

## **The Mediating Role of Job Stress between Social Support and development of Stress, Anxiety and Depression in Educators and Health Professionals**

**Dr. Amanat Khan<sup>1</sup>**

Combined Military Hospital, Rawalpindi

**Areeba Amanat<sup>2</sup>, Muhammad Aqeel<sup>3</sup>, Numair Ahmed Sulehri<sup>4</sup>, Eisha Sana<sup>6</sup> & Hira Amin<sup>7</sup>**

Foundation University, Rawalpindi Campus

**Areej Amanat<sup>5</sup>**

Yusra Medical and Dental College, Islamabad

Current study is intended to examine the mediating role of job stress between social support and development of stress, anxiety and depression in educators and health professionals. Sample comprised of 231 professional (Educators =131, Health =100) age ranged from 21 to 65 years. Purposive sampling technique was employed based on cross-sectional design. Three scales were used to measure job stress, social support, stress, anxiety and depression. This study revealed that job stress was positively significant predicted by social support ( $\beta=.39$ ,  $p<.000$ ;  $\beta=.04$ , n.s for educators and health professional respectively). In turn, job stress was positively significant predicting to stress ( $\beta = .54$ ,  $p<.000$ ;  $\beta = .04$ , n.s for educator and health professional respectively). Our study analysis revealed that job stress was significantly playing the role of full mediator between social support and stress in health professionals. Recommendations of the study are that both educators and health professional can equally be benefitted by an intervention addressing job stress however, educators can get more benefit by addressing job stress and stress.

*Keyword.* Social support, job stress, stress, anxiety and depression, health and educators professional

- 
1. *Health Professional at Combined Military Hospital, Rawalpindi.*
  2. *B.S Scholar from Department of Psychology, Foundation University, Rawalpindi campus.*
  3. *Lecturer, Department of Psychology, Foundation University, Rawalpindi Campus.*
  4. *Foundation University Rawalpindi Campus, Department of Business & Economics.*
  5. *MBBS Scholar from Yusra Medical and Dental College, Islamabad.*
  6. *B.S Scholar from Department of Psychology, Foundation University, Rawalpindi campus.*
  7. *B.S Scholar from Department of Psychology, Foundation University, Rawalpindi campus.*

*Correspondence concerning this article should be addressed to Areeba Amanat Department of Psychology*

There is a consensus across the scholars that teaching is the most crucial and noblest social profession, which is creating all other professions since centuries in entire world. It has positive influence on all socio-economic groups of human culture. Educators are expected to create such intellectual scholars, who will be contributing effectively and valuable input within a society. This task is becoming very difficult and challenging day by day for every human society, whereas minor mistake may make greater destruction in the construction of the social norms. Education is gradually becoming business because of change in social structure and advancement in technology, in which teacher are well paid as per other industries. Students are considering as customers in the dynamic business model. They are more valuable customers than employed teachers in business model institutes. Consequently, the role of monitoring and personality shaping of students has been specifically taken out from teacher's job roles. Teachers are just serving as facilitators to assist pupils learn by rote, certain topics had imperatively lost its intellectual worth in this change. It creates deleteriously effects on teacher mental health. This substantial change creates the job stress among educational professionals and is an important factor for enhancing psychological problems especially stresses, anxiety and depression. Similarly, the health professionals had remained reinforced with monetary benefits. because of it vital need in human society. Their jobs have singularity for which they don't have to do multi-tasking and work overload (Husain, Gulzar, & Aqeel, 2016; Shoukat, Wasif, & Aqeel, 2015; Amin, Wasif, & Aqeel, 2015; Sidrah, Wasif & Aqeel, 2015; Khan, Aqeel, & Riaz, 2014).

Job stress, in general, refers to work-related psychological pressure against a worker's ability to respond and handle a specific situation at the work place tactfully. In other words, it is "harmful psychological and physical responses produced when worker's competence and resources are not compatible with the job requirements" (Chen & Silverthorne, 2008).

Job stress among educational professionals had become a topic of professional interest (Fisher, 1994). Job stress, occupational stress, Job strain, work stress; with at all titles, had been observed as a vital workplace concern by adequate researchers (Fox & Spector, 2006; Judge & Colquitt, 2004; Glazer & Beehr, 2005; Karasek, 1979; Dormann & Zapf, 2002; Lazarus, 1991; Ganster & Schaubroeck, 1991; Husain, Gulzar, & Aqeel, 2016; Jamal & Baba, 1992; Scheck, Kinicki, & Davy, 1995; Dewe, 2003; Viswesvaran, Sanchez, & Fisher, 1999). Job stressor may vary and depend on nature of workplace in different organizations. There are a variety of harmful outcomes for workplace stress including ambiguities in job roles, work overload, incompetent supervisor, downsizing, lack of recognition, violence and technological difficulties (DeFrank & Ivancevich, 1998).

