COMPARING COPING STRATEGIES, AFFECTIVE SELF-REGULATION AND RESILIENCY IN CANCER PATIENTS BASED ON GENDER, AGE, OCCUPATION AND EDUCATION

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ABSTRACT
The present study was conducted with aim of investigating and comparing the coping strategies, self-regulation and emotional resiliency among cancer patients in Tehran, according to sex, age, occupation and education. Therefore, through using a multistage cluster sampling, 200 cancer patients (100 females and 100 males) were selected. The research instrument was questionnaires of: 1) Lazarus Stress Assessment 2) Larsen Emotional self-regulation 3) Resilience for Adults Freiberg et al.,. The collected data were analyzed using Pearson's correlation coefficient, Spearman correlation coefficient, and t-test. Results showed significant predictive variables of gender and job type resiliency, coping with stress and emotional self-regulation, respectively. However, age and education level predicted for resiliency, coping with stress and emotional self-regulation was not significant. The results also indicated the role of emotional self-regulation and resilience in coping with the stress caused by internal and external factors in patients with cancer is effective.

Keywords: Coping Strategies, Stress, Emotional Self-regulation, Resilience, Cancer

INTRODUCTION
In recent years, cancer rates have increased dramatically among different groups of people, therefore comprehensive supports in terms of both medical and psychological of these individuals are extraordinary importance.
Since cancer is a disease caused by various factors, such as weakness, disease, fear and stress associated with surgery, chemotherapy, and most importantly stress from illness, mental health threat to the people. Identify and evaluate potential factors affecting these patients is important. The capacities and capabilities are including resiliency, coping strategies and self-regulation that can affect the mental component of cancer patients.
The purpose of this paper was comparison of coping with stress, emotional self-regulation and resilience among cancer patients according to gender, age, occupation and education.
Doing the research on the relationship between emotional self-regulation and resilience in coping with the stress of cancer patients is important from both theoretical and practical perspectives. Theoretical perspective, Evidence shows that self-regulation is inefficient because it can lead to ineffective coping styles should lead to hopelessness and lack of control which is characteristic of depression and it sometimes happens that most of the internal and external sources of support are weakened. Therefore, theoretically the relationship between self-regulation and coping styles mediate the empirical and scientific resiliency in a sample of patients with cancer. On a practical level, if coping styles mediate the relationship between self-regulation and resilience we need in this situation is a positive intervention which includes increase in the positive sense of them as a way to reduce the ineffective coping styles, and a method for increasing the strength and resilience and well-being of individuals coping with stress is ineffective. Cognitive and metacognitive strategies that people use to regulate their own use, Could improve the health of people in various aspects of biological, psychological, social and ethical issues and thereby increase their efficiency and quality of life (SalehiMorkani, 2006).
Research Article

Research shows that stress and emotional regulation with the appearance of chaotic behavior disorders, are associated and People with emotional regulation and problem-oriented, and show risk and risky behavior (Robin et al., 2008; quoted by Yazdani, 2012).

In the field of cancer research has been done on stress but the research has not been done one Variables associated with resiliency and self-regulation and on the other hand among the research that shows people how to use stress management strategies and regulatory strategies has not done. The study will try the self-regulatory strategies and stress management strategies in the theoretical study of cancer patients do. On the other hand we would be very useful in practical fields.

On the specific aim of the aspects we can say that although this study makes is making clear, the uncertainties of theoretical psychology the special aspect of this study would help mental health professionals in the psychological etiology of cancer and coping style for people with cancer.

As regards, various aspect of cancer psychology has been presented and different approaches depending on their views of human psychology, psychological aspects of cancer have different etiology. Regarding that in a clinical study the clinician guide, interview, conducting the interview, etiology of the difficulties, conceptualizing the problem and symptoms in patients conceptualize and design a treatment plan specific etiology is originated.

This research will result in realizing a more efficient pattern of interviews, diagnosis and treatment of cancer patients. In our research we want to achieve the following objectives:

Identifying and coping strategies in cancer patients according to sex, age and education
Identifying and determine emotional self-regulation in cancer patients according to sex, age and education
Identifying and determine resiliency in cancer patients according to sex, age and education

Regarding the above objectives, the following questions are raised:

- Are coping strategies in cancer patients according to gender, age, occupation and education are different?
- Is emotional self-regulation in cancer patients according to gender, age, occupation and educations are different?
- Is resiliency in cancer patients according to gender, age, occupation and education is different?

