

WAYS OF COPING AND MULTIDIMENSIONAL HEALTH LOCUS OF CONTROL IN HOSPITALIZED DEPRESSED PATIENTS ADMITTED THROUGH THE EMERGENCY DEPARTMENT OR CONSULTATIONS

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SUMMARY

Background: In a previous study, we compared the family relationships of patients hospitalized in a psychiatry unit from either psychiatric consultations or after passing emergency room (E.R.). The intensity of depression was statistically comparable in both groups. What distinguishes patients transiting emergencies is that their families and couples are more cohesive and adaptable. In this study, we compare both groups in terms of coping mechanisms and multidimensional health locus of control (MHLC).

Subjects and methods: All patients (N=2172) with a major depressive disorder admitted to our department between 01/01/2010 and 31/12/2012 are included in an open study. They completed the Beck's Depression Inventory, the Olson's Family Adaptability and Cohesion Scale, visual analogue scales of stress, the ways of coping checklist, and the MHLC scale.

Results: Patients admitted through emergencies are found to have less belief in chance (CHLC) ($t=2.488$; $p=0.014$), distance themselves more from their problems ($t=-2.187$; $p=0.03$), but reappropriate them less positively ($t=2.355$; $p=0.019$) than those admitted through consultations. A logistic regression model including variables identified in the previous study (adaptability in the original family and the couple's lived stress) gives a risk factor (odds ratio) of 14.7 which means that a patient who would combine the different risk factors would be 14.7 times more likely to go through emergency.

Conclusions: How to explain that depressive patients with more favorable factors considered: to believe less in chance, distancing from their problems, and having a better family support, are more likely to go to the E.R.? We make the suggestion that those factors exactly slowed down patients in their care application at first, allowing the depression to worsen. It is only once they would have depleted their reserves that they would reach the emergency room on their own initiative or encouraged by their families, themselves overwhelmed by the situation.

Further study should take into account the duration of the episode before arrival at the hospital.

Key words: major depressive disorder – emergencies – consultation – coping behavior - multidimensional health locus of control

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INTRODUCTION

In a previous study (Dubois et al. 2013), we compared the family relationships, and the intensity of the depression of patients hospitalized in a psychiatry unit from either psychiatric consultations or after passing emergency room (E. R.).

The severity of depression has proved to be statistically similar in both samples ($t=1.438$; $p=0.90$); the BDI results showed a mean result of 43.14 ± 13.605 for E.R. patients and 43.07 ± 13.310 for others. And according to the Family Adaptation And Cohesion Scale of Olson FACES III (Olson 1983), E.R. patients' couples were more cohesive and adaptable.

In the present study, we compare both groups in terms of coping mechanisms (Folkman & Lazarus 1980, 1985) and Multidimensional Health Locus of Control of Wallston et al. (1978). It seems that no study before us made that comparison. Only a few articles highlighted associations between health locus of control and frequency of emergency department visits and hospital admissions (Portinga et al. 2008, Berglund et al. 2014, Mautner et al. 2015).

SUBJECTS AND METHODS

The University Hospital Center of Mont-Godinne is the only university hospital covering a broad geographical area. There are two mainly ways of being admitted into the psychosomatic department. Most of the time, outpatients are admitted after a consultation. In fewer cases, outpatients are admitted via the E.R. The sample in this study includes all patients hospitalized in our department between January 2010 and December 2012. To be included, patients must have a major depressive disorder objectified by a clinician after a line inter-judge has been established. The severity of the depression was assessed by the Beck Depression Inventory. Patients also filled several other assessment forms: a visual analogue scale measuring stress in professional, social, and family life as within their couple; a scale on life events (past year and past month); Olson's FACES III (results treated in a previous study), the Ways of Coping Checklist, and the Multidimensional Health Locus of Control of Wallston (results treated in this study).

The Ways of Coping Checklist filled by patients assess all cognitive and behavioural processes that an individual places between himself and an event perceived as threatening, to master, tolerate or diminish its impact on his physical or psychological well-being. There are different versions of the Ways of Coping Checklist, but the one used in this study is the version revised by Folkman and Lazarus (1980, 1985), comprising eight items of evaluations: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal.

