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RESEARCH PAPER

Unravelling the Psychological Underpinnings of Classroom Dynamics: A Study on Teacher-Student Interaction

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ABSTRACT

The study was intended to explore the psychological bases of Teacher-Student Interaction (TSI) in the classroom. Moreover, differences in five psychological bases, emotional, conduct, hyperactivity, inattention, and peer interaction across teachers' gender, qualification, and teaching experience, were also the study's purpose. A cross-sectional quantitative survey study was designed for this purpose. The participants of the study were secondary school teachers from the Gujranwala district. A self-developed Teacher-Student Interaction Scale (TSIS) was used to collect data from 285 respondents. Data were analysed using mean, standard deviation, one sample, independent sample t-test, and Analysis of Variance (ANOVA). It was found that conduct and emotional bases are teachers' most frequently used psychological bases to develop TSI, while peer interaction is comparatively less contributing base. It was also revealed that there were insignificant differences regarding psychological bases across gender and qualification of the teachers. Furthermore, there was a contradiction in using psychological bases like emotional, hyperactivity, and the total scale across teachers' teaching experience. Hence, we suggest that future researchers conduct more in-depth studies on STIs to find the factors that lead to similar bases across gender, qualification, and experience.

KEYWORDS Emotional, Inattention, Peer-Interaction, Psychological Bases, Teacher-Student Interaction

Introduction

A supportive and friendly school environment is essential for teachers and students to develop successful teaching and learning interaction. Because pupils spend much of their time in their classrooms, teachers are encouraged to try different techniques and methods to help students' learning and success (Reeve & Shin, 2020). Supporting this argument, Ahmad et al. (2017) emphasise that healthy interactions inside the classroom can result from good interaction between students and teachers, which will lead to successful learning. Good teachers can recognise variations in their pupils' behaviour and comprehend their requirements in the classroom. It is also evident that Teacher-Student Interaction (TSI) is built on daily interpersonal experiences in the school (Ramseyer & Tschacher, 2016). Literature also supports that TSI is a vital component of the classroom's psychosocial atmosphere and has been shown to positively impact students' learning (Lin et al., 2020).

Robles et al. (2019) argue that TSI is critical to students' academic life. The learner-centred TSI helps students to emphasis on the learning processes. Communication between teachers and students significantly impacts students' learning outcomes (Li & Yang, 2021). Teachers and students need to communicate effectively for better interaction during classroom activities for a better learning process. The TSI can be seen as the emotional support, attention, conduct, peer influence, and level of hyperactivity during class instruction (Yuliani, 2021).

According to Turner and Christensen (2020), both teachers and students recognise the significance of classrooms and the activities carried out within them in shaping the desired educational outcomes. These outcomes encompass a wide range of factors, including instructional effectiveness and the development of prosocial behaviour. In addition, Durgungoz and Durgungoz (2022) believe these relationships are essential for establishing a social presence in class. According to research, the frequency, quality, and form of classroom interactions influence social presence more precisely. At the same time, Pennings et al. (2018) observed that positive and regular interaction in class improves the level and quality of social interaction. Many studies have shown that TSIs play a critical role in the teaching and learning process. The TSIs were found to be linked to student cognitive student learning and motivation. Classroom interactions and interpersonal relations are terrains where learning's emotional, social, and cognitive aspects intersect, and the teachers play a crucial role in classroom interactions, as per literature (Ghafarpour & Moinzadeh, 2020).

It is also evident that students with more positive TSI s are more satisfied with learning and school (Cipriano et al., 2019). A lack of connection between teacher and student often hampers students' interpretation of learning content. As a result, the instructor must improve student engagement by engaging with them more often during the learning experience and asking what problems they are having (Yuliani, 2021). Teachers' interpersonal skills are critical for effective student learning and should be emphasised in teacher training and development (Arsenijevic et al., 2017). Successful TSI is related to a reduced understanding of social agency (Chen, 2016). In contrast, unsuccessful TSIs are associated with a reduced understanding of social agency (Heikonen et al., 2017).

