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Pakistani pre-service teachers' initial motivation in teaching choice

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ABSTRACT

The Factors Influencing Teaching Choice (FIT-Choice) scale measures pre-service teachers' understanding of initial motivations for choosing teaching as a career. A sample of 95 primary and 247 secondary pre-service teachers from Pakistan reported their reasons for choosing teaching as a career. This study used principal component and confirmatory factor analyses to test the validity and reliability of the FIT-Choice scale from a cross-cultural viewpoint set within a Muslim, Asian context. The results showed different gender preferences toward job security. Findings showed the different constructs that may be influenced by Pakistani culture and the educational context.

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Introduction

The shortage of qualified and trained teachers remains a long-lasting struggle in K–12 education globally (Mason-Williams et al. 2020). Researchers in some countries have addressed the teacher shortage (Organisation for Economic Co-operation & Development 2011; Richardson and Watt 2006). Watt et al. (2012) investigated the recruitment of high-quality teachers to enhance students' academic success, a state's growth, and citizens' well-being. Considering aspects that influence the choice of teaching as a career, therefore, provides a significant empirical foundation for teachers, emerging teacher education plans and programs, and improving the inclusive quality of teaching (Flores and Niklasson 2014; Heinz 2015).

Pakistan is an independent country. Since its establishment in 1947, the quality of teacher education has always been a policy topic. Teacher education in Pakistan has long been a challenge (Akram and Zepeda 2015; Butt 2008; Dilshad 2010; Shaukat and Chowdhury 2020). Researchers have noted that the Pakistani government needs to make substantial efforts to prepare pre-service teachers (PSTs), arguing that teacher training programs lack compatibility with school contexts, including but not limited to school curricula, adequate resources, and universal admission standards into teacher education programs (Ali 2011).

In Pakistan, the quality of teacher education still needs improvement through the introduction of advanced approaches and practices to be implemented by motivated teachers. A broader understanding about PSTs' initial motivation and perceptions about teaching career choice contributes to a significant knowledge base for developing teacher education guidelines and programs planned to advance the quality of teachers and teacher training (Shaukat and Chowdhury 2020). Recognizing PSTs' motivations, specifically, determines why students would want to become a teacher educator. PSTs who have dedicated themselves to a coaching program are in a unique situation to articulate what drew them to the profession, lacking any real experience as an employed teacher (Fray and Gore 2018). Measuring teacher motivation at different points throughout their teaching career provides insights to prepare PSTs with the driving force behind their preliminary career choice and to precisely appraise aspects of teacher recruitment (Kwok, Rios, and Kwok 2022). This study deliberates on early PSTs' motivations to become a teacher to study the reasons behind the initial motivation for why PSTs want to become a teacher. PSTs are inspired to serve through altruism, driven by their internal motivation, and motivated from their socialization influences. In this study, we aim to explore the validity of the FIT-Choice scale in terms of the reproducibility of its factors in Asian contexts such as Pakistan. Furthermore, we are determining the differences between male and female PSTs enrolled in primary and secondary teacher education programs in the responses to any FIT-Choice factors.

Using the scale of 'Factors Influencing Teaching Choice' (FIT-Choice) (Watt and Richardson 2007), this study investigates the initial motivation factors behind PSTs' choice to become a teacher. This study also explores the possible influences of Pakistani unique cultural ideology and its educational context and policy to construct the characteristics of PSTs through the FIT Choice scale for initial motivations. These conclusions might enlighten teacher recruitment policies in Pakistan.

Theoretical framework and literature review

FIT-Choice: international comparisons

In teacher education research, the Factors Influencing Teaching (FIT)-Choice survey (Watt and Richardson 2007) has been used widely in the conceptualization of teacher motivation. Several studies have employed the FIT-Choice scale to specify transformations in teacher motivations by gender, grade level (Dundar 2014), career stage (Ponnock, Torsney, and Lombardi 2018), and country (Chong and Low 2009; Dundar 2014; Lin et al. 2012; Watt and Richardson 2007; Watt et al. 2012). Built on the extensive literature review, this study examines the Pakistani PSTs' initial motivation for choosing teaching as a career.

We reviewed several studies that investigated the differences between gender and primary and secondary programs to guide our research design. Gender is a significant variable in terms of examining the motivation factor for choosing teaching as a career between male and female teachers. In the Turkish context, Ozturk Akar (2012) found that teaching was a suitable job for women as compared to male counterparts on the social dissuasion subscale of the FIT-Choice scale. In other countries, such as the Netherlands, Australia, and China, there were more female PSTs (Bruinsma and Jansen 2010; Feng 2014;

Richardson and Watt 2006; Sinclair 2008). In these countries, teaching was recognized as the least desirable career choice as compared to other professions such as medicine, engineering, and law.

