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Impact of Science Teachers' Emotional Intelligence on Self-Efficacy at Secondary Level

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ABSTRACT

The present study explored the relationship between teachers' emotional intelligence and their self-efficacy at the secondary school level. A correlational research design was employed, and a multi-stage random sampling procedure was used to select participants. The final sample comprised 1,623 male and female secondary school teachers. Data were collected through two standardized, closed-ended questionnaires. Inferential statistical techniques, including Pearson's correlation coefficient and linear regression analysis, were utilized to examine the data. The findings indicated a significant positive relationship between emotional intelligence and self-efficacy among teachers. Moreover, emotional intelligence emerged as a strong and significant predictor of teachers' self-efficacy. In light of these findings, the study recommends fostering emotional intelligence competencies among teachers as a means to strengthen their sense of efficacy in performing professional responsibilities.

Keywords: Critical Thinking, Self-reliance, Reasoning, High School

INTRODUCTION

Emotional intelligence plays a pivotal role in enabling individuals to interact constructively with others and serves as a foundation for responsibility, effectiveness, and overall productivity. It is widely recognized as a key determinant of performance, particularly in contexts where collaboration is essential, such as educational institutions and organizational settings. Teacher's higher order skill intelligence significantly influence students' learning outcomes (Anderson, 2004), emotional intelligence becomes especially important in the teaching profession (Khan et al., 2025; Ullah & Akbar, 2021; Ullah & Akbar, 2020). It contributes to the development of student teacher positive and healthy relationships, fosters cooperation among colleagues, and supports enhanced academic performance (Khan et al., 2024; Mustafa et al., 2024; Ullah et al., 2023).

Self-efficacy is a complex and context-dependent construct, varying significantly across individuals according to the domains in which they develop confidence in their capabilities. As a result, there is no single, universally applicable measure of teacher self-efficacy. Bandura (2006) argues that self-efficacy comprises a differentiated set of self-perceptions tied to specific functional domains; therefore, combining these multidimensional elements into a single assessment may produce ambiguous findings and create uncertainty regarding what is truly being measured, as well as the extent to which situational or task-related demands are being accounted for. According to Bandura (1997), self-efficacy shapes how individuals approach tasks within a given domain by influencing the level of effort they invest, their willingness to persevere in the face of challenges, and the evaluative judgments they make about the task itself.

In recent years, scholarly interest in the interplay between emotional intelligence and self-efficacy within educational environments has grown substantially. Research from both Western and Asian contexts consistently demonstrate that teachers with higher emotional intelligence tend to display enhanced professional confidence, greater adaptability, and improved instructional performance. Despite these international findings, the relationship between these two constructs remains insufficiently examined within Pakistan. To address this gap, the present study investigates the association between emotional intelligence and self-efficacy among science teachers in the Pakistani context. By exploring this link, the study aims to advance existing knowledge on teacher professional growth and provide evidence-based insights that can guide policy formulation, strengthen teacher education programs, and promote more effective teaching and learning practices across Pakistan.

Objectives of the Study

The study's objectives were as follows:

1. To investigate correlation between science teachers' emotional intelligence and self- efficacy at secondary level.
2. To examine the impact of science teachers emotional intelligence on self- efficacy at secondary level.

Research Questions

Following were research questions of the study:

1. What is relationship between science teachers' emotional intelligence and self-efficacy at secondary level?
2. What is the impact of science teachers' emotional intelligence on self-efficacy at secondary level?

LITERATURE REVIEW

Teachers' Emotional Intelligence

Scholars have offered varied interpretations of emotional intelligence, reflecting its multidimensional and evolving nature. Salovey (2019) conceptualizes emotional intelligence as the capacity to accurately perceive, evaluate, and express emotions, as well as the ability to understand emotional meanings, access and generate emotions to facilitate thinking, and regulate emotions in ways that promote personal and intellectual growth. Barsade (2016) emphasizes the social dimension of emotional intelligence, noting that group and team contexts often require individuals to influence others' emotions and behaviors effectively. Mayer et al. (2018) distinguish emotional intelligence from general intelligence, explaining that the former draws upon social, perceptual, practical, and emotional forms of knowledge rather than traditional cognitive abilities. Boyatzis (2018) further defines emotional intelligence as the awareness, understanding, and purposeful use of one's emotional competencies to enable effective or superior performance, suggesting that similar terminology may be applied to social intelligence competencies. According to Goleman and Boyatzis (2017), individuals demonstrate strong emotional intelligence when they can adapt to the emotional states of others and respond with empathy and sensitivity.

