

## 5 EVALUATION OF POSITIVE MENTAL HEALTH AND SENSE OF COHERENCE IN MENTAL HEALTH PROFESSIONALS

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### ABSTRACT

**BACKGROUND:** The Sense of Coherence (SOC) of Antonovsky (1996) which is based on salutogenic theory and the multifactor Positive Mental Health (PMH) model of Lluch (1999) provide two constructs for comprehending, evaluating, and intervening in the promotion and maintenance of a good state of mental health.

**AIM:** Were assessed self-rated mental health of health professionals working in mental health services and relations between both constructs and sociodemographic, work, and health variables.

**METHODS:** The sample was made up of n=102 attending professionals at the mental health units of the Parc Hospitalari Martí i Julià, in Salt, Girona. The variables studied were sociodemographic work-related, health-related, and self-perception of mental health, evaluated by means of the Sense of Coherence questionnaire and the Positive Mental Health questionnaire. The questionnaires were self-administered.

**RESULTS:** Overall, the sample studied scored high in the Sense of Coherence and the Positive Mental Health questionnaires. In terms of the relation between the overall scores of the SOC questionnaire and the PMH, analysis revealed a positive relation between the two.

**CONCLUSIONS:** This positive relation between the two questionnaires may be of particular interest in future studies of the multifactor model of Positive Mental Health and the salutogenic model that underlies the Sense of Coherence, by generating a global conceptual framework for the study of mental health from a positive perspective.

**PALAVRAS-CHAVE:** Health promotion; Mental health; Community psychiatry; Health professionals

### RESUMEN

“Evaluación de la salud mental positiva y sentido de coherencia en profesionales de la salud mental”

**CONTEXTO:** El Sentido de Coherencia (SOC) de Antonovsky (1996) que se desprende del modelo salutogénico y el modelo multifactorial de Salud Mental Positiva (SMP) Lluch (1999), definen dos constructos que sirven para comprender, evaluar e intervenir sobre la promoción y el mantenimiento de un buen estado de salud mental.

**OBJETIVO(S):** Fueron evaluados la autopercepción de salud mental de los profesionales de la salud que trabajan en servicios de salud mental y las relaciones entre ambos constructos y variables sociodemográficas, laborales y de salud.

**METODOLOGÍA:** La muestra estuvo configurada por 102 profesionales asistenciales de las unidades de salud mental del Parc Hospitalari Martí i Julià de Salt, Girona. Las variables estudiadas fueron datos socio demográficos, datos laborales, datos relacionados con la salud y autopercepción de salud mental, evaluada mediante el cuestionario Sentido de Coherencia y el cuestionario de Salud Mental Positiva de Lluch, ambos auto administrados.

**RESULTADOS:** Globalmente, la muestra estudiada obtuvo niveles altos de Sentido de Coherencia y Salud Mental Positiva. En cuanto a la relación entre las puntuaciones globales del cuestionario SOC y el cuestionario SMP, el análisis reveló una relación positiva entre ambos cuestionarios.

**CONCLUSIONES:** La relación positiva puede ser especialmente interesante para abrir futuras investigaciones relacionadas con el estudio del modelo multifactorial de Salud Mental Positiva y el modelo salutogénico que sustenta el Sentido de Coherencia, pudiendo generar un marco conceptual global para el estudio de la salud mental desde la perspectiva positiva.

**DESCRIPTORES:** Promoción de la salud; Salud mental; Psiquiatría comunitaria; Profesionales de la salud

### RESUMO

“Avaliação da saúde mental positiva e sentido de coerência em profissionais de saúde mental”

**CONTEXTO:** O sentido de coerência de Antonovsky (1996) surge a partir do modelo salutogénico e do modelo multifatorial de Saúde Mental Positivo (SMP) Lluch (1999), que define dois constructos que servem para compreender, avaliar e intervir sobre a promoção e a manutenção de um bom estado de saúde mental.

**OBJETIVO(S):** Avaliar a saúde mental em termos de auto-avaliação dos profissionais de saúde que trabalham em serviços de saúde mental e as relações entre ambos os construtos com as variáveis sociodemográficas, de saúde e de trabalho.

**METODOLOGIA:** A amostra foi constituída por 102 profissionais de saúde das unidades de saúde mental do Parc Hospitalari Martí i Julià, Salt, Girona. As variáveis estudadas incluíram: dados sócio-demográficos, dados profissionais, dados relativos à saúde e auto-perceção da saúde mental avaliada através do questionário Sentido de Coerência de Antonovsky e do questionário de Saúde Mental Positiva de Lluch. Os questionários foram auto-administrados.

**RESULTADOS:** Globalmente, a amostra em estudo obteve níveis elevados de sentido de coerência e de saúde mental positiva. Quanto à relação entre as pontuações globais do questionário SOC e as pontuações globais do questionário SMP, a análise revelou uma relação positiva entre ambos os questionários.

**CONCLUSÕES:** A relação positiva entre o SOC e a SMP pode ser especialmente interessante para abrir futuras pesquisas relacionadas com o estudo do modelo multifatorial de Saúde Mental Positiva e o modelo salutogénico que sustenta o sentido de coerência, podendo originar um marco conceptual global para o estudo da saúde mental a partir de uma perspectiva positiva.