However, when exploring the differences between primary and secondary school teachers, PSTs in the primary school setting scored significantly higher regarding working with school children and adolescents (Watt and Richardson 2007). Jansen and van der Meer (2012) noted that PSTs who wanted to teach in secondary programs were motivated by their passion for teaching their content areas, but PSTs in the primary program were more motivated to work with children. Nesje, Brandmo, and Berger (2018) also reported that PSTs in Norway had different motivations, beliefs, and prospects of the teaching profession. A study also showed that primary school PSTs reveal more optimism about the teaching career owing to their beginning years of training, while secondary school PSTs reveal more reality checks through their experiences in schools after completing their university degree (Fokkens-Bruinsma and Canrinus 2014).

Gender and teaching career

Teacher job satisfaction and job security is a predictor of teacher retention, a determining factor of teacher devotion, and commitment toward professional affairs (Shann 1998). In Pakistan, most parents received secondary education, and 'middle-class men have moved into certain professional occupations such as law and medicine, whilst undergraduates from poorer backgrounds continue to pursue careers in traditionally female professions such as teaching' (Ferrie, Riddell, and Stafford 2006, 43). In this respect, social security is a very substantial feature in the choice to enter the teaching profession. Research illustrates more female teachers than male teachers choose to enter the teaching profession for different reasons: demographic, cultural, economic, and political dynamics (Tasner, Mihelic, and Ceplak 2017), and social context as well. It remains unknown what factors specifically influence female PSTs' motivations for choosing to teach. Salary and job security were also regarded as important for female teacher educators. In Schulze and Steyn's (2003) study, male and female educators were found to be generally motivated by similar factors (job security, salary, school environment); hence, female educators value the specific privileges offered by the school administration that permit them to manage the demands of their twofold roles as working women and mothers or homemakers.

PSTs' motivation

Teacher motivation is a core determinant of students' performance (Nakk and Timostsuk 2021; Walsh and Taylor 2007). Motivation for becoming a teacher has focused on motivational drives that associate with PSTs' values and interest in the teaching profession (Fokkens-Bruinsma and Canrinus 2012). In the scenario of PSTs, internal motivation is considered as a desire to work with children as part of the project of practicum, and they tend to guide and scaffold children to fulfil their sense of achievement (Lortie 1975; Stemberger 2020). PSTs are reinforced to teach by external motivations (Lai et al. 2005). For instance, PSTs pursue teaching because of financial needs (Darling-Hammond and Cobb 1996). Altruistic reasons are related to the view that teaching is a significant profession that pays toward the advancement of society (Anderman and Young 1994).

Richardson and Watt (2006) created a framework for studying the motivation for choosing to teach. The framework consists of 12 constructs which include PSTs' perceptions about teaching capabilities, intrinsic career value, fallback career, job security, time for family, job transferability, shaping the future of children, enhancing social equity, making social contributions, working with children, prior teaching and learning experiences, and social influences. The FIT-Choice scale has been verified for its usefulness and recognition of relative differences generally in European and other Western backgrounds such as Australia, the USA, Germany, and Norway (Watt et al. 2012); however, testing of the scale is lacking in Asian contexts, particularly in Pakistan. Using the same theoretical framework and instruments, this current study expands the investigation of PSTs' motivations to a South Asian context, namely Pakistan.

Educational context and policy in Pakistan

Pakistan is an emerging Islamic, pluralistic, and multi-ethnic state that has an inclusive variety of cultural features and socio-political historical contexts. These contextual influences impact on the traditions, values, and norms as well as the education system. For example, Pakistan has a 57% literacy rate, and it was ranked 145 out of 187 countries on the Human Development Index (United Nations Development Programme 2017). With globalization, education has become an inseparable component of social and economic development, and the teaching profession is one of the largest in the country (Halai and Retallick 2007).

However, the teaching profession in Pakistan does not provide well-matched incentives, salaries, and career paths as compared to the equally qualified people of other professions within the country, such as engineering, medicine, and law. Studies on the profile characteristics of candidates in Pakistan have restricted scope beyond socio-cultural, economic, academic, and family background-associated aspects that are related to career ambitions in terms of their recruitment and retention in the teaching profession. The precise cultural structures, practices, and beliefs (e.g. application of the FIT-Choice scale with culture-specific dimensions) can deviate from earlier applications of the instrument in Western culture and can also maximize the usefulness of the instrument by discovering the degree of appropriateness with the local cultural setting of Pakistan.

