Assessment of Resilience Among College Teachers

Nighat Parveen, Dr. Shazia Zamir and Dr. Huma Haroon

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NIGHAT PARVEEN

Ph.D. (Education) Scholar, National University of Modern Languages (NUML), Islamabad.
Senior Teacher at Islamabad Model College for Boys, I-8/3, Islamabad.
Email: nighatwadanafridi@gmail.com
Tel: 03315168528

Dr. SHAZIA ZAMIR

Assistant Professor, National University of Modern Languages (NUML), Islamabad.
Email: szamir@numl.edu.pk

Dr. HUMA HAROON

Senior Teacher at Islamabad Model College for Boys, I-8/3, Islamabad.
Email: huma4luck@gmail.com

Abstract

Resilience is the process of positive adaptation in the context of challenging situations by recognizing the available individual and contextual resources. Little has been reported about the teachers' resilience level and its resources in the local scenario of Pakistan at higher secondary level. This research work aimed to assess the resilience level and its resources among college teachers. It collected responses from 200 randomly selected college teachers on a self-reporting doughnut resilience questionnaire. The descriptive analysis revealed that the majority of teachers possessed a high level of resilience. A significant relationship existed between three internal sources of resilience. The six external sources of resilience were also significantly interrelated showing the importance of both individual and contextual factors of resilience. The mean scores were highest on skill factor(external factor) and teachers' self-efficacy factor (internal factor). Community being a weak external factor of resilience needs to be promoted to boost resilience among college teachers.

Keywords: *Resilience, Teachers' Resilience, External Factors, Internal Factors.*

Introduction

In the educational process, the teacher has always performed a central role. Eccles and Roeser (2016) explained that teacher generates the emotional climate of a classroom where students grow and learn. In this context, the psychological well-being of teachers becomes significant. Resilience is one of the parameters for psychological wellbeing. As defined by Rutter (1985) resilience is the capability to face and recover from the stern hardships with the help of positive adaptability. Teaching is a demanding job especially in the current era of diversity and challenges (Hargreaves & Fink, 2006). Resilience is significant for everyone, but the resilience of a teacher plays a central role in the teaching-learning process. Teachers have to face several challenges such as limited resources, lack of training, crowded classrooms, governmental policies, issues in personal lives, high expectations of administrations, parents, and even students. Studies have established that teachers' resilience is important for their wellbeing and retention (Brouskeli, Kaltsi, & Loumakou, 2018).

According to Action and Glasgow (2015), the will and capability of teaching are affected by the extent teachers are positively adapted to their professional role. Teacher retention, especially in the early years of career is a matter of concern in many countries (Scheopner, 2010). Tait (2008) describes that assessing the factors that sustain teachers to move from the early years of the profession to a career stage may prove helpful in addressing the issue of teacher retention. Resilience is also a factor that predicts the retention and sustainability of teachers within their profession. Resilient teachers meet challenges at work to thrive by maintaining their motivation and commitment (Gu & Day, 2007).

Beltman, Mansfield, and Price (2011) reviewed the literature on resilience and found that resilience is not a much-explored field in education. Multiple ideas and notions were combined to compose and refine the meanings of teachers' resilience. Various conceptual frameworks helped researchers to reach a consensus that several personal and environmental resources combine dynamically to shape the resilience of individuals. Resilience was not explicitly examined in initial studies, but it helped to answer the question about factors that sustain teachers in their profession.

Teacher is the leader who influences the classroom environment both positively and negatively. Students learn and grow there, whose well-being is one of the educational objectives of the educators (Eccles & Roeser, 2016). Teachers who are socially and emotionally well-equipped cause an impact on students' achievements (McLean & Connor, 2015). Therefore, resilience research is significant for all stakeholders in the field of education including administrations, teachers, teacher educators, students, parents, and employers. The current study intended to assess the resilience level among college teachers. It also aimed to investigate sources of resilience among college teachers.

Review of Related Literature

The term resilience was used by Werner (1971) in a study about children who were suffering from behavioural issues. It was discovered that one-third of these children managed a normal developmental pattern despite poor background. These children were named 'resilient'. It is derived from the Latin word '*resiliens*' which means to 'bounce back'. The research studies conceived resilience in at least two ways. It is conceptualized as capacity or as a trait. Higgins (1994) presented resilience as a process of healing and growth, whereas, Wolin and Wolin (1993) conceived it as a trait and capability to deal with and bounce back in a difficult situation. Luthar, Cicchetti, and Becker (2000) defined resilience as a dynamic process of positive adaptation in the face of significant adversity, such adaptation help individuals to benefit from the outcomes that are experienced while facing risks. The construct of resilience was initially conceived as a personal capacity (Masten, Best & Garmezy,1990). However, later studies described resilience as a complex construct that is the product of a dynamic relationship between adversities and protective factors (Benard, 2004). Worsley (2006) defined resilience as a continuous process of acquiring competence while recognizing the available resources in the face of adversities. This approach has encouraged researchers to devise new strategies and programs for the improvement of resilience.

The phenomenon of resilience has two important features, it includes the presence of risk elements and protective factors (Barrett & Turner, 2004). It was concluded that resilience results from a dynamic interaction between risk and protective factors (Beltman et al., 2011). Protective factors mitigate the adverse effects of risk factors (Lewis, 2000).

