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RESILIENCE AS A PREDICTOR OF BURNOUT, DEPRESSION AND HOPE AMONG MEDICAL STUDENTS

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ABSTRACT

Objective: To investigate the effect of resilience on burnout, depression and hope among medical students. **Study Design:** Descriptive cross-sectional design. **Place and Duration of Study:** Army Medical College Rawalpindi (AMC) and Al-Nafees Medical College, Islamabad (ANMC) between September to November 2018. **Methodology:** A sample of 200 medical students participated in the study. Purposive sampling technique was used and participants fulfilling the inclusion criteria of being student of medicine were given a written consent form. Resilience Scale, Breso's Academic Burnout Scale, DASS-21 and Snyder Adult Hope Scale along with demographic sheet and consent form were used in this study for data collection. **Results:** Participants were studying in different medical years (such as first year to final year). Both male and female students were involved as research participants. Their age ranged from 18 26 years (M_{age} = 20.76, SD = 1.42). A significant negative relationship was observed between resilience and depression, between hope and depression, and also between burnout and hope. Significant positive relationship was observed between resilience and hope, and between burnout and depression. Moreover findings also revealed resilience as a strong predictor of depression and hope among medical students. **Conclusion:** Level of resilience in medical students is significantly negatively related to depression and positively related to their level of hope. Findings are helpful for practioners, counselors and management of institutions dealing with medical students.

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INTRODUCTION

Everyone experiences negative situations in life and many times causes of those events cannot be controlled. Medicine related study keep these students under many burdens and responsibilities, and has very little tolerance for negligence as they deal with people health. These pressures are challenging sources of psychological distress such as depression, anxiety, stress, and burnout among them.[1] The mental well-being of medical students is a worldwide concern as it is associated with the quality of health care they are likely to provide in future.[2] Mental health care of medical students is a multifarious process encompassed with their personal characteristics, training-related stressors and many other factors[3].

Resilience, the permanent evolving state of energy and ability to combat is likely to play significant role in burnout[4], depression[5], and hope[6]. Students who learn because of stress or other related factors experience emotional fatigue, non-personalizing tendencies, and low personal feelings.[7] Resilience, burnout, and depression seems conceptually interlinked and may have negative association as greater level of resilience may lower depression and burnout. Hope and resilience on the other hand are stable psychological traits that can act as the protective factors against adversity. Both are closely aligned constructs as they foster a positive and optimistic

outlook in the case of hardships.

Previous studies show that a high level of resilience is associated with the subjective well-being of medical professionals and nurses.[8] Enhancing level of resilience is one way to deal with these stressors. Moderating negative life events in medical students have an impact on students' perception.[9] At least half of all medical students are burned out during medical education, It also shows that burns continue in medical school and are sometimes associated with mental disorders and suicidal ideation.[10] In a latest meta-analysis it was revealed that one third of medical students in the world suffer from depression, and the prevalence of depression symptoms is usually higher among medical students than among the general population.[11] With reference to Pakistan, it was observed that in 77% medical students' sleep deprivation contributed to the high level of stress.

The Higher level of stress was experienced by fourth and fifth grade medical students as compared to medical students studying in earlier grades.[12] The present research was purported to explore the role of resilience in cultivating burnout, depression and hope among medical students and further findings of the study may prove beneficial in minimizing these psychological problems by using resilience and hope as protective factors.

METHODOLOGY

This study was conducted on a sample of 200 medical students, using a cross-sectional descriptive research design. Convenient purposive sampling technique was used in order to collect the data. Inclusion criterion of the sample selection was based on currently being medical student. Data was collected from male and female students of Army Medical College, Rawalpindi (AMC) and Al-Nafees-Medical College and Hospital, Islamabad (ANMC). Their age ranged from 18-26 years (M_{age} = 20.76, SD = 1.42). They were studying in different medical years (first year to final year).

Urdu version of Resilience Scale was used to assess the level of resilience in medical students. It is a 25 item and 7 options ranging scale from 'strongly disagree' to 'strongly agree'. Respondents were asked to point out their level of agreement on each item. High scores on this scale depict more resilience, whereas, low score show low resilience. There is no reverse coded item in the instrument. Cronbach's Alpha reliability coefficients for scale has been reported as 0.91 in the original study.[13]

To assess burnout among students Breso's adapted version of Maslach Burnout Inventory-Students Survey was used. It is a 29 item scale and option ranging 0 to 6. Alpha coefficient of this scale is =.70.[14]

Depression subscale of Depression, Anxiety, Stress Scale (DASS-21) was used to measure the level of depression among participants. It is a 7 item subscale in likert format with 4-point options that shows the level of depression. The score ranges from 0 to 3. Alpha coefficient of this scale is 0.75.[15]