Interactions between instructors and learners significantly contribute to students' academic achievements (Burić & Kim, 2020). Students are also motivated to learn and succeed when they believe their teachers care about them, and caring teachers are described as having democratic interaction styles, attempting to establish expectations for student activities depending on individual differences, modelling a caring viewpoint toward their work, and providing positive feedback (Mojavezi & Tamiz, 2012). Akhtar et al. (2019) suggested that if teachers try to develop relationships with their students, they will inspire them to learn, and they must be certified if they are fulfilling their students' educational and emotional needs. The current study was designed to explore the psychological bases of TSI in the classroom.

Conceptual Framework

The present study intended to explore the psychological bases contributing to the TSI in the classroom. The TSI was measured using the factors like emotional, conduct, inattention, hyperactivity, and peer interaction. The conceptual framework used in this paper is presented in Figure 1.

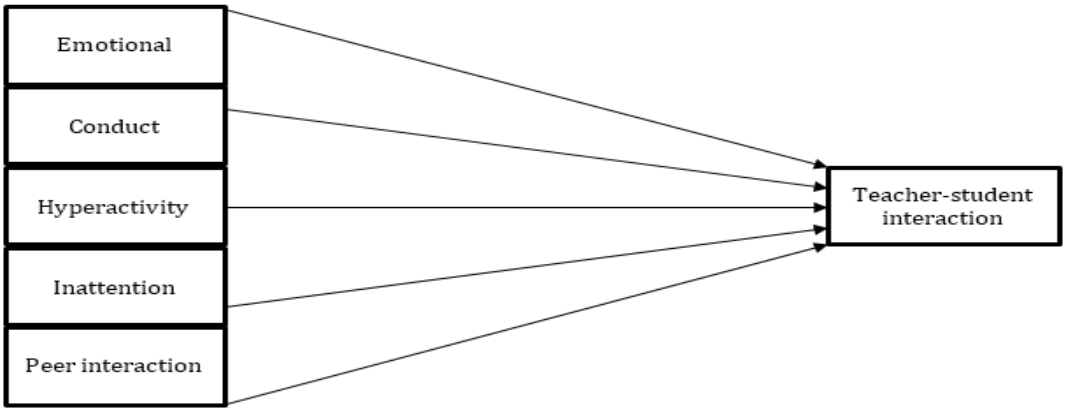

Figure 1: Conceptual framework

The authors designed the following objectives and research questions based on the conceptual framework.

Objectives of the Study

The following research objectives drove the present research paper.

1. To identify the teacher-student interaction's psychological bases (emotional, conduct, inattention, hyperactivity, and peer interaction) in the classroom.
2. To find out the difference between psychological bases reported by the teachers across gender, their qualifications, and teaching experience.

Research Questions

1. What are the most frequently practised psychological bases reported by the teachers that help develop teacher-student interaction within the classroom?
2. Is there a significant difference between the mean score of the teacher-student interaction's emotional, conduct, hyperactivity, inattention, and peer-interaction bases and the scale mean, i.e., 3?
3. Is there gender wise difference between the mean scores of psychological bases reported by the teachers, which help in developing teacher-student interaction within the classroom?
4. Is there a significant difference between the mean scores of psychological bases reported by the teachers across their qualifications, which help in developing teacher-student interaction within the classroom?
5. Is there a significant difference between the mean scores of psychological bases reported by the teachers across their teaching experience, which help in developing teacher-student interaction within the classroom?

Literature Review

Because of the many areas they are working to improve, schools that want to promote students' social-emotional learning and traditional objectives like grades, test scores, and graduation rates confront an even more severe difficulty. However, one feature of a child's education predicts a relatively large number of these results: Interactions between teachers and students (Brinkworth et al., 2018). Most teachers agree that the classrooms and activities there influence the student achievements we want, ranging from knowledge to social-emotional competency. However, we can encourage specific results to be determined by the excellence of such procedures (Turner & Christensen, 2020). Several studies have shown that TSIs critically influence learners' academic achievement. The TSIs were linked to students' academic achievement and motivation (Pennings et al., 2018).

Similarly, because of Ahmad et al. (2017), strong classroom interactions will result from good contact between teachers and students, leading to successful learning. In reality, good teachers can recognise modifications in their pupils' attitudes and comprehend their demands in the classroom. Another study supports this argument, which reveals that the intensity of a teacher's relationships with learners in the classroom significantly impacts their learning and achievement (Pianta, 2016).

