

Assessment of Resilience Among Undergraduate University Students of Karachi

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Abstract

University life is considered as the period of transition and students face various challenges during this developmental period. Empirical evidences find university students as the most vulnerable population for the mental health problems as compared to general population of same age. When dealing with stress, resilience serves as the protective factor that decreases the likelihood of psychopathology among students and leads them toward positive adaptation. Present study was aimed to assess the psychological resilience among undergraduate university students of Karachi with respect to gender and year of education. It was a cross-sectional analytical study conducted in two well-known universities of Karachi, i.e. University of Karachi and Jinnah University for Women. Two hundred undergraduate students (90 males and 110 females), between the age range of 18 to 30 years were approached by using random sampling technique. Present study uses Connor-Davidson Resilience Scale (CD-RISC) as the measure of resilience among university students. Overall, university students appeared to have moderate level of resilience. Data analysis revealed significant gender difference in the resilience scores of university students. However, year of education is not associated with difference in resilience scores. Implication of study suggests positive education of university students.

Keywords: Gender difference, Resilience, Stress, Undergraduate university students

Introduction

In the study of resilience young people “at-risk” is widely researched topic. That is conceptualized as facilitating youth in terms of promoting personal skills and providing the environment that help young population to thrive and withstand in adverse situation (Noble & McGrath, 2013). The concept of resilience has been defined as the multifaceted and complex; it has been described in versatile ways. Such as, Windle (2011) described resilience as, “*The process of effectively negotiating, adapting to, or managing significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and ‘bouncing back’ in the face of adversity*” (Windle, 2011, p. 1). Bonano (2004), Masten (2018) and Zautra, Hall and Murray (2010) defined resilience as successful outcome or positive adaptation to adverse situation. According to these definitions, resilience is comprised to two fundamental characteristics i.e. recovery and sustainability (Bonanno, 2004; Masten A. S., 2001; Rutter, 1987). Recovery is concerned with competency to deal adverse situation. On the other hand, sustainability is concerned with consistent way of moving on to positive adaptation to adverse situation.

In the domain of health priorities of 2020, World Health Organization (WHO) places emphasize on building and strengthening resilience at the individual and community level. World Health Organization (WHO) characterizes resilience as the fundamental feature of protecting and promoting health among young population (World Health Organization, 2017). Empirical evidences suggest that low resilience is associated with psychological distress and difficulty in coming back to normal pace of life after trauma or stressful life event. On the other hand, increased level of resilience leads to adaptability and efficient dealing with adverse life events (Conway, Tugaday, Catalino, & Fredrickson, 2013). A study (Fergusson, Beautrais, & Horwood, 2003) conducted on the suicidal tendencies among young population suggests resilience and vulnerability as the two extreme poles of same continuum. Because development of resilience is linked to certain protective factors that buffer person from psychological distress. However, negative or threatening factors increase the likelihood of psychological distress and vulnerability to development of psychopathology.

At global level, the mental health of university students is a public health matter of concern. There are vast researches (Dachew, Bisetegn, & Gebremariam, 2015; Kitzrow, 2003; Tariku, Zerihun, Bisrat, Adissu, & Jini, 2017) done in this area of interest and young student population is found to be the most vulnerable population for psychological problems such as depression, anxiety, adjustment, relational issues and many of others. The entrance of young population into the university is marked as the period of transition. Despite university demands, during this transition period they face many psycho-social challenges from society, such as, independent decision making, maintaining appropriate interpersonal relationships, participation societal level, taking responsibilities, future life direction and so on (Cleary, Walter, & Jackson, 2010; Hamaideh, 2009).

University life itself is surrounded with various stressors and challenges. Aideed, Abeera and Bajwa (2019) classify these stressors during university study life into five categories, namely; interpersonal stressors, intrapersonal stressors, stress of studies, stress of teachers and stress of social and peer groups. During the transition of university life psychological disturbance impose negative consequences on academic life, such as cognitive decline learning difficulties, relational problems, poor attention and low academic grades (Shankar & Park, 2016). Studies conducted on university students report increased level of psychological distress among them (Dachew, Bisetegn, & Gebremariam, 2015; Hersi, et al., 2017; Tariku, Zerihun, Bisrat, Adissu, & Jini, 2017). These studies identify various risk factor associated with psychological problems such as, young age, lack of social support, history of psychopathology, deficient academic performance and grades, financial problem, female gender and continuous pattern of study without break. Ultimately, these psychological problems increase the probability of risk taking behaviors e.g. suicidal behavior and substance abuse (Tran, et al., 2017). In nutshell, these are the factors that make university students as the most vulnerable population toward psychical, psychological and cognitive problems durinh university academic life (Shankar & Park, 2016).