Risk Elements

The risk factors may be personal or contextual. Day (2008) believed that teaching requires substantial investment on personal grounds. The most common individual risk factors reported by various researchers include lack of self-belief (Kitching, Morgan & O'Leary, 2009), reluctance in asking help from colleagues (Fantilli & McDougall, 2009), and a clash between personal beliefs and the practices being used (McCormack & Gore, 2008). Similarly, certain contextual elements place risks for teachers such as

challenges in personal lives, families, workplace, and professional responsibilities. Fleet, Kitson, Cassady, and Hughes (2007) also identified various contextual challenges that included lack of infrastructure at home, family commitment, issues at the workplace, work-life balance, inappropriate teachers' training programs, etc. Challenges at educational institutions include academic workload (Kaldi,2009), timetable (Sinclair, 2008), violent behaviour of students coupled with non-supportive management (Demetriou, Wilson, & Winterbottom, 2009). Several workplace risk factors were identified by Castro, Kelly, and Shih (2010) such as time management, heavy assignment, non-teaching duties, and discouraging policies. Some other contextual risks which teachers face are overcrowded classrooms, lack of resources and equipment, relationship with colleagues, students and leadership, curriculum, externally imposed regulations and poor salaries. To help teachers retention, finding out risk factors is important but identification and growth of the support factors are equally important.

Protective Elements

Braun, Schonert-Reichl, and Roeser, (2020) found that emotional regulation skills, occupational health, and life satisfaction level of teachers are associated with students' wellbeing. To become resilient individuals, personal skills such as problem-solving, mood-protection during a problem situation are significant (Masten & Powel, 2003). The positive appraisal style of individuals helps them to successfully face a challenging situation Kalisch, Müller, and Tüscher (2015). In this context, it is known that people who are extroversion, display openness, conscientiousness, and agreeableness make a positive appraisal of hard situations. Sinclair (2008) identified that motivation and commitment help teachers to stay at the job. Teachers can fight the odds with help of qualities such as self-efficacy, problem-solving, positive outlook, and perseverance (Yost, 2006).

Castro et al. (2010) also reported that individual traits including self-efficacy, confidence, and certain coping skills help teachers to face hard situations. Day (2008) found that confidence, self-efficacy, enthusiasm, optimism, positive attitude, and satisfaction driven from the accomplishment of tasks also support teachers at their work. Beltman, Mansfield et al. (2011) concluded that a sense of humour, emotional intelligence, and interpersonal skills also help teachers to cope with difficult situations. Tait (2008) also believes that self-efficacy has a strong impact even at the initial stages of teaching. Gu and Day (2007) reported that personal characteristics such as intrinsic motivation, persistence, sense of purpose, and professional aspiration are interrelated. Self-efficacy is one of the strongest elements for being resilient and it is enhanced in the face of difficulty.

Individual skills, cultural characteristics, community structure, and social relationships are identified as sources of resilience (Day, 2008). Castro et al. (2010) reviewed previous researches and found that teachers look for contextual support at the workplace from school administrators, mentors, pre-service peers, parents, and even from students. Howard and Johnson (2004) described that a supportive, caring well-organized and encouraging management is the key factor for resilience among teachers. The support of a professional mentor especially at the early stages of the career is significant (Olsen & Anderson, 2007). Peer from pre-service training may also become a source of support, they reinforce teachers to put more effort through a positive outlook towards challenges (Jarzabkowski, 2002).

A dynamic relationship exists between risk and protective factors. Various models of resilience have explained this relationship. Fergus and Zimmerman (2005) have explained three types of models which are named as ' compensatory, protective, and challenge models'. Compensatory models focus upon the way protective factors minimize the damage expected from risk factors. Protective factors explain the role of protective sources whereas the challenge models explain the pathways of risk elements. Worsley (2010) presented the construct of resilience through the 'Resilience Doughnut Model'. She explains that resilience is the capacity that could be developed. Resilience is a dynamic process as it is influenced by adversities, risks, contextual resources, and the individual's ability to deal with these risks. When an individual

responds to adversity, resilience is built. Her model explains the trajectory of interaction between resource factors from individuals' outer environment and resource factors from individual's personal capacities.

Day (2008) suggests that research is needed to investigate sources of resilience that can keep teachers motivated and committed to their job. The current study contributes to the research on resilience by identifying major sources of resilience and examining the relationship between individual and contextual factors among teachers at the higher secondary level/ college level.

Hypotheses

The research objective of assessment of resilience level among college teachers was achieved by applying descriptive statistics. The following null hypotheses were formulated for the investigation of sources of resilience among college teachers to achieve the research objective.

H_o 1. The external factors of resilience are not significantly correlated.
H_o 2. The internal factors of resilience are not significantly correlated.

Problem Statement

Resilience is the process that enables individuals to cope with adversities and to thrive in the face of challenges. Teachers have to face various challenges in their profession. Many internal and external factors help in developing their resilience. The study aimed to asses the resilience level among college teachers. Furthermore, it was designed to identify the internal and external factors of resilience. The study intended to find out the relationship between different factors of resilience.

Conceptual Framework

Teacher resilience is investigated using Resilience Doughnut Model given by Worsley (2006). She has comprehended resilience as a process where personal competencies are developed in the moment of adversity if the individual negotiates and navigates the accessible resources. "The Resilience Doughnut Model" has two tiers of circles indicating internal and external sources for developing resilience. The outer circle consists of external sources for developing resilience in individuals. The study included six external factors which are "skill, family and identity, education, peer, community and money factor". Whereas, the inner circle of the model indicates three internal sources of resilience including "self-efficacy (I can), self-esteem (I am) and the awareness of resources (I have)".

