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Patient's Perceived Autonomy Support Affecting their Levels of Depression and Treatment Motivation

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Utilizing the concept of autonomy-supportive from Self-Determination Theory (Deci & Ryan, 2000), the present study examined the levels of depression and treatment motivation among 193 cancer patients within repeated measure research design. The Treatment Motivation Questionnaire (Ryan, Plant, & O'Malley, 1995) and Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) were administered to the patients at the time of admission in hospitals. During their treatment, patients were then requested to fill Health Care Climate Questionnaire (Williams, Grow, Freedman, Ryan, & Deci, 1996). One month later patient's scores on depression and treatment motivation were again tested and were compared with the pervious scores on both scales. Results indicated that (a) prior the treatment, patients were more depressed and less motivated for their treatment (b) the patients perceiving higher autonomy support were more motivated towards their treatment and were less depressed than patients perceiving their doctors with low autonomy-supportive. Results pertaining to gender differences demonstrated that both male and female patients who perceive their physicians more supportive reported less depression and greater treatment motivation than those who don't perceive their therapist as supportive for them. Findings further contributed that female patients perceiving autonomy support reported higher levels of depression and low levels of treatment motivation than male patients perceiving autonomy supportive.

Keywords: Perceived Autonomy Support, Cancer Patients, Depression, Treatment Motivation, Interventions,

After many modern and dynamic discoveries in health care sector, human behavior along with his attitude is still the main influencer on the deviations that occurs in the health-related consequences (Schroeder, 2007). People when become aware of their diagnoses with cancer, their health and eudemonia gets highly affected. In order to fulfill the bio-psychosocial requirements of cancer patients, their therapeutic interventions should include the patient focused considerations like living standards, depressive symptoms along with physiologic measures (Glasgow, 2003).

According to self-determination theory (SDT: Deci & Ryan, 2000) patient's experience and motivation should be monitored carefully as they are the behavioral mediators of health outcomes. SDT provides a theoretical account to highlight how professionals, investigators, and rules personage can work progressively for the biological and psychosocial consequences of the patient. SDT investigators presume that congenitally individuals are directed towards development and wellness; they feel self-reliant, capable and considered as important (Sheldon, Williams, & Joiner, 2003).

SDT differentiates between autonomous and controlled supportive environment by defining autonomy as an experience of choice and will power when a person behaves congruously with his own deep rooted beliefs and values. Whereas controlled support involves behavior due to requirement or warnings from either extraneous factor (e.g., family member) or rigid belief to avoid guilt or disgrace one must behave accordingly. SDT depicts that psychological responses towards cancer depends upon counseling of health care professionals' experiencing both self-reliant and skilled (Williams, Deci, & Ryan, 1998).

Multiple aspects of human autonomy have evaluated in clinical research, some care must be required to adopt and distinguish among these concepts. For example in many areas it has been mentioned that sometime patients with achievement/independent are more vulnerable for depression (Nietzel & Harris, 1990). In some other work it also focused on autonomous motivation for treatment (Zuroff, Koestner, Moskowitz, McBride, Marshall, & Bagby, 2007). However the both versions of autonomy can show the relatively stable characteristics of the individual that can be preventively measured before the treatment. In opposite to it interaction of individual within the group setting is defined as autonomy satisfaction and thus, can be validly measured by group treatment.

As per SDT theory the patients requires maintenance in their behaviors to adopt values along with skills to change internally and then expose themselves to self-governance. In this theory it also comments that maximizing the patient's internalized experience of his independence, ability and likeliness can maintain the patient's behavioral change (Williams, Deci, & Ryan, 1998).

SDT being the general motivation theory, engendered experimental and field studies on the influence of perceived autonomy support on patient's depression and thus on treatment motivation (Deci & Ryan, 2000). From the past one and a half decades growing studies on change in health related behavior include application of SDT (Patrick & Williams, 2011; Ryan & Deci, 2008; Williams et al., 1998). These studies focused on the action of factors linked with the patient's autonomy ability and relatedness in the treatment environment and their effect on change initiation and its stability over time.

