

## RELATIONSHIP OF EMOTIONAL INTELLIGENCE AND HEALTH LOCUS OF CONTROL AMONG FEMALE BREAST CANCER PATIENTS IN PAKISTAN

Rubina Naz, Anila Kamal, Ahsan Mahmood\*

National Institute of Psychology Quaid-i-Azam University Islamabad Pakistan, \*Combined Military Hospital/National University of Medical Sciences (NUMS) Rawalpindi Pakistan

### ABSTRACT

**Objective:** To investigate relationship between emotional intelligence and health locus of control in married women with breast cancer disease.

**Study Design:** Cross sectional study.

**Place and Duration of Study:** The data was collected from Nuclear Oncology & Radiology Institute (NORI Hospital) Islamabad (n=210) and from Combined Military Hospital (CMH) Rawalpindi (n=101). Data collection was completed between the period from Oct 2013 to Feb 2014.

**Patients and Methods:** The sample was selected using non-probability sampling technique. Collected breast cancer patients sample was n= 311 whose age range was from 18-80 years. A biographical sheet that contain personal and disease information of patient, and two scales were used: Self Report Measure of Emotional Intelligence (Khan & Kamal, 2010), and Multidimensional Health Locus of Control (Wallston, Stein, & Smith, 1994) were used to assess the constructs explored in this study.

**Results:** Results depict that there was significant positive correlation between emotional intelligence (EI), including its sub scales Emotional Self-Regulation Skills (ESRS), Emotional Self Awareness Skills (ESAS), and Interpersonal Skills Scale (ISS) with the Internal Health Locus of Control (IHLOC). Doctors Health Locus of Control (DHLOC) also have significant relationship to emotional intelligence's all sub divisions, whereas external health locus of control including Chance Health Locus of Control (CHLOC) and Powerful Other people Health Locus of Control (PHLOC) both are related to psychological distresses but it was observed in breast cancer population that chance was significantly correlated to ESAS, and ISS and powerful other people locus. Further on group comparison One Way Analysis of Variance (ANOVA) depicted no significant difference on disease stage groups.

**Conclusion:** The strength factors of EI and HLOC are highlighted in current study. It was concluded that Emotional Intelligence (EI) and health locus of control (IHLOC, & DHLOC) have positive direction of relationship, both skills leads to positive adaptation and greater coping strengths.

**Keywords:** Emotional intelligence, Health locus of control.

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### INTRODUCTION

Breast cancer is the most commonly diagnosed neoplasm in all over the world specifically in female population. According to World Health Organization (WHO) breast cancer is diagnosed in 1.2 million people worldwide every year<sup>1</sup>. Pakistan has alarming figures of breast cancer disease in female population even it was reported that Pakistan has the highest rate of

breast cancer in all over the Asia due to which every year 40,000 women die<sup>2</sup>. The most prevalent age range in Pakistan is 20–70 years<sup>3</sup>. It was suggested in many studies that cancer is considered an immune related disease and number of research evidences yielded that psychological processes have greater impacts on immunity of human beings<sup>4</sup>, so that it is the need of hour that researchers should to explore those specific psychosocial constructs that helps to promote psychological and physical wellbeing.

Psychosocial effects of cancer have been under studied in Pakistan, Kausar and Saghir<sup>5</sup> reported indigenous researcher work on

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**Correspondence:** Dr Ahsan Mahmood, Oncologist, Department of Oncology, CMH Rawalpindi Pakistan

Email: [ahsan\\_mahmood@hotmail.com](mailto:ahsan_mahmood@hotmail.com)

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psychosocial issues of breast cancer population like stress, post-traumatic stress disorder, spouse anxiety, depression and familial support, mental health of breast cancer patients. Some of studies were carried out to examine the awareness of Pakistani females regarding this disease and associated social stigmas were explored<sup>6,7</sup>. The available indigenous research work have explored different psychological issues of breast cancer population but none of these had explored emotional intelligence and health locus of control constructs among this population.

Therefore this research article would be a little effort to highlight the strength factors of emotional Intelligence and Health locus of control in breast cancer female patients. Emotional intelligence has significant effects on

good adaptation<sup>9</sup>. Another study revealed that EI and ILOC have positive correlation in breast cancer patients<sup>10</sup>. The theoretical framework of constructs under investigation is briefly discussed in subsequent section.