**KEYWORDS:** Promoção da saúde; Saúde mental; Psiquiatria comunitária; Pessoal de saúde

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## INTRODUÇÃO

The evaluation of positive mental health in health professionals may be viewed within the framework of the salutogenic model put forward by Antonovsky (1996) and the multifactor positive mental health model formulated by Lluch (1999). Both models are solidly placed within the framework of the Promotion of Health, by which we understand a way of providing people with the means required to improve their health and assert greater control over themselves. In order to achieve an appropriate state of physical, mental, or social well-being, an individual or a group must be able to identify and realize their aspirations, satisfy their needs, and change so as to adapt to their environment. In this line of thinking, health is perceived not as an objective, but rather as a source of richness in daily life.

In the specific area of mental health, the positive dimension refers to the concept of mental well-being and the ability to adapt to adversity. This is a way of directing one's gaze toward that which allows for greater control over health, and how it may be improved. The underlying idea is that it is not enough merely to prevent mental disorders; rather, what is needed is to promote the development of healthy people which, in turn, permits the formation of healthy families, groups, and workplace environments (World Health Organization [WHO], 2008).

In this light, the salutogenic approach places its emphasis on that which generates health, rather than that which generates illness; it is a revolutionary, and influential, model for understanding of the processes that help to explain health in people. Its creator, Aaron Antonovsky (1996), focused his model on two constructs: Sense of Coherence (SOC) and General Resistance Resources (GRR). Sense of coherence (SOC) is defined on the basis of three dimensions or factors: comprehensibility, manageability, and meaningfulness. Evidence demonstrates that the salutogenic model, as a promoter of health, improves the recovery ability of people and encourages the development of a good subjective state of physical and mental health, with a positive effect on their self-perception of their quality of life and general well-being (Lindström & Eriksson, 2010).

In the same direction, the Positive Mental Health (PMH) construct, first put forward by Jahoda (1958), emerged as a means to explore and define that "something more than the absence of illness" which, from the beginning of the twentieth century formed a part of the standard definition of mental health.

In order to put the concept of PMH into operation, Lluch (1999) put forward a questionnaire and a multi-factor model that may be explained on the basis of six inter-related factors: Personal Satisfaction (F1), Prosocial Attitude (F2), Self-control (F3), Autonomy (F4), Resolution of Problems and Self-actualization (F5), and Interpersonal Relationship Skills (F6).

Both, the model and the questionnaire (Lluch, 1999) have been examined in the context of research projects and doctoral theses, in nursing as well as in other related areas of science, with attention placed on exploring the relations between Positive Mental Health (PMH) and the ability for self-care, emotional intelligence, healthy lifestyles, physical health, and mental illness (Lluch-Canut, Puig-Llobet, Sánchez-Ortega, Roldán-Merino, Ferré-Grau & Positive Mental Health Research Group, 2013).

The questionnaire has also been translated into Portuguese (Sequeira, Carvalho, Sampaio, Sá, Lluch-Canut & Roldán-Merino, 2014).

The results of the various investigations lend support to the definition of PMH as a dynamic, fluctuating construct that includes thoughts and feelings, both positive and negative. It is, after all, as healthy to be worried when in situations of uncertainty as it is to feel happy when things are going well (Lluch, 2008). The balance among factors showed lowered levels of the ability to resolve problems to be offset on occasion by a heightened level of personal satisfaction.

A positive perspective on mental health is seen to be indispensable when one observes the epidemiological state of mental illness. Taken together, mental illnesses carry the heaviest burden of illness in Europe, and their impact on the quality of life is greater than that of chronic diseases such as diabetes, or cardiovascular and respiratory ailments.

For this reason, it is necessary not only to attend to problems of mental health and attempt to reduce their incidence, but also to provide the resources needed to improve the mental health of those who are not patients per se.

Fortunately, recent years have seen a growing interest in this topic, and there has been a decided increase in the publication of articles that consider mental health from a positive point of view. The construct of SOC has been, and continues to be, widely studied in various lines of research (Lindström & Eriksson, 2010).

The PMH construct is of course newer, but in addition to the studies based on the work of Lluich (1999), official bodies in countries such as Canada (Canadian Institute for Health Information [CIHI], 2011) and in the EU (European Commission: Mental Health [ECMH], 2010) have included the PMH construct in general health surveys. In addition, PMH is being investigated in Asia (Vaingankar, Subramaniam, Abidin, Picco, Chua, Eng, Sambavisam, Shafie, Zhang & Chong, 2014). Nevertheless, to our knowledge no study to date has explored the two constructs, SOC and PMH, conjointly.

Given the importance of a positive perspective on mental health, it has been decided to examine to what extent mental health professionals themselves enjoyed positive mental health, bearing in mind that it is they who are in the closest contact, and for the greatest amount of time, with mental illness, and thus they would be assumed to be at a higher level of vulnerability. Furthermore, their level of positive mental health would need to be higher if they were to provide effective help. Therefore, the hypothesis of our study was based on the notion that those providing professional mental health care would enjoy a good level of self-perception of their own positive mental health in spite of having a greater level of vulnerability due to their higher degree of exposure to mental illness. Building upon this hypothesis, our aim was to evaluate the self-perception of mental health from a positive perspective, and to analyze the relations among the SOC construct, the PMH construct, and the sociodemographic, work, and health characteristics of the people in question.

## METHODOLOGY

The design used for this study was observational and transversal, with a non-experimental quantitative focus. The population of the study consisted of all the attending professionals in the mental health network of the Parc Hospitalari Martí i Julià in Salt, Girona, Spain, affiliated with the following services: severe mental disorder unit, acute and sub-acute hospitalization units, specialized hospitalization unit for the mentally handicapped, child psychiatric referral unit, and the detox/double-pathology unit. The selection criteria for the sample were a work contract of longer than six months' duration and voluntary participation in the study.

