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RESEARCH ARTICLE

A Cross-Sectional Study on Factors Related to Suicidal Ideation in Individuals with Spiritist Involvement: Comparison before and during the Covid-19 Pandemic

Tiago Medeiros Sales [1], Rosa Maria Salani Mota [2], Raimunda Hermelinda Maia Macena [3]

[1] Psychiatrist and Doctor of Public Health at the Faculty of Medicine of the Federal University of Ceará.
[2] Statistician and Professor in the Department of Statistics and Applied Mathematics at the Federal University of Ceará.
[3] Nurse and Professor in the Department of Physical Therapy and the Graduate Program in Public Health at the Faculty of Medicine of the Federal University of Ceará.

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ABSTRACT

Purpose: Suicide increases in Brazil annually and the population search for spiritual care, as in Spiritism, a religion that attracts people in psychic pain. We sought to identify the factors associated with suicidal ideation among persons with some Level of Spiritism Engagement (LSE), before and during COVID-19.

Methods: This cross-sectional analytical research with 848 inhabitants from Ceará, Brazil, with some LSE, was conducted through digital data collection via *snowball*, with a bivariate ($p < 0,30$), multivariate ($p < 0,30$) and multinomial analysis ($p < 0,05$) of sociodemographic factors, psychic status, psychic care, spiritual belief and LSE related to suicidal ideation. Afterward, a multinomial regression analysis ($p < 0.05$) was conducted on all significant factors to identify those most strongly associated with suicidal ideation.

Results: Risk factors of mild/moderate suicidal ideation were to be single (OR=2,32; CI 1,19-4,52), previous psychotherapy before COVID-19 (OR=1,81; CI 1,10-2,98) and to be spiritist (OR=2,43; CI 1,34-4,38). Risk factors of severe suicidal ideation were: to be single (OR=4,05; CI 1,89-8,69), unemployed (OR=2,93; CI 1,45-5,92), have a regular/bad/worse self-perception of emotional health (OR=4,84; CI 2,55-9,17), previous psychotherapy before COVID-19 (OR=2,57; CI 1,40-4,71) and to be spiritist (OR=2,13; CI 1,00-4,52). Pre-pandemic regular/high/very high LSE was a protective factor for severe suicidal ideation during COVID-19 (OR=0,38; CI 0,16-0,90).

Conclusion: Negative self-perception of emotional health, psychotherapeutic follow-up, and identification as spiritist were associated with severe suicidal ideation, which appears to support the notion that spiritism attracts individuals experiencing psychic distress. Despite this disease profile, higher levels of spiritist engagement before the pandemic were protective against severe suicidal ideation during COVID-19, suggesting a potential positive effect of spiritism on mental health.

Keywords: Suicidal Ideation, Spiritism, COVID-19, Suicide, Spirituality.

List of Abbreviations

ICPs = Integrative and Complementary Practices
LSE = Level of Spiritist Engagement
MAST = Multi Attitude Suicide Tendency Scale
NCH = National Council of Health

Introduction

Suicide is a challenge for public health[1]. Suicidal ideation stands out and it means the thought of actively provoking the self-death[2]. Underdeveloped and developing countries are the most vulnerable with 800.000 deaths / year around the world[3]. Brazil's suicide incidence grows annually, at a 6,36 persons by 100.000 inhabitants rate, mainly among youngsters and adults aged under 30 yrs.[4]. Suicidal ideation and suicide are closely associated with Common Mental Disorders (CMDs)[5], a term coined by David Goldberg and Peter Huxley[6], which corresponds to the set of mental disorders most commonly found in the general population, such as insomnia, fatigue, somatizations, stress, anxiety, depression, among others. Among CMDs, anxiety, depression, and stress stand out, recognized for their high prevalence and high rate of comorbidities[7].

The Brazilian National Health System hardly tackles suicide[8], due to an ineffective promotion of the main preventing factor - the treatment of psychiatric disorders[9] such as anxiety[2], stress[10], depression[2,11], and suicidal ideation[12,13]. Consequently, the Brazilian population with almost 90% of Christians[14] seeks for mental health care of religious origin. The use of spirituality as a health resource is a common practice of most societies[15-17], that fortify themselves through faith, benefit from social and personal care and from community help[18-19].

Previous studies show that spirituality is linked to better mental health, as it plays a significant role in enhancing psychological well-being[18,29-31]. Spiritual practices offer social and emotional support, reduce stress, anxiety, and depression levels[18,29,30]. Additionally, spirituality fosters greater psychological resilience, helping individuals cope with trauma and find purpose and meaning in life. It serves as a psychological resource to face mental and emotional challenges, ultimately contributing to improved overall quality of life and mental health[31]. Recently, the benefit of spirituality on mental health was seen during COVID-19[20-22].

Regarding spirituality in Brazil, Spiritism is widely spread and is considered a scientific-philosophical doctrine, in addition to being a religion[23,24]. It offers a free assistance system aimed at improving mental health[25], regardless of the religion of the individuals involved. Thus, many people in need of healthcare engage with Spiritist therapy, making Spiritism a religion of psychological demand[26]. The specific mechanisms of how Spiritist engagement influences mental health may vary based on individual beliefs and spiritual practices[26]. Despite this, scarce studies have sought to understand this phenomenon[27, 28].

During the pandemic, there was an increase in mental health issues[67-68], including a rise in suicidal ideation[64], which possibly led to a higher level of Spiritist engagement. However, this engagement was affected by limited access to Spiritist centers due to the lockdown[34]. Thus, COVID-19 created a time divide, altering parameters related to suicidal ideation as well as Spiritist engagement, even among individuals who already had some level of engagement before the pandemic. This study, conducted during the pandemic, aimed to determine the factors associated with suicidal ideation among people with some Level of Spiritist Engagement (LSE), comparing before and during COVID-19 periods.