At global and international level, assessment of resilience among both genders yield controversial findings (Dasti, et al., 2018; Dowthwaite, 2018; Manandhar, Hawkes, Buse, Nosratid, & Magar, 2018; Naz, Saeed, & Muhammad, 2017). In the context of Pakistan, recent empirical

evidence report increase in likelihood of resilience among males. On contrary, Sahar and Muzaffar (2017) and Sun and Stewart (2012) find females better in coping with stressors and expressing positive emotions and maintain healthy interpersonal relationships.

Education is one of the fundamental features for any country's growth and development. Ultimately, advancement and growth in educational institutions also serves as a step for betterment of nation (Siddiqi, 2012). Apart from negative or risk factor among students, various researches have place emphasize on identifying protective factors in university academic life (Hakami, 2018; Pidgeon & Keye, 2014; Pranjić, 2018; Sharp & Theiler, 2018). Moreover, in recent years, mental health of university students and promoting positive education is a widely addressed future research implication (Hernández - Torrano, et al., 2020). That's why; the primary purpose of this study is to assess the psychological resilience among university students of Karachi, and secondly, to identify the difference of resilience among university students with respect to gender and year of education. In the light of above provided literature, it was hypothesized that resilience would significantly differ among university students with respect to gender and year of study.

Literature Review

Benard (2004) described resilience as "*personal strength*" that a person gets from the protective factors of one's environment. She further classified these personal strengths into four positive characteristics of a person i.e. autonomy, problem solving, sense of competence and sense of purpose. Autonomy is associated with the sense of environmental mastery and molding environment as per one's strength and capabilities. Problem solving skills, as name suggests is associated with intellectual and reflective skills of a person over dealing with problems. Social competence involves developing and maintaining positive interpersonal relationships. Sense of purpose is living and believing on goal oriented and purposeful life. They avoid risk taking behaviors and believe on self, others and future with positive attitude.

The conceptual framework of resilience provides deep insight related to healthy growth of young adults and adjustment with environment in efficient way (Garmezy, Masten, & Tellegen, 1984; Masten S. , 1994;

Rutter, 1987; Werner & Smith, 1992). The origin of resilience is rooted in the domain of developmental psychology (Noble & McGrath, 2013). Werner & Smith (1992) are among the pioneer of introducing and measuring resilience of children. Then the focus was shifted from children to all age of population. Because all stages of human development are associated with certain demands and challenges (Buhler, 1935; Erikson, 1963; Neugarten, 1968). Ryff and Singer (2008) argued that psychological growth and development of human is influenced by the context and environment in which upbringing is done. Masten (2001) placed emphasize on the development of resilience. according to him, *“Resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities”* (p. 235). Similarly, Benard (2004) also integrated the development of resilience with life span approach of human development. She argued that resilience is a personal strength and result of successful developmental outcome; as the same idea was presented by Maslow (1970) in the form of hierarchy of basic human needs, Erikson (1963) theory of psychosocial development and the concept of multiple intelligences by Gardner (1993).

Cultural Consideration the Assessment of Resilience

Resilience is usually described as “bouncing back”. However, “bouncing back to what?” is a topic of interest for researchers to assess resilience it in terms of culture and societal expectations. It is actually the culture that provides the continuum to assess “external adaptation” or “internal adaptation” in a particular context. In good adaptation or resilience “external adaptation” is regarded as meeting societal expectation related to one’s intellects, socialization and occupation. “Internal adaptation” is described as having desired emotional adaptation and optimum level of wellbeing. These are the diverse models of adaptation that also create diversity in the assessment of resilience (Synder & Lopez, 2007).