Emotional intelligence (EI) is defined as the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth<sup>11</sup>. In current study to measure EI researcher used indigenous scale SRMEI<sup>12</sup> that was developed by following Goleman's theory<sup>13</sup> according to them the emotional intelligence is observed when a person demonstrates skills to use awareness

**Table-I: Demographic characteristics of sample (n=311).**

Variables	Frequency	Percentages (%)
<b>Age</b>		
18 – 44 Years	154	49
45- 80Yrs	157	51
<b>Education</b>		
Illiterate	124	40
Up to metric	119	38
Above metric	68	22
<b>Stage of disease</b>		
Stage I	67	21
Stage II	123	43
Stage III	94	30
Stage IV	27	9

**Table-II: Inter- correlations between SRMEI scale its subscales, and MHLC scales (N=311).**

	SRMEI	ESRS	ESAS	ISS
Internal HLOC	.569**	.492**	.602**	.373**
Chance HLOC	.106	.045	.142*	.172**
Doctor's HLOC	.281**	.230**	.292**	.240**
Powerful Other People HLOC	.038	-.001	.182	.178**

Note. \*\*p<0.01, \* p<0.05

patient's positive adaptation to cancer disease and is negatively associated with distress and worry<sup>8</sup>. On the other hand health locus of control, including both internal health locus of control and doctor's health locus of control both were analyzed in chronic disease patients' as source of

about his emotions in regulation his emotions through adequate expression and control, and to use the awareness about other emotions in such a manner that is helpful in developing good interpersonal relations. Authors of SRMEI comprised this scale into three sub scales1)

Emotional Self-Regulation Skill (ESRS), 2) Emotional Self Awareness Skill (ESAS), and 3) Interpersonal Skills Scale (ISS).

The second construct under investigation is health locus of control that refers to psychological hardiness of someone, whether towards wellbeing or about illness. Psychologically strong people tend to have an internal locus of control in contrast to see their reinforcements are beyond their control. The locus of control construct stemmed from Rotter's social learning theory<sup>14</sup>. Following Rotter's concept Multidimensional Health Locus of Control (MHLC) form "C" is introduced by Wallston and colleagues<sup>9</sup>, four further independent dimensions of control were introduced, internal health locus of control that refers to better emotional status and adaptation to illness, Chance locus of control is related to depressed mood, Doctor health locus of control is also indicating positive healthy behaviors, while the Others locus of control is related to psychological distress<sup>9</sup>.

## PATIENTS AND METHODS

A cross sectional study design was followed in current study. Sample was selected from OPD's of NORI hospital Islamabad and CMH Rawalpindi during the period of 27<sup>th</sup> Oct 2013 to 14<sup>th</sup> Feb 2014. Inclusion criteria was the breast cancer patients, married women only, with disease stage I, II, III and IV. The sample size was n=311 breast cancer patients. A non-probability purposive sampling technique was being used for participants' selection.

Researcher used a consent form to fulfill research ethical concerns, after then Participants were supplied a biographical form to obtain personal demographic and disease information of patients. Patients were recruited on an indigenously developed 60 item scale of Self Report Measure of Emotional Intelligence (SRMEI)<sup>12</sup>, and Multi-Dimensional Health Locus of Control (MHLC) scales<sup>9</sup>. Both scales reported alpha coefficients were perfectly satisfactory<sup>9,12</sup> but for this specific sample researcher again tested the alpha coefficients of both scales and

found them quite satisfactory for this study. The alpha reliabilities were measured to check the psychometric properties of scales and results revealed that SRMEI scale's (60 items) internal consistency was  $\alpha=.92$ , its subscales' reliability coefficients were ESRS (27 items)  $\alpha=.91$ , The ESAS (21 items)  $\alpha=.73$ , and ISS (12 items)  $\alpha=.72$ , all of these scales showed highly encouraging internal consistency for current sample.

The second measure used in study was Multidimensional Health Locus of Control Form C Scale<sup>9</sup>. This scale was used after translated in Urdu language by using committee approach method, language experts were approached for Urdu language and for back translation in English Language. The alpha coefficients were assessed to check the psychometric properties of the translated version on this population (breast cancer female Pakistani patients) for current study and quite satisfactory results were found for internal health locus of control (LOC, 6 items)  $\alpha=.91$ ; chance LOC (6 items)  $\alpha=.80$ ; and powerful others (6 items)  $\alpha=.77$ <sup>15</sup>. Both of these scales have encouraging internal consistency for this study. The data was collected from NORI (n=210) and from CMH Rawalpindi (n=101) from 27<sup>th</sup> Oct 2013 to 14<sup>th</sup> Feb 2014. Data had been analyzed using Statistical software package (SPSS) version 18. Descriptive statistics were used to describe the results, Bivariate Pearson correlation was computed to check the relationship between main variables of the study, and Analysis of Variance (ANOVA) was applied on disease stages group comparison for emotional intelligence and health locus of control. The level of significance was  $<0.05$  for analysis.

## RESULTS

Through descriptive analysis frequencies and percentages were computed on demographics including age, education groups and disease stage of patients.

There was almost equal frequency in both age groups with the mean age of 45 years. One hundred and twenty four (40%) patients were

illiterate. Majority of patients (43%) were of stage II see (table-I).

