacy. In addition to educational qualification, other factors such as age, instructional experience, and the type of school do not directly affect a teacher's self-efficacy. On the other hand, Huang et al., 2013) demonstrated overall higher academic self-efficacy of males while domain-wise digging supported that females dominate in language arts self-efficacy compared to males who are rich in mathematics, computer, and the social sciences.

Previously, many researchers (Lapan et al. 1996; Matsui et al. 1990; Pajares and Miller 1994; Randhawa et al. 1993; Wang 2003) have also identified higher self-efficacy in mathematics in males compared to females. Recently, Wang et al., 2019 have also reported higher self efficacy in males.

In addition to overall self efficacy, we have not observed any significant gender based difference in efficacy for student engagement, instructional strategies, and classroom management. Cheung, 2008 and Shazadi et al., 2011 also marked a considerable gender based difference where female teachers were more efficacious than male teachers.

Teachers' self efficacy has significantly increased with experience in both males and females. Teacher educators with 16-20 years of teaching experience have higher teacher self-efficacy scores than teachers with less teaching experience (Figure 1). Although gender wise comparison revealed male

teacher educators with more than ten years of teaching experience had scored higher than female teacher educators.

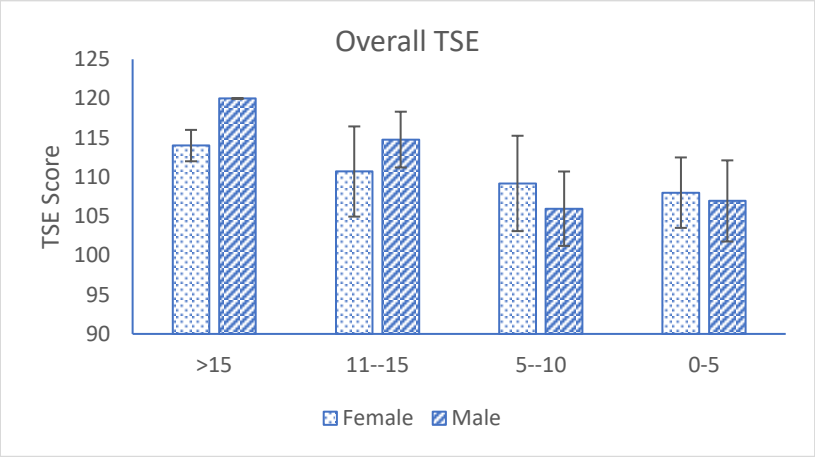

Figure 1: Overall Self efficacy of male vs. female teacher educators.

While females dominate in teacher self efficacy scores in the less than ten years of teaching experience category, hence, these results are in line with previous studies that suggested that teachers with more years of teaching experience had higher self-efficacy than teachers with less teaching experience (Cheung, 2008; Shazadi et al., 2011). Shazadi et al. (2011) revealed that teachers with a long teaching experience had higher self-efficacy. The study also found that there was a gender-wise significant difference in the self-efficacy of the teachers. There was no significant difference in the teachers' self-efficacy in terms of professional qualification when it comes to the qualification factor. These results indicated that no gender differences in EI exist, admitting that while males and females have different profiles of strengths and weaknesses in different areas of SE. in a longitudinal study, George et al. (2018) found that teachers' self-efficacy increased across all dimensions of self-efficacy as they progressed from their first to fifth year of teaching.

Similarly, in their large-scale cross-sectional study, Wolters and Daugherty (2007) found that teachers with more experience reported higher self-efficacy. Conversely, teachers with low self-efficacy early in their careers may be more inclined to leave the profession (Hong, 2012). on the other hand, Klassen and Chiu (2010) identified a curvilinear relationship between teaching experience and self-efficacy across 1,430 practicing teachers. Across all dimensions, teaching self-efficacy peaked at approximately 23 years of experience before declining. They speculated that this decline in the later years – which may explain the weak correlations between experience and self-efficacy – may be due to the loss of enthusiasm Huberman (1989) described toward the end of a teaching career.

Research on preservice teachers' experiences may explain how teachers develop a sense of efficacy once employed. In their longitudinal study, Woolfolk Hoy and Burke-Spero (2005) found that teachers' self-efficacy rose during their education program but declined after their first year of teaching. Individuals may draw on different sources of information in evaluating their instructional capabilities as they leave teacher education and begin

working in schools. Such a transition involves a change in context and more opportunities to perform instructional tasks, both of which can alter the relative potency of the sources (Bandura, 1997). This can lead to seemingly contradictory findings when making comparisons across groups. For example, Klassen and Chiu (2011) reported that practicing teachers were more likely than preservice teachers to report that teaching was stressful but had higher self-efficacy for classroom management.

However, in large-scale studies, bivariate correlations between years of teaching experience and self-efficacy tend to be nonsignificant or weak (Kim and Burić, 2020; Tschannen-Moran and Johnson, 2011). Similarly, DeMesquita & Drake (1994) and Pigge & Marso (1993) have also reported that teachers' self-efficacy was not affected by their teaching experience. Cheung (2008) measured the primary teachers' self-efficacy in Hong Kong and Shanghai. Interestingly, the authors also reported the significant positive effect of years of instructional experience on teachers' perceived self-efficacy. The qualitative results from the Shanghai teachers demonstrated that they received training from the universities and their daily teaching experience, among other factors, were important contributors to their self-efficacy. This study also revealed that male teacher educators' instructional strategies and classroom management abilities are increased with teaching experience, mainly after ten years. However, there was no significant difference in female teachers' self-efficacy (in terms of efficacy for student engagement, instructional strategies, and classroom management) according to years of teaching experience (Figure 2-4). Our results are also supported by a previous study by Tschannen-Moran and Woolfolk Hoy (2007), where researchers compared novice teachers (≤3 years of experience) to career teachers (>4 years of experience) using similar measures of support and satisfaction with instructional performance. Their results indicated career teachers have higher self-efficacy for instructional strategies and classroom management (Gale et al., 2021).