SDT focused on the procedures adopted by a person to motivate the initiation of new health related behaviors and sustaining them consistently. Sense of autonomy and competence is vital component of internalization and integration which determines person's self-

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regulation and retain behaviors contributing to wellness and health. Thus, the climates where the intervention being done can bear autonomy and can provide assurance which in turn increases the adaptability and thus enhance health outcomes. According to SDT, sense of relatedness is equally essential to internalization. Values and behavior promoted by the relied and attached individuals are more adapted by the people (Deci & Ryan, 2000).

Autonomy-supportive environment of health care affect the patients experience of depression (Kasser & Ryan, 1996), which influences the sequence of treatment and its alternatives. People when perceive their psychological motives are being supported, their mental health improves (low depression, anxiety, and somatization), better prime of life, and progressive health-related consequences with constant adaption of directed medications. Such mediation aids the internalization of autonomous self-regulation and experiences of ability, which shows the enhancement psychosocial in treatment outcomes (Patrick & Williams, 2011). Relation between SDT and health behaviors studied in various researches depicts findings in a consistent and interesting pattern. Patients show more involvement in treatment voluntarily and show consistency in their improvements when their psychological needs for autonomy is supported by health care.

According to researches there is a correlation of autonomy and self-efficacy with respect to better health, quality of life and decrease in depressive symptoms showing that depression could be decreased with the perception of autonomy and competence and is related to high treatment motivation and improved quality of life for cancer patients. As indicated by SDT, with the support of practitioner, patients are thought to be highly motivated towards treatment and less depressed (Senecal, Nouwen, & White, 2000).

Autonomy support is linked to motivational interviewing (MI) (Miller & Rollnick, 2002) as MI encourages a framework which diminishes those practitioner behaviors which can provoke patient resistance (Miller, Benefield, & Tonigan, 1993); continuous autonomy support by practitioner is the solution for it. In contrast to it, in tradition medical setup most of the cancer patients (or those suffering from any chronic disease) want physician to administrate prescription precisely and they are less prone to consider these recommendations as control (Schneider, 1998). In short, it is anticipated that measures of autonomy support is not only related but also provide clear prediction about treatment motivation and behavior in achieving desired health outcomes.

Researchers found that treatment motivation is decreased by patients' depression which can be controlled by an autonomy supportive patient/provider relationship (Williams, McGregor, Zeldman, Freedman, & Deci, 2004). Other researches on health care reinforced the finding that autonomy support by practitioners in health care affected not only patients' motivation to treatment but also psychological behaviors including depression and anxiety as well (Williams, Gagne, Ryan, & Deci, 2002).

Studies have shown that cancer patient's depression and treatment motivation is affected by an autonomy supportive patient/provider relationship. Several other researches related to health care have reported that autonomy support by doctors and professionals affected patient's motivation to treatment and psychological behaviors including depression and anxiety. Hence, former researches on health motivation have been productive in anticipating health outcomes from SDT constructs of motivation (Williams et al., 2004).

This study was completed utilizing repeated measures design in a way where the same group of patients participated in the study for two times and provided the data on study measures prior and during phase of the intervention.

The present study tested four primary hypotheses derived from the SDT process model: (1) cancer patients will report differences in depression and motivation for treatment at prior and during stages of intervention; (2) cancer patients perceiving high autonomy support will experience low levels of depression as compared to the cancer patients who perceive their physicians less autonomy supportive; (3) cancer patients who perceive high autonomy support will be highly motivated for their treatment than the cancer patients who perceive their doctors less autonomy supportive; (4) Cancer patients perceiving low autonomy support will report low depression and high level of treatment than cancer patients perceiving high autonomy support.

