

## EFFECTS OF FINANCIAL PRECARIOUSNESS ON MENTAL HEALTH

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### SUMMARY

**Background:** The physical and mental health of a population is based, in particular, on its quality of life and its access to health care. Given these determinants, Greece's population has greatly suffered due to the sharp cuts in the budget for social benefits and health care (some measurable evidence is the recent increase in the suicide rate). Starting January, the 1st of 2015, unemployment benefits in Belgium have been eliminated for all recipients who do not have a full-time year of work over the last three years. Therefore, we must ask whether there will be similar psycho-medical consequences for Belgium's population.

**Subjects and methods:** Open study over a year (01/07/14 – 30/06/15) of emergencies admitted to the University Hospital Center of Mont-Godinne including a psychopathological motif. In addition to general socio-demographic data, psychic disorders are measured, as well as different types of crises (familial, professional or couple crisis), familial support and its dynamic (FACES III of Olson) and finally social integration (social isolation scale from the National Social Life, Health, and Aging Project (NSHAP)). These patients are compared with those admitted during the six months preceding the Act modifying the unemployment benefits.

**Results:** Between July the 1<sup>st</sup> of 2014 and June the 30<sup>th</sup> of 2015, we saw an increase in the number of admissions to the psychiatric emergency department by 2.5% in six months, despite a decrease in the number of admissions to all-cause emergencies. Our study also shows a degradation of social network quality characterized by a more pronounced social isolation of our patients. At last, an alteration of cohesion in the patient's origin family was highlighted.

**Conclusion:** Although we cannot establish a direct causal link between this law and the results of this study, these may suggest a weakening of the population mental health due to difficult socio-economic context. As a result, we are faced not only with a public health problem but also with one concerning health care organization.

**Key words:** mental health – precariousness – exclusion – poverty

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### INTRODUCTION

On January 1, 2015, Belgium passed a law stipulating that all citizens who had not collected the equivalent of one year's full-time work in the previous three years would no longer receive unemployment benefits. Therefore, we asked ourselves what the consequences of such exclusion might be for an individual's mental health. Indeed, several historical examples illustrate the deleterious effects of precariousness on a given population: in 2010, the financial crisis in Greece led to a 20% increase in the suicide rate (Stuckler & Basu 2014). Earlier in 2007, during the Subprime Mortgage crisis in the United States, we saw a significant increase in the depression rate for the people in neighborhoods that were affected the hardest from house repossessions and abandonments (Cagney et al. 2014). During our research, two elements drew our particular attention: the first is that beyond the intrinsic deleterious character of poverty and precariousness at the level of an individual's psychological health, it would be above all the economic and social disparities that would have the most harmful consequences e.g. the fact of being unemployed and seeing one's neighbour find work, not having access to certain health care while others do, etc. (Burrows & Laflamme 2010, Laflamme et al. 2009a, Kuo et al. 2004, Crawford & Prince 1999, Whitley et al. 1999). The second element is the real killer: social isolation, which seems to be a cause, risk factor, and consequence of precariousness (Holt-Lunstad et al. 2015, Hawley et

al. 2015, Cornwell & Waite 2009, Hawley & Cacioppo 2010). Indeed, social isolation can lead to precariousness, or aggravate the latter if both are associated, and finally, precariousness dissolves the social bond regardless of its degree of quality. An outstanding study called the Harvard Study of Adult Development, shows that the key element of a successful life is not wealth or fame, but having quality social relationships. This study started in 1938 by Harvard University researchers and it still is in progress today. To be precise, there are two types of social isolation: isolation that can be quantified (by the number of friends, family, social activities etc.) and, isolation that is perceived (the feeling of being alone). The perception of loneliness seems to be the most harmful to mental health (Cornwell & Waite 2009). Thus, we have seen that financial precariousness, a fortiori marked by strong economic disparities, as well as a perception of lack of social support were risk factors for an individual's health. In Belgium, the restriction of access to unemployment benefits affects many individuals who already are in a difficult financial situation. We are interested in what could be the psycho-medical consequences of this exclusion. We believe, based on the literature and historical examples cited above, that it is likely to lead to a decline in the quality of life and health of the individuals involved and an increase in the rate of attempted suicide and suicide, in any case risky behaviors for the patient's life. Taking into account the literature, we have made five hypotheses: we expect an increase in the number of patients

admitted to psychiatric emergencies, an increase in the number of socially disadvantaged patients, i.e. those who have suffered a loss of employment or litigation for example, a decrease in the quality of the patients' social network, an increase in the rate of depression among hospitalized patients and finally a less good cohesion and/or adaptability of the patient's original family or current couple.

## SUBJECTS AND METHODS

### Subjects

We based ourselves on admissions to the emergency room of the Mont-Godinne University Hospital including a psychopathological reason between July 1, 2014 and June 30, 2015. During this period, 425 patients were registered. 210 came during the first 6 months and 215 during the following 6 months. Of the 425 questionnaires we sent out, 77 patients responded (18.4%). Of these, 41 were admitted between 1 July 2014 and 31 December 2014 and 36 between 1 January 2015 and 30 June 2015.