Figure 1 Resilience Doughnut Model (Worsley, 2006)

Methodology

This study is descriptive in nature and adopted a quantitative approach to achieve the set objectives. The public sector teachers teaching at higher secondary level in Islamabad city constituted the population of this research work. The sample consisted of 200 teachers which were randomly selected from the population by using a simple random sampling technique. A self-reporting questionnaire on a five-point Likert scale was used to collect information from respondents. The research instrument was the questionnaire form of an online system called "Doughnut Resilience Quiz" developed by Worsley (2006). It consisted of 51items. Permission to use the quiz was acquired via email. The instrument was piloted to test its reliability in the local scenario. Data were collected from the public sector college teachers after acquiring permission from the directors at the Federal Directorate of Education, Islamabad. The total number of questionnaires distributed among teachers was 220. Out of these, 200 completely filled questionnaires were received back, hence the response rate remained 91%.

Table 1: Reliability Statistics for Sources of Teachers' Resilience (N=200)

Sources of Teachers' Resilience		Cronbach's Alpha	Number of Items
External Sources	Skill Factor	.775	8
	Family and Identity Factor	.704	10
	Education Factor	.808	9
	Community Factor	.725	9
	Peer Factor	.777	6
	Money Factor	.711	9
Internal Sources	Self-efficacy (I can)	.576	10
	Awareness of Resources (I have)	.785	19
	Self-esteem (I am)	.776	22
Overall Teachers' Resilience		.890	51

Table 1 demonstrates Cronbach Alpha values for sources of teachers' resilience on the doughnut resilience quiz. The alpha value ranged between .808 to .576 for all internal and external sources of resilience, whereas the overall teachers' resilience scored the alpha value of .890 which is acceptable.

Data Analysis

The data were treated with statistical techniques of frequencies, mean, percentages, percentiles, correlation coefficient using SPSS.21.

Table2: Demographic Structure of Respondents (N=200)

Demographic variables	Frequency	Percent	Valid Percent	Cumulative Percent
Gender				
male	100	50.0	50.0	50.0
female	100	50.0	50.0	100.0
Total	200	100.0	100.0	
Age				
21-30 years	22	11.0	11.0	11.0
31-40 years	111	55.5	55.5	66.5
41-50 years	46	23.0	23.0	89.5
51-60 years	21	10.5	10.5	100.0
Total	200	100.0	100.0	

Teaching Experience				
less than 05 years	16	8.0	8.0	8.0
05-10 years	41	20.5	20.5	28.5
10-15 years	73	36.5	36.5	65.0
15-20 years	36	18.0	18.0	83.0
20-25 years	14	7.0	7.0	90.0
25-30 years	16	8.0	8.0	98.0
more than 30 years	4	2.0	2.0	100.0
Total	200	100.0	100.0	
Academic Qualification				
Masters	146	73.0	73.0	73.0
M.Phil	43	21.5	21.5	94.5
Ph.D	11	5.5	5.5	100.0
Total	200	100.0	100.0	
Professional Qualification				
B.Ed	105	52.5	52.5	52.5
M.Ed/MS.Ed	39	19.5	19.5	72.0
Nil	56	28.0	28.0	100.0
Total	200	100.0	100.0	
Designation				
Lecturer	102	51.0	51.0	51.0
Assistant Professor	62	31.0	31.0	82.0
Associate Professor	15	7.5	7.5	89.5
Professor	1	.5	.5	90.0
others	20	10.0	10.0	100.0
Total	200	100.0	100.0	
Marital Status				
married	179	89.5	89.5	89.5
single	21	10.5	10.5	100.0
Total	200	100.0	100.0	

Table 2 displays the demographic features of the participants. A gender-wise equal distribution of respondents was observed. The majority of respondents fell in the age group of 31-40 years. A work experience of 10-15 years was possessed by most of the participants. The majority of the college teachers were holding a Masters's degree. They had a professional degree of B.Ed. Among the respondents, the majority were designated as lecturers and were married.

Table 3: Mean Scores of Teachers on External Factors of Resilience (N=200)

External Factors of Teachers' Resilience	Mean	Std. Deviation	Remarks
Skill Factor	4.4	.49	Often agreed
Family and Identity Factor	4.1	.47	Often agreed
Education Factor	4.0	.59	Often agreed
Community Factor	3.3	.67	Sometimes agreed
Money Factor	3.9	.59	Often agreed
Peer Factor	3.9	.68	Often agreed
Overall Teachers' Resilience	3.9	.39	Often agreed

Table 3 depicts the mean scores of respondent teachers on external factors of teachers' resilience. The respondent teachers often agreed upon skill factor (4.4), Family and identity factor (4.1), education factor

(4.0), money factor (3.9) and peer factor (3.9). They sometimes agreed upon the community factor (3.3) of teachers' resilience. Moreover, the respondent teachers often agreed upon the overall teachers' resilience doughnut scale (3.9). It was found that the mean score remained highest on skill factor whereas, it was lowest on the community factor.

Table 4: Mean Scores of Teachers on Internal Factors of Resilience (N=200)

Internal Factors of Teachers' Resilience	Mean	Std. Deviation	Remarks
Teachers Self-efficacy	4.2	.41	Often agreed
Teachers Awareness of Resources	3.9	.47	Often agreed
Teachers Self-esteem	3.9	.41	Often agreed

Table 4 reveals mean scores on internal resources of resilience including Self-efficacy (4.2), Awareness of resources (3.9), and Self-esteem/Self-concept (3.9). The mean score on self-efficacy was relatively higher than awareness of resources and self-esteem. It indicates that most teachers 'often agreed' upon all three internal factors of teachers' resilience.