Method

Participants

Sample consisted of 193 cancer patients under treatment of 10 physicians taken from four different hospitals of Multan. Their age range was between 33-55 years with mean age of 39.33 out of them 112 were female patients of breast cancer and 81 were male patients with liver cancer. All the cancer patients were more or less similar in their educational and income levels. They were selected through convenient sampling technique.

Instruments

Following scales were used to measure the variables of the study.

Beck Depression Inventory (BDI) The BDI (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) containing 21 items is the self-administered inventory to measure depression. Responses are rated on a 4-point scale rating scale from 0 to 3. Items are scored by sum up the ratings for the 21 items. The highest score on each of the 21 items is 3. The highest possible total for the whole test is 63 and zero would be the lowest possible score for the whole test. If more than one is circled on one item, only one highest score is added. The original BDI has a split-half reliability co-efficient of .93 and Urdu-version of BDI has reliability of .83.

Treatment Self-Regulation Questionnaire (TSRQ) The TSRQ (Ryan, Plant, & O'Malley, 1995) pertains why individuals pursue some behavior and why follow a treatment regimen. The scale assesses the level to which an individual's need for the treatment is autonomous. It has 19 items with 7-point Likert-type scale ranging from strongly disagree to strongly agree (1-7). It has two subscales: Autonomous Regulation and Controlled Regulation. To obtain the scores on these subscales, scores are averaged out on items of each subscale. They are: Autonomous Regulation: 2, 3, 7, 10, 13, 16, 18, 19 and Controlled Regulation: 1, 4, 5, 6, 8, 9, 11, 12, 14, 15, and 17. Both subscale scores are usually used individually, but at times they have been combined into a Relative Autonomy Index (RAI) by subtracting the average for Controlled Regulation from the average for Autonomous Regulation. The original TSRQ has a split-half reliability co-efficient of .88 and Urdu-version of TSRQ has split-half reliability of .76.

The Health Care Climate Questionnaire (HCCQ) The HCCQ (Williams, Grow, Freedman, Ryan, & Deci, 1996) contains 15 items with 7-point rating scale. It is used to measure patients' perceptions

of the degree to which their specific doctor is autonomy supportive, or it can be used to assess patients' perceptions of the degree to which their team of health care providers is autonomy supportive. To calculate the total scores on scale, scores on items are added. However, for before adding the item scores, the score of item 13 is must first reversed. The scores range between 15 -105. Cut off score is 75. A higher score than 75 shows the higher level of perceived autonomy support. The original HCCQ has a split-half reliability co-efficient of .91 and Urdu-version of HCCQ has split-half reliability of .78.

Procedure

The study was completed in two phases.

Phase 1

Phase 1 was subjected to adaptation, translation, and validation of the instruments to be used in main study. After obtaining the relevance of all instruments, two of the original scales; Treatment Self-regulation Scale and Health Care Climate Questionnaire were translated through Back Translation Method. Urdu-version of BDI translated by Sultan (2007) was already available. For the purpose of Urdu translation, three bilingual educationists with Ph.D qualification were requested to translate these measures into Urdu language. Three other bilingual experts were further approached to translate these Urdu-translated versions into English language again. This time both original and translated version of scales were compared by experts in a way to check carefully every item on both versions of scales whether each item is conveying the same meaning. Items with high ratings were retained in the Urdu-version while the items with low rating were repeated again on translation method. After completing the back translation, both the scales were found successfully translated in Urdu language and all the items were found suitable to ask from the students in Urdu language.

The reliability and validity of both scales were then determined by administering both the questionnaires to a sample of 70 patients evenly divided in male and female cancer patients. Psychometric properties in terms of split half reliability were determined and scales were found highly reliable.