High stress levels hinders productivity, quality, creativity on one hand and employee wellbeing, morale at other hand (Cohen & Williamson, 1991). It is a sequel of many psychosocial factors which had impacted workforce in many irregular ways. These factors include noise and dim light at working place, high job demands, role overload, role ambiguity, lack of sleep and time pressure (Khan, Aqeel, & Riaz, 2014). But the underlying physiological mechanism effects on the relationships between high job strain and low social support leading to severe health problems, had remains vague in the past studies. Few researchers agree that the

idea of acute stress respond to these psychological problems (Karasek & Theorell, 1990; Kivimäki, et al., 2012).

The consistent job stress may lead workers toward mental disorders including psychological distress. Depression, usually defined as an umbrella term for depressive disorder with many symptoms that badly effect mental health. These symptoms comprise hopelessness, dysphoria, self-deprecation, and devaluation of life, anhedonia lack of interest, and inertia (Lovibond & Lovibond, 1995).

Prior numerous study's findings explained that social support was highly related with less job stress and negatively associated with different forms of psychological distress (Albrecht, Burlison, & Sarason, 1992; Wright, King, & Rosenberg, 2014; Stansfeld & Candy, 2006; Ota., et al, 2009; Nieuwenhuijsen, Bruinvels & Frings-Dresen, 2010; Karasek & Theorell, 1990). Numerous previous researches also revealed that Social Support has been negatively associated with a series of psychological problems such as loneliness (Segrin & Domschke, 2011), depression (Kleinberg, Aluoja, & Vasar, 2013), perceived stress (Wright, Banas, Bessarabova, & Bernard, 2010), and anxiety (Hart & Hittner, 1991). Many researches proved that Social support has been negative predicted for depression (Väänänen, Marttunen, Helminen, & Kaltiala-Heino, 2014). Moreover, Social Support can be most useful in depression for dealing with the receptors of a sense in acknowledgement that reinforces the self-esteem (Vollmann et al., 2010).

Similar, studies proved that the social support was one of the most crucial variable to cure the job stressors which boost the strain (Cohen & Wills, 1985). Social support had been proposed as the influential remedy against the stress for social comfort (Thoits, 1986). Many forms of Social Support, including tangible human assistance, emotional and informational support functions as proactive factors to reduce psychological problems because, social support can aid people to evaluate stressful events. But, if social support is implemented without a proper procedure it may act as risk to increase stress instead of decreasing (Brock & Lawrence, 2009; Gleason, Iida, Shrout, & Bolger, 2008; LaGaipa, 1990).

The occupational stress and psychological problems was highly related with social environment in a workplace had under-researched (Kinman, Wray, & Strange, 2011; Kowalski et al., 2010). Occupational stress was predicted to be controlled by social support (Jenkins & Elliott, 2004). Although there is less knowledge about the types of social support that are available to health professionals. Different types of support in the society are related to job stress previously. One study explains, social support sources and functions to job resources, according to the job demands-resources and model of burnout (Demerouti et al., 2001). There were evidence, that work-related support, may be specifically crucial for declining stress among health professionals (Liang, Hsieh, Lin, & Chen, 2013; McGilton, Hall, Wodchis, & Petroz, 2007). A variety of distinctions had been made between various types of social support and the functions they serve (Uchino, 2004; Thoits, 2011).

The prior studies had revealed that the instrumental support and encouragement of worth were impacting positively on psychological well-being, such as helping individuals to cope up with occupational stress (Akroyd, Caison, & Adams, 2002; Scheurer, Choudhry, Swanton, Matlin, & Shrank, 2012; Stevens et al., 2013; Varvel et al., 2007; House, 1987).

In Pakistan, there are many research conducted on job stress in teachers; the prior researches had not focused with the mediating role of job stress between social support and psychological distress (Stress, anxiety and depression) in health and educational professionals (Husain, Gulzar, & Aqeel, 2016; Shoukat, Wasif, & Aqeel, 2015; Amin, Wasif, & Aqeel, 2015; Sidrah, Wasif & Aqeel, 2015; Khan, Aqeel, & Riaz, 2014). Previous studies had confirmed that the Social Support was used as a moderator between social stressor and job performance. Which entails that, high social support will change the negative relationship between social stressor and job performance (House, 1981).

This study was carried out to explore this unpacked and neglected area. The value of the present study has fulfilled the neglected area for the previous knowledge on the specific professionals. Current study was intended to examine the mediating role of job stress between social support and development of stress, anxiety and depression in educators and health professionals. Moreover the study was investigating the relationship among job stress, social support and psychological stress (Stress, anxiety and depression) in educators and health professionals.

## **Method**

### **Hypotheses**

1. Social support is negatively related with job stress, stress, anxiety and depression in educators and health professionals.
2. Job stress is positively related with stress, anxiety and depression in educators and health professionals.

### **Sample**

Purposive convenient sampling techniques were employed based on cross-section design. Sample comprised 231 professionals (Health, n=100; Educators, n =131). Both male and female health and educators professionals were incorporated with age ranged from 20 to 65 years. The sample was selected from different public and private schools, colleges, military hospital and combined military hospital of two twin's cities Rawalpindi and Islamabad, Pakistan.