The variables studied were a) sociodemographic, work, and health data: age, sex, marital status, dependents, professional category, type of work contract, work shift, years working in mental health, other jobs, job satisfaction, health problems, and visits to doctors and/or psychiatrists or psychologists in the previous year,

and b) self-perception of state of mental health: level of positive mental health and sense of coherence. In order to evaluate the sociodemographic, work, and health variables, an ad hoc data collection sheet was prepared for this study. For the evaluation of mental health self-perception two questionnaires were used: the Positive Mental Health questionnaire (PMH+) of Lluich (1999) and the Sense of Coherence SOC-13 of Antonovsky (1996), in a Spanish validated version by Virués-Ortega, Martínez-Martín, Del Barrio & Lozano (2007). The Positive Mental Health questionnaire of Lluich (1999) is composed of 39 items, unequally distributed among the six factors that define the construct. The items are presented as statements (both positive and negative) and the response to each item is rated on a scale with from 1 to 4 points in terms of the degree of frequency: always or almost always, quite frequently, sometimes, and never or almost never. The scoring allows for a single value to measure positive mental health (with all the items on the questionnaire) as well as specific values for each factor (Table 1).

The Sense of Coherence questionnaire SOC-13 of Antonovsky (1996) is made up of 13 items; on a Likert-type response scale with scores from 1 to 7, with 1 being the lowest score and 7 the highest. The contents of the questionnaire take in the three dimensions that define the construct: comprehensibility, manageability, and meaningfulness. The questionnaire allows for gathering scores for each of the dimensions and also for an overall sense of coherence (Table 1). The questionnaires were self-administered and the estimated reply time was approximately 25 minutes. Data collection was carried out in 2012.

Table 1 - Distribution of the items by factors, maximum and minimum values for each factor, and overall scores for each of the questionnaires

Positive Mental Health Questionnaire		
Factors	Items	Max-Min
F1: Personal satisfaction	4*, 6, 7, 12, 14, 31, 38, 39	8 - 32
F2: Prosocial attitude	1, 3, 23*, 25*, 37*	5 - 20
F3: Self-control	2, 5*, 21*, 22*, 26*	5 - 20
F4: Autonomy	10, 13, 19, 33, 34	5 - 20
F5: Resolution of problems and self-actualization	15*, 16*, 17*, 27*, 28*, 29*, 32*, 35*, 36*	9 - 36
F6: Interpersonal relationship skills	8, 9, 11*, 18*, 20*, 24, 30	7 - 28
PMH+ Total	1 al 39	39 - 156

SOC-13		
Factors	Items	Max-Min
Comprehensibility	2*, 6, 8, 9, 11	5 - 35
Manageability	3*, 5, 10*, 13	4 - 28
Meaningfulness	1*, 4, 7*, 12	4 - 28
SOC-13 Total	1 al 13	13 - 91

The questionnaires were self-administered and the estimated reply time was approximately 25 minutes. Data collection was carried out in 2012.

Data analyses were performed using SPSS for Windows 17.0 (SPSS Institute, Chicago, IL, USA). A descriptive analysis of all the variables included in the study was carried out; the categorical variables were analyzed in tabular form with frequency and percentages, and the numerical variables were analyzed with basic descriptive statistics (averages, minimum, maximum, range, and standard deviation). To compare the averages for a numerical variable with normal distribution between two groups we used the Fisher student t test, and the ANOVA was used to compare a factor among more than two groups. For comparison of two numerical variables the Pearson correlation was used. A p value less than or equal to 0.05 was considered significant.

### Ethical Considerations

Consent to carry out this study was provided by the management of the mental health network of the Parc Hospitalari Martí i Julià; in addition, a favorable report was issued by the investigative committee of the Institut d'Assistència Sanitària ('Health Care Institute'). All of the participants were informed of the study and participation was entirely voluntary.

### RESULTS

Of the total study population (n=180) a response was received from n=102, yielding a 56.7% participation rate. Of these, 74.5% were nursing professionals (nurse's aides or nurses). The average age was 40.2 years (SD: 11.1) and 66.7% were female. In terms of the length of time working in the profession, the average was 12.1 years (SD: 9.01). The majority of the participants (86.3%) lived with a partner and approximately half of them had dependents. In terms of their working conditions, 50% had permanent contracts, 69.6% worked the day shift fulltime, and 52% said they generally felt satisfied with their work. In terms of the health variables, more than 80% of the professionals said they did not have physical or mental health problems. Only 16.7% claimed they had suffered a physical health problem in the past year while 11.8% had seen a psychiatrist or psychologist at some point.

Regarding the self-perception of mental health as evaluated via the SOC questionnaire, an average of 62.2 was obtained in the total score (SD: 5.39). In terms of the dimensions of the questionnaire, an average score of 25.42 (SD: 3.34) was recorded for comprehensibility, while the average score for meaningfulness was 19.16 (SD: 2.25). Finally, the average score was 17.64 (SD: 2.35) for the dimension of manageability (Table 2). Overall, 61.8% of the mental health professionals showed concern for the things that went on around them, while 42.2% indicated that to date their lives carried clear objectives and that their daily activities brought them happiness and satisfaction (41.2%). Some 54.9% of the population studied indicated that they never had the impression that the things they did every day were of little importance.