Table 5: Percentile Analysis of Overall Teachers' Resilience Score (N=200)

Percentile	Teachers' Resilience Scores
5	164.1
10	174.0
15	181.0
20	186.0
25	**188.0**
30	191.0
35	193.0
40	195.0
45	198.0
50	**200.5**
55	202.6
60	205.6
65	209.0
70	211.7
75	**214.0**
80	218.8
85	221.0
90	224.0
95	231.0

The potential range of the teachers' resilience scale was 55-255. Table 5 indicated that the overall teachers' resilience score of 188.0 fell on the 25th percentile showing a low level of teachers' resilience. The score of 200.5 fell upon 50th percentile showing a moderate level of teachers' resilience and the score of 214.0 fell upon 75th percentile which shows the high level of teachers' resilience.

Table 6: Levels and Dimensions of Overall Teachers' Resilience (N=200)

Teachers' resilience level	Score range	frequency	Percentage
Low Level	51-119	0	0%
Average Level	120-187	46	23%
High Level	188-255	154	77%

Table 6 describes the overall teachers' resilience level of participant teachers on the 'Resilience Doughnut Quiz'. The descriptive analysis shows that 77% (n=154) teachers had a high level of resilience, 23% (n=46) teachers showed a moderate level of resilience and none of the respondent teachers possessed a low level of resilience.

Table 7: Percentile Analysis of External Resources of Teachers' Resilience (N=200)

Percentile	Scores on External Factors of Teachers' Resilience					
	Skill Factor	Family and Identity Factor	Education Factor	Peer Factor	Community Factor	Money Factor
Potential range of scale	05-40	05-100	05-45	05-30	05-45	05-45
5	27.1	34.0	26.0	15.0	20.1	26.0
10	29.0	35.0	29.1	18.0	22.0	28.1
15	31.0	36.0	31.0	19.0	24.0	29.2
20	31.2	37.0	32.0	20.0	25.0	30.0
25	**32.0**	**38.0**	**33.0**	**21.0**	**25.3**	**31.3**
30	33.0	39.0	34.0	22.0	26.0	32.0
35	33.4	39.0	35.0	22.0	27.0	33.0
40	34.0	40.0	35.4	22.4	28.0	34.0
45	34.5	41.0	36.0	23.0	28.0	34.0
50	**35.0**	**42.0**	**37.0**	**23.0**	**29.0**	**35.0**
55	36.0	42.0	37.0	24.0	30.0	36.0
60	36.0	43.0	38.0	24.0	30.0	37.0
65	37.0	43.0	38.0	25.0	32.0	37.7
70	37.7	44.0	39.0	26.0	33.0	38.0
75	**38.0**	**45.0**	**40.0**	**26.0**	**34.0**	**39.8**
80	38.0	46.0	41.0	27.0	35.0	40.0
85	39.0	47.0	42.0	28.0	37.0	41.0
90	39.9	48.0	43.0	28.0	38.0	42.0
95	40.0	49.0	44.0	29.0	41.0	43.0

Table 7 describes the percentile analysis of external factors of teachers' resilience. It was observed that the percentile scores of 32.0 (skill factor), 38.0 (family and identity factor), 33.0 (education factor), 21.0 (peer factor), 25.3 (community factor), and 31.3 (money factor) fell on 25th percentile. On 50th percentile the scores of 35.0 (skill factor), 42.0 (family and identity factor), 37.0 (education factor), 23.0 (peer factor), 29.0 (community factor) and 35.0 (money factor) were recorded. The scores of 38.0 (skill factor), 45.0 (family and identity factor), 40.0 (education factor), 26.0 (peer factor), 34.0 (community factor) and 39.8 (money factor) were recorded on 75th percentile.

Table 8: Percentile Analysis of Internal Resources of Teachers' Resilience (N=200)

Percentile	Scores on Internal Factors of Teachers' Resilience		
	Self-efficacy (I can)	Awareness of Resources (I have)	Self-esteem (I am)
Potential range of scale	05-100	05-95	05-110
5	34.1	57.0	70.1
10	37.0	61.0	73.0
15	38.0	65.0	76.0
20	39.0	67.0	77.2
25	**39.0**	**68.3**	**79.0**
30	40.0	70.0	80.0
35	40.0	71.0	81.0
40	41.0	72.0	83.0
45	41.0	73.0	84.0
50	**42.0**	**74.0**	**85.0**
55	42.0	76.0	86.0
60	43.0	77.0	87.0
65	43.0	78.0	89.0
70	44.0	79.0	90.7
75	**45.0**	**80.0**	**92.8**
80	45.0	81.0	94.0
85	46.0	82.0	95.0
90	46.0	84.0	96.0
95	48.0	88.0	100.0

Table 8 demonstrates the percentile analysis of internal factors of teachers' resilience. It was recorded that the scores of 39.0 (self-efficacy), 68.3 (awareness of resources), and 79.0 (self-esteem) fell at the 25th percentile. The scores of 42.0 (self-efficacy), 74.0 (awareness of resources), and 85.0 (self-esteem) occupied the 50th percentile. The 75th percentile recorded scores of 45.0 (self-efficacy), 80.0 (awareness 0f resources), and 92.8 (self-esteem).

Table 9: Correlation Matrix for External Factors of Resilience (N=200)

External factors of teachers' resilience	Skill factor	Family and identity factor	Education factor	Community factor	Money factor	Peer factor	Teachers' resilience
Skill factor	1						
Family and identity factor	.358[**]	1					
Education factor	.487[**]	.386[**]	1				
Community factor	.195[**]	.288[**]	.529[**]	1			
Money factor	.238[**]	.254[**]	.330[**]	.342[**]	1		
Peer factor	.384[**]	.348[**]	.540[**]	.249[**]	.216[**]	1	
Teachers' resilience total	.615[**]	.639[**]	.815[**]	.696[**]	.614[**]	.641[**]	1

$** p < .01$

Table 9 indicates the relationship between external sources of resilience on teachers' resilience quiz. It was found that overall teachers' resilience and its six external factors were significantly correlated ($p < .01$).