Phase II

Phase II of the study consists of the main study. Cancer Patients were recruited through convenient sampling technique from primary care practices of 10 physicians at four different hospitals in Multan-Pakistan. This study was completed into two phases. In phase I, cancer patients were firstly tested on their levels of depression and motivation for treatment. While their treatment was undertaken by their physicians, they were given the Health Care Climate Questionnaire to fill out for knowing how much they are provided autonomy support by their physicians. On the basis of patients' scores on Health Care Climate Questionnaire, they were grouped into two; who perceive their physician autonomy supportive and who did not perceive them as supportive. In phase II patients were again tested one month later on depression and treatment motivation. Urdu-versions of the scales were used in the study. Scores on both scales of two administrations were compared. Both the groups were also compared and analyzed to see the differences in their levels of depression and treatment motivation through statistical analysis on SPSS.

Results

In order to get comprehensive profiles of cancer patients' depression and treatment motivation in terms of their perception about autonomy support of their physicians prior and during intervention, paired sample *t*-test was computed (Table 1) and in order to see the differences between two groups of patients perceiving their physicians autonomy supportive and not supportive in terms of their depression and treatment motivation, independent sample *t*-test was computed (Table 2). Analysis for hypothesis 4 about female patients is presented in Table 3.

Table 1 indicates the significant differences in the scores of cancer patients on scales of depression and treatment motivation prior and during intervention. These findings suggested that cancer patients prior to the intervention report high levels of depression and low levels of motivation for treatment. While during the intervention the results are vice versa.

Table 2 indicates that the cancer patients who perceive their physicians autonomy provider during treatment and those who perceive vice versa significantly differ in reporting levels of depression and motivation for treatment. Cancer patients who perceive autonomy tend to report less depression and high treatment motivation as compared to those who don't perceive autonomy.

Table 3 indicates that the female cancer patients who perceive their physicians autonomy provider during treatment and those who perceive them as not supportive significantly differ in reporting their levels of depression and motivation for treatment. Female cancer patients who perceive autonomy support tend to report less depression and high treatment motivation as compared to those female patients who don't perceive autonomy support.

Table 4 presents that the male cancer patients perceiving their physicians autonomy support during treatment and the patients perceiving their physicians as not supportive differ in reporting their levels of depression and motivation for treatment. Male patients who perceive autonomy support tend to report less depression and high treatment motivation as compared to those male patients who don't perceive autonomy support.

Table 1
Depression and Treatment Motivation Prior and During Intervention (N =193*)*

	Prior Intervention		During Intervention			
Scales	*M*	*SD*	*M*	*SD*	*t*	*p*
Depression	49.23	11.04	23.86	09.12	2.17	.03*
Treatment Motivation	84.21	16.28	112.35	16.07	3.32	.01**

df = 191, ** $p < 0.01$, *$p < 0.05$.

Table 2
*Depression and Treatment Motivation between Patients Perceiving their Physicians Supportive and Patients Perceiving their Physicians Not Supportive (N =*193*)*

	Patients Perceiving Autonomy Support (*N* = 104)		Patients Perceiving Not Autonomy Support (*N* = 89)			
Scales	*M*	*SD*	*M*	*SD*	*t*	*p*
Depression	21.32	08.83	38.72	09.43	-2.73	.01*
Treatment Motivation	107.55	14.63	77.62	15.83	2.05	.02*

df = 191, * $p < 0.05$, ** $p < 0.01$.

Table 3
*Depression and Treatment Motivation of Female Cancer Patients Perceiving their Physicians Autonomy Supportive and Perceiving Not-supportive (N =*112*)*

	Patients Perceiving Autonomy Support (*N* = 47)		Patients Perceiving Not Autonomy Support (*N* = 65)			
Scales	*M*	*SD*	*M*	*SD*	*t*	*p*
Depression	31.27	07.72	39.02	07.62	-3.14	.00*
Treatment Motivation	112.04	11.53	68.71	13.03	3.62	.00*

df = 110, * $p < 0.001$.

Table 4
*Depression and Treatment Motivation of Male Cancer Patients Perceiving their Physicians Autonomy Supportive or Perceiving Not-supportive (N =*81*)*

	Patients Perceiving Autonomy Support (*N* = 57)		Patients Perceiving No-Autonomy Support (*N* = 24)			
Scales	*M*	*SD*	*M*	*SD*	*T*	*p*
Depression	27.11	05.58	30.17	05.77	-2.21	.02*
Treatment Motivation	131.52	09.66	84.13	11.20	2.91	.01*

df = 87, * $p < 0.05$.