Table 2 - Descriptors in the SOC and PMH

Questionnaire	Range	Minimum	Maximum	Mean	SD
SOC					
Comprehensibility	18	16	34	25.4	3.3
Manageability	14	11	25	17.6	2.3
Meaningfulness	10	14	24	19.1	2.2
Total SOC score	26	48	74	62.2	5.3
PMH					
F1: Personal satisfaction	13	14	27	22.7	3.0
F2: Prosocial attitude	5	10	15	12.8	1.4
F3: Self-control	9	6	15	11.5	2.2
F4: Autonomy	10	2	12	7.5	1.9
F5: Problem resolution	15	12	27	22.0	3.4
F6: Interpersonal relationship skills	12	9	21	15.9	2.3
Total PMH score	47	68	115	94.3	9.9

SD: Standard deviation

As to the relation between the sense of coherence and the sociodemographic, work, and health variables (Table 3), women scored slightly higher than did men in the dimension of manageability—a dimension that helps to explain greater understanding of how events in the work environment are perceived, with a tendency to see things as structured and clear rather than chaotic and unpredictable. The dimension of meaningfulness showed significant differences in relation to the group of nursing professionals, with an average score of 18.12 (SD: 1.86), revealing them to have confidence and self-assurance and the ability to find needed resources both within themselves and in their immediate environment (p=0.023). In like manner, a significant positive relation was shown for the level of job satisfaction of the attending professionals in the dimensions of manageability (p=0.030) and meaningfulness (p=0.007), as well as for the construct overall (p=0.001).

Thus, the higher the level of job satisfaction demonstrated by the professionals, the greater the value given to the things taking place around them, independently of the nature of what was happening (Table 3).

Table 3 - Sociodemographic, work, and health variables in the SOC questionnaire

Characteristics	n	Comprehensibility		Manageability		Meaningfulness		Total SOC	
		Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p
<b>Age in years</b>	<b>102</b>	<b>r: .010</b>	<b>.9181</b>	<b>r: -.063</b>	<b>.5321</b>	<b>r: .038</b>	<b>.7041</b>	<b>r: -.005</b>	<b>.9601</b>
<b>Sex</b>									
Female	68	25.4 (3.5)	.9342	18.0 (2.4)	.0322	19.1 (2.2)	.9512	62.6 (5.7)	.3132
Male	34	25.3 (2.8)		16.9 (2.0)		19.1 (2.3)		61.4 (4.4)	
<b>Marital status</b>									
Single	14	25.2 (2.7)	.8712	17.2 (2.0)	.4622	19.4 (1.8)	.6422	61.9 (3.5)	.7552
With partner and/or family	88	25.4 (3.4)		17.7 (2.4)		19.1 (2.3)		62.2 (5.6)	
<b>Dependents</b>									
Yes	51	25.6 (3.6)	.4272	17.4 (2.5)	.3162	19.0 (2.3)	.6322	62.1 (5.7)	.8842
No	51	25.1 (3.0)		17.8 (2.1)		19.2 (2.2)		62.3 (5.0)	
<b>Professional status</b>									
Psychiatrist	18	25.6 (2.7)	.9103	16.8 (1.5)	.0763	20.2 (1.7)	.0233	62.6 (4.5)	.9213
Psychologist	6	26.5 (3.0)		16.5 (3.3)		20.3 (2.1)		63.3 (7.0)	
Nurse	32	25.2 (3.1)		18.1 (1.9)		19.3 (2.3)		62.6 (5.3)	
Nurse's aide	44	25.3 (3.9)		17.9 (2.7)		18.4 (2.2)		61.7 (5.8)	
Other	2	26.5 (0.7)		15.0 (2.8)		20.5 (0.7)		62.0 (2.8)	
<b>Type of contract</b>									
Permanent	51	25.4 (3.1)	.9433	17.6 (2.4)	.8773	19.0 (2.1)	.5003	62.1 (5.2)	.9943
Temporary	45	25.4 (3.7)		17.6 (2.4)		19.2 (2.4)		62.2 (5.9)	
Trainee (MIR, PIR, EIR)	6	25.0 (1.4)		17.1 (0.7)		20.1 (1.3)		62.3 (1.8)	
<b>Work shift</b>									
Day (fulltime)	71	25.4 (3.4)	.2183	17.3 (2.3)	.1293	19.1 (2.1)	.1143	62.0 (5.2)	.2803
Night (fulltime)	15	26.4 (2.8)		17.8 (2.5)		20.0 (2.0)		64.2 (5.4)	
Day/night (75% time)	16	24.3 (3.2)		18.6 (2.0)		18.3 (2.6)		61.3 (5.8)	
<b>Other job</b>									
Yes	60	25.5 (3.3)	.6452	17.7 (2.1)	.7882	19.3 (2.3)	.4252	62.5 (5.2)	.4612
No	42	25.2 (3.3)		17.5 (2.7)		18.9 (2.1)		61.7 (5.6)	
<b>Degree of job satisfaction</b>	<b>102</b>	<b>r: .172</b>	<b>.0841</b>	<b>r: .216</b>	<b>.0301</b>	<b>r: .266</b>	<b>.0071</b>	<b>r: .312</b>	<b>.0011</b>
<b>Physical health problems</b>									
Yes	17	25.1 (3.5)	.7422	17.1 (3.0)	.3132	19.3 (2.5)	.7112	61.6 (6.3)	.6242
No	85	25.4 (3.3)		17.7 (2.1)		19.1 (2.2)		62.3 (5.2)	
<b>Mental health problems</b>									
Yes	3	23.3 (1.1)	.3592	16.6 (0.5)	.4672	19.0 (1.0)	.8972	59.3 (1.5)	.3462
No	99	25.4 (3.3)		17.6 (2.3)		19.1 (2.2)		62.3 (5.4)	
<b>Doctor visits</b>									
Yes	35	26.2 (3.5)	.0592	17.8 (2.9)	.6212	19.5 (2.2)	.1922	63.6 (5.7)	.0492
No	67	24.9 (3.1)		17.5 (1.9)		18.9 (2.2)		61.4 (5.0)	
<b>Psychiatrist/psychologist visits</b>									
Yes	12	25.0 (3.5)	.6442	17.5 (1.7)	.9212	20.0 (2.2)	.1352	62.6 (5.6)	.7702
No	90	25.4 (3.3)		17.6 (2.4)		19.0 (2.2)		62.1 (5.3)	
<b>Years working</b>	<b>100</b>	<b>r: -.010</b>	<b>.9251</b>	<b>r: .007</b>	<b>.9411</b>	<b>r: .038</b>	<b>.7051</b>	<b>r: .014</b>	<b>.8921</b>