Materials and Methods

STUDY DESIGN, SETTING AND PARTICIPANTS

This cross-sectional analytical research was conducted with persons with some LSE in the state of Ceara, Brazil. This study was conducted throughout the year 2021, during the second wave of COVID-19. Inclusion criteria adopted were: being 18 years old or older and being an inhabitant of the state of Ceara. A total of 848 people participated in this study, more than double the minimum required.

SAMPLE SIZE

Although the number of Spiritists in the Brazilian population is known to be 2% of the total[32], the sample of people with Spiritist engagement is unknown, as well as the prevalence of Common Mental Disorders (CMDs) and suicidal ideation in this population. Therefore, since the prevalence of the outcome (suicidal ideation) is unknown, a prevalence of 50% was assumed, and the sample size was calculated for a 5% alpha with 95% power, resulting in a total of 350 individuals. Considering an assumed loss of 10%, the minimum desired sample size was 385 individuals, including both Spiritists and non-Spiritists.

The non-probabilistic snowball sampling method was used, which allows for the identification of rare characteristics in large populations, with recruitment done through the participants themselves[33]. The digital approach for data collection was chosen due to the restrictions imposed by social distancing measures as a public health response to COVID-19[34], which temporarily closed community and social settings[35] and hindered in-person approach to Spiritists and attendees of Spiritist centers. As an advantage, digital data collection enables finding samples within an extensive community network[36], and therefore, digital data collection has progressively become a dominant research instrument. However, as a disadvantage, it increases the possibility of sample bias[37].

INSTRUMENTS

The Informed Written Consent term was available with a questionnaire and the selected suicide scale. The questionnaire had sociodemographic data, variables connected to the psychic status and to psychic care and structured questions to measure spiritual belief and LSE before and during the pandemic[38,39]. The suicide scale was the Multi Attitude Suicide Tendency Scale (MAST)[40].

LEVEL OF SPIRITIST ENGAGEMENT (LSE)

To elaborate LSE[31,72,73], different scores (0 - 2) were attributed to related questions, with different answer scores (1 - 6), according to their higher or lower level of connection with spiritism. The final result was estimated by the addition and classification on 5 categories – very

low (0-20%), low (21-40%), regular (41-60%), high (61-80%) and very high (81-100%)[38]. These categories were subdivided into 2 – very low/low and regular/high/very high. The instrument was elaborated in 3 blocks of questions to measure Sociodemographic Data, Psychic Status and Psychic Care, and Spiritual Beliefs and LSE[31].

MULTI ATTITUDE SUICIDE TENDENCY SCALE (MAST)

To assess suicidal ideation the MAST[41] was used, and the index of suicide risk was obtained by subtracting the subindex "death" (attraction minus death aversion), by the subindex "life" (attraction minus life aversion), which generated a minimum and a maximum value [40]. For bivariate analysis, 3 levels of suicidal ideation were used (mild, moderate and severe) and 2 levels for multivariate and multinomial analysis (mild/moderate and severe). Was developed by Orbach in 1991[41] and originally consisted of 30 items. The MAST is based on the assumption that suicidal behavior evolves around a conflict between four types of attitudes towards life and death: death repulsion, life repulsion, death attraction, and life attraction. The adapted Brazilian version of MAST allows for a principal component factor analysis, with items having a factor loading greater than |0.40|. As a result, a reduced version composed of 20 items was proposed. For this study, the adapted reduced version for the Brazilian context was used[42].

The MAST contains 20 items that address content related to life and death, and thus assumes that the risk of suicide increases as a conflict arises between the desire to live and the possibility of death[43].

DATA COLLECTION

Digital collection was used due to social distancing[34] that closed communities[35], including spiritist houses. This was advantageous because it allowed to access a small and specific sample among a wide community[36]. However, the sample bias mounted[37], which was hampered by the snowball[33] technique and complemented by the use of several digital platforms[44].

Instagram, Facebook and WhatsApp were chosen due to the enormous popularity. Digital pages of research were made available for the general public in Instagram and Facebook with data about the study and with the link to access software SurveyMonkey®, used for data collection. WhatsApp worked to spread information through individuals and groups with some LSE, that posted the informative invitation video and the links for Instagram, Facebook and SurveyMonkey®.

DATA ANALYSIS

To analyse data, SurveyMonkey® database was downloaded to Excel® for Windows 2013. After digital analysis, data was exported to SPSS® software, version 23.0 (SPSS, Inc, USA). A bivariate analysis of questionnaire data (sociodemographic factors, psychic status, psychic care, spiritual belief and LSE) was conducted associated to the index of suicide risk with a significance level up to 30%. After, a multivariate analysis with the same significance level was done, which originated data that was submitted to multinomial regression with a 5% significance. Finally, a multinomial regression analysis ($p < 0.05$) was performed on all significant factors associated with suicidal ideation, identifying the factors most strongly associated with suicidal ideation.

ETHICAL CONSIDERATIONS

The research met the Law 466/2012 of the National Council of Health (NCH), related to Research Ethics involving Human Beings, with approval of the Ethics Committee of the Federal University of Ceará (n. 2.237.838).

Results

SOCIODEMOGRAPHIC FACTORS

Considering the bivariate analysis with a significance level of 30%, the highest prevalence of severe suicidal ideation was observed in females (21.5%), younger individuals (29.7%), white individuals (21.2%), homosexuals (24.3%), singles (30.0%), those with low education (complete secondary school/incomplete higher school/technical – 29.3%), those with a daily workload greater than 8 hours (20.4%), those who were not the main household income providers (15.9%), and those with a low household monthly income (up to R$ 2.600.00 – 30.3%) (TABLE 1).