The studies that have been done in this area are including:

The result of the study of Gardner et al., (2008) reveals that there is a significant relationship between resiliency and learning self-regulation and resiliency was predicted by self-regulation (Bagheri and Yousefi, 2009).

In a research titled Resiliency in students' academic performance, Hanrich (2005) reached the conclusion that training can improve resiliency of university students is being developed. In addition to improving the academic performance of students was effective in increasing resiliency (Kamal and Mahdi, 2008).

Research evidence Lawn Hilde (2006) suggests that there is different depression among single and married women. Batman and Vetrl research (2007) it was shown that emotional self-regulation strategies among single and married women are different.

In their study, it was found that using strategies to reduce negative mood as one of emotional self-regulation strategies, is more evident among married women (Motegov, 2008).

Grazyanov (2006), the structural model of emotional self-regulation mediates on the severity of symptoms of children and stress among parents of children was investigated.

Multiple research have been done between impulsivity and hyperactivity and stress with parent’s stress impulsivity (Frazier et al., 2007).

Shasterman et al., (2009), have investigated the regulation of emotion and obsessive Tricho- tillomania and found that somewhat there is relation between emotion regulation and Tricho- tillomania (Franklin et al., 2008).
Research Article

MATERIALS AND METHODS

Methods

Research Methods in the event study methodology. In this study, Status, demographic variables of subjects are as the independent variable and self-regulation strategies and emotional coping strategies and resilience cancer patients have been considered as the dependent variable.

In the present study two methods of library and questionnaires were used. Three questionnaires, Resilience Scale for adults (RSA) and emotional self-regulation questionnaire Lazarus Stress assessment Questionnaire (for coping with stress) were used.

The corpus of study includes 200 cancer patients hospitalized in Imam Khomeini Hospital in Tehran were selected by multistage cluster sampling.

Analysis of Data

Table 1: Frequency table for respondents in employment status variable

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Frequency</th>
<th>Employment status</th>
</tr>
</thead>
<tbody>
<tr>
<td>40/5</td>
<td>81</td>
<td>Self-employee</td>
</tr>
<tr>
<td>59/5</td>
<td>119</td>
<td>employee</td>
</tr>
</tbody>
</table>

According to the obtained results, 8.3% had diploma, 66/9% had bachelor degree, and 21/1% had master degree and higher degrees.

According to obtained results, 50% of our case studies were female and 50% were male.

Table 2: Central indicators for subjects in the cognitive variables

<table>
<thead>
<tr>
<th>Evasion and avoidance</th>
<th>Reassessment</th>
<th>Problem Solving</th>
<th>Accepting Responsibility</th>
<th>Seeking support</th>
<th>Self-control</th>
<th>Deal directly</th>
<th>Spacing</th>
<th>age</th>
<th>Statistical indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequency</td>
<td>Changes Domain</td>
<td>Average</td>
<td>Variance</td>
<td>Standard deviation</td>
<td>Tilt</td>
<td>Skewness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>200</td>
<td>18/00</td>
<td>17/00</td>
<td>11/00</td>
<td>13/30</td>
<td>14/88</td>
<td>18/00</td>
<td>15/00</td>
<td>42/00</td>
</tr>
<tr>
<td>21/00</td>
<td>14/86</td>
<td>13/30</td>
<td>14/07</td>
<td>8/97</td>
<td>9/56</td>
<td>63/62</td>
<td>42/00</td>
<td>30/85</td>
<td>Average</td>
</tr>
<tr>
<td>21/28</td>
<td>14/37</td>
<td>13/31</td>
<td>15/53</td>
<td>14/07</td>
<td>8/97</td>
<td>9/56</td>
<td>63/62</td>
<td>30/85</td>
<td>Variance</td>
</tr>
<tr>
<td>-0/439</td>
<td>0/334</td>
<td>0/428</td>
<td>0/340</td>
<td>0/314</td>
<td>0/46</td>
<td>-0/47</td>
<td>0/69</td>
<td>0/83</td>
<td>Tilt</td>
</tr>
<tr>
<td>0/566</td>
<td>0/473</td>
<td>0/485</td>
<td>-0/482</td>
<td>0/582</td>
<td>-0/401</td>
<td>0/443</td>
<td>0/051</td>
<td>0/014</td>
<td>Skewness</td>
</tr>
</tbody>
</table>