### **Instruments**

Following three measures were used to assess job stress, social support, stress, anxiety and depression.

**Job Stress Scale.** It was originally developed by Parker and DeCotiis (1983). It consisted on 13 items. It was designed to measure employees perceived work-related psychological stress (e.g., anxiety, tension). Each item was rated on a 5-point Likert-type scale where scores are rated to the response category from (*strongly disagree*) to 5 (*strongly agree*).

Minimum score on scale is 13 and maximum can be 65. High scores indicate the high level of job stress and low scores on scale reflect low level of job stress.

**Multidimensional Scale of Perceived Social Support.** The scale was originally developed by Zimet, Dahlem, Zimet, and Farley (1988). It was designed to measure employees' perceived social support. It consisted of 12 items having 4 subscales named as: (1) Perceived social support, (2) Family, (3) Friends, and (4) significant others. It is a 7-point Likert scale. Minimum score on scale is 12 and maximum can be 67. High scores reflect the high level of social support and low scores on scale reflect low level of social support.

**Depression anxiety stresses scale.** DASS was developed by Lovibond & Lovibond (1995) and translated by Zafar & Khalily (2015). It was designed to measure employees' stress, anxiety, and depression. It consists of 42 items having three subscales: (1) Depression (items no. 3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, and 42), (2) Anxiety (items no. 2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40, and 41) and (3) Stress (items no. 1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, and 39). High scores reflect the high level of psychological problem on each subscale and low scores on scale reflect low level of psychological problem on each subscale.

## **Procedure**

Three instruments with demographic information were applied individually from both educators and health professionals. In the current research data of 231 participants were collected from hospitals and educational institutes of Islamabad and Rawalpindi. Participants of the study were approached by the researcher and with the permission of the hospital and educational institutes' administration. The research objectives and nature of the current study were explained during data collection. It was assured to the sample frame that study results would be kept confidential and would only be used for the research purpose. After taking the consent of the hospital and educational institute administration, the working conditions and environment were observed. Members of staff also helped to identify stressed participants. The researcher requested the heads of departments to identify the job-stressed individuals. Then the questionnaires were handed over to the participants. There was no fixed time limit for completing the questionnaires. It was difficult to convince the participants to fill the questionnaire because of excessive workload on them. Consistent counseling was applied during the process of data collection.

## **Results**

The current study was intended to examine the relationship among variables in context. Moreover, to investigate the mediating role of job stress between social support and development of stress, anxiety, and depression in educators and health professionals. Different statistical analyses were carried out to accomplish the objectives of the present study. Alpha coefficients and Person correlations were calculated to see the reliability of the three instruments in the present study. Moderation and mediation analysis were also performed to see the mediating role of job stress.

between social support and development of stress, anxiety and depression in educators and health professionals.

**Table 1**  
*Alpha coefficients and correlation matrix among Social Support, Job Stress, Stress, Anxiety and Depression in Health and educator Professionals (N = 231).*

variables	$\alpha$	1	2	3	4	5	6
Educators professionals							
1.DASS	.84	-	.86**	.80**	.83**	.57**	-.35*
2.Anxiety	.82		-	.86**	.83**	.13	-.05
3.depression	.86			-	.78**	.07	-.11
4.stress	.81				-	.37	-.31**
5.Job stress	.87					-	-.35***
6.Social	.76						-
Health professionals							
1.DASS	.71	-	.76**	.81**	.81**	.08	-.12
2.Anxiety	.73		-	.81**	.82**	.11	-.04
3.Depression	.76			-	.78**	.07	-.12
4.Stress	.86				-	.13	-.10
5.Job stress	.81					-	-.13
6.Social	.73						-

Note. DASS=Depression Anxiety Stress Scale, Social=Social Support, \*\*\* $p < .000$ . \*\* $p < .01$ . \* $p < .05$ .

Overall, Alpha coefficients of study variables were satisfactory in current study. Table revealed that social support was negatively significant related with job stress and stress in educators. Table result also displayed that job stress was positively significant related with stress in educators.

Table 2

*The mediating role of job stress between social support and development of stress, anxiety and depression in Health and educator Professionals (N = 231)*

Variables	Stress		Depression			Anxiety			$\beta$	Job stress		
	B	SE	B	B	SE	B	B	SE		B	SE	B
Health Professionals												
Social										.023	.054	.042
Job stress	.042	.222	.019	.068	.071	.029	.147	.087	.065			
Stress				.481	.081	.452***	.936	.039	.919***			
Anxiety					.545	.080	.522***					
Educator Professionals												
Social										.505	.106	.39***
Job stress	.30	.041	.54***	-.07	.018	-.013	.023	.026	.043			
Stress				.643	.064	.626***	.866	.047	.870***			
Anxiety				.366	.063	.355***						

.Note. Social=Social Support, \*\*\* $p < .000$ . \*\* $p < .01$ . \* $p < .05$ .