Results portrayed significant positive relationship between emotional intelligence and its sub divisions with internal HLOC. Emotional intelligence has significant positive correlation with doctor HLOC of control, both of these constructs are considered to be associated with better emotional status and better adaptation skills. Emotional intelligence has no significant relationship to CHLOC with SRMEI and sub scale ESRS this means patients who were highly self-regulated have better coping mechanisms as they were less relying on chance but with high ESAS and with high ISS even patients showed significant correlation on chance HLOC, this means breast cancer patients have bi-locals

for well-being. The main objective of current study was to explore the relationship between these constructs in breast cancer population, as positive psychology views these human strengths as buffers against physical and mental vulnerabilities. After sudden diagnosis of this life threatening disease and then a crucial treatment process patient needs more emotional stability, appropriate expression of negative emotions, better internal control without which completion of the treatment seems to be very difficult and challenging for patients<sup>10</sup>. EI is positively related to HLOC, when EI skills coupled with both IHLOC and DHLOC could have important implications for better adaptation and coping experience of breast cancer patients. Literature also guides that emotional intelligence is potentially helpful in reducing stress, and

**Table-III: Comparison of main constructs of study including SRMEI and MHLC scales between disease stages (n=311).**

Variables	Stage I (n=67)		Stage II (n=123)		Stage III (n=94)		Stage IV (n= 27)		F	P
	M	SD	M	SD	M	SD	M	SD		
SRMEI	222.13	29.15	223.93	29.22	225.10	29.05	214.29	24.54	1.05	.36
Internal LOC	25.82	6.61	26.64	6.72	26.43	7.11	23.29	5.55	1.94	.12
Other LOC	12.29	3.61	12.73	3.45	13.53	3.65	12.88	3.60	1.70	.16
Doctors LOC	16.98	1.79	16.91	1.80	16.86	1.98	17.48	.84	.88	.45
Chance LOC	31.02	3.88	31.13	4.01	31.40	3.73	32.51	2.04	1.16	.32

Note. \* $p < 0.05$ , \*\* $p < 0.01$

characteristics. Whereas others HLOC depicted non-significant correlation with SRMEI, sub divisions ESRS, and ESAS but significantly correlated with high interpersonal skills table-II.

Differences in SRMEI and MHLC scales between disease stages were insignificant table-III.

**DISCUSSION**

Emotional intelligence (EI) and health locus of control constructs are center of attention in research for last two decades. Both of these were found in different studies as stronger predictors

internal HLOC with doctors HLOC was found to be highly supportive for patient’s physical wellbeing<sup>16</sup>.

Similarly Watson and colleagues<sup>16</sup> suggested that internal control and one external locus of control dimension (doctors Health Locus of Control) related to well-being of patients where as Graci and Rosti<sup>17</sup> found that the external dimensions including chance and powerful other people were found to be associated with poor adjustment and psychological distresses among chronic illness patients. Bastian et al<sup>18</sup> claimed that people with higher emotional intelligence are

more satisfied in their life and they perceived better problem solving coping ability and show strong control over their life circumstances.

In current study sample demographic characteristics revealed that most of patients were illiterate or less than metric education, whereas almost equal frequency was observed in both age groups (younger and older) study results suggested that high emotional intelligence have significant positive relationship with positive health locus of control including internal health locus of control<sup>10</sup> and doctors health locus of control, no significant relationship was found between emotional self-regulation skill and other locus of control, some of the findings on chance and others locus of control were found significantly related with emotional intelligence sub divisions that portrayed breast cancer patients' have bi-local characteristics means they have internal control and motivation to fight against this disease but at the same time they shown fears, stress and depression as well. In another study it was reported that cancer patients have bi local characteristics in them because of severity of harm associated to disease<sup>16</sup>, for which they need extra attention and care. These findings could be a guide line for interventionist to formulate therapies accordingly, keep more focus on how to enhance these emotional and control skills among breast cancer population<sup>8,15-17</sup>.

Furthermore Comparison analysis revealed non-significant results of different disease stages on EI and HLOC, while frequencies revealed that high frequency lies in stage II and III, then I, and very few with stage IV were found. No doubt the fewer patients were found with stage IV, but stage III (2<sup>nd</sup> higher frequency of current sample) is critical and if patient have awareness about complexity of advanced levels of disease then distress is obviously attached to it. One of logical reason behind this finding could be illiteracy and lack of awareness about disease related facts, as during data collection it was observed that mostly women do not know about their disease stage therefore patients' medical files were used to obtain this information. For future researchers

it is strongly recommended to explore disease stage related changes on larger sample in different hospital settings may be diverse findings could be assessed, as one of the biggest limitation of current study was large number of illiterate or less educated sample. In a nutshell it is suggested that through psychological interventions patients' emotional status, internal control could be enhanced which may leads to better control and coping mechanism among breast cancer population as above mentioned literature also guides that these construct have their significant positive impacts on stress reduction and well-being.

## CONCLUSION

The strength factors of EI and HLOC are highlighted in current study. It was concluded that Emotional Intelligence (EI) and health locus of control (IHLOC, & DHLOC) have positive direction of relationship, both skills leads to positive adaptation and greater coping strengths.

## CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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