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Beliefs in the Medical Community: A Longitudinal Study with Assessment of Depression

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Abstract **Original Research Article**

Objectives: This study aims to write paranormal beliefs, the frequency of depression of Moroccan doctors, as well as to study the link between beliefs and depression. On the other hand, the evolution of the latter before and during the Covid 19 pandemic. ***Methods:*** This is a descriptive and analytical longitudinal study, involving 262 Moroccan doctors. We carried out a psychometric tests which consisted in passing the following scales: A belief scale "Revised paranormal brief scale", and a depression scale "Patient Health Questionnaire (PHQ-9)". ***Results***: The prevalence of paranormal beliefs among doctors is significant. Depression is more common among surgeons than other doctors. A correlation has been developed between some dimensions of belief in paranormal phenomena and depression. On the other hand, the pandemic has not had an impact on the beliefs of doctors. ***Conclusion***: This study highlights a strong link between beliefs and depression. Therefore, it would be wise to study the link of beliefs with other psychiatric parameters.

Keywords: Beliefs, Doctors, Depression.

Abréviations

RPBS Revised Paranormal Belief Scale
PHQ Patient Health Questionnaire
TRB Traditional Religious Beliefs
PSI Psi Dimension
WITCH Witchcraft
SS Non-interventional prospective studies SPI Spiritualism
ELF Extraordinary Life Formes PC Precognition
A Average
SD Standard Deviation CI Correlation Index

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INTRODUCTION

A belief in paranormal phenomena is, in other words, an absolute confidence that what presents itself to us in whatever form it is given - ghosts, spirits, psychic powers, etc. - that wants to interact with us and has a consciousness that could be described as 'human'. These beliefs rely on the establishment of a privileged relationship between the believer and the supernatural force. The belief in paranormal phenomena is a very plastic belief that tends to take the form given by the believer. Dependending on the function that each individual attributes to the belief, he or she develops a unique perception, making it a social fact, as well as an individual adaptable fact.

The definition of belief seems to crystallize and form a whole, whose function would be to respond to emotional needs such as comforting, providing certainty, calming anxieties, relieving in moments of crisis or simply reminding the human being of his duties (Idem, p.3). In other words, a belief is a profound certainty that does not need material or physical proof, as defined by any exact science, but responds to another logic, nourished by an authority that escapes the non-

believer. Once the experience has been made, the believer in paranormal phenomena believes, even if he or she remains aware of some 'flaws' in his or her belief. Few studies have examined the relationship between depression and the belief in paranormal phenomena.

The Revised Paranormal Belief Scale is now widely used to measure the degree of belief in the paranormal 'spirituality', relating to beliefs in past life and the power of the mind; 'superstition'; 'witchcraft'; 'precognition', referring to belief in precognition; the 'traditional religious beliefs' dimension; the 'psi' dimension, referring to beliefs in the power of the psyche over the environment; and the 'extraordinary life forms' dimension, relating to the belief in the existence of creatures.

METHODOLOGY

Participants and procedure

Two hundred and sixty-two participants (161 women and 101 men) gave their informed consent and completed an online questionnaire, after being informed about the study via social networks (facebook, Whatsapp groups).

The inclusion criteria were as follows:

Moroccan physicians who duly completed the questionnaire.

Measuring instruments Belief in the paranormal

Belief in the paranormal was measured using the Revised Paranormal Belief Scale (RPBS) French version, a self-report scale validated in French by R. Bouveta, H. Djeriouata, in 2014 [1]. The scale is composed of 26 items grouped around seven dimensions. Participants are asked to rate statements on a seven-point Likert scale (1 = totally disagree and 7 = totally agree) along 7 dimensions: traditional religious belief including 4 items for example, (e.g. item 1: "The soul continues to exist after physical death"), psi-powers including 4 items (e.g. item: "A person's thoughts can influence the movement of a physical object"), witchcraft including 4 items (e.g. item: "Through the use of spells and incantations it is possible to cast spells on people'); superstition with 3 items (e.g. 'The number 13 brings bad luck'); spiritualism with 4 items (e.g. 'Your spirit or soul can leave your body and travel [astral projection]'); extraordinary life forms with 3 items (e.g. 'There is intelligent alien life on other planets); precognition with 4 items (e.g. item: "Some psychics can accurately predict the future").

Depression

For the evaluation of depression, we used the Patient Health Questionnaire (PHQ-9), considered to be a brief tool to diagnose and measure the severity of depression. Each item is rated on a severity scale from 0 to 3. The participant is asked to rate how often each symptom has occurred in the past two weeks (0-not at all; 1- some days; 2- more than half the days or 3-almost every day), totaling to a score ranging from 0 to 27. The participant is also asked to what extent the identified problems have interfered with work, home or social life, however, responses to this item are not scored or included in the total score.