Table 10: Correlation Matrix for Internal Factors of Resilience (N=200)

Internal factors of teachers' resilience	Teachers' Self-efficacy	Teachers' Awareness of Resources	Teachers' Self-esteem	Teachers' Resilience total
Teachers' Self-efficacy	1			
Teachers' Awareness of Resources	.521**	1		
Teachers' Self-esteem	.604**	.790**	1	
Teachers' Resilience total	.719**	.924**	.942**	1

** $p < .01$

Table 10 showed that the relationship between overall teachers' resilience and its three internal factors was statistically significant ($p < .01$). All the internal factors of teachers' resilience showed a statistically significant correlation with each other and with the overall teachers' resilience.

Findings

- The study found that the overall resilience level of 77% of college teachers was high, it was moderate for 23% of teachers, and low for 0% of college teachers.
- The internal and external resources of resilience significantly correlated with each other and with overall teachers' resilience.
- Skill factor (4.3), Family and identity factor (4.1), education factor (4.0) were the stronger external sources of teachers' resilience. Peer factor and money factor equally (3.9) contributed to teachers' resilience at higher secondary level. Whereas, community factor (3.3) remained the weakest among all.
- The analysis on internal factors of resilience indicated that although self-efficacy score (4.2) was relatively higher, yet awareness of resources and self-esteem (3.9, 3.9) equally contributed to overall teachers' resilience.

Discussion

In the educational process, students perceive their teachers as role models and imitate their attitudes and behaviours consciously as well as unconsciously. A resilient teacher may become a source of inspiration for the students during difficult educational settings. Researches have established that teachers may help students learn protective mechanism against adversities by providing them supportive environment (Arif & Mirza, 2017; Henderson & Milstein,2003). This study was an effort to assess teachers' resilience among college teachers. It tried to find out the individual and contextual factors of resilience. The study also investigated the relationship between internal and external factors of resilience. It was found that most of the respondent teachers had a high level of resilience. Previously, Botou, Mylonakou-Keke, Kalouri, and Tsergas, (2017) and Brouskeli et al, (2018) have also reported teachers' resilience at a moderately high and high level. Day (2008) has reported that resilience can be improved by focusing on protective factors rather than focusing on the risk factors. Worsley (2010) has explained that to be resilient at a given time, the individual needs at least three external factors working well. This study discovered that among the external factors of resilience, the skill factor was the strongest factor and the community factor was the weakest factor. Regarding three well-working resources of resilience among teachers, it was discovered that skill, family and identity, and education are the potential factors.

Skill factor is reported as the strongest source of resilience among teachers. The skill factor encompasses a broad range of skills that are not limited to the teaching-learning process. On the doughnut resilience quiz, teachers reported good reading and writing skills. They know about the available resources for skill learning. They perceive themselves as self-efficient for hard work when they need to put effort into skill improvement. They are self-esteemed to do new experiments and do things better. The significance of skill learning is supported by the previous studies. Chan (2008) suggested training on personal skills such as

stress management for building resilience among teachers. Tait (2008) reported that ingraining the socialization skill, assertiveness, self-discipline, and empathy may improve the resilience of teachers.

This study found family and identity as the second well-working external factor for teachers' resilience. The majority of the teachers reported themselves as part of the families that have parents, uncles, aunts, grandparents, cousins, and children. These teachers have the confidence of one or more family members to whom they can talk. They reported that their family members have a happy view of the world and have battled out of the tough times together, and they value their success and encourage them to do well. On the resilience doughnut quiz, they reported that they spend time with their wider family. They are loved and valued in their family and they can make them feel better by taking care of them. They are not afraid of making mistakes as they believe they will be forgiven. They can identify to some member. Botou et al. (2017) confirmed the importance of family in building resilience. They found that the strong family nexus helped teachers in Greece maintain their resilience during the economic crisis. These teachers had strong relationships with their families. They got financial support from their family whenever needed. Therefore, the economic crisis in Greece could only moderately affect them. Chang, Neo, and Fung also found that an individuals' wellbeing and resilience are predicted by family resilience. Moreover, the family resilience and the resilience of individuals' existed in a reciprocal causal relationship. Families provide material and psychological support to individuals. Cohen, Slonim, Finzi, and Leichtentritt (2002) have also listed some protective factors and processes that families contribute to an individual's resilience. As confirmed by the researchers (Masten & Obradovic, 2008; Walsh, 1998, 2003), in Asian countries, the family acts as a unit to cope with a difficult situation.

The third external source of resilience among teachers is the education factor. On the resilience doughnut quiz, teachers have reported that they enjoy learning and acquiring information through reading. They are valued for having new ideas. They participate in groups where they can discuss and share ideas. They mentioned the motivation and encouragement provided by their teachers for their studies. Their mentors, tutors, and other professionals help them whenever needed. They participate in activities of professional development. They enjoy exciting ways of learning. Teachers care about the quality of learning regarding their profession. Teachers' self-esteem and confidence are improved with their academic qualifications. Teachers with a better command of their subject knowledge and updated information may achieve their teaching objectives which minimize the professional challenges. It is confirmed by the idea of 'know more—teach more' presented by Cochran-Smith and Lytle (1999). The findings of the current study are confirmed by the previous research which found education as an important factor for resilience building among teachers (Jackson & Martin, 1998). A reciprocal connection was identified between a healthy environment for learning and improved resilience (Le Cornu, 2009).

