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Factors influencing treatment dropout among patients in Community Mental Health Centers (CMHC) of Tehran city, Iran

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Abstract

Introduction: The current research aims at investigating the effect of demographic features such as educational level, gender, type of disorder, and physician's empathy and emotional intelligence on Community Mental Health Centers (CMHC) patients' treatment dropout.

Materials and Methods: A sample of 4101 patients and 26 physicians were selected. Patients' information was collected through CMHC registration software (information was already saved on the software since the centers have been established). Information related to physicians was also collected via two questionnaires, namely Bar-On EQ Inventory, and Jefferson Scale of Physician Empathy (JSPE), merely after consent forms were filled out. Based on the type of data, the collected information was transferred into nominal data, and later analyzed through Chi-square test via SPSS software.

Results: The results of the current research suggested that the more empathetic a physician is, the less likely patients' treatment dropout would be. Moreover, there was no significant relationship between the EI average score and treatment dropout. There was only a significant relationship between treatment dropout and adaptability, an EI competency. The findings of the current research indicated that none of the patients' demographic variables (gender, educational level, and type of disorder) had a significant relationship with treatment dropout.

Conclusion: Based on the findings of this study, physicians' communication skills, empathy, and adaptability did not significantly contribute to their patients' treatment dropout.

Keywords: Adaptability, Emotional intelligence, Empathy, Treatment dropout

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Introduction

Treatment dropout is considered to be a significant issue in mental health, since mental health care would not be effective in insufficient time (1,2). Treatment dropout seems to be a common problem, since it is reported to be as high as 22.3% in Canada and 22.4% in the U.S (3). Treatment dropout in outpatient psychiatric services has been estimated to range from 20% to 60% (4).

Variables such as low income, low age, and type of disorder are related to patients' treatment dropout (as cited in 5). Issues that predict treatment dropout include the tendency to individually manage the symptoms, pharmacotherapy, drug side effects, patients' low age, and male gender (3). In addition to patients' demographic characteristics, the type of disorder is also considered to be one of the factors related to psychiatric treatment dropout. Approximately 50% of psychiatric patients discontinue treatment; patients suffering from anxiety disorders are more likely to drop out. For instance, it has been stated that 85% of patients with social phobia who have been primarily interviewed would not attend the follow-up treatment sessions (6).

On the other hand, some studies suggested that mood disorders and substance abuse contribute more to treatment dropout, as compared with other types of disorder (3,5). In the same vein, Rossi et al. stated that there is a significant difference in the level of disability between dropout patients and patients who completed treatment (7). Patients with lower disabilities are more likely to drop out. Percudani, Belloni, Cotini, and Barbui also specified that patients with neurosis or character disorders are more likely to drop out in comparison with those experiencing psychosis (8).

It must be taken into consideration that clients' treatment dropout might also be influenced by other factors such as physician empathy and EI (9-11). The positive physician-patient relationship

would increase the satisfaction of the patient and accelerate clinical trials (9). One of the significant factors in building a positive physician-patient relationship is the physician empathy. Seyfarth and Cheney define empathy as the ability to put oneself in another's shoes in order to have a better understanding of their emotions and experiences (as cited in 12). Based on the studies in the realm of medicine, empathy is considered as the cornerstone in a successful physician-patient relationship (13). Physician empathy and communication skills increase patient satisfaction and compliance, and aid the physician in diagnosis and treatment (14). In a research on patient-reported outcomes of physician empathy, it was specified that physician empathy can play a salient role in decreasing depression and improving the life quality of patients suffering from cancer, leading to a better treatment outcome (15).

Moreover, the studies carried out in this field suggested that the lack of empathy might lead to negative effects on clinical trials (16). Thamson indicated that there is a significant relationship between different aspects of therapist's interpersonal skills on one hand, and patient satisfaction and motivation on the other hand (as cited in 17).