Table 3: Central indicators for subjects in resiliency subscales

<table>
<thead>
<tr>
<th>Personal structure</th>
<th>Continuation factor</th>
<th>Social support factor</th>
<th>Social factors</th>
<th>Personal agent factors</th>
<th>Statistical indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>frequency</td>
</tr>
<tr>
<td>16/0</td>
<td>22/00</td>
<td>26/00</td>
<td>69/00</td>
<td>69/00</td>
<td>Changes Domain</td>
</tr>
<tr>
<td>10/51</td>
<td>14/49</td>
<td>17/72</td>
<td>30/98</td>
<td>30/89</td>
<td>average</td>
</tr>
<tr>
<td>13/85</td>
<td>34/33</td>
<td>37/93</td>
<td>125/151</td>
<td>134/56</td>
<td>variance</td>
</tr>
</tbody>
</table>
The Sub-hypotheses related to Hypothesis 1

Coping strategies in cancer patients varies according to gender.

Independent t-test was used to test the hypothesized model.

• The average of the two groups of men and women are different in subscales direct confrontation and the average score of men is more than women also the amount of this difference is statistically significant. Because the observed independent T level was -2.25 and observed significance level of 0.025 is smaller than 0.05. Thus, our hypothesis that a significant difference between the two groups of male and female subjects with 0.95 hundredths degree of confidence and error rate of 0.05 hundredths are confirmed.

• Between two groups of men and women at average spacing’s are different subscales and the average score for women is more than men. But the difference is not statistically significant. Because the 1/18 observed independent T level, the observed significance level of 0.239 is greater than 0.05 hundredths. Thus, our hypothesis that significant differences between the two groups of subjects were men and women cannot be verified.

• Between two groups of men and women out there are differences in self-control subscale and the Average score for men is more than women. Also the amount of this difference is statistically significant. Because -3.44 the observed independent T level, Observed significance level of 0.001 is less than 0.01 hundredth. Thus, our hypothesis that a significant difference between the two groups of male and female subjects with 0.99 confidences hundredths and error rate 0.01 hundredths are confirmed.

• There is a difference between two groups of men and women in seeking support subscale and the Average score for men is more than women. Also the extent of these differences is statistically significant. Because the - 2.56 independent observed T, Observed significance level of 0.011 is smaller than 0.05 hundredths. Thus, our hypothesis that there is a significant difference between the two groups of male and female subjects with confidence rate of 0.95 hundredths and error rate 0.05 hundredths are confirmed.

• There are differences in the two groups of men and women in n mean subscale reception of problems. And the average score for women is more than men. Also, the extent of these differences is statistically significant. Because the 2.35observed independent T level was Observed significance level of 0.020 that is smaller than 0.05 hundredths.
Thus, our hypothesis that there is a significant difference between the two groups of male and female subjects with confidence rate of 0.95 hundredths and error rate 0.05 hundredths are confirmed.

- There are differences between the average of the two groups of men and women in subscales of problem solving. And the average score of men is more than women. Also, the amount of this difference is statistically significant. Because the independent observed \( T = 2.69 \), Observed significance level of 0.008 is smaller than 0.01 hundredths. Therefore, our hypothesized that there’s a significant difference between male and female subjects with confidence rate of 0.099 hundredth and error rate 0.01 hundredth will be confirmed.
- There is a difference between the two groups of men and women in subscales reassessment and the average score of men is more than women. But the difference is not statistically significant. Because the independent observed \( T = 1.68 \) at Observed significance level of 0.093 is greater than 0.05 hundredths. Thus, our hypotheses that there is a significant difference between the two groups of subjects were men and women cannot be verified.
- There is a difference between the average of the two groups of men and women in subscales of evasion and avoidance. And the average score for women is more than men. Also, the extent of these differences is statistically significant. Because the independent observed \( T = 2.24 \) at Observed significance level of 0.026 is smaller than 0.05 hundredths. Therefore, our hypothesized that there’s a significant difference between male and female subjects with confidence rate of 0.095 hundredth and error rate 0.05 hundredth will be confirmed.

To test this hypothesis, we used Pearson correlation model and the analysis of the results gave the following presentation:

The relationship between age and the deal is direct positive. With increasing age of the subjects, the use of coping techniques to deal direct is increases. But this relationship is not statistically significant. Because with the correlation coefficient of 0.114, the observed significance level of 0.106 is greater than 0.05 hundredths. Therefore, we hypothesized that a significant relationship between two variables cannot be verified.