The present study found that community is the weakest source of resilience among teachers. The common perception about eastern societies is that people generally remain connected with one another. Communities are considered intact and as a source of strength. But the current study has depicted a converse scenario at the workplace. It found that the teachers do not perceive community as their strength for resilience. It was observed that teachers are disengaged from their communities to perform any pivotal role. These findings are not consistent with the findings of the previous studies which reported the significance of social support as a source of resilience (Sudom & Zamorski, 2014). It was also found that environmental protective factors are mostly part of the community. Previous studies have confirmed that community, family, and school explain the resilience among teachers along with their personal factors (Yates, Pelphrey, & Smith, 2008). Some other studies have also described resilience in the context of individuals' social skills, academic achievements, and positive relationships (Johnson et al., 2014; Ungar & Lienbenberg, 2009).

The factors of peer and money also contribute well to teachers' resilience at higher secondary level. These factors are better contributors than the community factor. Mackenzie (2012) also reported that the money factor is important for teachers to stay at the job. Previous studies have confirmed that the socio-economic conditions affect resilience (Peterson, Park, & Sweeney, 2008). Once acquired, money may become a

source for resilience, but if one does not possess enough money the alternate sources such as the rest of the five external factors from the doughnut resilience model become active. In educational settings, better financial gains come with advancement in designation and work experience that promotes resilience.

Luthar (2006) confirmed the findings of the current study by reporting that resilience is the product of healthy relationships between coworkers. These findings were further strengthened by other studies (Gorman, 2005; Gu & Day, 2013; Masten, 2001). Peer factor is significant in building teachers' resilience especially at the early stages of career (Freedman & Appleman, 2008). Teachers get optimism and aspiration from their coworkers in any challenging situation (Anderson & Olsen, 2006). The positive outlook of colleagues is transmissible which becomes the source for boosting their morale (Howard & Johnson, 2004; Jarzabkowski, 2002). Research study confirmed that the positive relationships with colleagues helped teachers maintain their resilience during the economic crisis in Greece (Botou et al., 2017).

The current study found that internal factors of resilience coordinate with the external factors to build resilience among individuals. The internal factors included self-efficacy, awareness of resources, and self-esteem. The assessment of internal factors disclosed that all the internal factors contributed equally to the resilience of teachers at the higher secondary level. However, teachers scored the highest mean score on the self-efficacy factor. Day (2008) also identified that profession of teaching requires certain individual factors. The characteristics including self-esteem and self-efficacy are identified for empowering people to overcome challenges with enhanced resilience by previous studies (Day, 2008; Kitching, et al., 2009; Tait, 2008). These individual characteristics help in planning strategies to deal with setbacks and challenges (Tsouloupas et al., 2010). The study was delimited to six external and three internal factors of the resilience doughnut model. The partner factor of the model was not included in the study due to difficulty in data collection and data analysis of the current study design which places a limitation on the study. Data were collected on self-reporting questionnaires which may introduce bias from respondents.

Conclusions

- It is concluded that most of the teachers possessed a high resilience level.
- The current research indicated skill factor, family and identity factor, and education factor as three relatively stronger external factors of resilience along with three internal factors (self-efficacy, awareness of resources, and self-esteem) which are working better in teachers' life at the higher secondary level.
- All internal and external factors of teachers' resilience are significantly correlated.

Recommendations and Significant Implications

- The stronger external sources of teachers' resilience included skill, education, and family & identity factors. Worsley (2006) says that investment in stronger resources may further enhance teachers' resilience. The skill factor includes a variety of skills that may contribute to the teaching process such as writing, reading singing, playing an instrument, communication, leadership, time management, skills to incorporate technologies in process of teaching and learning, online teaching, classroom management, social skills, art, and creativity, etc. Appropriate opportunities including seminars, workshops, and refreshers courses may be arranged for demonstration and refinement of skills. Furthermore, the curriculum for prospective teachers may also incorporate mastering such skills.
- Education factor was identified as another strong resource of teachers' resilience, therefore, it is suggested that teachers' enrolments in virtual courses of their interest may be encouraged. Teachers may be granted incentives such as promotions, higher pay scales, etc for educational up-gradation. To promote a culture of continuing education, procedures for study-leave and scholarships may be made simple and unconditional.

- Family and identity factor may be conserved by providing educational and recreational opportunities at institutions such as family dinners, recreational leaves, symposiums for elder family members, orientation programs for better grooming of young children of teachers, etc. In Pakistan, teachers lack the provision of standardized facilities of health, residence, daycare centres, etc. Such facilities may be improved to make family and identity a better source of resilience among teachers.
- The community was identified as a weak source of resilience among teachers. It is needed to establish a meaningful interaction between teachers and the community through activities such as community galas. Teachers may join social forums to participate in efforts for addressing social issues and quality parenting. Social media may also prove helpful in this regard.
- Resilience may also be improved by developing stronger peer relationships. Activities such as annual dinners, formal and informal discussion sessions, mentor programs, open forums for addressing professional challenges may prove helpful in this regard. Mutual grievances may be removed to promote healthy peer interaction by establishing administrations based on justice and equality.
- The tangible and intangible remuneration may be upgraded to make money a better source of resilience among teachers.

References

Acton, R., & Glasgow, P. (2015). Teacher wellbeing in neoliberal contexts: A review of the literature. *Australian Journal of Teacher Education*, 40(8), 99-114.