Identification with culture is considered as one of the most important predictor of resilience. If a family identifies with a culture and meets the cultural standards of society it indicates the adequate functioning of the family in its cultural context. In such circumstances the family members learn to incorporate the cultural norms and build cultural competence that

ultimately develop the resources for the family to deal with crisis. Mainly this is personal resilience that leads to resilience of a community (Beauvais & Oetting, 1999).

Models of Resilience

Resilience is the concept of positive psychology that place emphasize on the positive development of human irrespective of stress of risk factors (Fergus & Zimmerman, 2005). Gramzy, Masten & Tellegen (1984) proposed the models of resilience (compensatory, challenge and protective) that suggests how positive and negative factors contribute to the development and progress of resilience (Garnezy, Masten, & Tellegen, 1984; Fergus & Zimmerman, 2005). In *compensatory model* personal positive strength neutralize the effect of stress. Positive personal strengths or compensatory factors such as self-efficacy, personal competence, perceived social support and coping directly influence on the stressful vulnerabilities of the environment (Eisman, Stoddard, Heinze, Caldwell, & Zimmerman, 2015; Fergus & Zimmerman, 2005). The *challenge model* suggests “curvilinear” nexus of protective and risk factors, that extremely low and high stress is predictive of negative outcomes. However, moderate level of stress enables an individual to learn self-efficacy learn and assess one’s environmental resources and it is application when required. To identify the coping of a person it is important to expose the person with stress. These stressors also become an opportunity for a person to learn from stress and resolve them adequately (Fergus & Zimmerman, 2005). The *protective model* of resilience suggests “conditional” relationship between protective and adverse factors. In adverse situations protective factors even if they are absent (such as positive parenting) work as to reduce stress and protect person from adverse event effects. (Fergus & Zimmerman, 2005).

Factors that promote resilience

According to Fergus and Zimmerman (2005) the course of resilience is associated with certain “promotive factors”. The scope of these positive factors ranges from personal to environmental factors that protect person from negative effects of stress. Moreover, these promotive factors also lead to the positive development of person to counter adversity in

successful way. During the course of resilience positive and negative factors are operated simultaneously. That is the reason that led researchers to identify the classification of resilience that either may be the assets or resources (Beauvais & Oetting, 1999; Fergus & Zimmerman, 2005). Assets are described as the factors that exist within the individual such as personal competence, self-efficacy, coping and future vision. Apart from the assests, resources are the external factors such as positive development, parenting, healthy environment. The relationship between asset and resources are inter-related and the integration of both factors lead to the positive development of society (Fergus & Zimmerman, 2005; Zimmerman, et al., 2013).

Hypothesis

The primary purpose of this study is to assess the psychological resilience among university students of Karachi, and following hypotheses were formulated:

1. Psychological resilience would significant differ among undergraduate university students with respect to gender.
2. Psychological resilience would significant differ among undergraduate university students with respect to year of education.

Method

Sample

It was a cross-sectional analytical study in which 300 undergraduate students (90 males and 110 females) from various departments of University of Karachi and Jinnah University for Women were randomly recruited for this study. The participants of this study were between the age group of 18 to 30 years old students. Only those students were eligible for study who were enrolled in any particular graduate program and have spent at least three months in university prior to study. Moreover, data was exclusively collected from those students who provided consent to participate in present study. Students beyond the age bracket of 18 to 30 years old and were appearing as repeater in semester or in particular course were excluded. Data was also not collected from students who refused to participate in study and having any physical or

psychological pathology. Detailed demographic characteristics of the participants are given in table I.

Measures

The Connor-Davidson Resilience Scale (CD-RISC)

This study uses “The Connor-Davidson Resilience Scale (CD-RISC)” by Connor & Davidson (1989) as a measure of resilience among university students. This scale is comprised of 25 statements in which respondent is required to rate each statement at 5-point rating scale, ranges from 0 to 4. In rating statements 0 = not true at all, 2 = sometimes true, 3 = often true and 4 = true nearly all the time. Standard format of scoring suggest 0 as minimum 100 as highest score on this scale, high score reflects high resilience and low score reflect low level of resilience. There is no cut-off point and reverse scoring in this scale. This scale has well established psychometric properties, Cronbach's α (*alpha*) value on general population is 0.89 and it has 0.30 to 0.70 item total correlation (Connor & Davidson, 2003).