In comparison to Western countries, in Pakistan, teaching is perceived as a low-status profession and often as a female profession with its low income and slow career path for advancement. Women are rarely directly accountable for supporting their families economically, so they tend to place less value on monetary incentives owing to their lack of motivation to gain high social status. This condition is itself a source of demotivation, especially for male candidates to become teachers. Notwithstanding the underrepresentation of men at some education levels, there is also a hierarchical disparity. Men govern senior executive positions at all levels of academia irrespective of levels of women's representation (Bolton and Muzio 2008; Gaskell and Mullen 2006). Generally, men are more expected to occupy the top managerial positions, and they have the privilege of leading and managing the departments and enjoy career progression quicker than women (Coleman 2002). Being family-oriented owing to the collectivist society to manage all the family members' needs, men often need to consider income-oriented professions that pay well and offer overtime work incentives, which the teaching

profession does not offer. Considering the socio-cultural context of Pakistan, the current study examines preservice teachers' initial motivation in terms of choosing teaching as a career.

Rationale for our study

A history of social movement, particularly throughout periods of anarchic outbreaks of intolerance, has called for education reform in Pakistan. As the society remains strongly patriarchal, despite isolated political advances for women of the elite classes, there remain questions as to what extent research in the West contributes to the research and understanding of issues/concepts in Pakistan. One question is, how should researchers consider the validity of research instruments developed in the West when conducting research in Pakistan? Shaukat (2011) addressed the issue by setting up specific Pakistani scales for self-efficacy by following classical research approaches. The evidence suggests that failing to repeat a primary factor analysis with a culturally different population can lead to missing significant outcomes (Pell and Hargreaves 2011).

We argue that PSTs' choice to become teachers is influenced by recent reforms in the teaching profession, including pay scales and social welfare policy, and thus we validate the instrument to determine the applicability of the FIT-Choice scale in relation to influential factors that motivate PSTs to choose teaching as a career. We also analyze the breakout of the variables to explore the differences between gender and teacher education programs to determine the applicability of the FIT-Choice scale on the sample of Pakistani PSTs.

This study was conducted on a sample of PSTs enrolled in primary and secondary teacher education programs to determine their initial motivational factors in choosing teaching as a career. The purpose of comparing these programs was to identify the nature of teacher education programs that prepare PSTs with required teaching skills, pedagogies, and classroom management strategies. Generally, primary and secondary teacher education programs provide the chance for PSTs to go through the set of professional knowledge, skills, and practices required to become proficient teachers. By considering the program intent, the present study was carried out between primary and secondary programs to explore PSTs' preparation before they begin teaching. In this study, we investigate the following research questions: 1) To what degree is the FIT-Choice scale valid in terms of the reproducibility of its factors for an Asian context such as Pakistan? 2) What are the differences between gender and teacher education programs in response to any FIT-Choice factors?

Methods

Subjects

The subjects included random samples of 342 (280 females, 62 males) pre-service primary ($n = 95$) and secondary ($n = 247$) teachers enrolled in teacher education programs of three large urban, comprehensive universities in Lahore, Pakistan. The respective institutes are responsible for inductive training for newly inducted teachers and offer courses for in-service teachers. The participants included only PSTs recruited through their program coordinator's invitations during their fall semester

of 2020 (i.e. during pandemic conditions). The participants were in two age categories: 23.7% ($n = 81$) were under 20 and 76.3% ($n = 261$) were over 30. Thus, the general subject profile was female secondary teachers between the ages of 20 and 30. The participation rate is 80% of the total population in the studied programs. PSTs were recruited from two teacher education programs, i.e., primary and secondary, in order to make comparative analyses of their program of studies, scope, and associated initial motivation to pursue teaching as a career.. The survey was completed within three months at the end of participants' second semester of their two-year degree programs (primary and secondary) with the key intention of recognizing PSTs' preferred program, gender, and institution.

Instrument

The FIT-Choice scale with an English version (Watt and Richardson 2007) was employed to collect data from samples concerning PSTs' motivation for teaching. Motivations for teaching (12 factors) included 38 items with possible rated responses from 1 (not at all important) to 7 (extremely important), Cronbach's alphas ranged from .67 to .89 for the Australian sample. In this study, the reliability of all subscales for the Pakistani pre-service teacher sample, presented in Table 1, reveals Cronbach's alphas ranging from .58 to .87, indicating results comparable with those found in the Australian sample. Most of Cronbach's α coefficients were satisfactory (Watt et al. 2012), excluding Fallback career ($\alpha = .59$) and Job transferability ($\alpha = .58$) for the Pakistani sample. Thus, although we specifically investigate teaching motivation among Pakistani pre-service teachers, the extending of the FIT-Choice scale to other teacher groups illustrates the feasibility of using the instrument in other countries.