SOC: Sense of Coherence questionnaire; SD: Standard deviation; p: level of significance; 1: Pearson correlation coefficient; 2: Fisher Student t test; 3: ANOVA

Those professionals who replied that they had seen a doctor in the previous year scored higher, and significantly so, in terms of coherence, in comparison to those who said that they had not visited a doctor in the prior year ( $p=0.049$ ), which may be explained by the impulse to find a definitive, healthy solution to problems that might arise. This was not the case with other sociodemographic or work variables such as marital status, having dependents, the type of work contract, the period of time working in the area of mental health, or other jobs held outside of regular working hours. None of these variables showed significant differences with the sense of coherence declared by the professionals.

Table 4 - Sociodemographic, work, and health variables in the PMH questionnaire

	F1		F2		F3		F4		F5		F6		Total	
	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p	Mean (SD)	p
<b>Sex</b>														
Female	22.8 (2.9)	.610 <sup>1</sup>	13.1 (1.4)	.007 <sup>1</sup>	11.5 (2.4)	.890 <sup>1</sup>	7.4 (1.9)	.304 <sup>1</sup>	22.2 (3.5)	.362 <sup>1</sup>	16.0 (2.2)	.472 <sup>1</sup>	95.0 (10.5)	.348 <sup>1</sup>
Male	22.5 (3.1)		12.2 (1.3)		11.5 (1.7)		7.5 (2.0)		21.6 (3.1)		15.7 (2.5)		93.0 (8.6)	
<b>Marital status</b>														
Single	23.0 (2.0)	.705 <sup>1</sup>	12.2 (0.9)	.044 <sup>1</sup>	12.0 (1.9)	.362 <sup>1</sup>	7.3 (1.4)	.624 <sup>1</sup>	23.2 (2.1)	.063 <sup>1</sup>	15.6 (2.1)	.608 <sup>1</sup>	94.8 (7.5)	.836 <sup>1</sup>
With partner	22.6 (3.1)		12.9 (1.5)		11.4 (2.2)		7.6 (2.0)		21.8 (3.5)		15.9 (2.3)		94.2 (10.3)	
<b>Dependents</b>														
Yes	22.8 (3.2)	.670 <sup>1</sup>	12.9 (1.5)	.353 <sup>1</sup>	11.6 (2.7)	.790 <sup>1</sup>	7.8 (1.9)	.293 <sup>1</sup>	22.1 (3.3)	.864 <sup>1</sup>	15.9 (2.3)	.999 <sup>1</sup>	95.1 (10.6)	.423 <sup>1</sup>
No	22.5 (2.8)		12.6 (1.4)		11.5 (2.0)		7.3 (2.0)		22.0 (3.5)		15.9 (2.3)		93.5 (9.2)	
<b>Professional status</b>														
Psychiatrist	21.8 (2.6)	.191 <sup>2</sup>	12.5 (1.6)	.383 <sup>2</sup>	11.7 (1.7)	.310 <sup>2</sup>	7.1 (1.7)	.015 <sup>2</sup>	21.4 (3.6)	.169 <sup>2</sup>	15.2 (2.7)	.022 <sup>2</sup>	91.9 (9.2)	.071 <sup>2</sup>
Psychologist	24.5 (1.9)		13.1 (1.1)		12.6 (2.0)		7.3 (1.6)		24.1 (3.8)		18.5 (1.8)		102.5 (9.6)	
Nurse	23.3 (3.0)		12.9 (1.2)		11.0 (2.4)		6.8 (1.9)		22.0 (3.2)		16.2 (1.8)		93.5 (9.9)	
Nurse's aide	22.2 (3.1)		12.7 (1.6)		11.6 (2.2)		8.3 (1.9)		21.7 (3.3)		15.5 (2.3)		94.1 (9.8)	
Other	24.0 (1.4)		14.5 (0.7)		13.5 (2.1)		8.5 (0.7)		26.5 (0.7)		17.0 (2.8)		107.0 (1.4)	
<b>Type of contract</b>														
Permanent	22,5 (3.1)	.750 <sup>2</sup>	12.7 (1.4)	.790 <sup>2</sup>	11.7 (2.2)	.338 <sup>2</sup>	7.4 (1.9)	.221 <sup>2</sup>	22.3 (3.3)	.331 <sup>2</sup>	15.8 (2.3)	.773 <sup>2</sup>	94.5 (10.1)	.795 <sup>2</sup>
Temporary	23,2 (2.6)		13.0 (1.5)		10.9 (2.3)		8.4 (1.7)		21.6 (4.2)		16.2 (2.7)		94.9 (10.3)	
Trainee (MIR, PIR, EIR)	22,8 (2.9)		12.8 (1.7)		11.2 (1.6)		7.3 (2.1)		21.0 (2.7)		16.1 (1.7)		92.8 (8.9)	
<b>Work shift</b>														
Day (fulltime)	22,5 (3.1)	.750 <sup>2</sup>	12.7 (1.4)	.790 <sup>2</sup>	11.7 (2.2)	.338 <sup>2</sup>	7.4 (1.9)	.221 <sup>2</sup>	22.3 (3.3)	.331 <sup>2</sup>	15.8 (2.3)	.773 <sup>2</sup>	94.5 (10.1)	.795 <sup>2</sup>