The Teaching Interaction Framework conceptualises TSI in three ways: emotional support, classroom management, and instructional assistance. When it comes to emotional support, it is all about how the classroom activities promote and facilitate students' interpersonal competence (Poysä et al., 2019). The literature has also found that when there is emotional support in the TSIs, children are more ready to express their intellectual, social, and emotional needs, and the teacher is more responsive to those needs, as seen in the following: example. Classroom organisation concerns the relationships and activities associated with effective methods of organising and controlling school conditions (Hafen et al., 2015). Furthermore, it was discovered in another research that relationships had been

identified as a critical component of the success of not only traditional learning but also online and blended learning. Therefore, it is essential to consider how educators and pupils perceive interaction in online and blended secondary education courses (Blaine, 2019).

It is also evident that TSIs are determined by both partners' behaviours and responses, which are determined by each individual's perceptions and interpretations of the other's conduct. It's crucial to remember that pupils' and educators' actions and views are recorded in human memories (Brinkworth et al., 2018).

Li and Yang (2021) investigated the effect of TSI on students' self-efficacy. The findings show that interactions between teachers and students positively affect students' self-efficacy and preferences. Furthermore, students' preferences play a role in the supportive relationship between TSI and self-efficacy. Teachers should emphasise student-centred learning and motivate students to prefer classroom learning. In three nations, Singapore, Korea, and the United States, Hwang and Ham (2019) investigated the role of teacher contact in mediating the relationship between students' self-efficacy and math achievement. According to the findings, various teacher interactions affect the links between students' self-efficacy and mathematical achievement in each location. Furthermore, when negotiated interactions are detected, low-self-efficacy Korean pupils are more likely to have success when teachers interact with one another often. Singaporean children are meant to gain from instructors who collaborate with other teachers at various levels of self-efficacy. On the other hand, students in the United States obtain comparable results through teachers' regular contact with one another.

Kim et al. (2017) discussed that human behaviour comes from abstract senses and particular, practical terms. They questioned if people's conclusions regarding the physiological and psychological foundations of these two perspectives of comparable behaviours would change. They adjusted whether behaviours were conveyed abstractly or concretely in five studies. People believed that behaviours presented in concrete terms were less biologically driven and, in some ways, more psychological than those defined in abstract terms. The findings of their study produced downstream effects for the believed efficacy of problem treatments, and they held true for both mental disorders and ordinary behaviours.

Material and Methods

Research Design

A positivistic worldview guided the design of this study. Positivists believe in nomothetic approaches, and positivists' main purpose is to explore society's general structure. The research design of the study was cross-sectional for data collection. The nature of the study was quantitative. The existing phenomenon was studied to meet the purpose of the study. Data was collected from teachers of the secondary level at one point in time.

Participants

Participants of the study were all the teachers working in secondary schools in the Punjab province. The accessible population was secondary school teachers of Gujranwala district. There are four tehsils in the Gujranwala district; Wazirabad, Kamoki, Gujranwala, and Nowshera Virkan. There are 265 secondary schools and 5580 teachers working in the secondary schools of Gujranwala district (Punjab, n.d.). A simple random sampling technique was used to select 10% of teachers for data collection. The total selected sample was 558 teachers. But only 285 respondents submitted their responses. The demographic information of study participants is provided below in Table 1.

Table 1
Demographic Information of Respondents

Sr No	Variables	Level	Frequency
1	Gender	Male	130
		Female	155
2	Locality	Urban	146
		Rural	139
3	Teaching subject	Science	131
		Arts	154
4	Qualification	B.S/M.A	153
		M.Phil.	105
		Ph.D.	12
		Other	15
5	Experience	Less than 5 years	58
		6-10 years	119
		11-15 years	52
		More than 15 years	56

Instrument

Based on psychological bases; emotional, conduct, inattention, hyperactivity, and peer interaction, a five-point Likert scale with options ranging from 1 (strongly disagree) to 5 (strongly agree) was developed to collect the data from the study participants. The first draft of the Teacher-Student Interaction Scale (TSIS) consisted of 40 items. The TSIS was validated through expert opinion, and necessary changes were made in the light of expert opinion. Moreover, each item's Content Validity Ratio (CVR) was calculated using the Lawshe (1975) formula. Items with weak CVR were excluded from the instrument. Furthermore, the instrument's Content Validity Index (CVI) was also calculated and found to be .92, which was satisfactory according to the criteria described by Ishaque and Zaman (2022). Table 2 gives a detailed list of items against each psychological base in the first draft and after validation. The instrument's reliability was also ensured, and Cronbach's alpha was found to be .89.