Data collection and data analysis

This study was conducted adhering to the ethical guidelines approved by the Ethical Committee for conducting research with human subjects in teacher education samples. The first author collected the data by coordinating with teacher education programs in three urban universities in Lahore city and then formally invited the PSTs who were enrolled in primary and secondary undergraduate programs as freshmen to complete the FIT-Choice survey during their class time in the university. PSTs took 30 minutes to complete the survey. This occurred during pandemic conditions, which may have influenced the sample during data collection. Data were collected once from the participants during their free time in the schedule, to avoid irrelevant factors that distracted the attention of the subjects while completing the survey.

A principal components analysis (PCA) using SPSS 26 was used in assessing Fit-Choice survey items. The PCA included factorability for a 12-component solution with KMO value and p value. We ran the orthogonal rotation for a 12-factor solution and an oblique rotation for a freely estimated factor solution. Next, each factor was reproduced with a confirmatory factor analysis (CFA) using lavaan (Rosseel 2012) and assessed for fit with the weighted least square mean and variance adjusted estimator (WLSMV). The WLSMV estimator was used to include non-normal data into the analysis.

Table 1. FIT-Choice factor loadings, reliability, and central tendency ($N = 342$).

FIT-Choice item number and question	β	α	Mean (SD)
<i>Teaching as a contributor to society</i>		.64	5.28 (1.12)*
27. Teaching allows me to provide a service to society.	.61		5.30 (1.41)
28. Teachers make a worthwhile social contribution.	.76		5.42 (1.45)
29. Teaching enables me to give back to society.	.49		5.12 (1.53)
<i>Social influences</i>		.63	5.32 (1.21)*
36. My friend thinks I should become a teacher.	.66		5.29 (1.61)
37. My family thinks I should become a teacher.	.78		5.17 (1.67)
38. People I have worked with think I should become a teacher.	.40		5.51 (1.52)
<i>Intrinsic interest</i>		.87	5.16 (1.50)*
4. I am interested in teaching.	.78		5.25 (1.62)
5. I have always wanted to be a teacher.	.91		5.01 (1.76)
6. I like teaching.	.82		5.23 (1.66)
<i>Ability</i>		.79	5.39 (1.17)*
1. I have the qualities of a good teacher.	.86		5.41 (1.40)
2. I have good teaching skills.	.78		5.46 (1.34)
3. Teaching is a career suited to my abilities.	.61		5.30 (1.47)
<i>Working with children</i>		.61	5.14 (1.14)*
30. I want a job that involves working with children/adolescents.	.63		5.02 (1.53)
31. I want to work in a child/adolescent-centered environment.	.88		5.04 (1.57)
32. I like working with children/adolescents.	.31		5.37 (1.48)
<i>Enhancing social equity</i>		.60	5.00 (1.22)*
24. Teaching will allow me to raise the ambitions of underprivileged youth.	.63		4.88 (1.65)
25. Teaching will allow me to benefit socially disadvantaged.	.81		5.00 (1.73)
26. Teaching will allow me to work against social disadvantage.	.32		5.13 (1.51)
<i>Prior teaching and learning</i>		.65	5.45 (1.10)*
33. I have had inspirational teachers.	.77		5.63 (1.29)
34. I have had good teachers as role models.	.72		5.70 (1.28)
35. I have had positive learning experiences.	.45		5.04 (1.71)
<i>Fallback career</i>		.59	3.98 (1.42)*
7. I was unsure of what career I wanted.	.68		3.94 (1.94)
8. I was not accepted in to my first-choice career.	.74		3.92 (1.90)
9. I chose teaching as a last resort career.	.34		4.07 (1.91)
<i>Job security</i>		.66	5.02 (1.19)*
10. Teaching will offer study career path.	.59		4.79 (1.51)
11. Teaching will provide a reliable income.	.79		4.88 (1.51)
12. Teaching will be a secure job.	.52		5.40 (1.63)
<i>Time for family</i>		.69	4.62 (1.16)*
13. Part-time teaching could allow more family time.	.41		4.61 (1.84)
14. As a teacher I will have lengthy holidays.	.60		4.13 (1.94)
15. Teaching hours will fit with the responsibilities of having a family.	.57		4.83 (1.51)
16. As a teacher I will have a short working day.	.63		4.64 (1.69)
17. School holidays will fit in with family commitments.	.58		4.91 (1.70)
<i>Job transferability</i>		.58	4.86 (1.19)*
18. Teaching will be a useful job for me to have when traveling.	.43		4.42 (1.81)
19. A teaching qualification is recognized everywhere.	.60		5.07 (1.47)
20. A teaching job will allow me to choose where I wish to live.	.70		5.08 (1.53)
<i>Shape future of children/adolescents</i>		.65	5.33 (1.08)*
21. Teaching will allow me to shape child/adolescent value.	.60		5.28 (1.39)
22. Teaching will allow me to have an impact on children/adolescents.	.76		5.58 (1.35)
23. Teaching will allow me to influence the next generation.	.52		5.15 (1.48)