Physician's emotional intelligence is another significant factor in the treatment process. Goleman believes that emotional intelligence is an aspect of intelligence that plays a more significant role in individuals' success in various phases of life, as compared with cognitive intelligence (18). Salovey and Mayer define emotional intelligence as one's ability to control emotions and feelings, distinguish between one's own emotions and those of others, and use this as a guide to thinking and behavior (19).

Therapists with higher EI scores achieved better treatment outcome of their patients and lower dropout rates as compared with therapists with lower EI scores (10). Wagner and colleagues examined the

relationship between physicians' EI and patients' satisfaction, concluding that the higher physicians' EI is, the more satisfied their patients would be, resulting in medication and treatment adherence; therefore, the probability of treatment dropout would be decreased (20).

In another research, Weng suggested that a surgeon's EI is significantly and positively related to effective communication with the patient, which is in turn positively and significantly related to patient satisfaction before surgery (21). Therefore, more patient satisfaction, collaboration, therapy and medication adherence would result in less treatment dropout probability.

Considering the significance of the mentioned issues, various factors might contribute to treatment dropout; therefore, the contributing variables are categorized into three groups, namely factors related to (a) patients, (b) types of disorder, and (c) physicians. Among the factors related to patients, two demographic features of gender and educational level will be examined. Empathy and EI will be investigated among the variables related to physicians. Considering the types of disorder, patients with mood disorders and patients with anxiety disorders will be studied, since in the past two years, statistical reports proved that most patients suffer from either of the two. Hence, the current research aims at investigating the effect of variables such as gender, educational level, type of disorder, physician empathy, and physician EI on treatment dropout of patients in Community Mental Health Center of Tehran.

Materials and Methods

The participants of the current research consisted of all Tehran CMHC clients attending from January 2011 to April 2013, and all the physicians working in these centers. The sample comprised 26 physicians and 4101 patients suffering from major depression, depressive mood disorder, general anxiety disorder, obsessive compulsive disorder, and panic

disorder, whose information has been saved on CMHC registration software, including patients' demographic features such as age, gender, marital status, educational level, diagnoses, prescribed medication, number of visits, time of visits, next visit status, and follow-up status by case managers.

All patients have been informed from the very beginning that their information would be used and disclosed for research purposes, and consent forms were filled out by all of them, available on the software.

In the present research, treatment dropout was considered to be nonattendance for appointments up to 30 days after the confirmed date. The time between the first attendance and the last one, patient collaboration and treatment adherence, known as retention in treatment indicator, were extracted from the software.

Moreover, all research ethical issues have been considered in data collection. For gathering physician data, after the primary arrangements, an envelope was delivered to each physician consisting of a consent form, explanations on how the data is going to be used in the current research, Jefferson Scale of Physician Empathy, and Bar-On EQ Inventory, collected afterwards. Regarding the patient data, they have been informed about data registration, appointments, and follow-ups in the first visit; therefore, all patients who have been registered were well-informed and contented. Furthermore, no real names have been used in this study, i.e. the demographic information and types of disorder have been used along with a patient code.

Research instrument

A) *Jefferson Scale of Physician Empathy (JSPE)*: It consists of 20 items to investigate empathy among physicians; they need to respond to each item on a Likert-type scale ranging from 1 (totally disagree) to 7 (totally agree) (16). The validity and reliability of the questionnaire have been substantiated in several studies.

For instance, in a study on 704 physicians, the test-retest reliability coefficient was reported to be 0.65, and Cronbach's coefficient alpha was estimated as 0.81 (16). The validity of the questionnaire was also investigated and confirmed. In Iranian studies, Shariat and Keikhavandi reported the coefficient alpha as .88 for this scale and test-retest alpha as .94 (as cited in 22).