Teachers' Self-efficacy

Self-efficacy is not a natural trait. Experience is the foundation on which self-efficacy grows (Stajkovic et al., 2018). People's self-efficacy is affected more and more the more experiences they have. According to Ozer and Bandura (1990), mastering skills is one of the greatest strategies to increase self-efficacy. They will improve their talents as they practice more. People with a serious level of self-viability show various qualities. Before whatever else, those with high identity viability make targets for themselves. Low self-efficacy levels make people offer to set things right by continually tracking down motivations behind why they will fail (Stajkovic et al., 2018).

The teacher's self-efficacy has an impact on their success. As indicated by McLean et al. (2018), educators who have more grounded self-viability convictions are bound to accept that their future endeavors will yield productive outcomes. Positive achievements benefit the understudies as well as the school, their collaborators, the calling, and the school. If teachers are confident in their abilities, they are more likely to succeed in their work. As well as immensely affecting an instructor's prosperity, educator self-viability likewise hugely affects an educator's disappointment. At the point when the teacher needs trust in the students' abilities or the learning objectives, the understudies will be less persuaded. An educator is

bound to miss the mark concerning their goals on the off chance that they need certainty or conviction in their capacity to prevail in the homeroom or in their work. The study hall execution of educators will be influenced by their healthy identity viability (Demirtas, 2018). Self-efficacy as a teacher is essential to success.

According to Wilson et al. (2018), instructors who have high levels of self-efficacy in this area feel they can make sure all students are actively engaged in their studies. Because involved students are more likely to learn the content and master it, student engagement enhances student accomplishment. In order to successfully execute a job, a person must believe in their own efficacy (Bandura, 1982; Bandura, 1993; Bandura, 2010). Maddux and Gosselin (2012) conducted study on the three components of self-efficacy magnitude, strength, and generality that stem from efficacy and affect self-efficacy. These dimensions were developed using Bandura's (1977, 1982) research, although Maddux and Gosselin (2012) used a more contemporary approach.

Teachers' Emotional Intelligence and Self-efficacy

The relationship between academic self-efficacy and emotional intelligence has been the focus of most research. Emotional intelligence and self-efficacy were found to be positively correlated among physical education teachers, despite the fact that neither was associated with each teacher's age or level of experience. Chan (2008) demonstrated a significant and extensive connection between teachers' interpersonal and intra-personal emotional intelligence and total self-efficacy. Rastegar and Memarpour (2009) found a positive and significant correlation between self-efficacy. Ordun and Akun (2017) explained at what the capacity to understand people on a profound level and self-completion mean for self-viability. They found that capacity to appreciate individuals at their core and self-completion affected undergrads' self-adequacy. Rathi and Rastogi (2009) found that ability to understand anyone on a deeper level in the work environment exceptionally anticipated self-viability, to such an extent that laborers with higher capacity to understand people at their core likewise had more significant levels of self-viability.

Emotional intelligence and self-efficacy in academic settings are significantly linked in a number of additional studies (Abdolvahabi et al., 2012; El-Sayed et al., 2014). The ability to appreciate people on a deeper level, which shows a singular's ability to perceive and direct his feelings, as well as sympathize answer properly to the feelings of others (Wu, 2013), is one element that might influence teachers' self-viability. According to Tschannen-Moran et al. (2011) educators evaluate their own level of self-efficacy as well as their own teaching competence. All teaching activities require the ability to work with emotion, but the requirements for teaching competency vary depending on the activity (Corcoran & Tormey, 2013; Sutton & Wheatley, 2003).

Additionally, these factors predicted self-motivation and dedication to one's job favorably. Multiple studies have shown a connection between instructional activities and self-efficacy. According to Wu et al. (2019), instructional performance had a role in mediating this association. Another recent study with 350 secondary school teachers examined teachers' feelings, support for innovation, and self-efficacy

with information and communication technology (ICT). The results showed that support and self-efficacy influenced positive attitudes toward ICT as well as corporate satisfaction.

RESEARCH METHODOLOGY

It was a quantitative, correlational, non-experimental investigation. The survey and correlation research designs are a part of non-intervention studies. Correlational research which is the focus of the current work belongs to the quantitative research paradigm. The respondents in this study were science teachers. Emotional intelligence and self-efficacy were the study's factors.

The study's general population consists of all science teachers from the government high schools. A survey-based methodology was used to collect the data. All respondents were included in the sample, which was chosen at random from the population for the study. The government schools were chosen randomly and 1623 science teachers were randomly chosen. To assess teachers' emotional quotient, the Bar-On (2002) Emotional Quotient Inventory Short version was used. To measure teachers' self-efficacy, the Long version of the Teachers' Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) with 24 items was used.