This conditional model represented fit the data sufficiently,  $\chi^2(1) = .388$ ,  $p < .533$ ,  $\chi^2/df = .388$ , RMSEA = .000, CFI = 1.00, NFI = .99, TLI = 1.01. This study revealed that job stress was positively significant predicted by social support ( $\beta = .39$ ,  $p < .000$ ;  $\beta = .04$ , n.s for educators and health professional respectively). In turn, job stress was positively significant predicting to stress ( $\beta = .54$ ,  $p < .000$ ;  $\beta = .04$ , n.s for educators and health professional respectively). According to Baron and Kenny (1986) job stress was significant playing the role of full mediator between social support and stress in health professionals. The result indicated that Stress was a significant

predict for depression ( $\beta=.62, p < .000$ ;  $\beta=.45, p < .000$  for educators and health professionals respectively) and anxiety ( $\beta=.87, p < .000$ ;  $\beta=.91, p < .000$  for educators and health professionals respectively). Predictor variables shown for 53% of the variance in stress, and 88% of the variance in depression for educators.

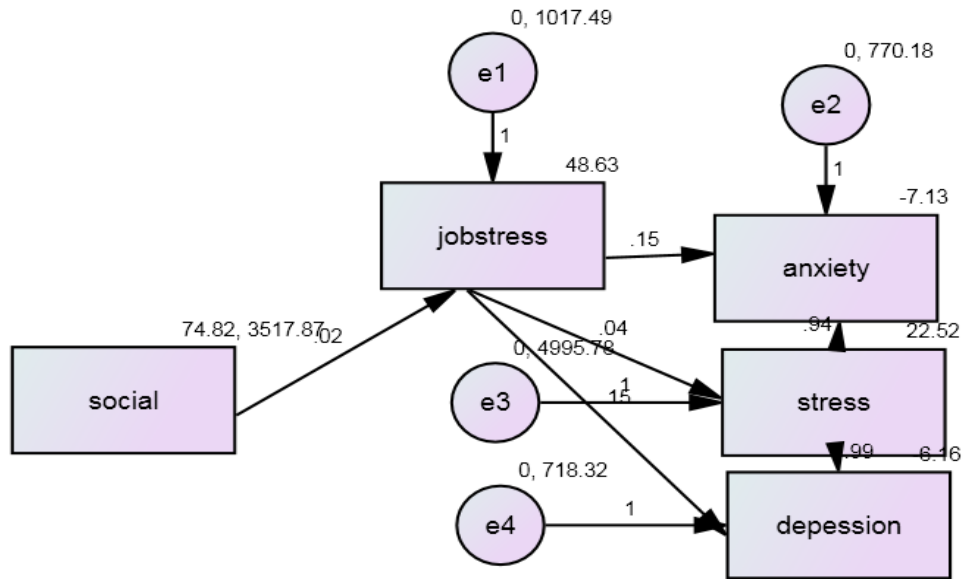


Figure 1. The mediating role of job stress between social support and development of stress, anxiety and depression in Health professionals (N = 100).

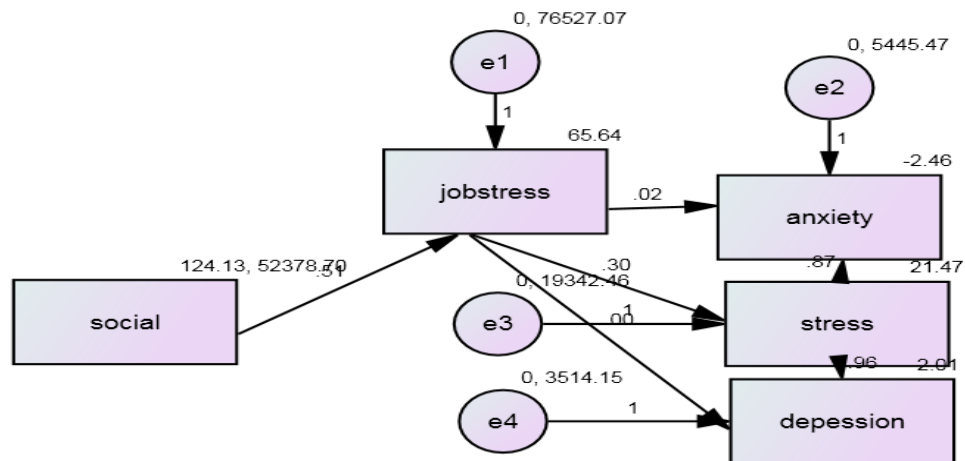


Figure 2. The mediating role of job stress between social support and development of stress, anxiety and depression in educator professionals (N = 131).



## **Discussion**

Current study was intended to examine the mediating role of job stress between social support and development of stress, anxiety and depression in educators and health professionals. Moreover, to examine the relationship among social support, job stress, stress, anxiety and depression in educator and health professionals.