Ethical Considerations

Prior to data collection permission was obtained from the Dean of concerned faculty of University of Karachi and Jinnah University for Women. Data was collected from eligible participants by considering the ethical principal of anonymity, maintaining data confidentiality, obtaining informed consent, refusal to participation and right to withdraw from research at any time. Participants were provided with the adequate time to complete present research questionnaire and ask any question in case of confusion or difficulty.

Procedure

After the approval of concerned authorities data was collected by the principal investigator of the research. Participants were individually approached by the researcher and at beginning level they briefly informed about the research to get the consent. Participants were informed that their participation in present research would be volunteer or unpaid. After gaining the verbal and written consent of the participant

they were provided with the socio-demographic information form and research measure. Completion of questionnaire was assured by the principal investigator and was marked for scoring and data analysis.

Data Presentation and Analysis

Data was analyzed by using Statistical Package for Social Sciences (SPSS, Version 22). Descriptive statistics (frequency, mean and standard deviation) was applied to obtain the estimated apparent presentation of data (Table I). To identify the gender difference on resilience scale Independent sample *t* test was applied (Table II). And to compute the resilience difference among students with reference to year of education One way analysis of Variance (ANOVA) was computed (Table III).

Table I: Demographic characteristics of participants with reference to mean score on CD-RISC

Variables	N (%)	Mean of CD-RISC (SD)
Total No of participants	200	63.26 (15.41)
Gender		
Male	90 (45)	59.46 (15.448)
Female	110 (55)	66.38 (14.734)
Year of Education		
13th year of education	50(25)	65.22 (14.36)
14th year of education	50 (25)	66.74 (13.17)
15th year of education	50 (25)	62.08 (15.81)
16th year of education	50 (25)	59.02 (17.28)
Birth Order		
Frist born	73 (36.5)	63.47 (16.40)
Middle born	53 (26.5)	63.04 (16.85)
Last born	74 (37)	63.23 (13.40)

Marital Status		
Single	187 (93.5)	62.88 (15.41)
Engaged	08 (4)	69.63 (14.90)
Married	05 (2.5)	67.40 (16.31)
Type of Family		
Nuclear	168 (84)	63.81 (14.44)
Joint	32 (16)	60.41 (19.76)
University		
University of Karachi	126 (63)	61.02 (16.03)
Jinnah University for Women	74 (37)	67.09 (13.55)
Employment status		
Not working	138 (69)	36.33 (14.54)
Part Time working	36 (18)	64.42 (15.07)
full time working	26 (13)	61.31 (20.19)

Table II: Gender difference among university students on the scores of CD-RISC (N=200)

Variables	Groups	N	M	SD	t	df	Sig.
Score on CD-RISC	Male	90	59.46	15.44	-3.23	198	.001
	Female	110	66.38	14.73			

*p<.05

This table shows significant gender difference [$t(198) = -3.287, p = .001$] on the scores of CD-RISC among university students. Female participants ($M = 66.38, SD = 14.73$) appeared to be more resilient as compared to male participants ($M = 59.46, SD = 15.44$)

Table III: One way analysis of Variance (ANOVA) for CD-RISC score with respect to year of education among university students (N=200)

	Sum Squares	of df	Mean Square	F	Sig.
Between Groups	1766.09	3	588.69		
Within Groups	45510.86	196	232.19	2.53	.058
Total	47276.95	199			

This table shows that resilience does not differ with reference to year of education among university students [$F(3, 196) = 2.53, p > .05$].

Discussion

Present research was aimed to assess resilience among undergraduate university students of Karachi and it was hypothesized that resilience would significantly differ among students with respect to gender and year of education. Findings revealed that the overall mean score of resilience among university students was 63.26 ± 15.41 (Table I) and there was significant gender difference in the scores of resilience among male and female students (Table II). However, year of education is not associated with difference of resilience among university students (Table III).