The multivariate analysis showed that being single (OR = 4.45; CI 2.30 - 8.60, $p < 0.001$), having the lowest education level (OR = 2.35; CI 1.26 - 4.39, $p = 0.006$), and having a lower family income (R$ 0 to R$ 2.600 – OR = 2.54; CI 1.24 - 5.02, $p = 0.037$) were associated with a higher risk of severe suicidal ideation. Conversely, being the main income provider was found to be a protective factor against severe suicidal ideation (OR = 0.54; CI 0.32 - 0.90, $p = 0.037$) (TABLE 1).

Table 1 – Bivariate and multivariate analysis of sociodemographic factors associated to suicidal ideation levels of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Sociodemographic Factors	Levels of Suicidal Ideation								Related to Suicidal Ideation Level:					
									Mild / Moderate			Severe		
	N	Mild		Moderate		Severe		p Value	OR[1]	95% CI[2]		OR*	95% CI[2]	
		n	%	n	%	n	%			LL[3]	UL[4]		LL[3]	UL[4]
Gender								0.289						
Female	494	82	16.6	306	61.9	106	21.5		0.926	0.586	1.463	1.334	0.753	2.364
Male	192	32	16.7	129	67.2	31	16.1		1.000	-	-	1.000	-	-
Age								0.104						
Between 18 and 34 years	101	16	15.8	55	54.5	30	29.7		0.945	0.494	1.809	2.012	0.959	4.222
Between 35 and 54 years	340	54	15.9	220	64.7	66	19.4		1.120	0.716	1.752	1.312	0.751	2.290
55 years or over	245	44	18.0	160	65.3	41	16.7		1.000	-	-	1.000	-	-

Sociodemographic Factors	Levels of Suicidal Ideation								Related to Suicidal Ideation Level:					
									Mild / Moderate			Severe		
	N	Mild		Moderate		Severe		p Value	OR[1]	95% CI[2]		OR*	95% CI[2]	
		n	%	n	%	n	%			LL[3]	UL[4]		LL[3]	UL[4]
Race								0.914						
White	345	58	16.8	214	62.0	73	21.2		1.123	0.459	2.747	1.259	0.418	3.792
"Pardo" (Brown)	304	49	16.1	198	65.1	57	18.8		1.230	0.499	3.031	1.163	0.381	3.548
Others	37	7	18.9	23	62.2	7	18.9		1.000	-	-	1.000	-	-
Marital Status								0.000						
Married or in a stable relationship	401	85	21.2	251	62.6	65	16.2		1.000	-	-	1.000	-	-
Single	170	15	8.8	104	61.2	51	30.0		2.348	1.296	4.255	4.446	2.298	8.603
Widower/Widow/ Divorced/ Separated	115	14	12.2	80	69.6	21	18.3		1.935	1.042	3.593	1.962	0.927	4.150
Education Level								0.006						
Complete Secondary School /Incomplete Higher Education /Technical	140	18	12.9	81	57.9	41	29.3		1.238	0.708	2.164	2.351	1.261	4.385
Bachelor's Degree/Graduation/ Post-Graduation	538	96	17.8	349	64.9	93	17.3		1.000	-	-	1.000	-	-
Workload / Daily Workload								0.647						
Up to 8 hours	308	48	15.6	200	64.9	60	19.5		1.000	-	-	1.000	-	-
8 hours or more	279	53	19.0	169	60.6	57	20.4		0.765	0.492	1.189	0.860	0.505	1.466
None	99	13	13.1	66	66.7	20	20.2		1.218	0.622	2.388	1.231	0.556	2.725
Main Household Income Provider	353	65	18.4	232	65.7	56	15.9	0.026	0.887	0.579	1.360	0.538	0.321	0.902
Household Monthly Income								0.037						
R$ 0 up to R$ 2.600	119	15	12.6	68	57.1	36	30.3		1.189	0.630	2.246	2.544	1.244	5.204
R$ 2.601 up to R$ 7.800	262	46	17.6	165	63.0	51	19.5		0.941	0.603	1.469	1.175	0.675	2.047
R$ 7.801 or more	305	53	17.4	202	66.2	50	16.4		1.000	-	-	1.000	-	-

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*, [4]*Upper Limit*

Sociodemographic factors that significantly influenced ($p < 0.05$) the shift in suicidal ideation were civil status and being the main household income provider. Single individuals had double the risk of severe suicidal ideation compared to widowers/widows/separated individuals (OR = 4.24; CI 2.10 - 8.60 vs OR = 2.26; CI 1.04 - 4.90). Being the main income provider was shown to be protective against the risk of severe suicidal ideation (OR = 0.50; CI 0.29 - 0.86) (TABLE 2).

Table 2 – Multinomial regression of sociodemographic factors associated with levels of suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Sociodemographic factors	Related to Suicidal Ideation Level					
	Mild / Moderate			Severe		
	OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		LL[3]	UL[4]		LL[3]	UL[4]
Civil Status						
Married or in a stable relationship	1.000	-	-	1.000	-	-
Single	2.358	1.252	4.441	4.242	2.099	8.571
Widower/ Widow / Divorced/ Separated	2.036	1.081	3.835	2.253	1.036	4.900
Main Household Income Provider	0.814	0.525	1.262	0.501	0.293	0.857

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*, [4]*Upper Limit*

PSYCHIC STATUS

Bivariate analysis of psychic status with 30% significance showed that severe suicidal ideation was most prevalent in illicit drug users (87.5%) and in people's self- harm (64.7%). Social distancing that affected very/totally emotional health prevailed in severe suicidal ideation (32.4%) than in those "noted "affected (10.6%), little (18.0%) or reasonably (21.3%). The self-perception of mental health as regular/bad/ worse was more prevalent among individuals with severe suicidal ideation than in those who perceived themselves with good/excellent mental health (35.4% vs 9.0%) (TABLE 3).