Regarding to objective 1 which states “To investigate the mediating role of the job stress among social support and development of stress, anxiety and depression in educator and health professionals” was partially supporting by current research. Our study results revealed that job stress is mediator between social support and development of stress, anxiety and depression in educators. Current results are consistent with previous study findings that social support was highly associated with less job stress and stress educator’s professionals (Beehr & McGrath, 1992; Azeem & Nazir, 2008; Kim, Sherman, & Taylor, 2008; Siu et al., 2013; AbuAlRub, 2004; Fisher, 1994; Kerr, Preuss, & King, 2006; Cohen & Wills, 1985; Hughes et al., 2004; Kerr et al., 2006; Mazza & Eggert, 2001; Perkins & Hartless, 2002; Husain, Gulzar, & Aqeel, 2016). Prior studies elaborated that social support is one of the most effective means by which people can cope with stressful events (Kim, Sherman, & Taylor, 2008).

Similar study reported that Social Support has adverse effects on job stress in education context (Siu, Lu, & Spector, 2013). On the contrary, previous studies finding were reported that health professionals are less exposed to job stress in presence of social support and vice versa. Interestingly, coworkers were more prone job stress as compared to the higher professionals (AbuAlRub, 2004). On the other hand, job strain was found elevated in teachers because of work overload and job descriptions. For instance, they were under great load of extra classes, and research work (Fisher, 1994).

Prior study revealed that family support is an main crucial factor for buffer to overcome of family stress and job stress (Ngai & Cheung, 2002). Friend’s support was highly associated with better well-being (Kerr, Preuss, & King, 2006). Buffering hypothesis model elaborated that social support had negative impact on human psychological well-being. It means that social support protects to overcome individuals stress, anxiety in threading conditions (Cohen & Wills, 1985). Similar, research had shown that lack of social support was a risk factor for depression (Kerr et al., 2006; Mazza & Eggert, 2001; Perkins & Hartless, 2002).

Numerous prior studies reported that high job strain in workplace was led to job anxiety. In contrast, Social support is frequently recommended as cure for this job strain, because it is expected to help in one of three ways: (1) it is directly help out for reducing the anxiety, (2) it is most beneficial factor and interact with other buffering organizational elements to overcome

occupational stressors and (3) it is reducing the strength of their effects on anxiety, and by weakening the strength of the occupational stressors themselves (Beehr & McGrath, 1992). In Pakistani context, educators have limited income because a constant amount is paid without bonus. The cultural norms and family system is arranged in such a way that can either enhance or destroy the psychological well-being of an individual.

Regarding to hypothesis 1 which states “Social support is negatively related with job stress, stress, anxiety and depression in educators and health professionals” was partially supporting in current research. Our study results revealed that social support is negatively related with job stress and stress in educator’s professionals. Current results are consistent with previous study that social support was highly associated with less job stress and stress educator’s professionals (Kim, Sherman, & Taylor, 2008; Siu et al., 2013; AbuAIRub, 2004; Fisher, 1994). Similar study reported that Social Support has adverse effects on job stress in education context (Siu et al., 2013). Contrary, previous studies finding reported that health professionals were less exposed job stress in presence of social support and vice versa. Interesting, coworkers were more prone job stress as compare to loaded professionals (AbuAIRub, 2004). Moreover, job strain was found elevated in teachers because of overloaded job descriptions for instance, they were shitload of extra classes, and research work (Fisher, 1994). Prior study revealed that friend’s support was highly associated with better well-being (Kerr et al., 2006).

Regarding to hypothesis 2 which states “Job stress is positively related with stress, anxiety and depression in educators and health professionals.” was partially supporting in current research. Our study results revealed that job stress is positively related with stress in educator’s professionals. Current study results are comparable with previous study that job stress was highly associated with more psychological distress in educator’s professionals(Chan, 2002). Prior studies elaborated that teachers were more predisposed psychological distress because of job strain and lack of social support than health professionals (Chan, 2002). Numerous prior studies reported that high job strain in workplace was led to job anxiety. In contrast, Social support is frequently recommended as cure for this job strain, because it is expected to help in one of three ways: (1) it is directly help out for reducing the anxiety, (2) it is most beneficial factor and interact with other buffering organizational elements to overcome occupational stressors and (3) it is reducing the strength of their effects on anxiety, and by weakening the strength of the occupational stressors themselves (Beehr & McGrath, 1992).

### **Implementations & Conclusion**

This would help in clinical and pedagogical solutions for seizing reins of deleterious power of job stress on educator’s life and also resolve problem of health professionals for the better work environment. This involves development of proper strategies such as screening system which will further help in applying counseling and therapeutic techniques to the affected educators/health professionals. Recommendations of the study are for both educators and health professional, who can equally benefit by an intervention addressing job stress, however; educators can get more benefit by addressing social support and job stress.

The results of present study lead to new surprising finding for educators who would quit their current jobs because of job stress, they may have developed imperative psychological distress (stress, anxiety and depression) in comparison to health professions. In Pakistan, newly

hired employers of different private and public sector /organizations, would commonly not screened for their mental problems, Educators and health professionals may take risky and deleterious effect of their mental problems to their novel situation and this would undermine intellectual performance as teachers. This study suggested to the employers of private and public education organization to evaluate mental problems of their latest appointed teachers so that they could overcome with compulsory psychological cure before they continue with their teaching activities. The similar process is being recommended to other organization workers with similar problem who could further be appropriate for their case.