Hope was measured by Snyder Adult Hope Scale. It is a12-item with two subscales based on Snyder's cognitive model of hope; 1) Agency (i.e., goal-directed energy) and (2) Pathways (i.e., planning to accomplish goals). Of the 12 items, 4 make up the Agency subscale (item nos.) and 4 make up the pathways subscale. The remaining 4 items are fillers. It is an 8-point Likert-type scale ranging from 1 (definitely false) to 8 (definitely true). Alpha coefficient of this scale is .74.[16]

Pearson Product Moment correlation was computed to look into the relationship among study variables, whereas linear regression analysis was carried out to study the impact of resilience on burnout, depression, and hope of

medical students. SPSS-21 was used to analyse the results of present study. The level of significance (p) was considered as statistically significant if $p<0.05$. Frequencies were calculated for education while mean values and standard deviations were calculated for study variables.

RESULTS

The age range of the sample was between 18 to 26 years (mean=20.76 ± 1.42years). Out of the total sample, 2.5% (f=4) of the participants were in first year of medicine, 46.5% (f=93) were in second year, 31.0% (f=62) were in third year, and rest 20% (f=40) were in final year of medicine.

Table 1: Pearson product moment correlation between resilience, burn out, depression, hope and its subscales.

Variables	1	2	3	4	5	6
Resilience	-	-.06	-.21**	.44**	.21**	.45**
Burnout	-	-	.02	-.00	.20**	.04
Depression	-	-	-	-.17*	-.12	-.25**
Hope	-	-	-	-	-.56**	.89**
1.Agency	-	-	-	-	-	-.44**
2.Pathway	-	-	-	-	-	-
α	.95	.67	.71	.71	.65	.76
M	98.69	86.00	10.45	51.26	12.75	22.54
SD	30.81	16.86	3.73	10.92	2.42	6.51
Skewness	-1.33	-.16	1.52	-1.15	-.71	-.97
Kurtosis	1.01	-.17	4.24	1.52	1.03	.34

*p<.01**, p<.05* showing that values are statistically significant.*

The alpha coefficients for measures used to assess resilience, burnout, depression and hope showed sound reliability. The values of skewness and kurtosis also indicated normality of the data (Table I). Resilience showed significant negative correlation with depression ($r = -0.21$, $p<0.01$), and significant positive correlation with hope ($r = 0.44$, $p<0.01$) and its domains i.e., agency ($r = 0.21$, $p<0.01$) and pathway ($r = 0.45$, $p<0.01$). Significant negative correlation was observed between depression and hope ($r = -0.17$, $p<0.05$). No significant relationship emerged between resilience and burnout.

Results of linear regression analysis (Table II) showed the prediction of resilience on depression and hope. Role of resilience in prediction of burnout was not explored as the correlation between resilience and burnout was not significant. Results showed that resilience emerged as significant negative predictor and explained 4.6% of the variance in the depression ($F=9.63$, $p=0.002$). On the other hand resilience significantly positively predicted hope and explained 20% variance ($F=49.35$, $p=0.001$).

Table 2: Regression analysis on depression and hope by resilience (N=200)

Variables	B	SE	β	95% CI	
				LL	UL
Depression $\Delta R^2=.04$, $R^2=.046$ ($F=9.63$**), $p=0.002$	-.02	.08	-.21	.04	-.01
Hope $\Delta R^2=0.19$, $R^2=0.20$ ($F=49.35$**), $p=0.001$	.15	.02	.44	.11	.20
**p<.01, *p<.05					

DISCUSSION

Present study was conducted to explore the role of resilience in predicting burnout, depression and hope among medical students. Findings of the study revealed resilience as significant correlate of depression and hope, moreover significant negative relationship emerged between depression and hope. Linear regression analysis further illustrated that resilience significantly negatively predicted depression and positively predicted hope of medical students. Previous findings also share similar results[17] and highlight that improving resilience may act as guard against negative responses.[18] Findings of the study have theoretical as well as practical implications such as exploring the important psychological and cognitive factors contributing towards resilience indigenously, whereas regarding practical implications, it may help practioners, clinicians and administrators as medical students are most of the time under pressure of their studies and strain of heavy duty

hours which significantly influence their level of resilience that in turn aggravates their level of burnout and depression and lowers down the level of hope. Working on their cognitions and familial plus social factors may contribute towards elevated resilience level.

CONCLUSION

The study concludes that resilience is a significant negative predictor of depression and significant positive predictor of hope among medical students. Present findings are helpful for practioners, counselors and management of institutions dealing with medical students.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Sumna Safeer	Conceived, designed, data collection and analysis	
2	Saadia Aziz	Methodology, supervision and critical review