Night (fulltime)	23,2 (2.6)		13.0 (1.5)		10.9 (2.3)		8.4 (1.7)		21.6 (4.2)		16.2 (2.7)		94.9 (10.3)	
Day/night (75% time)	22,8 (2.9)		12.8 (1.7)		11.2 (1.6)		7.3 (2.1)		21.0 (2.7)		16.1 (1.7)		92.8 (8.9)	
<b>Other job</b>														
Yes	22.9 (3.0)	.349 <sup>1</sup>	12.8 (1.4)	.629 <sup>1</sup>	11.7 (1.9)	.347 <sup>1</sup>	7.2 (1.6)	.024 <sup>1</sup>	22.6 (3.3)	.037 <sup>1</sup>	16.0 (2.3)	.575 <sup>1</sup>	95.4 (9.4)	.161 <sup>1</sup>
No	22.3 (2.8)		12.7 (1.5)		11.3 (2.5)		8.1 (2.2)		21.2 (3.4)		15.7 (2.2)		92.6 (10.5)	
<b>Physical health problems</b>														
Yes	21.2 (3.0)	.032 <sup>1</sup>	13.1 (1.5)	.374 <sup>1</sup>	11.5 (2.2)	.968 <sup>1</sup>	7.3 (2.0)	.576 <sup>1</sup>	21.0 (3.2)	.191 <sup>1</sup>	15.8 (2.4)	.820 <sup>1</sup>	91.9 (10.3)	.304 <sup>1</sup>
No	23.0 (2.9)		12.7 (1.4)		11.5 (2.2)		7.6 (1.9)		22.2 (3.4)		15.9 (2.3)		94.8 (9.8)	
<b>Mental health problems</b>														
Yes	20.0 (2.6)	.112 <sup>1</sup>	11.3 (0.5)	.078 <sup>1</sup>	9.6 (4.0)	.131 <sup>1</sup>	6.3 (1.1)	.260 <sup>1</sup>	20.3 (3.7)	.381 <sup>1</sup>	16.3 (1.1)	.768 <sup>1</sup>	85.3 (11.9)	.112 <sup>1</sup>
No	22.7 (2.9)		12.8 (1.4)		11.6 (2.1)		7.6 (1.9)		22.1 (3.4)		15.9 (2.3)		94.6 (9.8)	
<b>Doctor visits</b>														
Yes	22.2 (3.2)	.267 <sup>1</sup>	13.1 (1.3)	.117 <sup>1</sup>	11.9 (2.2)	.218 <sup>1</sup>	7.8 (1.5)	.339 <sup>1</sup>	22.4 (3.7)	.368 <sup>1</sup>	15.8 (2.3)	.793 <sup>1</sup>	95.3 (10.0)	.479 <sup>1</sup>
No	22.9 (2.8)		12.6 (1.5)		11.3 (2.1)		7.4 (2.1)		21.8 (3.4)		15.9 (2.3)		93.8 (9.9)	
<b>Psychiatrist/psychologist visits</b>														
Yes	20.8 (3.5)	.020 <sup>1</sup>	12.2 (1.2)	.155 <sup>1</sup>	10.2 (2.1)	.027 <sup>1</sup>	7.4 (1.3)	.736 <sup>1</sup>	20.3 (3.7)	.064 <sup>1</sup>	15.6 (2.0)	.665 <sup>1</sup>	87.9 (9.2)	.016 <sup>1</sup>
No	22.9 (2.8)		12.9 (1.5)		11.7 (2.1)		7.6 (2.0)		22.2 (3.3)		15.9 (2.3)		95.2 (9.7)	

PHM: Positive Mental Health questionnaire; SD: Standard deviation; p: level of significance; 1: Fisher student t test; 2: ANOVA

As to self-perception of mental health evaluated by means of the PMH+, the sample score yielded an overall average of 94.30 (SD: 9.9). One should bear in mind that the total scores on the test ranged between 71 and a maximum of 112 (Table 4). There was observed to be a relation between the age of the professionals and factor F4: Autonomy ( $p=0.038$ ), with an increase in the individual criteria and independence with increased age. As to the relation between sex and factor F2: Prosocial Attitude, the scoring of the women was higher than that of the men, reaching statistical significance ( $p=0.007$ ), with an average score of 13.10 points (SD: 1.48). The women also therefore scored higher in terms of a predisposition to 'altruism' and helping others. It is of note that the professionals who said that they did not have health problems had statistically significant scores in the factor F1: Personal Satisfaction ( $p=0.032$ ), related to high self-esteem, satisfaction with their personal life, and an optimistic outlook toward the future. In contrast, those who had needed to see a psychiatrist or psychologist had lower values in terms of factor F3: Self-control ( $p=0.027$ ) relative to the ability to maintain an emotional balance. No statistically significant differences were found relative to the other variables.