Multivariate analysis, with a statistical significance < 30%, showed that severe suicidal ideation was the most found in unemployed ($p < 0.001$; OR = 3.88; CI 2.19 – 6.89) in relation to employed persons; individuals with physical disease ($p = 0.002$; OR = 2.81; CI 1.46 – 5.42) than those who were not affected; people in a marital crisis ($p = 0.007$; OR = 2.86; CI 1.28 – 6.37) than those not affected; alcohol /smoking users ($p = 0.007$; OR = 6.37; CI 1.41 – 28.66) than non-users; and victims of suffered violence ($p = 0.015$; OR = 3.07; CI 1.19 – 7.94) compared to those who did not suffer violence. During COVID-19, people that suffered reasonably with social distancing presented a higher risk of severe suicidal ideation ($p = 0.002$; OR = 2.82; CI 1.17 – 6.80) than those who were not affected; whereas those who were very/totally affected by social distancing had higher risk ($p = 0.002$; OR = 3.09; CI 1.24 – 7.67) when compared to those nothing affected. The self-perception of

emotional health has shown that persons who perceived emotional health as regular/bad/worse had a higher risk ($p < 0.001$; OR = 6.07; CI 3.51 – 10.51) of severe suicidal ideation than those that perceived it as good/excellent (TABLE 3).

Table 3 – Bivariate and multivariate analysis of factors related to psychic status connected to suicidal ideation levels of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Psychic status factors	Levels of Suicidal Ideation							Related to Suicidal Ideation Level					
								Mild / Moderate			Severe		
	N	Mild		Moderate		Severe		OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		n	%	n	%	n	%	pValue		LL[3]	UL[4]		LL[3]	UL[4]
Unemployment	201	22	10.9	113	56.2	66	32.8	0.000	1.468	0.879	2.449	3.887	2.191	6.897
Physical disease	134	15	11.2	78	58.2	41	30.6	0.002	1.442	0.795	2.616	2.819	1.465	5.425
Close person's disease	247	36	14.6	154	62.3	57	23.1	0.245	1.187	0.764	1.846	1.544	0.917	2.599
Mourning	86	13	15.1	53	61.6	20	23.3	0.716	1.078	0.566	2.055	1.328	0.629	2.804
Marital Crisis	81	9	11.1	45	55.6	27	33.3	0.007	1.346	0.638	2.842	2.864	1.286	6.376
Alcohol or smoking	34	2	5.9	18	52.9	14	41.2	0.007	2.417	0.553	10.573	6.374	1.417	28.668
Illicit Drugs	8	0	0.0	1	12.5	7	87.5		-	-	-	-	-	-
Suffered Violence	57	6	10.5	31	54.4	20	35.1	0.015	1.381	0.562	3.396	3.077	1.191	7.949
Violence Committed	14	1	7.1	7	50.0	6	42.9		-	-	-	-	-	-
Self-harm	34	0	0.0	12	35.3	22	64.7	0.000	-	-	-	-	-	-
Social Distancing affecting Emotional Health								0.002						
Nothing	104	21	20.2	72	69.2	11	10.6		1.000	-	-	1.000	-	-
A little	289	45	15.6	192	66.4	52	18.0		1.244	0.694	2.233	2.206	0.961	5.067
Reasonable	188	27	14.4	121	64.4	40	21.3		1.307	0.689	2.480	2.828	1.176	6.803
Very/ Totally	105	21	20.0	50	47.6	34	32.4		0.694	0.343	1.404	3.091	1.244	7.679
Self-perception of Emotional Health status								0.000						
Good / Excellent	401	78	19.5	287	71.6	36	9.0		1.000	-	-	1.000	-	-
Regular / Bad / Worse	285	36	12.6	148	51.9	101	35.4		1.117	0.718	1.738	6.079	3.513	10.519

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*, [4]*Upper Limit*

Psychic factors that significantly influenced suicidal ideation at a 5% significance level were: unemployment and self-perception of emotional health. Unemployed presented a higher risk (OR = 2.53; CI 1.38 – 4.62) of severe suicidal ideation than the employed individuals; regular/bad/worse self-perception of emotional health presented a higher risk (OR = 4.83; CI 2.74 – 8.51) of severe suicidal ideation when comparing to the individuals who perceived their own emotional health as good/excellent (TABLE 4).

Table 4 – Multinomial regression of psychic status associated with levels of suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Psychic status	Related to Suicidal Ideation Level					
	Mild / Moderate			Severe		
	OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		LL[3]	UL[4]		LL[3]	UL[4]
Unemployment	1.456	0.859	2.468	2.533	1.389	4.620
Self-perception of Emotional Health						
Good / Excellent	1.000	-	-	1.000	-	-
Regular / Bad / Worse	1.028	0.651	1.622	4.833	2.743	8.517

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*, [4]*Upper Limit*

PSYCHIC CARE

When comparing severe suicidal ideation before and during the pandemic, bivariate analysis with approximately 30% significance related to psychic care showed that psychiatric follow-up decreased from 32.0% to 31.4%; the diagnosis of psychiatric disorders increased from 35.5% to 42.1%; the use of psychiatric drugs in general increased for psychiatric disorders, from 27.7% to 30.5%, and for non-psychiatric diseases, from 27.6% to 33.3%. Severe suicidal ideation was reported by 25.4% of individuals attending psychotherapy before the pandemic and 24.7% during the pandemic, while 21.8% were treated with Integrative and Complementary Practices (ICPs) before the pandemic and 19.5% during the pandemic (TABLE 5).