## References

- AbuAlRub, R. F. (2004). Job stress, job performance, and social support among hospital nurses. *Journal of nursing scholarship*, 36(1), 73-78.
- Ahmady, S., Changiz, T., Masiello, I., & Brommels, M. (2007). Organizational role stress among medical school faculty members in Iran: dealing with role conflict. *BMC Medical education*, 7(1), 14.
- Amin, F., Wasif, S., & Aqeel, M. (2015). Depression, anxiety and stress. Germany: Lambert Publications.
- Akroyd, D., Caison, A., & Adams, R. D. (2002). Burnout in radiation therapists: the predictive value of selected stressors. *International Journal of Radiation Oncology\* Biology\* Physics*, 52(3), 816-821.
- Albrecht, T. L., Burleson, B. R., & Sarason, I. (1992). Meaning and method in the study of communication and social support: An introduction. *Communication Research*, 19(2), 149-153.
- Azeem, S. M., & Nazir, N. A. (2008). A study of job burnout among university teachers. *Psychology & Developing Societies*, 20(1), 51-64.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Beehr, T. A., & McGrath, J. E. (1992). Social support, occupational stress and anxiety. *Anxiety, Stress, and Coping*, 5(1), 7-19.
- Brock, R. L., & Lawrence, E. (2009). Too much of a good thing: underprovision versus overprovision of partner support. *Journal of Family Psychology*, 23(2), 181.
- Camara, M., Bacigalupe, G., & Padilla, P. (2014). The role of social support in adolescents: are you helping me or stressing me out? *International Journal of Adolescence and Youth*(ahead-of-print), 1-14.
- Cava, M. J., Murgui, S., & Musitu, G. (2008). [Differences in protective factors of substance use in early and middle adolescence]. *Psicothema*, 20(3), 389-395.
- Chan, D. W. (2002). Stress, self-efficacy, social support, and psychological distress among prospective Chinese teachers in Hong Kong. *Educational Psychology*, 22(5), 557-569.
- Chen, J.-C., & Silverthorne, C. (2008). The impact of locus of control on job stress, job performance and job satisfaction in Taiwan. *Leadership & Organization Development Journal*, 29(7), 572-582.
- Cheung, N. F. (2002). The cultural and social meanings of childbearing for Chinese and Scottish women in Scotland. *Midwifery*, 18(4), 279-295.

- Cohen, S., & Williamson, G. M. (1991). Stress and infectious disease in humans. *Psychological bulletin*, 109(1), 5.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological bulletin*, 98(2), 310.
- Demaray, M. K., Malecki, C. K., Davidson, L. M., Hodgson, K. K., & Rebus, P. J. (2005). The relationship between social support and student adjustment: A longitudinal analysis. *Psychology in the Schools*, 42(7), 691-706.
- DeFrank, R. S., & Ivancevich, J. M. (1998). Stress on the job: An executive update. *The Academy of Management Executive*, 12(3), 55-66.
- Dewe, P. (2003). A closer examination of the patterns when coping with work-related stress: Implications for measurement. *Journal of Occupational and Organizational Psychology*, 76(4), 517-524.
- Decker, C. L. (2007). Social support and adolescent cancer survivors: A review of the literature. *Psycho-Oncology*, 16(1), 1-11.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, 86(3), 499.
- Dormann, C., & Zapf, D. (2002). Social stressors at work, irritation, and depressive symptoms: Accounting for unmeasured third variables in a multi-wave study. *Journal of Occupational and Organizational Psychology*, 75(1), 33-58.
- Dingfelder, H. E., Jaffee, S. R., & Mandell, D. S. (2010). The impact of social support on depressive symptoms among adolescents in the child welfare system: A propensity score analysis. *Children and Youth Services Review*, 32(10), 1255-1261.
- Fisher, S. (1994). *Stress in academic life: The mental assembly line*: Open University Press.
- Fox, S., & Spector, P. E. (2006). The many roles of control in a stressor-emotion theory of counterproductive work behavior. In *Employee health, coping and methodologies* (pp. 171-201). Emerald Group Publishing Limited.
- Graziano, F., Bonino, S., & Cattellino, E. (2009). Links between maternal and paternal support, depressive feelings and social and academic self-efficacy in adolescence. *European Journal of Developmental Psychology*, 6(2), 241-257.
- Hart, K. E., & Hittner, J. B. (1991). Irrational beliefs, perceived availability of social support, and anxiety. *Journal of clinical psychology*, 47(4), 582-587.
- Huang, C. P., Chen, H. N., Su, H. L., Hsieh, C. L., Chen, W. H., Lai, Z. R., & Lin, Y. W. (2013). Electroacupuncture reduces carrageenan-and CFA-induced inflammatory pain accompanied by changing the expression of Nav1. 7 and Nav1. 8, rather than Nav1. 9, in mice dorsal root ganglia. *Evidence-Based Complementary and Alternative Medicine*, 2013.
- House, J. S. (1987). Social support and social structure. In *Sociological forum* (Vol. 2, No. 1, pp. 135-146). Kluwer Academic Publishers.
- Husain, W., Gulzar, A., & Aqeel, M. (2016). The mediating role of depression, anxiety and stress between job strain and turnover intentions among male and female teachers. *FWU Journal of Social Sciences*, 10(1), 48.
- Hughes, J. W., Tomlinson, A., Blumenthal, J. A., Davidson, J., Sketch Jr, M. H., & Watkins, L. L. (2004). Social support and religiosity as coping strategies for anxiety in hospitalized cardiac patients. *Annals of Behavioral Medicine*, 28(3), 179-185.
- Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*, 285-308.
- Kerr, D. C., Preuss, L. J., & King, C. A. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathology. *Journal of abnormal child psychology*, 34(1), 99-110.

