

## Resilience, perceived social support and psychological stress in diagnosis of cancer

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### ABSTRACT

**Objective:** To identify the relationship of resilience, psychological stress and perceived social support among cancer patient.

**Study Design:** A correlational Cross-sectional study.

**Place and Duration:** From 20<sup>th</sup> November, 2016 to 25<sup>th</sup> March, 2017 at Shaukat Khanum Memorial Cancer Hospital and Research Centre Lahore and Mayo Hospital, Cancer Ward, Lahore.

**Methodology:** Patients diagnosed with cancer were assessed for resilience, psychological stress and perceived social support with Conner-Davidson Resilience Scale (CDRS), Cohen perceived Stress Scale and Multidimensional perceived Social Support Scale respectively.

**Results:** Sixty-one patients both males (51%) and females (49%) were selected. Resilience was significantly positively correlated with social support (.416,  $p < 0.01$ ) and negatively correlated with the psychological stress (-.594,  $p < 0.01$ ) and stress is significantly negatively correlated with resilience and social support (-.594 and -.337 respectively). Social support has a significant impact on stress with variance of 11%. ( $p = .000$ )

**Conclusion:** Resilience, psychological stress and perceived social support have a significant relationship and perceived social support has an impact on predicting lower stress.

**Keywords:** Cancer, Patients, Correlation, Resilience, Stress, Perceived social support.

### How to Cite This:

Nigah Z, Ajmal A, Abid S. Resilience, perceived social support and psychological stress in diagnosis of cancer. *Isra Med J.* 2019; 11(1): 36-40.

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### INTRODUCTION

In recent times, cancer is responsible for the highest death rate globally, but specifically in Pakistan. Estimated 48,449 cancer deaths approximately 133 cancer deaths per day appeared in the Pakistan population so far in 2012<sup>1</sup>. In that scenario, there

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Received for Publication: 11-06-18

1<sup>st</sup> Revision of Manuscript: 06-07-18

2<sup>nd</sup> Revision of Manuscript: 22-08-18

3<sup>rd</sup> Revision of Manuscript: 10-09-18

4<sup>th</sup> Revision of Manuscript: 16-10-18

5<sup>th</sup> Revision of Manuscript: 22-11-18

6<sup>th</sup> Revision of Manuscript: 01-02-19

Accepted for Publication: 16-02-19

must be stress' presence. The prominent side of stress are anxiety or depression that could be associated to chances about the diagnosis, side-effects of chemotherapy or radiotherapy treatment, loss of societal or personal control, physical decline, and thought images of death<sup>2</sup>.

Formation of the resilience in any person is to be marked by the stress. It entails healthy functioning in the presence of the fact that the person is facing agony but serves as a healthy individual in his all types of environment. Some people possess lesser levels of verge for stress, that is, the exalted indicators of tension and depression<sup>3</sup>, while others spring back from it, as revealed by the person proficiency to survive and get over the precarious and hardening-challenging situations.

Cancer patients need more social and psychological support for their treatment process to be end up successfully<sup>4</sup>. Perceived Social support is the person's perception of being given needed love, care and value by others near to him or her<sup>5</sup>. Social support has an extraordinary emphasis to deal with psychic problems such as anxiety and tension, commonly endowed by cancer patients. Lessened levels of social support heads towards social and psychological stress, which can affect the immune-resistance system with the endocrine system and elevation of tumor production<sup>6</sup>.

A decade ago, many of the studies have showed that high-quality positive social support can give guaranteed enhancement in resilience to stress and will help in the protection from psychopathology resulting from trauma, decreasing the consequences of trauma-induced disorders such

as posttraumatic stress disorder (PTSD), and can decrease the chances of morbidity and mortality<sup>7</sup>. It has been supported by the last study carried out in Pakistan that social support intervention improved resilience and quality of life of the subjects who received intervention as compared to those who did not<sup>8</sup>.

The most importantly, people with major diagnosis do not get the actual support necessary for recovery phase. The importance of this study is to highlight the vital role of social support, providing those benefits to the patients that could work psychologically in a positive manner such as the early changes in the patient, the medicine adherence, and chemotherapies' painful events. This research will add on to the nurses, clinicians, and most importantly, the blood relations around the patient, to make them feel better not only with the treatment but the support they provide including financial and spiritual. With reference to this study's objectives, hypothesis were that resilience would be negatively correlated with stress and positively correlated with social support but stress and social support would have negative relation. Another prediction, social support would have an impact on predicting lower levels of stress. We conducted this study with an objective to identify the relationship of resilience, psychological stress and perceived social support among cancer patients.