Multivariate analysis with a statistical significance level of < 30% for psychiatric care before the pandemic indicated that severe suicidal ideation was higher among individuals with psychiatric follow-up ($p < 0.001$; OR = 3.05; CI 1.69 - 5.52), those diagnosed with psychiatric disorders ($p < 0.001$; OR = 3.67; CI 1.92 - 7.01), users of psychiatric drugs for psychiatric disorders (at least once) ($p < 0.001$; OR = 2.88; CI 1.67 - 4.97), and users of psychiatric drugs for non-psychiatric diseases ($p = 0.026$; OR = 1.82; CI 1.18 - 2.80). During the pandemic, severe suicidal ideation was higher among individuals with psychiatric follow-up ($p = 0.002$; OR = 2.98; CI 1.49 - 5.93), those diagnosed with psychiatric disorders ($p < 0.001$; OR = 7.42; CI 3.01 - 18.27), users of

psychiatric drugs for psychiatric disorders (p = 0.002; OR = 2.31; CI 1.28 - 4.17), and users of psychiatric drugs for non-psychiatric diseases (p = 0.003; OR = 2.59; CI 1.26 - 5.30). Severe suicidal ideation before the pandemic was higher among individuals undergoing psychotherapy (p < 0.001; OR = 3.10; CI 1.82 - 5.26) and those receiving Integrative and Complementary Practices (ICPs) (p = 0.023; OR = 1.93; CI 1.13 - 3.31), while during the pandemic, it was higher among individuals with active psychotherapy follow-up (p = 0.036; OR = 2.21; CI 1.19 - 4.07) compared to those without follow-up (TABLE 5).

Table 5 – Bivariate and multivariate analysis of factors associated with psychic care before and during COVID-19 connected to suicidal ideation levels of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Psychic Care factors before and during COVID-19	N	Levels of Suicidal Ideation						P Value	Related to Suicidal Ideation Level					
		Mild		Moderte		Severe			Mild / Moderate			Severe		
		n	%	n	%	n	%		OR[1]	95% CI[2] LL[3]	UL[4]	OR[1]	95% CI[2] LL[3]	UL[4]
Psychiatric Care before COVID-19														
Psychiatric follow-up	172	20	11.8	95	56.2	54	32.0	0.000	1.313	0.770	2.239	3.058	1.692	5.527
Psychiatric Disorder	141	15	10.9	74	53.6	49	35.5	0.000	1.353	0.744	2.460	3.675	1.927	7.010
Psychiatric drugs for psychiatric disorder								0.000						
Never	427	80	18.7	286	67.0	61	14.3		1.000	-	-	1.000	-	-
Yes, at least once	238	30	12.6	142	59.7	66	27.7		1.324	0.831	2.109	2.885	1.673	4.977
Psychiatric drugs for non-psychiatric disease	154	25	16.4	85	55.9	42	27.6	0.026	1.157	0.699	1.913	1.820	1.180	2.809
Psychiatric Care during COVID-19														
Psychiatric follow-up	121	13	10.7	70	57.9	38	31.4	0.002	1.490	0.792	2.802	2.982	1.499	5.934
Psychiatric disorder	95	6	6.3	49	51.6	40	42.1	0.000	2.285	0.953	5.477	7.423	3.015	18.272
Psychiatric drugs for psychiatric disorder	154	21	13.6	86	55.8	47	30.5	0.002	1.091	0.643	1.852	2.313	1.281	4.174
Psychiatric drugs for non-psychiatric disease	98	12	12.5	52	54.2	32	33.3	0.003	1.154	0.594	2.243	2.590	1.264	5.307
Non-medical assistance before COVID-19														
Psychotherapy	304	32	10.8	188	63.7	75	25.4	0.000	1.950	1.243	3.060	3.100	1.826	5.262
Integrative and Complementary Practices (ICPs)	264	30	11.7	171	66.5	56	21.8	0.023	1.814	1.146	2.870	1.936	1.130	3.316
Non-medical assistance during COVID-19														
Pychotherapy	174	19	11.2	109	64.1	42	24.7	0.036	1.672	0.976	2.864	2.211	1.199	4.076
Integrative and Complementary Practices (ICPs)	162	21	13.2	107	67.3	31	19.5	0.387	1.445	0.858	2.433	1.295	0.697	2.408

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*,[4]*Upper Limit*

Factors of psychic care that greatly influenced (p < 0,05) suicidal ideation were: the use of psychiatric drugs for psychiatric disorders at least once before the pandemic, which presented a higher risk (OR = 2.25; CI 1.27 – 3.97) of severe suicidal ideation when compared to individuals who had never used this kind of medication; and psychotherapy follow-up before the pandemic, with a discreet higher risk (OR = 2.08; CI 1.28 – 3.36) on mild/moderate suicidal ideation and higher risk (OR=2.50; CI 1.41-4.42) on severe suicidal ideation if compared to people without follow-up (TABLE 6).