Findings of the present research are in line with another research (Molinero, Zayas, González, & Guil, 2018) conducted in the context of Spain and indicated medium level of resilience among university students. Similarly, Hamdan-Mansour et al., (2014) also used CD-RISC and found moderate to high level of resilience with the mean value of 69.7 (SD=13.3) among university students of Jordan. There are marked empirical evidences (Gartland, et al., 2019; Herbert, Leung, Pittman, Floto, & Afari, 2018; Naz, Saeed, & Muhammad, 2017) that associate development of resilience with social and geographical context, such as age, gender, financial status, ethnicity and environmental problems.

The formulated hypothesis of present study was partially proved and it was found that male and female students had significantly different level of resilience. Female students showed significantly higher level of resilience as compared to male students. In the social determinants of health, gender is one of an important variable (Men, Frieson, Socheat , Nirmita, & Mony, 2011). World Health Organization (2010) asserts that gender influence health in two ways; primarily, gender discrimination for providing health care services and secondly, gender norms with respect to age and community group. Social role, demands, expectations and behavior of both genders vary with respect to their culture (Manandhar, Hawkes, Buse, Nosratid, & Magar, 2018).

Findings of the present study with respect to gender difference are in support of number of recent local researches such as Masood, Masud, & Mazahir (2016) and Naz, Saeed, & Muhammad (2017) that find female participants on advantage of scoring high on the construct of resilience as compare to males. There are plenty of researches (Bibi, Saqlain, & Mussawar, 2016; Abbruzzese, Magnani, Robert, & Mancuso, 2019; Dowthwaite, 2018) that report women as more emotionally intelligent than men. Globally, females are considered as better in expressing positive emotions such as empathy, openness and maintaining positive interpersonal relationships. Findings of present research also extend the understanding of World Health Organization (2020) data that suggests more life expectancy among women as compared to men. Women tend to live longer approximately 6 to 8 years than men.

Reduced level of resilience among male participants could be attributed to increased prevalence of depression among men at global level. The recent data of WHO (2020, p. 12), report 77% suicide prevalence among men belong to underdeveloped countries of the world. Young age <50 years and gender of male were the identified risk factors for committing suicide. A recent systematic review (Shakeel, 2019) in Pakistan reports 22% suicide rate among young population and identify academic stressor as one the major factors of high prevalence of suicide. Apart from high suicidal rate among men, Hays (2018) also finds men as suffer from more life threatening disease such as cancer and cardiovascular diseases. Moreover, they tend be more involved in risk taking behaviors such as, substance abuse, violent outburst and reckless driving as compared to women. Overall, these are factors that could be attributed to elevated

level of resilience among female participants. Because resilience is not just about dealing with adversity, it is also about positive adaptation with the daily life challenges (Noble & McGrath, 2014).

The third finding of present study does not support the formulated hypothesis and suggest no significant difference with respect to year of education among university students. Same findings were extracted from another study conducted in the context of North Carolina (VanBuren & Rottmann, 2021). Similarly, Chow et al., (2018) also do not find difference of resilience on the measure of CD-RISC among undergraduate students. However, it finds significantly reduced level of resilience among undergraduate students as compared to postgraduate students. Academic literature in this subject matter evidence that during adulthood when student enter into the university life, they do not only face academic stressor rather they also face many developmental crisis such as identity and existential crisis, need for autonomy and many other according to their culture demand (Noble & McGrath, 2014). In the context of Pakistan, Javed (2020) findings are also consistent with the crisis face by the youth of Pakistan. Environmental scientists also claim that Pakistan is one the most vulnerable country to extreme weathers and climate change, e.g. rising temperature, unexpected raining pattern, flooding, and lack of water reservoir and so on (Faisal, Hilary, & Jo-Ellen., 2011). Siddiqi (2012) also confirms that the students of Pakistan also face these hurdles of climate change, global warming and political crisis. Beauvais & Oetting (1999) argue that resilience is the balancing between protective and risk factors. However, if the frequency of risk factors is raised than strengthening and development of protective are required.

The present research findings are surrounded with various limitations. This study uses cross sectional research design and does not identify the relationship and causality among variables. Moreover, this study uses self-report questionnaire that raises question on the validation of data because of self-serving biases and social desirability factor. This research only targets the two different university of Karachi, that's why findings of this research cannot be generalized on all undergraduate student population of Karachi.