Anderson, L., & Olsen, B. (2006). Investigating early career urban teachers' perspectives on and experiences in professional development. *Journal of Teacher Education,* 57(4), 359-377.

Arif, I., & Mirza, M. S (2017). Effectiveness of an Intervention Program in Fostering Academic Resilience of Students at Risk of Failure at Secondary School Level. *Bulletin of Education and Research,* 39(1), 251-264

Barrett, P. M., & Turner, C. M. (2004). *Handbook of interventions that work with children and adolescents: Prevention and treatment.* USA: Springer Publication.

Beltman, S., Mansfield, C., & Price, A. (2011). Thriving Not Just Surviving: A Review of Research on Teacher Resilience. *Educational Research Review,* 6, 185-207. https://doi.org/10.1016/j.edurev.2011.09.001

Bernard, B. (2004). *Resiliency. What we have learned.* San Francisco: Wested.

Botou, A., Mylonakou-Keke, I., Kalouri, O., & Tsergas, N. (2017). Primary School Teachers' Resilience during the Economic Crisis in Greece. *Psychology,* 8, 131-159. Retrieved from http://dx.doi.org/10.4236/psych.2017.81009 on 20-07-2019 at 8:30 pm

Braun, S. S., Schonert-Reichl, K. A., & Roeser, R. W. (2020). Effects of teachers' emotion regulation, burnout, and life satisfaction on student well-being. *Journal of Applied Developmental Psychology*, 69, 101151.

Brouskeli, V., Kaltsi, V., & Maria, L. (2018). Resilience and occupational well-being of secondary education teachers in Greece. *Issues in Educational Research,* 28(1), 43-60.

Castro, A. J., Kelly, J., & Shih, M. (2010). Resilience Strategies for New Teachers in High-Needs Areas. *Teaching and Teacher Education,* 26, 622-629. https://doi.org/10.1016/j.tate.2009.09.010

Chan, D. W. (2008). Emotional Intelligence, Self-Efficacy, and Coping among Chinese Prospective and In-Service Teachers in Hong Kong. *Educational Psychology,* 28, 397-408. https://doi.org/10.1080/01443410701668372

Cochran-Smith, M., & Lytle, S. L. (1999). Chapter 8: Relationships of knowledge and practice: Teacher learning in communities. *Review of research in education,* 24(1), 249-305.

Cohen, O., Slonim, I., Finzi, R., & Leichtentritt, R. D. (2002). Family Resilience: Israeli Mothers' Perspectives. *The American Journal of Family Therapy,* 30, 173-187. http://dx.doi.org/10.1080/019261802753573876

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change,* 9 (3), 243-260. https://doi.org/10.1007/s10833-007-9054-6

Demetriou, H., Wilson, E., & Winterbottom, M. (2009). The role of emotion in teaching: Are there differences between male and female newly qualified teachers' approaches to teaching? *Educational Studies,* 35(4), 449-473.

Eccles, J. S., & Roeser, R. W. (2016). School and community influences on human development. In M. H. Bornstein, & M. E. Lamb (Eds.). *Developmental psychology: An advanced textbook* (pp. 503–554). (7th ed.). Erlbaum.

Fantilli, R.D., & McDougall, D.E. (2009). A study of novice teachers: Challenges and supports in the first years. *Teaching and Teacher Education,* 25, 814-825.

Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health,* 26, 399-419.

Fleet, A., Kitson, R., Cassady, B., & Hughes. R. (2007). University-qualified Indigenous early childhood teachers: Voices of resilience. *Australian Journal of Early Childhood,* 32(3). 17-25.

Freedman, S.W., & Appleman, D. (2008). "What else would I be doing?": Teacher identity and teacher retention in urban schools. *Teacher Education Quarterly, 35*(3), 109-126.

Gorman, C. (2005). The Importance of Resilience. *Time,* 165, A52-A55.

Gu, Q., & Day, C. (2007). Teachers' resilience: A necessary condition for effectiveness. *Teaching and Teacher Education,* 23(8), 1302-1316. https://doi.org/10.1016/j.tate.2006.06.006.

Gu, Q., & Day, C. (2013). Challenges to Teacher Resilience: Conditions Count. *British Educational Research Journal,* 39, 22-44.

Hargreaves, A., & Fink, D. (2006). *Sustainable Leadership.* San Francisco, CA, Jossey-Bass.

Henderson, N., & Milstein, M. (2003). *Resiliency in Schools. Making it happens for students and educators.* Thousand Oaks, California: Corwin Press Inc.

Higgins, G.O. (1994). *Resilient adults: Overcoming a cruel past.* San Francisco, CA: Jossey- Bass.

Howard, S., & Johnson, B. (2004). Resilient Teachers: Resisting Stress and Burnout. *Social Psychology of Education,* 7, 399-420. https://doi.org/10.1007/s11218-004-0975-0

Kaldi, S. (2009). Student teachers' perceptions of self-competence in and emotions/stress about teaching in initial teacher education. *Educational Studies,* 35(3), 349-360.

Kalisch, R., Müller, M. B., & Tüscher, O. (2015). A conceptual framework for the neurobiological study of resilience. *Behavioral and brain sciences,* 38.