Table 6 – Multinomial regression of psychic care associated with levels of suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Psychic care	Related to Suicidal Ideation Level					
	Mild / Moderate			Severe		
	OR[1]	95% CI[2] LL[3]	UL[4]	OR[1]	95% CI[2] LL[3]	UL[4]
Psychic Care before and during COVID-19						
Psychiatric drugs for psychiatric disorder (before COVID-19)						
Never	1.000	-	-	1.000	-	-
Yes, at least once	1.089	0.671	1.767	2.253	1.277	3.975
Psychotherapy follow-up (before COVID-19)	2.081	1.287	3.365	2.503	1.415	4.428

Source: Author(s) (2022) [1]*Odds Ratio*, [2]*Confidence Interval*, [3]*Lower Limit*, [4]*Upper Limit*

SPIRITUAL BELIEF

Bivariate analysis with a significance level up to 30% has shown a higher prevalence of moderate suicidal ideation among individuals who classified themselves as spiritists (67.9%), those who reported a reasonable/high/very high preference for spiritism (66.8%), those with regular/high/very high levels of spiritual engagement (LSE) pre-pandemic (74.1%) and during the pandemic (73.4%), and those working in spiritist houses, including Public Lectures (62.3%), Spiritual Care (66.3%), and Charity/Volunteering (82.3%). On the other hand, the higher prevalence of severe suicidal ideation was observed among agnostics (46.2%), individuals with very low/low LSE pre-pandemic (21.2%) and during the pandemic (21.3%), and those who sought spiritism due to mental pain (26.1%) (TABLE 7).

Multivariate analysis with a significance level of up to 30% has shown that self-classification as Catholic is a protective factor against both mild/moderate suicidal ideation (p = 0.001; OR = 0.41; CI 0.26 - 0.65) and severe suicidal ideation (p = 0.001; OR = 0.48; CI 0.27 - 0.83). In contrast, individuals who self-classified as Spiritists presented a higher risk of mild/moderate suicidal ideation (p < 0.001; OR = 3.19; CI 2.00 - 5.08). A strong preference for Spiritism, rated as reasonable/very/totally, was associated with a higher risk of mild/moderate suicidal ideation (p < 0.001; OR = 3.23; CI 1.93 - 5.41). Regular/high/very high LSE before the pandemic was revealed as a protective factor, reducing the risk of severe ideation (p = 0.015; OR = 0.42; CI 0.19 - 0.96). Seeking Spiritism due to mental pain was associated with a higher risk of severe suicidal ideation (p = 0.034; OR = 2.11; CI 1.11 - 3.99). Engagement in Public Lectures reduced the risk of both mild/moderate suicidal ideation (p = 0.019; OR = 0.37; CI 0.18 - 0.75) and severe ideation (p = 0.019; OR = 0.33; CI 0.12 - 0.93). Similarly, working in Spiritual Care reduced the risk of both mild/moderate suicidal ideation (p = 0.039; OR = 0.44; CI 0.22 - 0.83) and severe ideation (p = 0.039; OR = 0.37; CI 0.15 - 0.93) (TABLE 7).

Table 7 – Bivariate and multivariate analysis of factors related to spiritual belief associated to suicidal ideation levels of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Spiritual Belief factors	Levels of Suicidal Ideation								Related to Suicidal Ideation Level					
									Mild / Moderate			Severe		
	N	Mild		Moderate		Severe		p Value	OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		n	%	n	%	n	%			LI	LS		LI	LS
Self-classified Religiousness														
Without religion	26	5	19.2	9	34.6	12	46.2	0.002	-	-	-	-	-	-
Agnostic	10	2	20.0	2	20.0	6	60.0	-	-	-	-	-	-	-
Evangelist	29	7	24.1	13	44.8	9	31.0	0.079	-	-	-	-	-	-
Africa-Derived Religion	38	5	13.2	24	63.2	9	23.7	0.761	-	-	-	-	-	-
Catholic	157	42	26.8	85	54.1	30	19.1	0.001	0.416	0.266	0.652	0.481	0.276	0.838
Spiritist	545	73	13.4	370	67.9	102	18.7	0.000	3.197	2.009	5.087	1.637	0.952	2.814
Preference for Spiritism								0.000						
None / A little	102	31	30.4	45	44.1	26	25.5		1.000	-	-	1.000	-	-
Reasonable / Very / Totally	584	83	14.2	390	66.8	111	19.0		3.237	1.934	5.418	1.595	0.881	2.887
Level of Spiritist Engagement before COVID-19								0.015						
Very low / Low	523	78	14.9	334	63.9	111	21.2		1.000	-	-	1.000	-	-
Regular / High / Very high	112	18	16.1	83	74.1	11	9.8		1.077	0.611	1.897	0.429	0.192	0.960
Level of Spiritist Engagement during COVID-19								0.057						
Very low / Low	607	101	16.6	377	62.1	129	21.3		1.000	-	-	1.000	-	-
Regular / High / Very high	79	13	16.5	58	73.4	8	10.1		1.195	0.630	2.267	0.482	0.192	1.207
Motivation to search for the spiritist doctrine	635	96		417		122								
Origin / familial influence	102	16	15.7	63	61.8	23	22.5	0.570	0.890	0.488	1.621	1.162	0.575	2.346
Friends/socio-familial influence	141	20	14.2	91	64.5	30	21.3	0.770	1.061	0.615	1.829	1.239	0.652	2.355
Curiosity	203	34	16.7	131	64.5	38	18.7	0.747	0.835	0.524	1.332	0.506	0.825	0.468
Mental pain	153	18	11.8	95	62.1	40	26.1	0.034	1.278	0.729	2.241	2.114	1.118	3.996
Self-reported mediumship	126	15	11.9	84	66.7	27	21.4	0.489	1.362	0.747	2.484	1.535	0.764	3.082
Scientific/philosophical interest	228	31	13.6	163	71.5	34	14.9	0.056	1.346	0.840	2.155	0.810	0.452	1.451
Necessity/ familial pain	25	7	28.0	15	60.0	3	12.0	0.173	0.474	0.188	1.198	0.321	0.081	1.274
Worker/facilitator in the spiritist centre	288	42	14.6	205	71.2	41	14.2	0.046	1.255	0.733	2.149	0.676	0.352	1.298
Public Lecture	61	16	26.2	38	62.3	7	11.5	0.019	0.370	0.181	0.756	0.335	0.120	0.932
Spiritual Care	101	22	21.8	67	66.3	12	11.9	0.039	0.441	0.225	0.864	0.376	0.152	0.930
Systematic study of Spiritist doctrine	122	19	15.6	86	70.5	17	13.9	0.929	0.875	0.449	1.706	0.857	0.360	2.045
Mediumship studies	94	14	14.9	67	71.3	13	13.8	1.000	0.971	0.480	1.965	0.929	0.370	2.327
Fraternal service	62	10	16.1	42	67.7	10	16.1	0.767	0.825	0.375	1.811	1.032	0.377	2.823
Fluidotherapy (magnetised/fluidic water)	66	8	12.1	51	77.3	7	10.6	0.489	1.407	0.612	3.237	0.875	0.285	2.682
Mediumship meeting	142	21	14.8	103	72.5	18	12.7	0.791	1.010	0.520	1.961	0.783	0.330	1.857
Charity/ volunteering	62	6	9.7	51	82.3	5	8.1	0.096	1.987	0.792	4.988	0.833	0.233	2.978
Administrative role	78	12	15.4	57	73.1	9	11.5	0.761	0.963	0.461	2.010	0.703	0.259	1.907