Score interpretation:

- 1-4: minimal depression;
- 5-9: mild depression;
- 10-14: moderate depression;
- 15-19: moderately severe depression
- 20-27: severe depression.

Data were analyzed using SPSS version 20 software. Quantitative data were expressed as average +/-standard deviation. Qualitative data were expressed as a percentage. Bivariate and multivariate analysis were performed. Any p-value < 0.05 was considered statistically significant.

RESULTS

The number of doctors included in the study is 262. The average age of the doctors was 33 years. The female sex represents 68.5%. The average seniority is 7.87 years, 34% of the doctors in the study are surgeons.

The average of the TRB dimension was the highest in our population (6.06) with a standard deviation of 1.51, Table 1.

Table 1: The average of belief dimensions

Dimension	A ± SD
TRB	6,06 ±1,51
PSI	2,34 ±1,61
WITCH	4,53±2,04
SS	1,47±1,06
SPI	2,55±1,53
ELF	2,39±1,20
PC	1,81±1,19

Assessment of depression during the covid 19 pandemic.

Our study showed a high rate of depression after covid (p< 0.001), Table 2.

Table 2: The average of depression before and after Covid-19 pandemic

Period	A ± SD
Before covid-19 pandemic	4,71 ± 5,44
During covid-19 pandemic	7,59 ± 5,98
After covid19 pandemic	4,99 ± 5,51

There was no significant difference in beliefs between the two genders.

For the depression scale:

In our population, 47% of the doctors had no depression, 34% of the cases depression was mild, in 13% of the cases it was moderate, in 6% of the cases moderately severe and in 4% of the cases was severe.

The bi-variate analysis showed that:

Female gender is related to depression ($p< 0.01$) Surgeons were found to have a high rate of depression and therefore surgical specialty is related to depression ($p < 0.02$).

A negative correlation was found between depression and the PSI dimension ($p< 0.05$, $r=-0.19$). However, the TRB dimension was not correlated with depression, but rather with seniority ($r= 0.16$, $p < 0.05$).

The covid-19 pandemic did not have an impact on physicians beliefs.

Table 3: Logistic regression of factors related to depression

Factor	A	E.S	Wald	ddl	p	CI
TRB	-0,004	0,101	0,002	1	0,966	0,996
PSI	-0,194	0,097	4,001	1	0,045	0,824
WITCH	0.053	0,078	0,468	1	0,494	1,055
SS	-0,060	0,149	0,161	1	0,688	0,942
SPI	0,089	0,105	0,720	1	0,396	1,093
PC	0,212	0,138	2,340	1	0,126	1,236
Gender	-0,573	0,281	4,161	1	0,041	0,564
Seniority	-0,005	0,021	0,055	1	0,815	0,995
Profession	0,628	0,277	5,152	1	0,023	1,874
Constant	-0,175	0,787	0,049	1	0,824	0,839

DISCUSSION

To explain health-related behaviors, social determinants such as spiritualism and religiosity are increasingly identified as having an impact on health.

Systematically, spiritualism and religiosity have been introduced into the medical field involving a growing interest in the possible perceived health benefits of having a spiritual belief and spiritual beliefs and following a religious lifestyle.

More specifically, spirituality refers to feelings or experiences of reverence, peace or attachment with a Supreme Being, and is generally identified as what gives transcendent meaning to life.

Although there are various descriptions of spiritualism, the basic concepts are the same [2, 3]. It may well include the personal inner, and emotional expression of the worshiper, evaluated using the spiritual well-being, peace and comfort derived from faith and spiritual adaptation.

Religiosity is more related to cultural and social norms and refers to an externally prescribed belief system and guidelines for conduct.

It is usually explained in a behavioral context where rituals and other symbolic activities (e.g. meditations, prayers, fasting, reading of religious scriptures, attendance at services, etc.) are practiced by individuals according to their specific beliefs and modes of social organization [4].

These activities have been noted to strengthen people's faith and help them to make practical health decisions.

Although there are still deliberations on the possible association between spirituality/religiosity with health and weaknesses in the definition and measurement of the construct, attempts have been made to operationalise and conceptualize spiritualism and religiosity to link with health outcomes as well as its measurement impact on society domain [5, 8, 9].

The results of our study showed that the the TRB dimension gave the highest score. The dimension did not target a particular religion.

As has been found in the literature, depression was observed predominantly among surgeons in different specialties [6].

The Covid-19 pandemic has been found to increase the rate of depression with no impact on beliefs [7]. However, the TRB and SPI dimensions were not correlated with depression, unlike what has been found in other studies where the mentioned dimensions were protective factors against chronic diseases and improved quality of life [3]. According to our study, which was conducted on a population of Moroccan doctors, the PSI dimension was the only dimension related to depression; however, the main factor associated with depression was the medical specialty (surgeons in our case).

CONCLUSION

The results of our work may help further new studies to explore the link between depression and beliefs, especially among physicians as well as to study the link between surgical specialty and depression.

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