β = standardized beta coefficient; α = Cronbach's alpha; SD = standard deviation; * = composite variable. All fit indices were good and assessed under the following criteria CFI = TLI > .95, RMSEA < .05 with CI < .10, SRMR < .05.

For gender differences, the t-test independent sample was performed to determine statistically significant differences between gender and nature of the teacher program (i.e. primary and secondary). The t-test determines the difference between the two groups in terms of mean scores. Effect sizes were based on Cohen's (1988, 284–287) guidelines for interpreting eta squared values: .01 = small effect, .06 = moderate effect, .14 = large effect. Two-way analysis of variance (ANOVA) was also performed to determine the interaction

between gender and teacher education program, being the main effect variables. Since there were no interaction effects between gender and program, post-hoc testing was not performed further.

Results

Validity of the FIT-Choice scale

For research question 1, the data from PSTs had factorability for a 12-component forced solution (e.g. $KMO = .83$ and $p < .05$ for sphericity; orthogonal rotation) explaining 65.71% of the variance, with component 1 (*Intrinsic interest*) contributing 20.83% and component 2 (social contribution or *Teaching as a contributor to society*) contributing 7.05%, and components 3 through 12 (37.83% explained variance) explaining 5.88% (*Time for family*) and ending with 2.60% (*Fallback career*). See Table 1 for FIT-choice item descriptions and their assessed internal consistency.

Assessing the oblique rotation results with a 12-factor solution resulted in several FIT-Choice item crossovers and factors supported by two items between FIT-Choice survey items. The support of factors by two items was not optimal. As a result, orthogonal rotation was deemed more aligned with representing the FIT-Choice survey.

The results for a freely estimated (i.e. not following the established survey factors of the FIT-Choice survey) orthogonal rotation for FIT-Choice survey items were then conducted. When assessing FIT-Choice factors, we examined the underlying factor structure while allowing FIT-Choice items to freely estimate. The result was a 10-component solution, which explained 60.47% of the variance, which was less explained variance compared to our forced 12-component solution (rotation method = orthogonal). Additionally, there were items departing from their established FIT-Choice item groupings. These findings can also inform the validity expressed in research question 1.

In the 10-component solution, five factors remained intact and were *Intrinsic interest*, *Time for family*, *Ability*, *Job security*, and *Fallback career*. The other five factors were mixed and may have resulted from the specific group of participants responding to the FIT-Choice survey. The mixed results produced the following item clusters: a) items 32, 33, 34, 35, 36, 37 (mix of *social influences*, *prior teaching & learning*, and *working with children*); b) items 22, 26, 27, 28, 38 (mix of *teaching as a contributor to society*, *social influences*, *enhancing social equity*, and *shape future of children/adolescents*); c) items 29, 30, 31 (mix of *working with children* and *teaching as a contributor to society*); d) items 18, 19, 20, 21 (mix of *job transferability* and *shape future of children/adolescents*); e) items 23, 24, 25 (mix of *enhancing social equity* and *shape future of children/adolescents*). Thus, validity centers around the five factors that remained the same concerning teacher participants, which were *Intrinsic interest*, *Time for family*, *Ability*, *Job security*, and *Fallback career*.

As a follow-up, the oblique rotation was also assessed for a freely estimated factor solution. Again, orthogonal rotation was chosen for representing closer proximity to the FIT-Choice survey established factors (see Table 1).

For CFA, the WLSMV estimator was used to include non-normal data into the analysis. Table 1 displays the standardized coefficients (β) for each FIT-Choice factor. Of the factors, five beta coefficients were greater than .5 and eight factors had beta coefficients = < .49. The following factors had > .5 contribution to their established FIT-

survey groupings: *Intrinsic interest*, *Ability*, *Job security*, and *Shape future of children/adolescents*. Intrinsic interest had strong contributions with .78, .91, and .82, while Ability had the next set of coefficients with .86, .78, and .61. Job security (β s = .59, .79, and .52) and Shape future of children/adolescents (β = .60, .76, and .52) had similar results. CFA and reliability estimates validity are evidential around the Intrinsic interest and Ability factors.