## METHODOLOGY

This Correlational cross-sectional study was done from 20<sup>th</sup> November, 2016 to 25<sup>th</sup> March, 2017 at Shaukat Khanum Memorial Cancer Hospital and Research Centre Lahore and Mayo Hospital, Cancer Ward, Lahore. The sample for this study were 61 cancer patients who came hospital for routine check-up and their chemotherapy and radiotherapy had been progressing. Patients were mainly of all types of cancer especially of blood cancer in men and breast and uterus cancer in women. Outdoor recovered Patients who visited for their normal check-up and their chemotherapy and radiotherapy and other treatment had been already completed and those who were of age less than 15 years were excluded from study. As the needed sample was to take specific patients, the purposive sampling technique had been used to select the sample on the required variables. Data was collected by taking informed consents from the patients, by distributing questionnaires in Urdu language, translated versions of English Scales, the majority of patients were Urdu speaking so making it understandable for them.

For Resilience, 25 items Conner-Davidson Resilience Scale<sup>9</sup> was used. Participants had showed their agreement level with the statements on a 5- point Likert-type scale. The more score on the scale of resilience, the higher the resilience is present. Cohen Perceived Stress Scale<sup>10</sup> had been administered to measure the degree of stress in times of treatment of cancer. It consisted of four positively stated items (items 4, 5, 7, & 8) with

reversing response coding (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0). The Multidimensional Perceived Social Support Scale<sup>11</sup>, a self-reporting instrument with twelve items rated on a seven-point Likert-type scale with scores ranging from 'very strongly disagree' to 'very strongly agree' (1 to 7). It had been designed to measure an individual perception of social support acquiring from three prominent sources: Significant Others (SO) (Items 1, 2, 5, and 10), Family (FA) (Items 3, 4, 8, and 11) and Friends (FR) (Items 6, 7, 9, and 12).

## Operational Definitions:

**Resilience:** Psychological resilience is defined as individual's ability to spring back from adverse experience and to make one's self able to carry out with the demands which negative events seek<sup>12</sup>.

**Psychological Stress:** Psychological Stress is characterized by the perception of some threat that accounts for feelings of anxiety discomfort, emotional tension seeking, and adjustment issues<sup>13</sup>.

**Perceived Social Support:** Perceived social support is a two way process of resources' exchange between two individuals that can be perceived by the receiver or the provider, especially enhancing the well-being of the receiver or recipient<sup>14</sup>.

**Data Analysis:** Data was analyzed and different statistical tests like Pearson product correlation, linear regression analysis and T-tests were applied through Statistical Package for Social Sciences (SPSS) software of 21st version.

## RESULTS

A total of 61 participants both men (n=31, 51%) and women (n=30, 49%) in which 8(13.1%) were adolescents, 35(57.4%) were young adults and 14 (22.9%) were of middle-adulthood and 4(6.6%) were late-adulthood, diagnosed with cancer were recruited. Among 61 participants, 12 (19.7%) had primary level of education, 13(21.3%) had matriculation degree, and 14(23.0%) were having Intermediate education and graduates were 22(36.1%).

For assessing study's objective, that is identifying relationship among variables, Pearson correlation was carried out and significant results were derived. Positive relationship between Resilience and Perceived Social Support ( $r=.416^{**}$ ) was found. Psychological Stress was significantly negatively correlated with Resilience and Perceived Social Support ( $-.594^{**}$  .337<sup>\*\*</sup> respectively) at the significance level of 0.01. (Table-I)

As the sample contained two genders, and in order to determine was there any difference between males and females on the variables resilience and stress, t-test was carried out. Results showed that there are insignificant differences between males and females on the variable resilience. Males (M= 68.65, SD= 13.50) and females (M= 66.37, SD= 14.97) results are not similar. It depicts that males and females cancer patients has no difference in exhibiting resilience.

**Table-I: Descriptive statistics, and correlation of resilience, psychological stress and perceived social support. (N=61)**

Variables	Age	N (%) Males (31=50%) Females (30=49%)	M	SD	Std. Error	95% Confidence Interval for Mean	Male (Mean, SD) Female (Mean, SD)	T-test p value	Correlation with Resilience
<b>Resilience</b>	15-18	8(13.1%)	2.42	0.59	0.21	1.92 2.92	68.65,13.50 66.37,14.97	0.151	1
	19-40	35(57.4%)	2.80	0.49	0.08	2.63 2.97			
	45-65	14(22.9%)	2.82	0.51	0.13	2.51 3.12			
	65above	04(06.6%)	1.94	0.71	0.35	0.80 3.07			
	Total	61(100%)							
<b>Psychological Stress</b>	15-18	8(13.1%)	2.33	0.19	0.07	2.17 2.50	22.61,3.28 22.40,4.62	0.109	-.594**
	19-40	35(57.4%)	2.16	0.34	0.05	2.05 2.28			
	45-65	14(22.9%)	2.27	0.54	0.14	1.95 2.58			
	65above	04(06.6%)	2.72	0.25	0.12	2.32 3.12			
	Total	61(100%)							
<b>Perceived Social Support</b>	15-18	8(13.1%)	5.11	0.69	0.24	4.53 5.69	5.02,0.90 4.50,1.26	0.014	416**
	19-40	35(57.4%)	4.77	1.30	0.20	4.33 5.22			
	45-65	14(22.9%)	4.74	0.79	0.21	4.28 5.20			
	65above	04(06.6%)	4.10	1.04	0.52	2.43 5.77			
	Total	61(100%)							