Discussion

A great deal of work on self-determination model, peculiarly in the field of health, is centered on the study of the patient's perception whether their health care providers are autonomy supportive or not. The degree to which physicians provide autonomy support to their patients affects the patient's psychological distress and their hope and motivation for their treatment (Pelletier, Fortier, Vallerand, & Bri`ere, 2001).

In the present research, it was predicted that from several facets of the health care system, the physician role as autonomy supportive provider will affect the level of depression of cancer patients and their degree to be motivated for treatment because it has been observed that patients who are diagnosed with cancer will experience high levels of depression, and will be hopeless and are indecisive about attending intervention for cancer. In the first hypothesis it was supposed that cancer patients will report differences in depression and motivation to treatment at prior and during stages of intervention. The findings of the present study supported the hypothesis and suggested that cancer patients at the start of their therapy were more depressed and were less motivated to take up the treatment. These results are in lines with the findings of the study conducted by Williams, McGregor, Zeldman, Freedman, and Deci in (2004) who found that autonomy support and competence were significantly related to less depressive symptoms in the same way that they were related to glycemic control, indicating that these variables have effects on both biochemical processes and quality of life processes.

SDT model of health behavior also presents the evidence that the patient's psychological experiences are influenced by autonomy-supportive health care climates. Patient's inspiration for treatment was also affected by how much their health care takers provide autonomy support (Kasser & Ryan, 1996) which may affect perception, and treatment priorities. It is also the indicative of notion that when patients find their psychological needs are being fulfilled they live a life with better and positive mental health particularly less depressive symptoms, anxiety, and somatization, greater quality of life, and better health-related outcomes, such as greater intake of medication.

It was found that the cancer patients who have perceived their therapist as autonomy supportive during treatment were less depressed and highly motivated for their treatment. These findings are in tune with the reports of Albino, Lawrence, Lopes, Nash, and Tedesco (1991) who documented that patient perception is an essential factor in the timely, successful outcome of treatment. An absence of perception that their physicians are not autonomy

supportive has a substantial impact on the length of time a patient must bear during treatment, patients psychological emotions related to their disease, patients motivation and attitude for method of treatment (Skidmore, Brook, Thomson, & Harding, 2006). Research concerning these issues of treatment highlighted the important and vital differences in patients' levels of depression (Agar, Doruk, Bicakci, & Bukusoglu, 2005).

This study has also contributed a significant finding pertaining to gender differences in their levels of depression and treatment motivation when male and female perceive their physicians as supportive and non-supportive for them. Findings revealed that patients' perception towards his/her physician is more important and if patient is male or female when perceive physician as more supportive experience low level of depression and high degree of treatment motivation than those male and female patients perceiving their therapist less supportive. However mean differences indicated that female patients perceiving autonomy support reported higher levels of depression and low levels of treatment motivation than male patients perceiving autonomy supportive.

Conclusion

This study leads to a significant conclusion that autonomy support provided by physicians during treatment to their patients helps in regulating the cognitive process of patients' perception of their health care provider as autonomy supportive which ultimately affect their emotions of loss, disappointment, and depression. Another important finding suggests that in clinical practices, the patients' cooperation with therapist and continuation of treatment depends on to what extent patients perceive their therapist as autonomy support provider. Results pertaining to gender differences demonstrated that both male and female patients who perceive their physicians more supportive reported less depression and greater treatment motivation than those who don't perceive their therapist as supportive for them.

Limitations and Suggestions:

The sample size of the study is not large enough to generalize the findings. Therefore on the basis of results of present study, the findings cannot be generalized.

Physicians should include ways to improve health care autonomy supportiveness that could benefit the patients' emotions and motivation towards treatment.

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