Conclusion and Recommendation

The present study was aimed to assess the psychological resilience among university undergraduate students of Karachi. Findings reveal moderate level of resilience with significant gender difference. This research finds female students on the advantage of scoring high on the construct of resilience. This study serves as an initial step to promote positive education among university students. University life does not only foster education and knowledge, rather it also focuses on developing personal qualities among students by providing facilitative environment that ultimately promotes mental health of students. This study highlights the need for policy makers and university administrators to promote positive education of students by improving their wellbeing and facilitative study environment. A robust institutional policy to improve wellbeing and resilience of students is imperative to students' optimum future and country's progress.

References

- Abbruzzese, L., Magnani, N., Robert, I. H., & Mancuso, M. (2019). Age and Gender Differences in Emotion Recognition. *Frontiers in Psychology*, 10, 2371.
- Aideed, B., Abeera, A., & Bajwa, K. M. (2019). An Investigation of Stressors among University Students: A qualitative approach. *UCP Management Review*, 3(1), 5-24.
- Beauvais, F., & Oetting, E. R. (1999). Drug use, resilience, and the myth of the golden child. In M. D. Glantz , & J. L. Johnson (Eds.). New York: Kluwer Academic Publishers.
- Benard, B. (2004). *Resiliency: What We Have Learned*. WestEd.
- Bibi, S., Saqlain, S., & Mussawar, B. (2016). Relationship between Emotional Intelligence and Self Esteem among Pakistani University Students. *Journal of Psychology & Psychotherapy*, 6(4), 279.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? . *American Psychologist*, 59, 20 –28.

- Buhler, C. (1935). The curve of life as studied in biographies. *Journal of applied psychology*, 19(4), 405-409.
- Chow, K. M., Tang, W. F., Chan, W. H., Sit, W. H., Choi, K. C., & Chan, S. (2018). Resilience and well-being of university nursing students in Hong Kong: a cross-sectional study. *BMC Medical Education*, 18(13), 2-8.
- Cleary, M., Walter, G., & Jackson, D. (2010). Not always smooth sailing: mental health issues associated with the transition from high school to college. *Issues in Mental Health Nursing*, 32, 250-254.
- Connor, K. M., & Davidson, J. R. (2003). Development of A new Resilience scale: The Connor Davidson Resilience Scale. *Wiley Inter Science*, 76-82.
- Connor, K. M., & Davidson, J. R. (2003). Development of A new Resilience scale: The Connor Davidson Resilience Scale. *Wiley InterScience*, 76-82.
- Conway, A. M., Tugaday, M. M., Catalino, L. I., & Fredrickson, B. L. (2013). The broaden anddd build theory of positive emotions: Form, function and mechanism. In S. A. David, I. Boniwell, & A. C. Ayers (Eds.), *The Oxford Handbook of Happiness* (pp. 17-34). United Kingdom: Oxford university press.
- Dachew, B. A., Bisetegn, T. A., & Gebremariam, R. B. (2015). Prevalence of mental distress and associated factors among undergraduate students of University of Gondar, Northwest Ethiopia: a cross-sectional institutional based study. *PLoS One*, 10(3), e0119464.
- Dasti, R., Ain, N. U., Zainab, N., Rashid, N., Asif, S., Kanwal, F., et al. (2018). Resilience and Psychological Wellbeing in University Hostelites. *Pakistan Journal of Professional Psychologists*, 9, 31-44.
- Dowthwaite, L. (2018, November 21). Men and women experience happiness differently – here’s why. Retrieved February 1, 2021,

from The conversation: <https://theconversation.com/men-and-women-experience-happiness-differently-heres-why-104507>