Therefore, counselors and psychologists can develop intervention programs to enhance teachers' SE in their various organizations. Various organizations that employ teachers have the responsibility for providing attractive and conducive working environments that will motivate the teachers and enhance their commitment to their career and organizations. Organizations need to select teachers with high SE because this may positively impact the extent to which they can succeed in retaining their valuable workforce. After going through the findings of the present study, teachers with high SE will understand students' abilities and creativity. But both male and female SST possesses the same ability for managing relations.

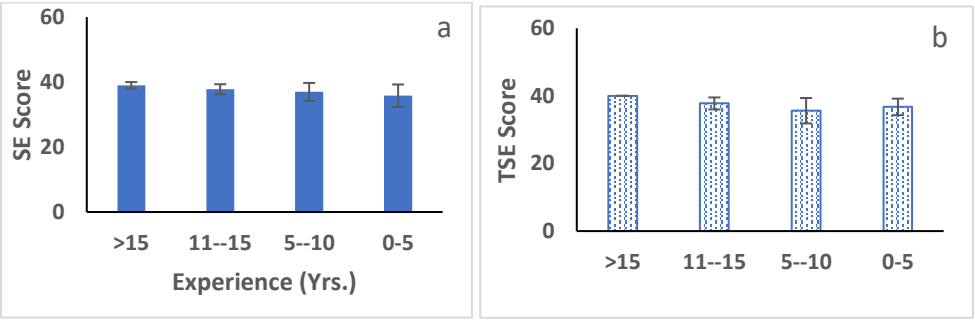

Figure 2: Efficacy in student engagement of female (a) and male (b) teacher educators.

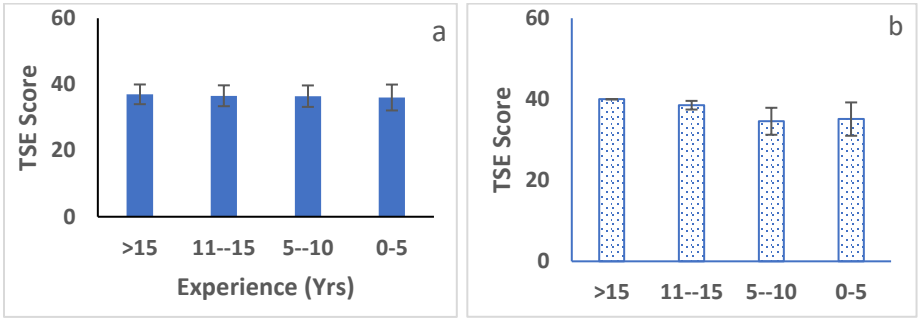

Figure 3: Efficacy in instructional strategies of female (a) and male (b) teacher educators.

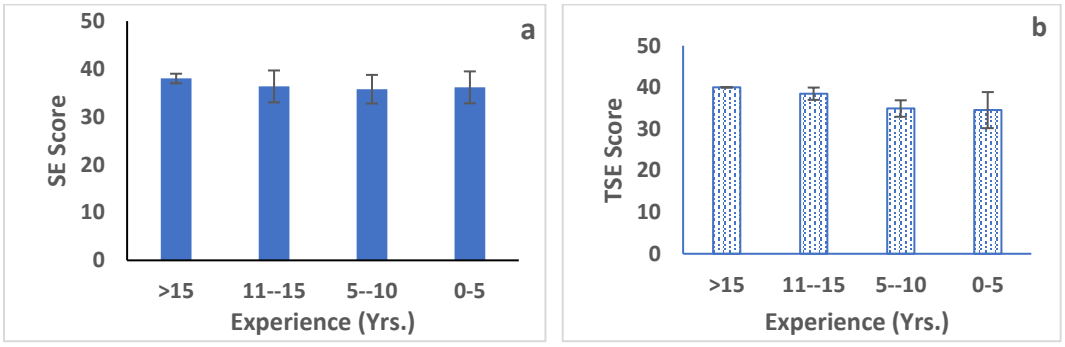

Figure 4: Efficacy in classroom management of female (a) and male (b) teacher educators.

Conclusion

The present study examined the association between teacher educators self-efficacy in relation to gender and experience. This study revealed that Teacher educators' self efficacy is not gender dependent. The results indicated that no gender differences in overall teacher educators self efficacy exist, admitting that experienced male teacher educators possess higher self efficacy than their female colleagues. In addition, male teacher educators with higher self efficacy have higher instructional strategies and classroom management abilities. Research that further explores the influence of particular experiences on teachers' self-efficacy at different career stages can inform what administrators can do to foster self-efficacy and how induction programs can best support new teachers. Future studies should also consider implementing an intervention program including exercise and education in efforts to reduce the prevalence of SPA and increase exercise self-efficacy among participants. These results are important to expand to include the influencing factors for self efficacy which is a less-studied topic in our fields.

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