Validity of the FIT-Choice scale in terms of the reproducibility of its factors for the Pakistani context

Through CFA, we observed the confirmation of each factor solution individually, which aligns with the number of factors in the FIT-Choice survey (see Table 1). The CFA could not be assessed with all 12 components (or factors) simultaneously because of limited sample size ($N = 342$). For instance, assessing model identification for the number of observed variances and covariances would result in 38 directly observed variables (i.e. 38 FIT-Choice survey items) each with parameter estimates and with 741 observations ($[v(v + 1)/2]$, where v = the number of directly observed variables) and numerous unique covariances ultimately leading to the 12-component model solution being under-identified (Kline 2015).

Investigating internal consistency, of the 12 components (or factors) *Intrinsic interest* ($\alpha = .87$) made good reliability, and *Ability* ($\alpha = .79$) was considered acceptable. Thus, the reliability of the other 10 FIT-Choice factors does not demonstrate good internal consistency reliability for the scale with this sample. The poor reliability results would suggest re-evaluating the survey items and conducting response validity to identify cultural differences that may be influencing the scales.

In considering principal components analysis (PCA), a 12-component solution was forced in order to align with the FIT-Choice survey and explained 65.71% of the variance. Within this PCA assessment, FIT-Choice survey items did cluster differently compared to the groupings (or clusters) defined by the FIT-Choice survey. For example, the following FIT-Choice survey factors retained their defined question groupings: *Intrinsic interest*, *Time for family*, *Ability*, *Job security*, while the survey questions belonging to the other factors were mixed. The biggest mixture was a combination of *social contribution*, *enhancing social equity*, and *shaping the future of children/adolescents*.

Lastly, when conducting PCA to allow for freely estimated values for FIT-Choice survey question groupings, the result produced a 10-component solution. This result could be an indication of how Pakistani PSTs are understanding the FIT-Choice survey questions differently. However, the explained variance was lower at 60.47% with a 10-component solution. From the 10-component solution, the FIT-Choice survey factors still intact as originally defined were: *Intrinsic interest*, *Time for family*, *Ability*, *Job security*, *Fallback career*. The remaining FIT-Choice factors were mixed and different from the originally defined FIT-Choice factors. The FIT-Choice survey items converged into four underlying factors – *social influence*, *social contribution*, *enhance social equity*, and *shape the future of children/adolescents*.

Comparing PSTs' motivations across gender and programs

For research question 2, the 12 choice factors were then subject to a two-way analysis of variance in SPSS 26, with gender and teacher education program being the main effect variables. Only one of the FIT-Choice factors showed statistically significant ($p < .05$) differences in the gender and program type variables. The interaction effect, $F(1, 338) = 6.25$, $p = .013$, was observed for *job security* and had a small effect size ($\eta_p^2 = .018$; secondary males $M = 5.24$ and $SD = 1.16$, secondary females $M = 5.36$ and $SD = 1.19$; primary males $M = 5.54$ and $SD = 1.08$, primary females $M = 5.51$ and $SD = 1.18$). For *job security*, $F(1, 338) = 14.12$, $p < .001$, gender was statistically significant with a small effect size ($\eta_p^2 = .04$), male $M = 4.40$, $SD = 1.20$, female $M = 5.16$, $SD = 1.15$, indicating that there is a difference between males and females for the teacher education program.

Since there were only two categories in both gender and teacher education program, no post-hoc comparisons were conducted. Although there was no interaction effect ($p = .08$), there was statistical significance ($p < .05$) related to teacher education program (secondary males $M = 4.25$ and $SD = 1.06$, secondary females $M = 4.54$ and $SD = 1.17$; primary males $M = 5.18$ and $SD = 0.84$, primary females $M = 4.88$ and $SD = 1.19$) with *time for family*, $F(1, 338) = 14.08$, $p < .001$, $\eta_p^2 = .04$, meaning there was a statistical difference in teacher education program type in responses for *time for family*.