- Khan, E. A., Aqeel, M., & Riaz, M. A. (2014). Impact of Job stress on Job attitudes and Life satisfaction in College Lecturers. *International Journal of Information and Education Technology*, 4(3), 370-373.
- Kim, D.-H., Lee, Y.-H., & Lee, J.-W. (2008). Assessment of job stress factors and organizational personality types for procedure-based jobs in nuclear power plants. *Journal of nuclear science and technology*, 45(8), 784-792.
- Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist*, 63(6), 518.
- Kinman, G., Wray, S., & Strange, C. (2011). Emotional labour, burnout and job satisfaction in UK teachers: The role of workplace social support. *Educational Psychology*, 31(7), 843-856.
- Kivimäki, M., Nyberg, S. T., Batty, G. D., Fransson, E. I., Heikkilä, K., Alfredsson, L., ... & Clays, E. (2012). Job strain as a risk factor for coronary heart disease: a collaborative meta-analysis of individual participant data. *The Lancet*, 380(9852), 1491-1497.
- Kleinberg, A., Aluoja, A., & Vasar, V. (2013). Help-Seeking for Emotional Problems in Major Depression. *Community mental health journal*, 49(4), 427-432.
- Lagaipa, S. J. (1990). Suffer the little children: the ancient practice of infanticide as a modern moral dilemma. *Issues in comprehensive pediatric nursing*, 13(4), 241-251.
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford University Press on Demand.
- Iida, M., Shrout, P. E., Laurenceau, J. P., & Bolger, N. (2012). Using diary methods in.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, 33(3), 335-343.
- Mazza, J. J., & Eggert, L. L. (2001). Activity Involvement Among Suicidal and Nonsuicidal High-Risk and Typical Adolescents. *Suicide and Life-Threatening Behavior*, 31(3), 265-281.
- McGilton, K. S., Hall, L. M., Wodchis, W. P., & Petroz, U. (2007). Supervisory support, job stress, and job satisfaction among long-term care nursing staff. *Journal of Nursing Administration*, 37(7/8), 366-372.
- Mearns, J., & Cain, J. E. (2003). Relationships between teachers' occupational stress and their burnout and distress: Roles of coping and negative mood regulation expectancies. *Anxiety, Stress & Coping*, 16(1), 71-82.
- Motowidlo, S. J., Packard, J. S., & Manning, M. R. (1986). Occupational stress: its causes and consequences for job performance. *Journal of applied psychology*, 71(4), 618.
- Motowidlo, S. J., Packard, J. S., & Manning, M. R. (1986). Occupational stress: its causes and consequences for job performance. *Journal of applied psychology*, 71(4), 618.
- Nieuwenhuijsen, K., Bruinvels, D., & Frings-Dresen, M. (2010). Psychosocial work environment and stress-related disorders, a systematic review. *Occupational medicine*, 60(4), 277-286.
- Noor, R., Gul, S., Khan, E. A., Shahzad, N., & Aqeel, M. (2016). The Impact of Coping Strategies on Psychological Adjustment across Male and Female Spinal Cord Injured Patients. *J. Appl. Environ. Biol. Sci*, 6(2S), 137-143.
- Ochoa, G. M., Ferrer, B. M., & Pérez, S. M. (2006). Marital conflict, parental support, and school adjustment in adolescents. *Anuario de Psicología/The UB Journal of Psychology*, 37(3), 247-258.
- Ota, I., Li, X. Y., Hu, Y., & Weiss, S. J. (2009). Induction of a MT1-MMP and MT2-MMP-dependent basement membrane transmigration program in cancer cells by Snail1. *Proceedings of the National Academy of Sciences*, 106(48), 20318-20323.
- Parker, D. F., & DeCotiis, T. A. (1983). Organizational determinants of job stress. *Organizational behavior and human performance*, 32(2), 160-177.