By distributing the two research instruments to science teachers, data were gathered. Before beginning the data collection, the researchers tried to follow the research ethics. The researchers introduced themselves to the respondents, described the purpose of the study, and gave them with assurances about the confidentiality and anonymity of the information they submitted. The subjects' specific written consent was also obtained. Finally, each participant received self-administered questionnaires containing all study-related information in order to gather their data. The study included a total of 1623 respondents. The relationship between the teachers' emotional intelligence and self-efficacy, examined using inferential statistics like Pearson correlation coefficient (Pearson r). Linear regression was also conducted to examine the effect of emotional intelligence on self-efficacy.

Results and Interpretations

Table 1

Correlation between Emotional Intelligence and Teachers' Self-efficacy

Variables	<i>N</i>	<i>r</i> -value	<i>Sig.</i>
Emotional Intelligence and Teachers' Self-efficacy	1623	.898**	.000

** $p < .001$ (2-tailed)

Table 1 showed a link between teachers' emotional intelligence and self-efficacy. Emotional intelligence was shown to have a high relationship with teacher self-efficacy ($r = .898^{**}$, $n = 1623$, $p.001$.)

Table 2

Effect of Emotional Intelligence on Teachers' Self-efficacy

Variables	<i>B</i>	<i>t</i> -value	<i>Sig.</i>	Model <i>R</i> Square
Emotional Intelligence and Teachers'	.898	31.82	.001	.807

Self-efficacy

Table 2 displayed the results of the linear regression, with an R^2 value (.807) that indicated how well the predictor explained the variation in the criteria. Emotional intelligence is therefore responsible for 80.7% of the variation in teachers' self-efficacy. With $p = .001$, the beta value (.898) is significant. The findings showed that emotional intelligence had a high, significant impact on teachers' self-efficacy, with a value of .898 at $p = .001$.

DISCUSSION

The profession of teaching necessitates the ability to deal with stressful work environments and uphold classroom etiquette. It is essential to keep in mind that teachers who are involved and emotionally intelligent are able to perform well in the classroom. The idea of emotionality, which is a part of characteristic capacity to understand individuals on a deeper level, is connected to such proficient inclination control. Enhancing teachers' self-efficacy and work performance requires a full grasp of emotional intelligence, a crucial psychological concept. However, Pakistan severely undervalues this factor, particularly in the teaching profession. Currently, instructors are simply required to enter the classroom with instructional skills and topic knowledge. Affective or emotional face of teaching is still being overlooked. Teachers' roles become more crucial as they help students' psychological development. As a result, teachers and students gain a better knowledge of one another. The world's educational systems are said to function best when teachers are involved. Self-efficacy and the effectiveness of teachers in their jobs are closely correlated with emotional intelligence. When a teacher has significant emotional reserves, his or her levels of self-efficacy are similarly high, which leads to improved work performance.

The present study explored the relationship between teachers' emotional intelligence and self-efficacy at the high school level. Consistent with prior research, the findings indicate a significant positive correlation between these two constructs, suggesting that higher levels of emotional intelligence are associated with greater self-efficacy among educators. This association highlights the critical role that emotional intelligence, along with its multiple dimensions, plays in educational contexts, particularly in enhancing teachers' confidence and effectiveness in their professional responsibilities. The results of this investigation align with previous empirical studies conducted by Abdolvahabi et al. (2012), Chan (2004), Fabio and Palazzeschi (2008), Kirk et al. (2009), Rastegar and Memarpour (2009), and Villanueva and Sanchez (2007), all of which reported a positive and meaningful relationship between teachers' emotional intelligence and their self-efficacy. These findings collectively highlight the importance of fostering emotional competencies in educational professionals as a means to improve instructional performance and overall educational outcomes.

CONCLUSION

The primary objective of the present study was to examine the relationship between emotional intelligence and self-efficacy among teachers. The results revealed a strong and statistically significant correlation between these variables, indicating that higher levels of emotional intelligence are closely associated with elevated self-efficacy. These findings further suggest that teachers' emotional intelligence exerts a meaningful influence on their perceived sense of efficacy, highlighting its pivotal role in shaping their professional confidence and effectiveness in the classroom. Overall, the study provides compelling evidence that the development of emotional competencies is integral to enhancing teachers' self-efficacy, thereby contributing to improved teaching performance and educational outcomes.

Recommendations

The emotional intelligence of teachers plays a crucial role in strengthening their self-efficacy within classroom environments. Consequently, enhancing teachers' emotional intelligence has the potential to significantly improve their professional performance, particularly at the high school level. Educational policymakers can play a pivotal role in fostering these competencies by integrating targeted strategies and training programs aimed at developing teachers' emotional skills. Furthermore, the systematic inclusion of emotional intelligence and its associated skills within teacher education curricula can provide pre-service and in-service teachers with structured opportunities to cultivate these abilities, ultimately contributing to more effective teaching, improved classroom management, and better student outcomes.

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