Comparing motivations for choosing teaching between male and female PSTs

The t-test results showed that females responded higher than males across the three *job security* items (i.e. items 10–12, see Table 1). For instance, for item 10 females ($M = 4.89$, $SD = 1.46$) responded higher compared to males ($M = 4.34$, $SD = 1.65$; $t(340) = 2.65$, $p = .009$). The magnitude of the differences in the means (mean difference = .55, 95% CI: 0.14 to 0.97) was small ($\eta^2 = .02$). Item 11 also illustrated a higher female ($M = 5.00$, $SD = 1.52$) response compared to males ($M = 4.34$, $SD = 1.35$; $t(340) = 3.17$, $p = .002$), and the mean difference (MD) was .67 (95% CI: .25 to 1.08) with a small effect size ($\eta^2 = .03$). Lastly, females ($M = 5.59$, $SD = 1.54$) responded higher compared to males ($M = 4.53$, $SD = 1.74$; $t(340) = 4.78$, $p < .001$) in item 12 and had an MD of 1.06 (95% CI: .62 to 1.49) with a moderate effect (.06 η^2). As a factor (i.e. composite variable), the results showed that females ($M = 5.16$, $SD = 1.15$) responded higher than males ($M = 4.40$, $SD = 1.20$; $t(340) = 4.67$, $p < .001$) with an MD of .76 (95% CI: .44 to 1.08) and moderate effect ($\eta^2 = .06$).

Discussion and implications

Applicability of FIT-Choice in the Pakistani context

The first research question is to examine the validity of the FIT-Choice scale in terms of the reproducibility of its factors for an Asian context such as Pakistan. Considering the PCA and the CFA results for the degree of the FIT-Choice scale, the conclusion is the FIT-Choice survey has a greater degree of validity when allowed to freely estimate when conducting PCA. However, when conducting PCA, there will be some FIT-Choice factors that will mix together, and the suggestion is to reassess the meaning of the survey item groupings (or clusters) in order to relabel the item grouping into a more meaningful factor that fits how Pakistani PSTs are responding. The other option of CFA on the 12 FIT-Choice components

had good fit indices but lacked strong internal consistency (or reliability estimates), and the PCA 12-component forced solution only had four FIT-choice factors retained compared with the 10-component solution being suggested as better aligned with the Muslim population.

The applicability of the FIT-Choice scale across diverse contexts is apparently influenced by social factors. In collectivist countries such as Turkey (Eren and Tezel 2010; Kilinc, Watt, and Richardson 2012) and China (Lin et al. 2012), social utility values seemed to be more prominent as compared to intrinsic and ability motivations that were the most-rated motivations in Western settings. Likewise, ability and intrinsic value motivations were leading in samples from Australia (Richardson and Watt 2006, 2014; Watt et al. 2012), the USA and Norway (Watt et al. 2012), and Canada (Klassen et al. 2011).

Research in some Asian cultures has shown that people are inclined to accomplish the goals and expectations of significant others. Pakistani future teachers might also score high on job security. Subsequently, teaching can offer prospects to become civil servants, which offers lifelong benefits and a high level of job protection (Suryani, Watt, and Richardson 2016).

Gender comparison of primary and secondary PSTs' job security and time for family

The second research question examines the difference of the FIT-Choice factors in relation to gender and teacher education programs. The results of the study showed that in primary programs, male PSTs rated job security higher compared with females, and across the programs, female PSTs in primary programs rated higher on job security for secondary teacher programs. As Moorhead and Griffin (1989) stated, job uncertainty affects a worker's commitment to the organization. An employee would be more devoted to his/her job and the organization, if they feel protected.

In Pakistan, male PSTs are less likely to be expected to be with young children because male teachers typically carry an expected higher level of educational presence (Carrington, Deppeler, and Moss 2010), such as in secondary education programs.

It is quite surprising to see primary male teachers' reported job security, which counters the concept that female teachers may have more need for job security (Han 2018; Schulze and Steyn 2003). However, considering Pakistani culture, males are not expected to teach, particularly in lower levels of teaching such as primary schools. A non-monetary reward associated with the occupation of teaching in Pakistan is employment stability and security. Politicization of the occupation and cumbersome bureaucratic procedures make it unlikely for someone to be dismissed once they get a teaching job. Like other government jobs, it comes with pension benefits after retirement. The subjects' preference for teaching as a profession offering job security and stable income may stem from subjects in the current study who come predominantly from families with low socioeconomic levels. In this context, men more perceived the teaching profession as a supplementary form of income as their preference is divided in pursuing other ways of income sources (Mehmood and Saleem 2015). Moreover, as females are more dominant in primary-level teaching in schools, the finding suggests the importance of and need for more males in the female-dominant professions, such as primary education, nursing, etc., to represent male participation.