B) Bar-On EQ Inventory: This inventory, developed by Reuven Bar-On, includes 133 questions through which 15 competencies (Emotional self-awareness, Assertiveness, Self-regard, Self-actualization, Independence, Empathy, Interpersonal relationships, Social Responsibility, Problem-solving, Reality testing, Flexibility, Stress Tolerance, Impulse Control, Happiness, Optimism) are investigated. In addition, this questionnaire consists of 5 categories including Intrapersonal relationships, Interpersonal relationships, Stress Management, Adaptability, and General Mood (23). EQI has also been standardized

in Iran. Ghahremani Ochghaz has reported the Cronbach's coefficient alpha of this inventory ranging from 0.69 to 0.86, and with the average of 0.76 (as cited in 24).

Results

The sample consisted of 3247 females (80%) and 828 males (20%). Their educational level ranged from illiterate (0.8), elementary (0.12), junior high (0.24), diploma (0.45), associate degree (0.6), bachelor (0.5), and master (0.6). Among them, 1969 patients were suffering from mood disorders (48%), and 2015 from anxiety disorders (52%). Regarding treatment adherence, 3177 patients (78%) dropped out and 898 (22%) completed their treatment. Among the physicians, 10 out of 26 had higher EQ average score (38%), and 16 physicians achieved lower average EQ score (62%). Eleven physicians (42%) had higher empathy scores and 15 (58%) scored low.

Table 1. Correlation coefficients and chi-square test for research variables

Variable	Value	df	Sig.
Intrapersonal relationship	0.001	1	0.971
Interpersonal relationship	2.064	1	0.151
Adaptability	12.967	1	0.000*
Stress management	2.391	1	0.122
General mood	0.251	1	0.643
Physician total EI	0.512	1	0.474
Physician empathy	6.551	1	0.010*
Type of disorder	1.749	1	0.417
Patients' gender	0.019	1	0.891
Patients' educational level	2.074	6	0.913

As displayed in Table 1, none of the variables related to patients (gender, educational level) significantly contributed to treatment dropout. Moreover, there was not a significant relationship between types of disorder and treatment dropout. Considering the variables related to physicians, none of the EQ elements

Discussion

Results of the current research suggested that there is a significant relationship between physician empathy and treatment dropout of clients. That is, the more empathetic a physician is, the less probable treatment dropout would be. This finding is in line with that of other studies done in the

(intrapersonal relationships, interpersonal relationships, stress management, adaptability, and general mood) had a significant relationship with treatment dropout. There was merely a significant relationship between adaptability ($X^2=12.967$, $P<0.0005$), and physician empathy ($X^2=6.551$, $P=0.010$).

same realm, stating that there is a significant relationship between various aspects of physicians' interpersonal skills and patients' satisfaction and motivation; i.e. satisfied patients would adhere to treatment and this would decrease treatment dropout (17). For instance, Evans indicated that teaching communication

skills to physicians in order to enable them to respond properly to verbal and nonverbal symptoms would help them in diagnosis and increases treatment adherence in patients (as cited in 15). In another study, Beckman and Frankel examined poor communication indicators (interrupting patients or leading them to a specific disorder) on a sample of physicians in 74 medical examinations, and concluded that these methods not only prevent the patient from talking about their worries, but also missing information necessary for diagnosis. This poor communication of the physician plays a key role in dissatisfaction of patients and their families. While patients are dissatisfied, they are more likely to drop out of treatment (as cited in 25).

In a systematic overview, Beck, Daughtridge and Sloane studied physician empathy and patient-physician relationship in health care. The results of examination on 14 verbal and 8 nonverbal communications showed that positive verbal behavior (e.g. empathy, reassurance, sense of humor, time for health training, sharing information, friendly and modest behavior, guiding the patient in the process of treatment, summarizing and clarifications) and positive nonverbal behavior (e.g. nodding, bending, body posture, position of arms and legs, and eye contact) are positively related to health outcomes (26).

Another research was carried out to examine patients' understanding of communicative behavior and physician empathy; the results suggested that the more understanding patients had of the physician empathy and attention, the more satisfaction, self-efficacy and control, and the less anxiety and excitement were observed in them (11).