Table 2
Table of Specification

Sr. No.	Psychological bases	No. of items in 1st draft	No. of items in the final draft
1	Emotional	8	6
2	Conduct	8	7
3	Hyperactivity	8	5
4	Inattention	8	6
5	Peer related	8	4
6	Total	40	28

Data Collection

After validation of TSIS, data were collected during June 2023 using online platforms. A Google Form link was generated for TSIS and shared with study participants through WhatsApp and Email. The authors used online mode for data collection because schools were closed due to summer vacations. An Excel sheet was generated from the responses received from the respondents and further analysed through SPSS (Statistical Package for Social Science). The response rate was 285 (51.07%). The reason behind less response rate was the closure of schools due to summer vacations.

Ethical Consideration

Research ethics were followed throughout the research journey. A WhatsApp group was formulated after selecting the sample. Participants of the study were briefed about the purpose of the study and got their consent to be part of the research investigation. The link to the Google Form was shared in the group. It was assured that the given information would be kept secret and purely used to complete the present research study and never disclosed to anyone at any time.

Results and Discussion

Collected data were analysed through SPSS. Data were coded, and then the screening of the data was made. Outliers were identified, and the normality of the data was ensured. The Skewness of the data was less than 1, and the Kurtosis was found as less than 2, which ensured the normality of the data. In descriptive statistics, mean, and standard deviation were used, while one sample, independent sample *t*-test, and Analysis of Variance (ANOVA) were used as inferential statistics to analyse the data. The results of the study were displayed through Tables and interpreted.

The first research question was about the most frequently practised psychological bases reported by the teachers, which helps develop TSI at the secondary level. Mean and standard deviation was used to address this research question. Results are presented in Table 3.

Table 3
Frequently Used Psychological Bases for Developing TSI

Sr. No.	Psychological Bases	M	SD	Rank
1	Emotional	4.16	.32	2nd
2	Conduct	4.21	.34	1st
3	Hyperactivity	4.13	.34	3rd
4	Inattention	4.03	.33	4th
5	Peer Interaction	3.89	.40	5th

In Table 3, we found that the psychological base related to their conduct (*M* = 4.21, *SD* = .34) got first rank in developing TSI, followed by the emotional base (*M* = 4.16, *SD* = .32) and hyperactivity base (*M* = 4.13, *SD* = .34). It was also found that peer interaction (*M* = 3.89, *SD* = .40) is the least base which contributes to TSI. The findings of research question 1 are also provided in Figure 2.