- Erikson, E. H. (1963). *Youth: Change and challenge*. New York: Basic books.
- Faisal, I., Hilary, H., & Jo-Ellen., P. (2011). *(Review of Current and Planned Adaptation Action: South Asia*. Adaptation Patnership/International Institute for Sustainable Development.
- Fergusson, D. M., Beautrais, A. L., & Horwood, J. L. (2003). Vulnerability and resiliency to suicidal behaviours in young people. *Psychological Medicine*, 33, 61–73.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. Basic Books.
- Garnezy, N., Masten, A. S., & Tellegen, A. (1984). The Study of Stress and Competence in Children: A Building Block for Developmental Psychopathology. *The Society for Research in Child Development, Inc.*, 55(1), 97-111.
- Gartland, D., Riggs, E., Muyeen, S., Giallo, R., Afifi, T. O., MacMillan, H., et al. (2019). What factors are associated with resilient outcomes in children exposed to social adversity? A systematic review. *BMJ open*, 9(4).
- Hakami, R. M. (2018). Prevalence of Psychological Distress Among Undergraduate Students at Jazan University: A Cross-Sectional Study. *Saudi Journal of Medicine & Medical Sciences*, 6(2), 82-88.
- Hamaideh, S. H. (2009). Stressors and Reactions to Stressors Among University Students. *International Journal of Social Psychiatry*, 57(1), 69-80.
- Hamdan-Mansour, A. M., Azzeghaiby, S. N., Alzoghaybi, I. N., Al-Badawi, T. H., Nassar, O. S., & Shaheen, A. M. (2014). Correlates of resilience among university students. *American Journal of Nursing Research*, 2(4), 74-79.

- Hays, B. (2018, Januray 18). Women Are More Resilient Than Men When Times Are Tough: Study. Retrieved Feburary 10, 2021, from Albawaba: <https://www.albawaba.com/business/women-are-more-resilient-than-men-when-times-are-tough-study-1076026>
- Herbert, M. S., Leung, D. W., Pittman, J. O., Floto, E., & Afari, N. (2018). Race/ethnicity, psychological resilience, and social support among OEF/OIF combat veterans. *Psychiatry Research*, 265, 265-270.
- Hernández - Torrano, D., Ibrayeva, L., Sparks, J., Lim, N., Clementi, A., Almukhambetova, A., et al. (2020). Mental Health and Well-Being of University Students: A Bibliometric Mapping of the Literature. *Frontiers in Psychology*, 11, 1226.
- Hersi, L., Tesfay, K., Gesesew, H., Krahl, W., Ereg, D., & Tesfaye, M. (2017). Mental distress and associated factors among undergraduate students at the University of Hargeisa, Somaliland: a cross-sectional study. *International Journal of mental health systems*, 11:3.
- Javed, F. (2020). Adaptation Challenges Faced by Pakistani University Entrants. *Students Success Journal*, 11(2), Student Success.
- Kitzrow, M. A. (2003). The mental health needs of today's college students: Challenges and recommendations. *NASPA Journal*, 41(1), 165–179.
- Manandhar, M., Hawkes, S., Buse, K., Nosratid, E., & Magar, V. (2018). Gender, health and the 2030 agenda for sustainable development. *Bulletin of the World Health Organization*, 96(9), 644–653.
- Maslow, A. H. (1970). *Motivation and Personality* (2nd ed.). New York: Harper & Row.
- Masood, A., Masud, Y., & Mazahir, S. (2016). Gender differences in resilience and psychological distress of patients with burns. *Burns*, 42(2), 300-306.

- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American psychologist*, 56(3), 227–238.
- Masten, S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang, & E. W. Gordon (Eds.), *Educational resilience in innercity America* (pp. 3-25). Hillsdale, NJ: Erlbaum.
- Men, C. R., Frieson, K., Socheat, C., Nirmita, H., & Mony, C. (2011). Gender as a social determinant of health: Gender analysis of the health sector in Cambodia. *World Conference on Social Determinants of Health* (pp. 22-42). Rio de Janeiro, Brazil: World Health Organization.
- Molinero, R. G., Zayas, A., González, P. R., & Guil, R. (2018). Optimism and Resilience among university students. *International Journal of Developmental and Educational Psychology*, 1(1), 147-154.
- Naz, S., Saeed, N., & Muhammad, A. F. (2017). Gender Differences In Resilience, Coping And Quality Of Life Of Oncology Nurses In Pakistan. *Pakistan Journal of Gender Studies*, 14, 145-159.
- Neugarten, B. L. (1968). The awareness of middle age. In B. L. Neugarten, Middle age and aging (pp. 93-98). Chicago: University of Chicago press.
- Noble, T., & McGrath, H. (2013). Well-being and resilience in education. In S. A. David, I. Boniwell, & A. C. Ayers (Eds.), *The oxford handbook of happiness* (pp. 563-578). United Kingdom: Oxford university press.
- Noble, T., & McGrath, H. (2014). Well-being and Resilience in School Settings. In G. A. Fava, & C. Ruini (Eds.), *Increasing Psychological Well-being in Clinical and Educational Settings, Cross-Cultural Advancements in Positive Psychology* (pp. 135-152). Springer Science+Business Media Dordrecht.
- Pidgeon, A. M., & Keyes, M. (2014). Relationship between resilience, mindfulness, and psychological well-being in university

students. *International Journal of Liberal Arts and Social Science*, 2(5), 27-32.