In the Multidimensional Health Locus of Control of walston (MHLC), a high score in the IHLC reflects a high level of internality, while the tendency to attribute the responsibility of own problems to the others is rendered by PHLC score, or to the chance, in the CHLC score. We compared the mean results of IHLC, PHLC and CHLC score in both samples.

All collected and socio-demographic parameters are computed into the patient file. The sample was then divided in two groups: patients hospitalized through the E.R. (n=146) and those admitted following consultations (n=2172). Statistics were conducted with parametric methods, including type I and type II errors. No post-hoc test was conducted. Mean comparisons were made using a student t test. Pearson's Chi-Carré test was performed on ordinal variables. When needed a logistic regression was performed.

RESULTS

Stress level and severity of depression

As mentioned in the introduction, the severity of depression was statistically similar in both samples.

From the stress point of view, only the values concerning the marital stress were statistically different ($t=2.590$; $p=0.010$).

Socio-demographic factors

Age: the mean age for patients hospitalized through consultations is 45.105 ± 12.4072 and 40.913 ± 13.3433 for E.R. patients. Statistical analysis shows a significant difference.

Sex: the sex ratio of E.R. patients (F/M=1.68) is not significantly different from consultation patient's sex ratio (F/M =1.55) ($\chi^2=2.90$; $p=0.585$).

Family setting: the number of brothers and sisters ($t=-4.971$; $p=0.000$) as well as the number of parents who are still alive ($t=-3.310$; $p=0.001$) are significantly different. Indeed, ER patients have a mean score of 0.80 brothers and sisters and 0.80 parents still alive against respectively 0.25 and 0.46 for consultation patients. However, no statistical difference was found concerning the number of children ($t=-0.793$; $p=0.429$).

Socio-professional status: differences between professional statuses were also investigated. Statistical differences were found between consultation patients and E.R. patients ($\chi^2=15.883$, $p=0.000$). In the emergency room, the main status encountered is joblessness, then employment. For consultation patients the main status is employment then joblessness. The following statuses come in the same order in both groups: the unemployed, then the ones on sick-leave and finally the retired.

The ways of coping

Patients admitted through emergencies distance themselves more from their problems ($t=-2.187$; $p=0.03$), but reappropriate them less positively ($t=2.355$; $p=0.019$) than those admitted through consultations.

No statistical difference was found in the others mechanisms of coping, such as confronting coping, self-controlling, seeking social support, accepting responsibility, escape-avoidance, and planful problem solving.

The multidimensional Health Locus of Control (MHLC)

Patients admitted through emergencies are found to have less belief in chance (CHLC) ($t=2.488$; $p=0.014$). No statistical difference was found about the IHLC and PHLC score (Table 1).

Logistic regression model

A logistic regression on parameters with significant difference we treated in this study allowed us to predict how likely it is for a patient to go to the E.R. (Table 2). Having a high cohesion in the current couple, distancing oneself from own problems correlate with high probability to go to the E.R. A lower probability was found concerning the professional status, advanced age, marital stress, high CHLC and positive reappraisal scores.

The logistic regression model gives a risk factor (odds ratio) of 14.7 which means that a patient who would combine the different risk factors would be 14.7 times more likely to go to the emergency.

DISCUSSION

The severity of depression is statistically similar in both populations. Whatever the way a patient is admitted, his BDI score reveals moderate to severe depression.

In our study, the fact that depression scores are alike in both samples means that physicians do not admit a patient more easily when they come via the E.R. and that the severity of the pathology is considered. Also, severity of depression do not seem to influence the way a patient comes-or is sent- to us.