Source: Authors (2022) [1]*Odds Ratio* [2]*Confidence Interval* [3]*Lower Limit,* [4]*Upper Limit*

Spiritual belief factors with 5% significance have demonstrated that the meaningfully influenced suicidal ideation were spiritist self-classification and pre-pandemic LSE. The former presented a higher risk of mild/moderate suicidal ideation (OR = 2.52; CI 1.42 – 4.47); whereas regular/high/very high LSE before the pandemic was a protective factor, with lower risk (OR = 0.37; CI 0.16 – 0.85) of severe suicide ideation (TABLE 8).

Table 8 – Multinomial regression of spiritual belief associated with levels of suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Spiritual belief	Related to Suicidal Ideation Level					
	Mild / Moderate			Severe		
	OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		LL[3]	UL[4]		LL[3]	UL[4]
Self-classified Religiousness – Spiritism	2.431	1.349	4.380	2.133	1.005	4.528
Level of Spiritist Engagement before COVID-19						
Very low / Low	1.000	-	-	1.000	-	-
Regular /High / Very high	0.908	0.502	1.645	0.382	0.161	0.907

Source: Author(s) (2022) [1]*Odds Ratio,* [2]*Confidence Interval,* [3]*Lower Limit,* [4]*Upper Limit*

MULTINOMIAL REGRESSION: ALL THE FACTORS

Multinomial regression analysis of all significantly factors associated to suicidal ideation indicated that to be single presented a higher risk of mild/moderate suicidal ideation (OR = 2.32; CI 1.19 – 4.52) and severe (OR = 4.05; CI 1.89 – 8.69). Unemployment has displayed a higher risk (OR = 2.93; CI 1.45 – 5.92) of severe suicidal ideation. Pre-COVID-19 follow-up was associated with mild/moderate suicidal ideation (OR = 1.81; CI 1.10 – 2.98) and showed a higher risk (OR = 2.57; CI 1.40 – 4.71) of severe ideation. The same happened to the spiritist self-classification that showed higher risk (OR = 2.43; CI 1.34 – 4.38) for mild/moderate suicidal ideation and higher risk (OR = 2.13; CI 1.00 – 4.52) for severe ideation. The only protection factor of high significance was pre-COVID-19 regular/high/very high LSE with lower risk (OR=0.38; CI 0.16-0.90) for severe ideation (TABLE 9).

Table 9 – Multinomial regression of all significantly factors associated to suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.

Suicidal Ideation Factors	Related to Suicidal Ideation Level					
	Mild / Moderate			Severe		
	OR[1]	95% CI[2]		OR[1]	95% CI[2]	
		LL[3]	UL[4]		LL[3]	UL[4]
Civil Status						
Married or in a stable relationship	1.000	-	-	1.000	-	-
Single	2.327	1.197	4.523	4.058	1.894	8.692
Widower/Widow/ Divorced/ Separated	1.923	0.961	3.847	1.787	0.757	4.216
Unemployment	1.750	0.944	3.245	2.937	1.456	5.926
Self-perception of Emotional Health status						
Good / Excellent	1.000	-	-	1.000	-	-
Regular / Bad / Worse	1.031	0.614	1.730	4.844	2.559	9.170
Psychotherapy follow-up before COVID-19	1.812	1.102	2.980	2.570	1.402	4.712
Self-classified Religiousness – Spiritism	2.431	1.349	4.380	2.133	1.005	4.528
Level of Spiritist Engagement Before COVID-19						
Very low / Low	1.000	-	-	1.000	-	-
Regular / High / Very high	0.908	0.502	1.645	0.382	0.161	0.907

Source: Author(s) (2022) [1]*Odds Ratio,* [2]*Confidence Interval,* [3]*Lower Limit,* [4]*Upper Limit*

Discussion

SOCIODEMOGRAPHIC FACTORS

Sociodemographic data indicated that the absence of a steady relationship was associated with suicidal ideation, which was higher among single individuals compared to those who had lost their partners. Single individuals had twice the chance of experiencing mild to moderate suicidal ideation, and this risk doubled for severe suicidal ideation. Individuals with low education had a higher probability of suicidal ideation. Being the main income provider had a protective effect against severe suicidal ideation, while individuals with lower household income were at a higher risk. However, the multinomial analysis of sociodemographic factors revealed that only the absence of a steady relationship was a risk factor, while being the main income provider was a protective factor.