- Pranjić, S. S. (2018). Positive education in higher education: Is it possible to focus on students' potentials and talents? *5th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2018, Conference Proceedings*, 5(3.4), pp. 577-584. Bulgaria.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American journal of orthopsychiatry*, 57(3), 316–331.
- Ryff, C., & Singer, B. (2008). Know thyself and become what you are: a eudaimonic approach to psychological well-being. *J Happiness Study*, 13-39.
- Sahar, N. U., & Muzaffar, N. (2017). Role of Family System, Positive Emotions and Resilience in Social Adjustment among Pakistani Adolescents. *Journal of Educational, Health and Community Psychology*, 6(2), 46-58.
- Shakeel, M. (2019). A qualitative analysis of suicide committed by the students in Pakistan. *Pakistan Journal of Medical Research*, 58(1), 35-40.
- Shankar, N. L., & Park, C. L. (2016). Effects of stress on students' physical and mental health and academic success. *International Journal of School & Educational Psychology*, 4(1), 5-9.
- Sharp, J., & Theiler, S. (2018). A Review of Psychological Distress Among University Students: Pervasiveness, Implications and Potential Points of Intervention. *International Journal for the Advancement of Counselling*, 40(3), 193–212.
- Siddiqi, A.-U.-R. (2012, May 3). *Some of the problems faced by students in Pakistan*. Retrieved February 20, 2021, from Say People: <http://saypeople.com/2012/05/03/some-of-the-problems-faced-by-students-in-pakistan/#.YDEJTugzY2w>

- Sun, J., & Stewart, D. (2012). Age and Gender Effects on Resilience in Children and Adolescents. *International journal of mental health promotion*, 9(4), 16-25.
- Zakai, W. A. (2021). Information Technology/Social Media and Suicidal Source. *Karachi Islamicus*, 2(1), 53-60.
- Tariku, G. H., Zerihun, A. A., Bisrat, Z. S., Adissu, G. G., & Jini, D. (2017). Mental Distress and its Associated Factors among Students of Mizan Aman Health Science College, Ethiopia. *Journal of Medical Sciences*, 17(2), 61-67.
- Tran, A., Tran, L., Geghre, N., Darmon, D., Rampal, M., Brandone, D., et al. (2017). Health assessment of French university students and risk factors associated with mental health disorders. *PLoS One*, 12(11), e0188187.
- VanBuren, A. N., & Rottmann, A. K. (2021). Evaluating Resilience Scores Among Honors Undergraduates Involved in Leadership Programs. *Journal of Leadership Education*, 20(12), 109-120.
- Werner, E., & Smith, R. (1992). *Overcoming the odds: high risk children from birth to adulthood*. New York: Cornell University press.
- Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology*, 21, 152-169.
- World Health Organizatio. (2020, December 4). *Global Health Observatory (GHO) data*. Retrieved February 6, 2021, from https://www.who.int/gho/women_and_health/mortality/life_expectancy_text/en/#:~:text=Women%20generally%20live%20longer%20than,differences%20between%20men%20and%20women.
- World Health Organization . (2017). *Building resilience: a key pillar of Health 2020 and the Sustainable Development Goals. Examples from the WHO Small countries initiative*. Denmark: WHO Regional Office for Europe.
- World Health Organization. (2010). *Gender, women and primary health care renewal: a discussion paper*. Geneva: World Health Organization.

Zautra, A. J., Hall, J. S., & Murray, K. E. (2010). Resilience: A New Definition of Health for People and Communities. In J. W. Reich, A. J. Zautra, & J. S. Hall (Eds.), *Handbook of adult resilience* (pp. 3-34). Newyork: The guilford press.