- The relationship between age and mechanism of distancing is negative. It means that with increasing age of the subjects, the use of distancing coping methods is reduced. But this relationship is not statistically significant. Because the correlation coefficient -0.017 the observed significance level of 0.80 hundredths is greater than 0.05. Therefore, we hypothesized that a significant relationship between two variables cannot be verified.
- The relationship between age and self-control is positive. It means that with increasing age of the subjects, the rate use of coping self-control will be increased. But this relationship is not statistically significant. Because the correlation coefficient was 0.131 significant level of 0.064 is greater than 0.05 hundredths. Therefore, our hypothesis a significant relationship between two variables cannot be verified.
- The relationship between age and seeking support is positive. It means that with increasing age of the subjects, the rate of combat responsibilities will increase. But this relationship is not statistically significant. Because the correlation coefficient was 0.057 significant level of 0.423 is greater than 0.05 hundredths. Therefore, our hypothesis that there is a significant relationship between two variables cannot be verified.
- The relationship between age and problem solving is positive. It means that with increasing age of the subjects, the rate will be increased use of coping strategies. But this relationship is not statistically significant. Because the correlation coefficient was 0.069 significant level of 0.335 is greater than 0.05 hundredths.
hundredths. Therefore, our hypothesis that there is a significant relationship between two variables cannot be verified.

- The relationship between age and re-evaluation is positive. It means that with increasing age of the subjects, the rate used to coping reassessment is increases. But this relationship is not statistically significant. Because the correlation coefficient was 0.068 significant level of 0.340 is greater than 0.05 hundredths. Therefore, our hypothesis that there is a significant relationship between two variables cannot be verified.

- The relationship between age and escape and avoidance, is negative. It means that as the age of our cases study increase, the use of coping method decrease. But this relation is not statistically significant. Because the correlation coefficient was 0.004 significant level of 0.956 was significant at the 0.05 hundredth. Therefore, our hypothesis that there is a significant relationship between two variables cannot be verified.

Coping strategies in cancer patients varies according to occupation.

- In order to test this hypothesis, we used the T Model and the analysis of the results gave the following presentation:

There is a difference between the average of two groups of employed and self-employee subjects in direct coping subscales. And the average score of the group is employee is more than self-employee. But the difference is not statistically significant. Because in 1.69 observed independent T level, the observed significance level of 0.091 is greater than 0.05 hundredths. Therefore, our hypothesis that there are significant differences between the two groups of self-employed and employers cannot be verified.

- Further surveys indicate that between-group differences in variables making, problem solving, escape and avoidance and re-evaluation is not significant. Because all the variables observed significance level is greater than 0.05 hundredths. However, differences in the degree of self-control variables to seek support and problems acceptance are significant. Because at all of these variable the significant level was more than 0.05 hundredth.

- Education level of the subjects and the use of coping strategies are related.

In order to test this hypothesis we used the Spearman correlation coefficient model and then analyze the results to be presented below:

The results of the relationship between stress coping strategies with education of case studies indicate that:

Among these variables, only distancing coping style was a significant positive relationship with education. Investigating the rest of the variables showed that the relationship was not significant.

The Sub-hypotheses related to Hypothesis 2

- Emotional self-regulation in cancer patients varies according to gender.

Independent t-test was used to test the hypothesized model.

Among the variables studied, the differences between males and females in cognitive and behavioral variables settings, change status, change emotion and significant increases in negative mood and decreased negative mood variable was not significant.

- Age of subjects and the use of coping strategies are related.

To test this hypothesis, we used Pearson correlation model and the analysis of the results gave the following presentation:

The obtained results indicate the relationship between self-regulation strategies with age of case studies. Investigation showed that among variables of study only decreasing the positive mood had positive and significant relation and The rest of the variables related to age didn’t have significant relation because they all have a significant level of 0.05 hundredths.

Coping strategies in cancer patients varies according to occupation.

In order To test this hypothesis, we used the T Model and the analysis of the results gave the following presentation:
The obtained result of the mean difference between the two groups, of self-employee and employer in self-regulation style show that there is difference among Self-regulation styles only cognitive styles of behavior and increased positive mood, between occupational groups.

Education level of the subjects and the use of coping strategies are related.