### Methods

The questionnaires used make it possible to evaluate a set of parameters:

- General socio-demographic questionnaire: age, date of birth, nationality, number of years of work already done, current and previous social status, whether the patient had a dispute or not, total unemployment time and hospitalisation history;
- Social isolation scale taken from the "NSHAP" study: taken from the National Social Life, Health, and Aging Project, this questionnaire is used to assess the patient's social isolation (Cornwell & Waite 2009). This questionnaire makes it possible to develop two scales of measurement: the first measures an individual's objective social isolation, which depends on two main factors: the lack of a strong social network and the lack of participation in social activities. Among the various items in the questionnaire, eight were selected: size of the social network, extent of the social network, frequency of interactions, proportion of social network composed by family members, number of friends, participation in group meetings, socialization with family members, volunteer work. The first four items focus on the limited dimension of the restricted social network, and the next four on that of social inactivity. The second scale measures an individual's perception of isolation. It also depends on two factors: a sense of lack of support and a sense of loneliness. Nine items were selected: confide in the family, relying on family, confide in friends, relying on friends, confide in your spouse, relying on your spouse, sense of lack of entourage, sense of isolation, feeling abandoned. The first six items are related to feelings of lack of support and the last three items are related to feelings of loneliness. The scores are calculated as fol-

lows: for each item, an average score is calculated and for each individual, the average score is subtracted from the score obtained. The score for each patient and for each item is therefore centered on the mean. The objective social isolation score and the isolation perception score are then obtained by summing the mean scores divided by the number of items to which the subject responded. Thus, a score of 0 means that the patient is exactly in the mean, a score of less than 0 suggests greater social isolation than the mean and a score of more than 0 means that the patient enjoys greater social support than the mean;

- BECK Depression Scale;
- Family Adaptability and Cohesiveness Evaluation Scale III - FACES III from David Olson.

From a statistical point of view, we used the SPSS 22 program for Windows, using parametric tests. We compared the quantitative values using the Student t-test. For the qualitative variables, we used Pearson's Chi Square independence test. The correlations were studied using the Pearson correlation coefficient, possibly controlled by a co-variable. If necessary, we performed a linear regression by introducing all variables at once and in decreasing order of correlation coefficient. The tests take into account errors of the first and second types. No post-Hoc tests were performed.

## RESULTS

### Patient demographics

Among the respondents, the mean age is 44.6 years for the "before" group and 41.5 years for the "after" group. Although there is a decrease in the mean age, this difference is not significant ( $t=0.967$ ;  $p=0.337$ ). There is an equal distribution of men between the two groups. Women represent 59% of the total and are five less in the second group. There is no significant difference in the gender distribution before and after December 31, 2014 ( $\chi^2=0.232$ ;  $p=0.630$ ). 94.8% of the patients who answered our questionnaire are Belgian. Two patients are of French origin, one of Algerian origin and one last patient is of Portuguese origin. Between the two groups, we observe a decrease in the number of patients whose cause of admission to the emergency room was a suicide attempt. However, this difference is not significant ( $\chi^2=0.081$ ;  $p=0.776$ ).

### Admissions to psychiatric emergencies

Between July 1, 2014 and December 31, 2014, 8,282 patients were admitted to the general emergency department of the Mont-Godinne University Hospital; 210 of them were referred to psychiatric emergencies. Between January 1, 2015 and June 30, 2015, there were 7855 admissions, 215 of which were psychiatric. We are therefore witnessing a 2.5% increase in the number of admissions to psychiatric emergencies in six months, while the total number of admissions has decreased by 5.2%. This difference is significant ( $\chi^2=0.242$ ;  $p<0.05$ ).

### Number of socially disadvantaged patients

Current social status refers to whether one works or not. Although there was a 28% increase in the number of patients who were not working and a 19% decrease in the number of patients who were working in both periods, these differences were not significant ( $\chi^2=0.864$ ;  $p=0.353$ ). We note a 50% increase in the number of disputes from January the first, 2015, but this result is not significant either ( $\chi^2=1.339$ ;  $p=0.247$ ). In one year, the number of years already worked has risen from 17.42 years to 15.33 years. Although there is a difference of more than two years to the disadvantage of the second group, that is, these patients had an average of two years less work than those in the first group, these differences are not significant ( $t=0.652$ ;  $p=0.517$ ).

### Social network quality

We observe a decrease in the objective social isolation score between the two groups as well as a negative mean for patients in the second group. This means that the latter are more objectively and socially isolated than patients in the first group. These differences are significant ( $t=3.172$ ;  $p<0.002$ ). We are witnessing a decrease in the perception of being socially isolated. Patients in the second group would feel less alone than those in the first group. However, these differences are not significant ( $t=-0.630$ ;  $p=0.530$ ).