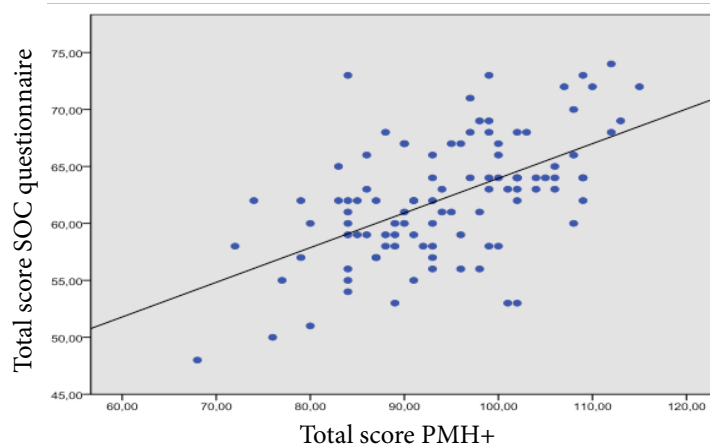
Turning to the overall relation between the global scores on the SOC and PMH questionnaires, analysis revealed a positive relation between the two ( $r=0.562$ ;  $p=0.0001$ ). In terms of factors, the 6 that make up the PMH construct correlated significantly with the dimension of Comprehensibility of the SOC, while all the PMH factors but one (F6: Interpersonal Relationship Skills) correlated significantly with the dimension of Meaningfulness of the SOC. The dimension of Manageability of the SOC only showed a significant correlation with one factor of the PMH, F1: Personal Satisfaction ( $p=0.062$ ), (Table 5 and Figure 1).

Table 5 - Analysis of the correlation between PMH and SOC

PMH \ SOC	Comprehensibility		Manageability		Meaningfulness		Total SOC	
	r	p	r	p	r	p	r	p
F1: Personal satisfaction	.465	.0001*	.186	.062	.296	.002*	.494	.0001*
F2: Prosocial attitude	.215	.030*	.106	.287	.210	.034*	.267	.007*
F3: Self-control	.465	.0001*	-.144	.150	.251	.011*	.256	.009*
F4: Autonomy	.305	.002*	.104	.300	.192	.054	.314	.001*
F5: Problem resolution	.377	.000*	.044	.660	.320	.001*	.387	.0001*
F6: Interpersonal relationship skills	.322	.001*	.076	.450	.136	.173*	.290	.003*
Total PMH	.570	.0001*	.106	.290	.386	.000*	.562	.0001*

PMH: Positive Mental Health questionnaire. SOC: Sense of Coherence questionnaire.  
r: Pearson correlation coefficient. p: level of significance. \*: significant correlation

Figure 1 - Analysis of the correlation of total scores of the SOC and PMH+ Questionnaires



## DISCUSSION

The average level of sense of coherence of the mental health professionals in our study is quite similar to the results obtained in other studies carried out in populations of a similar nature. Examples include studies with mental health specialists (Eriksson & Lindström, 2006), professionals providing care in internal medicine services (Tselebis, Moulou & Ilias, 2001), nursing teachers (Eriksson & Lindström, 2006), and Finnish nurses unemployed at the time the study was carried out (Leino-Loison, Gien, Katajisto & Välimäki, 2004).

According to Eriksson & Lindström (2006), the level of sense of coherence in the questionnaire used for the 2006 study (SOC-13) ranged between a minimum of 35.93 points and a maximum of 77.60 points, as reported for the populations studied. In the present study, our professionals had overall scores ranging from 48 to 74 points, respectively, which would indicate that the mental health professionals at the Parc Hospitalari Martí i Julià scored high in sense of coherence. As to the self-perception of mental health reported by the professionals in the PMH questionnaire, our sample obtained an overall average of  $X=92.70$  points. The minimum overall score for the professionals was 71 points and the maximum 112. Although we lack norms against which to evaluate the results, if we bear in mind the fact that the overall scores for the PMH questionnaire ranged between a minimum of 39 and a maximum of 156 points, we may safely assert that the professionals in our study showed moderately high levels of positive mental health.

Our results are in agreement with the data presented in the Eurobarometer (European Commission: Mental Health, 2010) in which it was noted that people feel, in general, more positively than negatively—that is, with a greater capacity for feeling positive emotions than negative ones. As to identifying the elements and variables related with positive mental health and the sense of coherence in the professionals in our study, age proved to be a variable that bore no relation with the sense of coherence, and it was only significant in factor F4: Autonomy of Positive Mental Health. The theory of Lindström & Eriksson (2010), according to which the level of sense of coherence increases with age, was not confirmed. Therefore, bigger longitudinal studies are needed to shed further light on this putative relation. This is not the case with positive mental health, which did indeed show a relation with age in our study's results. The age of the mental health professionals was significant in the factor of autonomy and in the overall construct. With increased age the professionals showed higher levels of positive mental health and a greater capacity to hold their own criteria, to display independence, to control their own behavior, and to display self-confidence. This was also borne out in the MIDUS study, in which older people, ranging in age from 65 to 74, were those who demonstrated the highest levels of positive mental health (Keyes, 2005).

In our study neither marital status nor having dependents played a significant role in determining the levels of SOC or PMH. This is in contrast to other studies, such as the above-cited Canadian study (Canadian Institute for Health Information, 2011) in which living alone or with a partner played a role in determining the levels of emotional well-being reported. However, it must be stressed that in our sample we did not consider the finer points of living with a partner; it appears that, a priori, the social support received by the individual, expressed as collaboration and esteem, are more important than the mere fact of either living alone or with a partner.