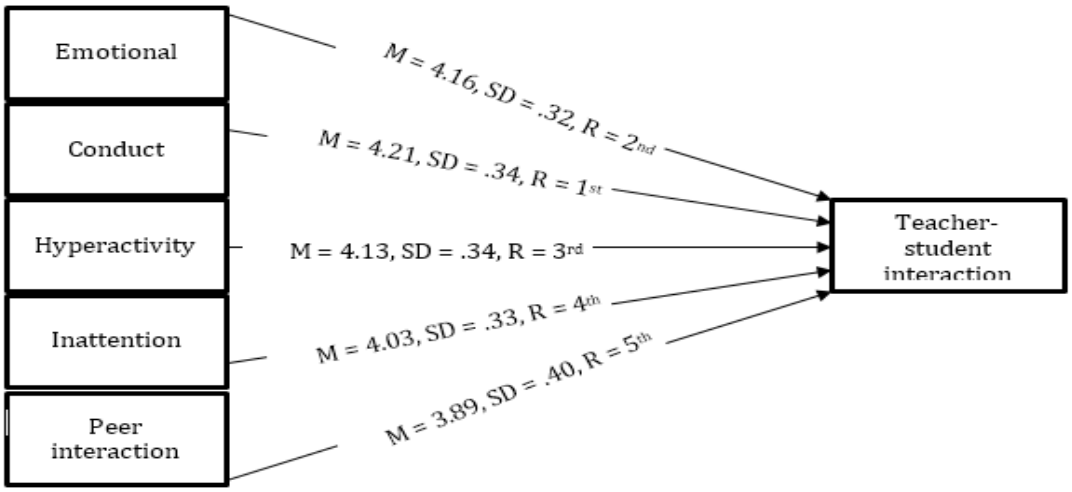

Figure 2 Contribution of Psychological Bases in TSI

The second research question was about the difference between each psychological base and the scale mean, i.e., 3. The authors applied one sample *t*-test to get results for the second research question. The results are presented in Table 4.

Table 4
Difference between Each Psychological Base and Scale Mean

Psychological Base	*M*	*SD*	*MD*	*df*	*t*-value	Sig. (2-tailed)
Emotional	4.16	.32	1.16	284	217.94	.00
Conduct	4.21	.34	1.21	284	208.31	.00
Hyperactivity	4.13	.34	1.13	284	203.10	.00
Inattention	4.03	.33	1.03	284	207.17	.00
Peer Interaction	3.89	.40	0.89	284	162.87	.00

In Table 3, we demonstrated the results of difference in each psychological base with scale mean, i.e., 3. It was revealed that there is a significant difference between each psychological base; emotional (M = 4.16, SD = .32; $t(284) = 217.94$, $p = .00 \leq .05$), conduct (M = 4.21, SD = .34; $t(284) = 208.31$, $p = .00 \leq .05$), hyperactivity (M = 4.13, SD = .34; $t(284) = 203.10$, $p = .00 \leq .05$), inattention (M = 4.03, SD = .33; $t(284) = 207.17$, $p = .00 \leq .05$), and peer interaction (M = 3.89, SD = .40; $t(284) = 162.87$, $p = .00 \leq .05$) and their scale mean, i.e. 3.

The third research question was designed to explore the gender-wise difference between the mean scores of psychological bases reported by the male and female teachers, helping to develop TSI in the class. An Independent sample *t*-test was applied to analyse the data, and the results are presented in Table 5.

Table 5
Gender-wise Differences in Psychological Bases

Psychological Base	Gender	*N*	*M*	*SD*	Mean Difference	*df*	*t*-value	Sig. (2-tailed)
Emotional	Male	130	4.16	.33	.00	283	-.094	.93
	Female	155	4.16	.31				
Conduct	Male	130	4.22	.34	.02	283	.572	.57
	Female	155	4.20	.35				
Hyperactivity	Male	130	4.17	.35	.07	283	1.738	.08
	Female	155	4.10	.33				
Inattention	Male	130	4.04	.36	.01	283	.230	.82
	Female	155	4.03	.30				
Peer Interaction	Male	130	3.91	.43	.04	283	.918	.36
	Female	155	3.87	.38				

In Table 5, the researchers provided the results of gender-wise differences regarding each psychological base contributing to TSI. It was revealed that the mean score of male teachers (N = 130, M = 4.16, SD = .33) on an emotional basis differ insignificantly from the mean score of female teachers (N = 155, M = 4.16, SD = .31) at $t(283) = -.94$, $p = .93 \geq .05$. Similarly results on the conduct of male teachers (N = 130, M = 4.22, SD = .34) show marginal difference than of female teachers (N = 155, M = 4.20, SD = .35) but this difference is statistically insignificant at $t(283) = .572$, $p = .57 \geq .05$. It was also revealed that the mean difference between male and female respondents' hyperactivity, inattention, and peer interaction was also statistically insignificant.

The fourth research question was designed to explore the difference among psychological bases of TSI reported by the teachers across their qualifications. ANOVA was used to analyse the data. The results are presented in Table 6.