The t-test results found that female PSTs responded with higher scores on job security factors as compared to male counterparts in their initial motivations to teach. This result may be associated with female educators viewing teaching as a prerequisite for harmonious associations with students and as showing more compatibility with their roles as mothers, as well as salary and job security, as indicated by Hillebrand (1989) and Schulze and Steyn's (2003). Females value the specific privileges that permit them to play roles as working women and mothers or homemakers (Ullah and Skelton 2013).

Lastly, the results also showed that secondary PSTs rate time for family more highly than their primary counterparts. This finding may reflect the PSTs' background in which teaching was seen as a default profession that may offer secure employment with other auxiliary benefits, such as time for family.. Additionally, with fewer working hours and teaching hours compared to primary teachers, secondary PSTs may see teaching secondary students as less burdensome, particularly when they can be assigned to do administrative tasks, which often happens in secondary schools.

Teachers are seen as being in a highly rated social position, and teaching is seen as attractive to secondary school graduates who enter teacher education and aim to work as competent teachers upon completion of their studies (Suryani, Watt, and Richardson 2016). The current study findings provide a base for the enhancement of teacher education programs and teacher training in the national education policies in Pakistan and are of importance for preparing PSTs who have entered the teaching career.

Our study evaluates PSTs' initial motivations to become a teacher in Pakistan using Richardson and Watt's (2006) well-established survey developed in an advanced country. As the motivations are related to teacher education programs and teacher retention, teacher education in Pakistan faces challenges and issues (Akram and Zepeda 2015; Butt 2008; Dilshad 2010; Shaukat and Chowdhury 2020). Teacher education programs need to not only prepare teachers for the realities of school life appropriate for varying school contexts (Ali 2011) and emphasize theory and subject content (Ahmed 2008), but also design effective teaching programs (Shaukat and Chowdhury 2020) that sufficiently consider the primary program differences, male and female teachers' needs and interests, as well as challenges in becoming a teacher. This study intended to offer a broader understanding of PSTs' initial motivations and perceptions of teaching career choice to become a teacher and extended a new understanding of the motivations in a different cultural context. It is important that future research identifies specific factors that influence all the motivational factors which we used within the survey and beyond.

Conclusion

The research study was carried out to determine the initial motivation of preservice teachers to choose teaching as a career. Hence this study provides the indication that socio-cultural, economic, academic, and family background are sources of variation in the choice toward selecting teaching as a profession, although it has rarely been studied systematically in Pakistan. This study provides insights to consider the socio-cultural, economic, academic, and family backgrounds of PSTs that are also associated with their career aspirations, as it reports the varied motivation between males and females in choosing teaching as a career. In addition, this study contributes to revealing the applicability of the FIT-Choice scale in the context of Pakistan, where research studies on the profile characteristics of candidates have

limited scope in exploring further, in terms of their initial motivation to join the teaching profession as a career.

Hence, this study acts as a thought-provoking way to compare candidates' motivations to become a teacher because each country has exclusive social, cultural, and economic aspects. By engaging the equal set of measures, it is conceivable to initiate relating findings across countries. This is the chief aim for using a recognized theoretical and psychometric framework, the FIT-Choice scale, which was originally developed in Australia (Richardson and Watt 2006; Watt and Richardson 2007, 2008) and then became extensively functional in many countries. As we have added to the evidence concerning the validity and reliability of the FIT-Choice scale from a cross-cultural viewpoint set within a Muslim, South Asian context, such motivation factors as '*Intrinsic interest*', '*Time for family*', '*Ability*', '*Job security*', and '*Fallback career*' remained intact in the context of Pakistan as in previous research studies.

This study involved a thorough assessment of both fitting the FIT-Choice survey onto a Muslim sample as well as allowing the participant responses to statistically group together and redefine what the FIT-Choice survey could look like for a Muslim population. Another aspect is that the interactions by gender and program showed differences in the report on *job security*. The significant difference is female PSTs' higher scoring in secondary programs than those in primary programs. We draw attention here to the gender-polarized nature of Pakistani society, and how females might be demonstrating a 'can do' character for secondary education indicative of self-esteem. We also found that PSTs in secondary programs reported higher than in primary programs for *Time with family*. Although there is a limitation regarding the size and location of the sample in the current study, the research results reported here will hopefully encourage others to evaluate further the initial motivation factors in Pakistan and other non-European environments, possibly looking at clusters of students with distinctive profiles. It is viable that a core of FIT-Choice factors, common across all cultures, will emerge to allow generalized hypothesis testing and eventually policy changes in teacher education.

Disclosure statement

No potential conflict of interest was reported by the authors.

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