Table 1. Comparison of depression, ways of coping and multidimensional health locus of control between E.R. and consultation patients

	E.R. patients		Consultation patients		t	p
	Mean	Δ	Mean	Δ		
BDI	43.14	13.61	43.07	13.31	NS	
Analogue Visual Scale						
Marital stress	60.91	32.11	66.9	29.12	2.59	0.01
Ways of Coping Checklist						
Confrontive coping	12.29	4.39	11.88	5.06	NS	
Distancing	10.45	5.41	9.59	5.77	-2.19	0.03
Self-controlling	13.63	4.13	13.22	4.11	NS	
Seeking social support	15.82	7.99	16.03	6.31	NS	
Accepting responsibility	13.35	5.04	13.81	5.48	NS	
Escape-avoidance	13.85	4.44	13.86	5.78	NS	
Planful problem solving	10.62	4.08	10.83	4.96	NS	
Positive reappraisal	9.99	4.39	10.74	5.11	2.36	0.02
Multidimensional Health Locus of Control						
CHLC	16.91	6.20	18.02	6.69	2.49	0.01
PHLC	20.50	8.16	20.91	7.03	NS	
IHLC	19.89	7.60	20.06	6.98	NS	

BDI - Beck Depression Inventory; Δ - standard deviation

Table 2. Parameters used in the logistic regression model predicting the probability to go to the E.R.

	P	OR	SE
Professional Status	0.05	0.64	0.24
CHLC	0.02	0.97	0.02
Distancing	0.02	1.05	0.02
Age	0.01	0.98	0.01
CC cohesion	0.01	1.02	0.01
Marital stress	0.01	0.99	0.00
Positive reappraisal	0.03	0.95	0.02

OR - Odd Ratio; SE - standard Error

In the previous study (Dubois et al. 2013), we already showed that patients admitted through emergencies have relatives who are more supportive and more adaptable. The hypothesis was that physicians and families could be exceeded or overloaded with symptoms they thought they could contain, forcing them at this point to aim at an urgent care of pathology.

In this study, following Dubois et al. (2013), we found that patients admitted through emergencies have less belief in chance than those admitted through consultations, distance themselves more from their problems, but reappropriate them less positively.

The two first results could seem surprising, if we consider them as favorable factors and thus protective regarding transit to emergencies. Indeed, to take distance from the problems experienced could immunize patients against emotional outbursts which often make them arriving in the emergency room. But this could also curb them in care proceedings, because as taking distance from their problems they minimize the threat as well.

Similarly, some studies have shown that patients with less belief in chance have a better self-rated health and have a lower rate of care demand (transit to emergency and hospitalizations) (Portinga et al. 2008, Berglund et al. 2014, Mautner et al. 2015). Based on these considerations one might hypothesize that these two factors have exactly slowed down patients in their care application at first. This would allow the depression to worsen and it is only once they would have depleted their reserves that they would reach the emergency room on their own initiative or encouraged by their families, themselves overwhelmed by the situation (Dubois et al. 2013).

As for the third finding of our study; the fact that E.R. patients reappropriate their problems less positively, we could imagine that the psychotherapeutic work already done in consultation would have allowed those patients to begin to reinterpret positively the situation, explaining the lower scores in the E.R. patients.

There are a few limitations to this study: one of them is that we didn't investigate the duration and the evolution of the depression before arrival in the Emergency Room, nor if E.R. patients had ever consulted a psychiatrist in the past. For this, we should also have measured the BDI scores of these patients in the last few months, and at the beginning of the depressive episode.

Concerning patients hospitalized through the consultations, we didn't consider the evolution of coping mechanisms, in particular positive reappraisal, to know if they would change during psychotherapy. As for E.R. patients, we should have known the duration of the depressive episode and the number of consultations spent before the hospitalisation. We can decently imagine that there were several, knowing that the waiting period before being hospitalized can last 1 or 2 months.

CONCLUSION

We studied whether patients hospitalized through emergencies have more pejorative specifications than those admitted through consultations. The depression level during the hospitalisation was similar in both samples. Patients admitted through emergencies have a better family support, believe less in chance, distance themselves more from their problems, but reappropriate them less positively.

We propose the hypothesis that the favorable factors abovementioned exactly slowed down patients in their care application at first, allowing the depression to worsen. It is only once they would have depleted their reserves that they would reach the emergency room on their own initiative or encouraged by their families, themselves overwhelmed by the situation.

Concerning the consultation patients' higher positive reappraisal, we suppose that this could translate the effect of the beginning of a psychotherapeutic work.

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