Table 6
Psychological Bases across Teachers' Qualification

Psychological bases		Sum of squares	Mean square	*df*	*F*	Sig.
Emotional	Between groups	.51	.17	3	1.64	.18
	Within groups	28.98	.10	281		
	Total	29.49		284		
Conduct	Between groups	.30	.10	3	.84	.47
	Within groups	28.98	.10	281		
	Total	29.49		284		
Hyperactivity	Between groups	.51	.17	3	1.24	.30
	Within groups	28.98	.10	281		
	Total	29.49		284		
Inattention	Between groups	.51	.17	3	1.71	.16
	Within groups	28.98	.10	281		
	Total	29.49		284		
Peer Interaction	Between groups	.51	.17	3	1.12	1.12
	Within groups	28.98	.10	281		
	Total	29.49		284		
Total Scale	Between groups	.51	.17	3	.52	.67
	Within groups	28.98	.10	281		
	Total	29.49		284		

*p<.05

In Table 6, we showed the results of one-way ANOVA for four tiers of teachers' qualifications (B.S/M.A, M.Phil., Ph.D., & others) on each psychological bases. The value of $F(1.64)$ with $df(281)$ on emotional base demonstrated that there is an insignificant difference among teachers with different qualifications as $p = .18 \geq .05$. Similarly, the results on the rest of the four psychological bases; conduct ($F = .84$, $df = 281$, $p = .47 \geq .05$), hyperactivity ($F = 1.24$, $df = 281$, $p = .30 \geq .05$), inattention ($F = 1.71$, $df = 281$, $p = .16 \geq .05$), peer interaction ($F = 1.12$, $df = 281$, $p = 1.12 \geq .05$) have insignificant difference across teachers' qualification. Moreover, *F*-value (.52) with *df* (281) have insignificant differences as $p = .67 \geq .05$ across teachers' qualifications on the total scale. Teachers with different qualifications do not differ on the psychological bases of TSI.

The fifth research question was, "Is there a significant difference between the mean scores of psychological bases reported by the teachers across their teaching experience, which help in developing TSI within the classroom?" We deployed an ANOVA to analyse the collected data, and the results are presented in Table 7.

Table 7
Psychological Bases across Teachers' Experience

Psychological Bases		Sum of squares	Mean square	*df*	*F*	*p*
Emotional	Between groups	.86	.29	3	2.81	.04*
	Within groups	28.63	.10	281		
	Total	29.49		284		
Conduct	Between groups	.24	.08	3	.69	.56
	Within groups	32.84	.12	281		
	Total	33.08		284		
Hyperactivity	Between groups	1.73	.58	3	5.12	.00*
	Within groups	31.70	.11	281		
	Total	33.43		284		
Inattention	Between groups	.74	.25	3	2.33	.07
	Within groups	29.90	.11	281		

	Total	30.64		284		
Peer Interaction	Between groups	.79	.26	3		
	Within groups	45.36	.16	281	1.62	.18
	Total	46.15		284		
Total Scale	Between groups	.79	.26	3		
	Within groups	20.40	.07	281	3.64	.01*
	Total	21.20		284		

*p<.05

Data were collected on four teachers' teaching experience categories: less than 5 years, 5 to 10 years, 11 to 15 years, and above 15 years. In Table 7, we presented the results of one-way ANOVA for four tiers of teachers' experience on each psychological base. The value of $F(2.81)$ with df (281) on emotional base demonstrated a significant difference among teachers with different teaching experiences as $p = .04 \leq .05$. Similarly, results on hyperactivity ($F = 5.12$, $df = 281$, $p = .00 \leq .05$), and total scale revealed that teachers differ significantly ($F = 3.64$, $df = 281$, $p = .01 \leq .05$) across their teaching experience. Contrarily to these findings, an insignificant difference was found in conduct ($F = .69$, $df = 281$, $p = .56 \geq .05$), inattention ($F = 2.33$, $df = 281$, $p = .07 \geq .05$), and peer interaction ($F = 1.62$, $df = 281$, $p = .18 \geq .05$) across teachers' teaching experience. Teachers with different teaching experiences differ from each other on psychological bases like emotional, hyperactivity, and the total scale of TSI. Moreover, the Post-hoc Tukey test was applied to find differences among teachers' teaching experiences with others on the psychological bases of TSI, and the results are provided in Table 8.

Table 8
Multiple Comparisons between Categories of Teachers' Teaching Experience across Total Sale of Psychological Bases of TSI.