Kitching, K., Morgan, M., & O'Leary, M. (2009). It's the little things: Exploring the importance of common place events for early-career teachers' motivation. *Teachers and Teaching: Theory and Practice,* 15(1), 43-58. ISSN 1354-0602 print/ISSN 1470-1278 online © 2009 Taylor & Francis doi:10.1080/13540600802661311

Jackson, S., & Martin, P. Y. (1998). Surviving the care system: education and resilience. *Journal of adolescence*, 21(5), 569-583

Jarzabkowski, L. M. (2002). The social dimensions of teacher collegiality. *Journal of Educational Enquiry,* 3(2), 1-20.

Johnson, B., Down, B., Le Cornu, R., Peters, J., Sullivan, A., Pearce, J. et al. (2014. Promoting. Early Career Teacher Resilience: A Framework for Understanding and Acting. *Teachers and Teaching: Theory and Practice,* 20, 530-546. https://doi.org/10.1080/13540602.2014.937957

Le Cornu, R. (2009). Building Resilience in Pre-Service Teachers. *Teaching and Teacher Education,* 25, 717-723. https://doi.org/10.1016/j.tate.2008.11.016

http://doi.org/10.1207/S1532480XADS07038

Lewis, A. L. (2000). *Option Valuation under Stochastic Volatility.* California. Finance Press.

Luthar, S. S. (2006). Resilience in Development: A Synthesis of Research across Five Decades. In: D. Cicchetti, & D. J. Cohen (Eds.), *Developmental Psychopathology: Risk, Disorder, and Adaptation*,739-795. New York: Wiley.

Luthar, S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562.

Mackenzie, S. (2012). 'I can't imagine doing anything else': why do teachers of children with SEN remain in the profession? Resilience, rewards and realism over time. Journal of Research in Special Educational Needs, 12(3), 151e161. http:// dx.doi.org/10.1111/j.1471-3802.2011.01221.x.

Masten, A. S. (2001). Ordinary Magic: Resilience Process in Development. *American Psychologist*, 56, 227-239. https://doi.org/10.1037/0003-066X.56.3.227

Masten, A., Best, K., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology* 2, 425–444.

Masten, A. S., & Obradovic, J. (2008). Disaster preparation and recovery: Lessons from research on resilience in human development. *Ecology and society*,13(1).

Masten, A.S., & Powel, J. P. (2003). A Resilience Framework for Research, Policy, and Practice. In Luthar, S.S. (Eds), *Resilience and vulnerability* (pp.1-25) Cambridge University Press.

McCormack, A., & Gore, J. (2008, November). If only I could just teach": Early career teachers, their colleagues, and the operation of power. In *Paper presented December 2008 at the Annual Conference of the Australian Association for Research in Education. Queensland University of Technology, Brisbane, Australia.*

McLean, L., & Connor, C. M. (2015). Depressive symptoms in third-grade teachers: Relations to classroom quality and student achievement. *Child Development,* 86(3), 945-954.

Olsen, B., & Anderson, L. (2007). Courses of action: A qualitative investigation into urban teacher retention and career development. Urban Education, 42(1), 5-29.

Peterson, C., Park, N., & Sweeney, P. (2008). Group Well-Being: Morale from a Positive Psychology Perspective. *Applied Psychology: An International Review*, 57, 19-36. https://doi.org/10.1111/j.1464-0597.2008.00352.x

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *The British journal of psychiatry*, 147(6), 598-611.

Scheopner, A. J. (2010). Irreconcilable differences: Teacher attrition in public and catholic schools. *Educational Research Review,* 5(3), 261-277.

Sinclair, C. (2008). Initial and changing student-teacher motivation and commitment to teaching. Asia-Pacific *Journal of Teacher Education,* 36(2), 79-104.

Sudom, K. A., Lee, J. E., & Zamorski, M. A. (2014). A longitudinal pilot study of resilience in Canadian military personnel. *Stress and Health*, 30(5), 377-385.

Tait, M. (2008). Resilience as a contributor to novice teacher success, commitment, and retention. *Teacher Education Quarterly*,35(4), 57-75.

Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010). Exploring the Association between Teachers' Perceived Student Misbehaviour and Emotional Exhaustion: The Importance of Teacher Efficacy Beliefs and Emotion Regulation. *Educational Psychology,* 30, 173-189. https://doi.org/10.1080/01443410903494460

Ungar, M., & Liebenberg, L. (2009). Cross-cultural consultation leading to the development of a valid measure of youth resilience: the international resilience project. Studia Psychologica, 51(2-3), 259-268.

Walsh, F. (1998). *Strengthening Family Resilience.* New York: Guildford Press.

Walsh, F. (2003). Family Resilience: A Framework for Clinical Practice. *Family Process,* 42, 1-18. http://dx.doi.org/10.1111/j.1545-5300.2003.00001.x

Werner, E. E. (1971). *The children of Kauai: a longitudinal study from the prenatal period to age ten. Honolulu:* University of Hawaii Press, ISBN 0870228609.

Wolin, S. J., & Wolin, S. (1993). *The Resilient Self: How Survivors of Troubled Families Rise Above Adversity.* NY: Villard Books

Worsley, L. (2006). *The Resilience Doughnut: The secret of strong kids.* Sydney, Australia: Wild and Woolley Publications.

Worsley L. (2010). The Resilience Doughnut Framework: The Contextual Factors Which Combine to Build Resilience in Young People. Retrieved from www.theresiliencedoughnut.com.au.

Yates, L., Pelphrey, B. A., & Smith, P. A. (2008). An exploratory phenomenological study of African American male pre-service teachers at a historical black university in the mid-south. *National Forum of Applied Educational Research Journal,* 21(3).

Yost, D., S. (2006). Reflection and self-efficacy: Enhancing the retention of qualified teachers from a teacher education perspective. *Teacher Education Quarterly*, 33(4), 59-76.