In order to test the hypothesis we used the Spearman correlation coefficient model and then analyze the results to be presented below:

The obtained result of the relationship between self-regulation styles with education of case studies reveals that:

Among the investigate variables only emotional change had significant relation with education and the rest of the variables the relationship wasn’t significant.

The Sub-hypotheses related to Hypothesis 3

Resiliency in cancer patients varies according to gender.

To test this hypothesis, we used the T Model and the analysis of the results gave the following presentation:

The obtained result reveals the difference between two groups of males and females in the resiliency factors. According to the obtained result the difference between two groups of men and women in the variable personal component, social support, social Coherence and Cohesion and Personal structure were significant while other differences of component were not significant.

Age of subjects and the use of Resiliency are related.

In order to test this hypothesis, we used Pearson correlation model and the analysis of the results gave the following presentation:

The obtained result show the relation between the resiliency and age of case studies that:

Among the under study variables, only the relation of personal structure with age is significant and the other variables are related to age is not significant.

Resiliency in cancer patients varies according to occupation.

In order to test this hypothesis, we used the T Model and the analysis of the results gave the following presentation:

The obtained result reveals the mean difference among two groups of patients of self-employee and employers in resiliency component. According to the results of the two groups of subjects, there is no significant difference between any of the components of resiliency.

Education level of the subjects and the use of Resiliency are related.

To test this hypothesis, we used the Spearman correlation coefficient model and then analyze the results to be presented below:

The obtained result shows the relationship between the components of resiliency and age of case studies. Investigated reveals that, there is no significant relationship between components of resiliency and education of case studies was observed.

Conclusion

The studies reveals that People with high self-regulation tend to use problem-focus coping styles. Instead, people with lower self-regulation tend to use emotion-focused coping styles. Result of analysis showed that higher self-regulation in cancer patients is associated with more efficient coping styles.

In other words, we can say that, Cancer patients in their ability to perform the duties and responsibilities in the workplace and the responsibility they believe they can be.

When facing with the stress from disease and environmental stress would use more problem-focused coping style. The role of gender in the relationship could be noted.

Women, when faced with life stressors such as duties of life like education and here's disease emotion-focused methods than other methods.

In this study, despite the fact that married women have used emotion-focused than problem-focused styles. But the use of emotion-focused styles was also normal.

One reason for this can be attributed to the gender of the subjects and the second and more fundamental reason is attributed to the type and characteristics of the subjects.
Research Article

Essentially, the use of emotion-oriented style (as a way of coping with low efficiency) can make people prone to anxiety disorder. Studies of gender differences in coping with stress suggests that men report more problem-oriented strategies and women report more emotion-oriented strategies. In explaining the issue and the results of cancer in women than men would say that In addition to gender differences in coping styles (Women use emotion-focused strategies).

It can be said that self-regulation with low efficiency may lead to poor results and work-related stress in the lives of women. Results and poor grades can lead to an internal source of stress for the individuals and people in order to cope with extrinsic stress, resort to coping and defense style.

It depends on how severe the stressor was, and how the Treasury confronts to be rich people have selected the different levels of efficiency strategies such as ineffective and immature problem-focused coping strategies such as avoidance coping style.

Another study about confused people showed that these depressed people experience more upset, negativism, hostility and distrust. Women, who have low social adjustment, tend to relate Communication problems with factors that they have little control, such as personality traits. They also in relation with others consider their misbehaving fixed and innate. Women, who have a positive attitude toward themselves and others, have better mental health. Less than others who had Negative attitude less mental health is less depressed and more happiness.

Therapeutic interventions and programs that involve setting personal goals were to increase personal commitment and joy in their family environment. Also interning their parents and families in everyday practice guidelines was to increase their happiness and health. Families had higher self-regulation, quality of life and mental health naturally increased. People who have a satisfying and supportive relationship are less likely to have physical and psychological illness and if they get sick they get better fast. Each of physiological effects increases the risk of serious illness.

It seems that confused relationships have an indirect effect on the health for instance someone who has confused relationship is unresponsive to their drug regimen. On the contrary, someone who had Orderly and peaceful relationship shows More attention to the possible physical therapy. And in fact quiet life and Understanding and coping and solve problems peacefully would Reduce destructive conflict and tension and stress and reduce anger and aggression is destructive. On the other, Feeling capable of mastering life increase confidence and a sense of tranquility And the effect of the elimination of learned helplessness is not to modify the terms and therefore is effective in reducing disease symptoms.

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