Numerous studies have noted that people with a high level of sense of coherence also enjoy good health and a sense of well-being (Virues-Ortega, Martinez-Martin, del Barrio & Lozano, 2007). According to Lindström & Eriksson (2010) this relation has been demonstrated in all of the populations studied to date, independently of age, sex, ethnic group, or nationality. Our study is in accordance with what we noted earlier, in making it clear that the health professionals who reported having visited the doctor had higher overall levels of SOC, exercised greater control over their health, and therefore enjoyed a greater sense of well-being.

In general, the sample studied revealed that a higher level of self-esteem and personal satisfaction with life, as well as emotional balance and empathy and the ability to understand the feelings of others, all combine to influence favorably the way in which information from the environment is perceived.

## CONCLUSION

Overall, the sample studied showed high levels of Sense of Coherence and Positive Mental Health. The positive relation between the two questionnaires may be of particular interest in the design of future studies of the multifactor model of Positive Mental Health and the salutogenic model that underlies Sense of Coherence, leading to a global conceptual framework for the study of mental health from a positive perspective. Further studies are needed to determine whether SOC and PMH are headed in the same direction.

## IMPLICATIONS FOR CLINICAL PRACTICE

The sense of coherence and positive mental health is crucial to assess the level of mental health of their people indicators. The instruments used in this study as a tool for assessing the health, allow us to deepen our knowledge of mental health professionals, with the goal of developing strategies that focus on health promotion, given the need to address interventions to promote the health of people in work contexts.

## REFERENCES

Antonovsky, A. (1996). The salutogenic as a theory guide health promotion. *Health Promotion International*, 11(1), 11-18.

Canadian Institute for Health Information (2011). *Recognizing and exploring positive mental health-policy dialogue: Synthesis and analysis*. Ottawa: Canadian Institute for Health Information.

Eriksson, M., & Lindström, B. (2006). Antonovsky's sense of coherence scale and the relation with health: A systematic review. *Journal of Epidemiology & Community Health*, 60, 376-381.

Eriksson, M., & Lindström, B. (2008). A salutogenic interpretation of the Ottawa Charter. *Health Promotion International*, 23(2), 190-198.



European Commission: Mental Health (2010). Special Eurobarometer 345 / Wave 73.2. Brussels: European Commission.

Herman, H., & Jané-Llopis, E. (2005). Mental health promotion in public health. *Promotion & Education Supplement*, 12(2), 42-47.

Jahoda, M. (1958). *Current concepts of positive mental health*. Nueva York: Basic Books.

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting Clinical Psychology*, 73(3), 539-548.

Leino-Loison, K., Gien, L. T., Katajisto J., & Välimäki, M. (2004). Sense of coherence among unemployed nurses. *Journal of Advanced Nursing*, 48(4), 413-422.

Lindström, B., & Eriksson, M. (2010). *The Hitchhiker's guide to salutogenesis. Salutogenic pathways to health promotion*. Helsinki: AB Folkhälsan.

Lluch, M. T. (1999). *Construcción de una escala para evaluar la salud mental positiva*. PhD Thesis, University of Barcelona, Faculty of Psychology, Barcelona, Spain. Retrieved from <http://www.tdx.cat/TDX-0331104-104403>

Lluch, M. T. (2008). *Concepto de salud mental positiva: Factores relacionados*. In J. Fornes, & J. Gómez (Eds.), *Enfermería Psicosocial II. Recursos y programas para la salud mental* (pp. 37-69). Madrid: Fuden.

Lluch-Canut, T., Puig-Llobet, M., Sánchez-Ortega, A., Roldán-Merino, J., Ferré-Grau, C., & Positive Mental Health Research Group (2013). Assessing positive mental health in people with chronic physical health problems: Correlations with socio-demographic variables and physical health status. *BMC Public Health*, 13, 928.

Ministerio de Sanidad, Política Social e Igualdad (2011). *Estrategia en Salud Mental del Sistema Nacional de Salud (2009-2013)*. Madrid: Ministerio de Sanidad, Política Social e Igualdad.

Sequeira, C., Carvalho, J. C., Sampaio, F., Sá, L., Lluch-Canut, T., & Roldán-Merino, J. (2014). Avaliação das propriedades psicométricas do Questionário de Saúde Mental Positiva em estudantes portugueses do ensino superior. *Revista Portuguesa de Enfermagem de Saúde Mental* (11), 45-53.

Tselebis, A., Moulou, A., & Ilias, I. (2001). Burnout versus depression and sense of coherence: Study of Greek nursing staff. *Nursing and Health Sciences*, 3, 69-71.

Vaingankar, J. A., Subramaniam, M., Abdin, E., Picco, L., Chua, B. Y., Eng, G. K., Sambavisam, R., Shafie, S., Zhang, Y., & Chong, S.A. (2014). Development, validity and reliability of the short multidimensional positive mental health instrument. *Quality of Life Research*, 23, 1459-1477.

Virués-Ortega, J., Martínez-Martín, P., del Barrio, J. L., & Lozano, L. M. (2007). Validación transcultural de la Escala de Sentido de Coherencia de Antonovsky (OLQ-13) en ancianos mayores de 70 años. *Medicina Clínica*, 128(13), 486-492.

World Health Organization (2008). *Action plan for the global strategy for the prevention and control of non-communicable diseases (2008-2013)*. Geneva: World Health Organization.

Ying, Y., Lee, P., & Tsai, J. (2007). Attachment, sense of coherence, and mental health among Chinese American college students: Variation by migration status. *International Journal of Intercultural Relations*, 31(5), 531-544.

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