\*\* $p < 0.01$ 

Results marked the insignificant differences between both genders on the variable stress. It showed that males and females cancer patient do not differ on the scores of stress, males ( $M=22.61$ ,  $SD=3.28$ ) and females ( $M=22.40$ ,  $SD=4.62$ ). (Table-I)

In order to access the impact of Perceived Social Support on predicting lower stress. Linear regression was applied. It depicted significant impact of social support seeking on stressful situations, i.e. social support given to the patients has a positive impact on having stress due to diagnosis of cancer. ( $\beta = -.337$ ,  $t = -2.8$ ,  $p = .000$ ) within the variance of  $R^2 = .112$  (112%),  $F = 7.573$ . (Table-II)

**Table-II: Matrix of linear regression of perceived social support and psychological stress. (N=61)**

Predictors	B	Std. Error	Beta	T	P
Constant	2.820	.212		13.274	.000
Social support	-.119	.043	-.337	-2.752	.008

Note.  $R^2 = .114$ , Adjusted  $R^2 = 0.99$ , ( $F = 7.573$ , \*\*\*  $p = .000$ ) \*\*\*  $p < .00$

## DISCUSSION

This study reported that there is a connection between resilience and perceived social support positively statistically significant. It reflected previous studies<sup>15</sup>. The positive relation ascertains that if the patient has more scores on the variable resilience then he or she will show up higher levels of perceived social support in times of hard illness and vice versa. According to a research conducted in Italy, they suggested a significant relation among hope, support from family plus the therapeutic alliance with the doctors and nurses staff and the speedy healing with cancer<sup>16</sup>.

The findings showed that there is a significant correlated inverse relationship between resilience and psychological stress. A resilience study also advocated that participants who are minor stressed have greater manifestation of resilience in daily life<sup>17</sup>. The diagnosis and treatment of cancer give rise to the changes in patients' life, in their day to day activities, working relationships, and roles. These life-shifts are associated with an elevated level of patient's psychological stress. Those who build resilience or given that opportunity to build it within themselves would cope-up with the stress more efficiently.

The results of the findings show no differences between both of the genders on the resilience and stress. A research shows that a family support given to the patient proved as an anticipator for the treatment prescription and instructions<sup>18</sup>. In Pakistan's collectivistic culture, people live in joint families where they both have support from their neighboring ones, members of family, friends of social circle, when they confront trauma. Both genders would also experience equal amount fear of losing life and their closeness to the death therefore there are no major differences.

Furthermore, Social support acts as a strong predictor for stress in the results' findings. With the existing literature, social support has been shown as a buffer or protective shield of stress that help in recovery phase, as well as protecting from the impact of after-effects of stress thus shortening the duration of trauma-recovery<sup>19</sup>. If a patient has been given a supportive family adjustment, he would survive with the disease with more power and the stress would be low in severity, thus acting as a predictor. Several studies have examined the "buffer" effect of social support during times of stress among women with breast cancer<sup>20</sup>. These studies generally conclude that social support from family and friends is associated with a better adjustment to disease. With the help of different interventional programs

and therapies sessions, social support could be enhanced for making quality life of the patients better as compared to those times when they were diagnosed with the disease.

On the basis of these results, it can be concluded that there is a positive relation between resilience and social support and significant correlated inverse relationship of psychological stress with resilience and social support. The results of the findings show no differences between both of the genders on the resilience and stress. Social support acts as a strong predictor for stress and predicts that Patients who live with insufficient fulfilment of belongingness need would come across to higher stress in cancerous life.

### CONCLUSION

Resilience, psychological stress and perceived social support have a significant relationship and perceived social support has an impact on predicting lower stress.

### LIMITATIONS

The limitation of this present study was that few hospitals were included in the study. Only three variables are studied. However, cancer patients are a vast population, there should be more variables to be researched. These variables should be assess by having more demographic variables such as education, marital status, socio-economic status and also the major cancer type.

### IMPLICATIONS

The findings would be essential for the doctors, therapists and counsellors knowing how to make the cancer patients more resilient by providing support and assistance from the close ones to the patient so that he or she may overcome the tension and stress resulting from the trauma of diagnosis of fatal disease just like cancer. Not just cancer but other diseases and psychological disorders could be cure with the psychological assistance provided by the family, peers and special persons around. Resilience and social support not only lower the stress levels but also protect the patients from other psychological problems such as depression, anxiety, hopelessness and loneliness.

### CONTRIBUTION OF AUTHORS

Nigah Z: Conceived idea, Data collection, Manuscript writing  
Ajmal A: Designed research methodology, Data analysis, Critical revision manuscript.  
Abid S: Literature search, Data collection, Manuscript final reading.

**Disclaimer:** None.

**Conflict of Interest:** None.

**Source of Funding:** None.

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