### Depression

We observe a 9.4% increase in Beck's score between the two groups, which suggests that patients in the second group are more depressed than those in the first. However, these differences are not significant ( $t=-0.690$ ;  $p=0.492$ ). We also looked at whether there was a link between having work-related difficulties and depression. For this we have taken back patients presenting a social risk, i.e. who either do not have a job, or have already had a dispute, or have totaled less than 17.42

years of work in their life. We see that those in the "before" group have an average Beck score of 19.26, while those who visited the emergency department after January 1 have one of 26.36, meaning an increase of 37%. We are therefore witnessing an increase in the rate of depression among patients presenting this social risk. These results are significant ( $t=-2.019$ ;  $p=0.048$ ).

### Family cohesion and flexibility according to Olson

Only the results concerning cohesion in the family of origin are significant ( $t=2.039$ ;  $p=0.046$ ). This means that patients who arrived after January 1 had a less united family of origin than those in the second group. We can make two hypotheses: since there is an increase in the number of admissions, more patients are being admitted with a lower quality family of origin. Or, as the patients in the second group had a more dysfunctional family of origin, they were therefore unable to benefit from a stable and structuring emotional base. As a result, they find themselves more vulnerable and less able to manage the emergence of problems in their current lives. In other words, when a difficulty arises (whether social or personal), individuals from these broken families are the first to suffer and will have a harder time coping than those who have grown up in a loving family.

### Links between the explanatory variables

We see that there is a link between an individual's objective social isolation and the intensity of depression ( $p<0.000$ ). Therefore, we conclude that the more socially isolated a patient is, the more likely he is to be depressed. The same conclusion is reached with respect to family cohesion: the closer a family is, the less likely its members are to be affected by depression ( $p<0.001$ ). Finally, there is a correlation between family cohesion and observed social isolation. In other words, the presence of love in the family of origin would decrease the risk of subsequent social isolation ( $p=0.05$ ).

**Table 1.** Correlations between objective social isolation, Beck and family of origin cohesion scores

		Correlations		
		Objective Social Isolation	BECK	Cohesion Family of Origin
Objective Social Isolation	Pearson Correlation	1	-0.451**	0.238
	Sig. (bilateral)		0.000	0.050
BECK	Pearson Correlation	-0.451**	1	-0.414**
	Sig. (bilateral)	0.000		0.001
Cohesion Family of origin	Pearson Correlation	0.238	-0.414**	1
	Sig. (bilateral)	0.050	0.001	

**Table 2.** Coefficients and standard deviation from the linear regression of objective social isolation on the cohesion of the family of origin

	Coefficients					
	Non-standardized coefficients		Standardized coefficients		t	Sig.
	B	Standard error	Beta			
Constant	35.105	3.990			8.799	0.000
Objective Social Isolation	-7.647	2.569	-0.331		-2.976	0.004
Family of Origin Cohesion	-0.425	0.141	-0.335		-3.005	0.004

Table 1 shows that social isolation and family cohesion are important risk factors for depression.

We then wanted to know if these two factors (social isolation + family cohesion of origin) could be correlated with the intensity of patients' depression. We have therefore made a linear regression which shows the following results visible in table 2: there is indeed a significant link between these two explanatory factors and the intensity of depression ( $p < 0.000$ ), namely that 25% of the variance of the latter can be explained by the two items. Each of these elements alone has a significant participation as predicted by Pearson's correlation coefficients as we can see in table 2.

## DISCUSSION

As we can see, we were able to validate three out of five of our hypotheses. Unfortunately, the results for our two last hypotheses are not significant. They suggest nonetheless the existence of an increasingly disadvantaged population. We are not able to confirm the validity of these statements, but they let us think that a precarious social status can weaken a patient's mental health. There are some limitations to this work: first, out of 425 questionnaires sent, we received only 78 returns, or only 18.4% of the total. In addition, these questionnaires were sometimes partially completed, which further limited the number of interpretable responses. As a result, obtaining meaningful results was laborious and not all of our hypotheses could be demonstrated. There are also certain biases: for example, we have separated patients who work from those who do not, but not all those who do not work are necessarily unemployed (they may still be students or receive a disability pension for example). We have presented the fact that in total we have collected less than 17 years of work as a social risk, yet some patients have not been able to reach numbers simply because they are still young and only beginning to work. Finally, we certainly cannot demonstrate that the results of our work can be explained by the passing of this legislation.

## CONCLUSION

Even though we cannot establish a direct causal effect with the passing of this legislation, we have seen that a precarious situation associated with a marked perception of social isolation can probably worsen a patient's mental as well as physical well-being. We can consider our results as a bundle of "mini-evidences" used to highlight certain problems linked to precariousness and perhaps motivate people to dive deeper into the subject. It would therefore be interesting to repeat this study at this time to see if the rate of depression among those who were unemployed that year has increased or not.

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### Contribution of individual authors:

All authors made a substantial contribution to the design of the study, and/or data acquisition, and/or the data analysis and its interpretation.

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