Moreover, Kim, Kaplowitz and Johnston investigated the effect of physician empathy on patient satisfaction and treatment follow-up, and stated that those who recognized physician empathy were

significantly more satisfied and had more treatment follow-up (9).

The obtained results suggested that there is a significant relationship between adaptability and treatment dropout; that is, the more adaptable a physician is, the less probable his/her patients' treatment dropout would be. Although there is scarcity of research on EI and treatment dropout, some more related studies are referred to below.

Wagner et al. examined the relationship between physician EI and patient satisfaction, stating that physicians with higher EQ have more satisfied patients; hence, patients are more likely to follow therapeutic orders and less likely to discontinue treatment (20).

In another study, Wang et al. investigated the relationship between surgeon empathy and EI, and patient satisfaction and feeling healthy before and after the surgery. They suggested that surgeon EI is positively and significantly related to better communication with the patient and successful communication is positively and significantly related to patient satisfaction before and after surgery (27). Moreover, Weng carried out another research claiming that physician EI is positively related to patient trust, and good physician-patient relationship positively affects patient satisfaction (21).

Based on the findings of the current research, there is no significant relationship between the average score of EI and treatment dropout, and there is merely a significant relationship between adaptability and treatment dropout. This study might be in contrast with the previous ones due to the small sample size of physicians. In other words, the physicians did not achieve a wide range of EI scores. Adaptability or flexibility deals with the ability to adapt one's emotions, thoughts, and behavior with the ever-changing situations. This aspect of EI refers to one's overall ability to cope with unknown, unpredictable, and changing situations. Adaptable individuals are

active, wise, helpful, and able to unbiased react to changes. These people are able to change their minds when they find out they have made a mistake. Additionally, they are open to different ideas, orientations, methods and actions. Therefore, it can be stated that more adaptable physicians are more likely to adjust themselves to others' emotions, thoughts, and various clinical situations, and can build better relationships with patients, resulting in more patient satisfaction and less treatment dropout.

The obtained results showed that there is no significant relationship between variables related to patients including type of disorder (mood, anxiety), gender and academic level and treatment dropout. Heidary's study is in line with the current research stating that there is no significant relationship between gender and academic level and type of illness of patients in Community Mental Health project and their treatment adherence or dropout (28). This study also supports that gender, academic level and type of disorder do not play any role in patient treatment adherence, though the findings in this regard are not in line with previous studies. Based on other investigations, low age is an indicator of treatment adherence and younger patients are more likely to discontinue treatment (4,28) and female gender has an effect on treatment adherence (28).

Pinto-Meza et al. investigated the reasons of treatment dropout and suggested that in the first three visits of general practitioners and psychologists, the probability of treatment dropout was higher; though for psychiatrists, higher age, female gender, and living in large urban areas were indicators of lower treatment dropout (as cited in 28).

There were limitations to the present study including small sample size of physicians, limitations on the types of disorder diagnosed in the aforementioned centers, and lack of access to treatment dropout related to other types of disorder in order

to have a comparison in treatment dropout rate. Furthermore, since most patients in CMHC are of lower economic level, this might be a reason for their treatment dropout, and due to lack of access to patients of higher economic levels, studying this variable was not possible.

Conclusion

The results of this study indicate that the more empathetic a physician is, the less probable treatment dropout would be in his/her patients, that is, patients adhere to treatment with more satisfaction. Moreover, higher physician adaptability contributes to less treatment dropout of patients. Physicians who are able to adapt themselves are more likely to adjust themselves to others' emotions, thoughts, and various clinical situations, and can build better relationships with patients, resulting in more patient satisfaction and less treatment dropout. Based on these findings, it can be deduced that teaching communicative skills, empathy, and EI to the physicians in these centers can lead to less treatment dropout among clients. Further research is called for to consider factors such as physicians' personality traits, patients' and physicians' attitudes, and to compare different health centers regarding treatment dropout.

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