Variable	Teachers' Teaching Experience		*MD*	Lower Bound	Upper Bound
Psychological Bases of TSI	Less than 5 years	6 to 10 years	-1.13*	-.25	-.02
		11 to 15 years	-.06*	-.19	.08
		More than 15 years	-.05*	-.19	.08
	6 to 10 years	11 to 15 years	.08	-.04	.20
		More than 15 years	.08	-.03	.19
	11 to 15 years	More than 15 years	.00*	-.13	.13

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

In Table 8, we demonstrated the post-hoc Tukey test's result to determine the difference in psychological bases for TSI across four categories of their teaching experience. Results show that the mean difference (-1.13) between teachers' experience of less than five years significantly differed from the teachers with 6 to 10 years, 11 to 15 years (MD = -.06), and more than 15 years (MD = -.19) of teaching experience. Moreover, an insignificant mean difference (.08) was found between teaching experience 6 to 10 years and more than 15 years (MD = .08). Furthermore, a significant mean difference (.00) was calculated between teaching experience 11 to 15 years and more than 15 years across the total scale.

Discussion

This study was intended to find out the most frequently used psychological bases that lead to build TSI. Moreover, gender-wise, qualification-wise, and experience-wise difference was also the purpose of the study. Results of the study revealed that teachers' conduct, emotional attachment, and hyperactivity are the psychological bases used by the teachers that help build TSI in the class. The study's results align with the study conducted by (Poysä et al., 2019). On the other hand, peer interaction and inattention are the bases

that are less focused by the teachers. Moreover, teachers tend towards the highest mean score, significantly differing from the scale mean score on each psychological base. Furthermore, an insignificant difference was observed between male and female teachers across the psychological bases of TSI. The similarity of findings may be due to the psychological attachment of male and female teachers toward the students. Similar results were found in teachers' qualifications (B.S/M.A, M.Phil., Ph.D., & others). This study showed that teachers' qualifications do not play a role in providing psychological bases for TSI in the classroom. When the analysis was made on teachers' teaching experience across four levels, it was found that teachers differed significantly from each level of their experience across emotional, hyperactivity base, and the total scale. Teachers at the beginning of their career significantly differ from teachers having teaching experience above 5 years in providing psychological bases for TSI. This significant difference may be due to the energetic start of their career and also the positivity of their attitude.

Conclusion

On the bases of the findings of the study, it was concluded that teachers' conduct provides the critical psychological base followed by emotional, hyperactivity, and inattention in developing TSI in the classroom. Moreover, the teachers reported peer interaction is a comparatively less practised psychological base. It was also concluded that the mean score of all psychological bases tends towards the maximum, showing that teachers focus on psychological bases in the classroom. The study's findings showed that there was gender-wise and qualification-wise insignificant difference. So, it was concluded that males and females with different qualifications have similar practices regarding all psychological bases studied in the study. Furthermore, teachers significantly differ in providing psychological bases for TSI from the beginning of their careers and afterward. It was concluded that employees are determined and enthusiastic at the start of their careers, which tends to decline with time due to organisational behaviour. The same case might be with the teachers.

Recommendations

The present study had several limitations. First, the response rate was 51 % only. It may be may happen that teachers were enjoying their vocations by avoiding school-related tasks. The second reason for the lesser response rate may be that data were collected using an online platform (Google Forms), and there might be a possibility that people with limited knowledge of the internet might not be able to respond. The third limitation of the data collection was that we only took data from teachers to measure TSI and neglected to add students' voices. The present study also had several implications. We found that emotions and conduct-related bases contribute more to TSI. Hence, our teachers can use these underpinnings to promote a more conducive learning environment. It was also found that peer-related and inattention are the least contributing factors to TSI. Teachers can promote strategies to enhance the scope and contribution of these factors to enhance TSI. We studied only five psychological bases; emotional, conduct, inattention, hyperactivity, and peer interaction, were studied in the study. The rest of the psychological bases are suggested to be studied in future research. Moreover, the qualitative study may be designed to identify the most frequently used psychological bases which help develop TSI within the classroom. Based on the study findings, future researchers were suggested to conduct more in-depth studies on STIs to find the factors that lead to similar bases across gender, qualification, and experience with qualitative and quantitative data collection tools.

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