- Perkins, D. F., & Hartless, G. (2002). An ecological risk-factor examination of suicide ideation and behavior of adolescents. *Journal of Adolescent Research, 17*(1), 3-26.
- Ganster, D. C., & Schaubroeck, J. (1991). Work stress and employee health. *Journal of management, 17*(2), 235-271.
- Glazer, S., & Beehr, T. A. (2005). Consistency of implications of three role stressors across four countries. *Journal of Organizational Behavior, 26*(5), 467-487.
- Jamal, M., & Baba, V. V. (1992). Shiftwork and department-type related to job stress, work attitudes and behavioral intentions: A study of nurses. *Journal of organizational behavior, 13*(5), 449-464.
- Jenkins, R., & Elliott, P. (2004). Stressors, burnout and social support: nurses in acute mental health settings. *Journal of advanced nursing, 48*(6), 622-631.
- Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: the mediating role of work-family conflict. *Journal of Applied Psychology, 89*(3), 395.
- Scheurer, D., Choudhry, N., Swanton, K. A., Matlin, O., & Shrank, W. (2012). Association between different types of social support and medication adherence. *The American journal of managed care, 18*(12), e461-7.
- Scheck, C. L., Kinicki, A. J., & Davy, J. A. (1995). A longitudinal study of a multivariate model of the stress process using structural equations modeling. *Human Relations, 48*(12), 1481-1510.
- Segrin, C., & Domschke, T. (2011). Social support, loneliness, recuperative processes, and their direct and indirect effects on health. *Health communication, 26*(3), 221-232.
- Shoukat, S., Wasif, S., Aqeel, M. (2015). Cognitive failor and depression. Germany: Lambert Publications.
- Shulman, E. P., & Cauffman, E. (2011). Coping while incarcerated: A study of male juvenile offenders. *Journal of Research on Adolescence, 21*(4), 818-826.
- Siu, O.-l., Lu, C.-q., & Spector, P. E. (2013). Direct and indirect relationship between social stressors and job performance in Greater China: The role of strain and social support. *European Journal of Work and Organizational Psychology, 22*(5), 520-531.
- Sidrah, R., Wasif, S., Aqeel, M. (2015). Eating disorders and depression among adolescents. Germany: Lambert Publications.
- Somers, C. L., Owens, D., & Piliawsky, M. (2008). Individual and social factors related to urban African American adolescents' school performance. *The High School Journal, 91*(3), 1-11.
- Stansfeld, S., & Candy, B. (2006). Psychosocial work environment and mental health—a meta-analytic review. *Scandinavian journal of work, environment & health, 443-462*.
- Thoits, P. A. (1986). Social support as coping assistance. *Journal of consulting and clinical psychology, 54*(4), 416.
- Theorell, T., & Karasek, R. A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of occupational health psychology, 1*(1), 9.
- Theorell, T., Karasek, R. A., & Eneroth, P. (1990). Job strain variations in relation to plasma testosterone fluctuations in working men—a longitudinal study. *Journal of internal medicine, 227*(1), 31-36.
- Uchino, B. N. (2004). *Social support and physical health: Understanding the health consequences of relationships*. Yale University Press.
- Väänänen, J.-M., Marttunen, M., Helminen, M., & Kaltiala-Heino, R. (2014). Low perceived social support predicts later depression but not social phobia in middle adolescence. *Health Psychology and Behavioral Medicine: an Open Access Journal, 2*(1), 1023-1037.
- Valiev, M., Bylaska, E. J., Govind, N., Kowalski, K., Straatsma, T. P., Van Dam, H. J., ... & De Jong, W. A. (2010). NWChem: a comprehensive and scalable open-source solution for large scale molecular simulations. *Computer Physics Communications, 181*(9), 1477-1489.

- Varvel, S. J., He, Y., Shannon, J. K., Tager, D., Bledman, R. A., Chaichanasakul, A., ... & Mallinckrodt, B. (2007). Multidimensional, threshold effects of social support in firefighters: Is more support invariably better?. *Journal of Counseling Psychology, 54*(4), 458.
- Vollmann, M., Scharloo, M., Salewski, C., Dienst, A., Schonauer, K., & Renner, B. (2010). Illness representations of depression and perceptions of the helpfulness of social support: Comparing depressed and never-depressed persons. *Journal of affective disorders, 125*(1), 213-220.
- Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of vocational behavior, 54*(2), 314-33.
- Wright, K. B., Banas, J. A., Bessarabova, E., & Bernard, D. R. (2010). A communication competence approach to examining health care social support, stress, and job burnout. *Health Communication, 25*(4), 375-382.
- Wright, K. B., King, S., & Rosenberg, J. (2014). Functions of social support and self-verification in association with loneliness, depression, and stress. *Journal of health communication, 19*(1), 82-99.
- Zafar, H., & Khalily, M. T. (2015). Didactic Therapy for Management of Stress and Co-morbid Symptoms of Depression and Anxiety in Pakistani Adolescents. *Pakistan Journal of Psychological Research, 30*(1), 131.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment, 52*(1), 30-41.