Not being in a steady relationship and living alone have already been listed as relevant aspects for suicide, regardless of the culture[32]. In Brazil, this trend is corroborated by regional data, as in Pernambuco, where more than 400 women legally separated committed suicide between 2013 and 2017; and in Ceará, divorce is linked to suicide, as over the double of national data[33]. Low education has already been connected to suicide in Brazil, e.g., in Curitiba, where people with mental disorders and with education between 0 and 8 years (p = 0.016), or 9 and 12 (p = 0.013) were significantly associated to suicide[34]. Similarly, persons holding 4 to 7 years of education presented the highest prevalence of suicide in Goiás, from 2009 to 2014[1], as well as in Ceará, from 2015 to 2017[35]. In fact, more than half of Ceará's inhabitants have not completed the elementary or secondary school[7].

Indeed, poverty raises the risk of mental disorders worldwide[36]. In Brazil, the quintile of the population with the lowest income presented a 2 to 5 times higher risk of mental disorder, and who was born in a poor family or has impoverished after childhood have a higher risk to

try suicide[37]. In Ceará, low income was identified as one of the factors most connected to suicide[33], and more than half of this population has an income less than 1 minimum salary (up to R$ 1.046,00)[7], which makes visible the state's vulnerability. In parallel, to be the main household income provider, regardless of the value, has a lower risk for suicide due to parenthood[38] and also family relationships are a protective factor for suicide[39], which is in line with the current study.

PSYCHIC STATUS

During the pandemic, emotional health was impacted by unemployment, physical disease, use of alcohol and/or smoking, reasonable/very/totally self-perception of social distancing which affected mental health and the regular/bad/worse self-perception of emotional health triggered the chance to have severe suicidal ideation. Moreover, the psychic status associated to these factors has indicated that only unemployment and the self-perception of emotional health contributed to the chance of developing severe suicidal ideation.

Emotional pain and suicide were widely associated with physical disease, mainly in elderly[40]. The use of licit drugs and alcohol was directly related to the risk of injury, including the self-inflicted[43] and was also significantly connected to suicidal ideation (OR = 1.86), suicide attempt (OR = 3.13) and completed suicide (OR = 2.59)[44]) and has also gotten worse during COVID-19[45]; also, smoking habits worsened[46]. Social distancing, even before the pandemic, has already been a risk factor for mental diseases[47] and for suicide[32]. In COVID-19, social distancing, all alone, was associated with active and passive suicidal ideation[48], which represented a 'second pandemic' due to its impact over mental health[49]. Unemployment caused emotional pain, because it represents one of the strongest suicide predictors, independently of the culture[38]. In USA, the fear of losing a job was the second cause of mental disorder during the pandemic, and it was ranked immediately below the fear of dying by COVID-19[50]. In Ceará, unemployment represented a 2 times higher risk for suicide, when compared to the rest of the country[33]. The regular/bad/worse self-perception of emotional health was in line with the evidence that showed the significant risk of suicide attempts ($p < 0.001$) caused by this negative self-perception[34].

PSYCHIC CARE

Before the pandemic, having a psychiatric disorder with follow-up, the use of at least one psychiatric medication, the use of psychiatric medications for non-psychiatric diseases, and the use of Integrative and Complementary Practices (ICPs) were substantially associated with severe suicidal ideation. These factors continued to be relevant during the pandemic, with the addition of psychotherapy follow-up. The multinomial analysis showed that only the use of psychiatric drugs for psychiatric disorders and psychotherapy follow-up, both before the pandemic, had a higher chance of severe suicidal ideation.

Psychic care was frequent even before the pandemic. The multinomial analysis corroborated the strong association between severe suicidal ideation and the use of psychiatric drugs and psychotherapy before COVID-19. Consequently, it was evident that this population had a high level of severe psychic suffering, which corroborates spiritism as a religion of psychological quest[19]. During the pandemic, suicidal thoughts raised and the suicidal behaviour in the hospital emergence decreased[51], which characterised the worsening of general mental health and justified the maintenance of psychiatric and psychological follow-up.

Fortaleza, Ceará's capital has demonstrated a precarious public service on mental health, with a scarce attendance on basic care (23%), low medicine prescriptions (31%), and short supply (58%) of psychiatric drugs. These are worse numbers when compared to the other three big cities – Porto Alegre, São Paulo and Campinas[52]. Similarly, the structure, organization and access to mental health professionals decreased worldwide[53], and the patients with mental disorders before COVID-19 were neglected[54,55] and new medical treatments were reduced[56]. The sample showed a high level of assistance and psychiatric treatment in contrast to the lack of assistance of public health care, which might be perceived as the private access to care, enabled by the higher income participants had when compared to the part of Ceará's population (up to USD $189)[7].

The prescription of psychiatric drugs during the pandemic increased in Brazil[57], as well as the primary care[58], which is in contrast with Fortaleza's poor public health care. This drug prescription was nearly more than 7%, when compared to pre-COVID-19, with a growth of self-medication[59,60], which might help to explain the higher drug use associated to the low assistance on mental health in Ceará. Besides, the private affordance of psychiatric drugs, enabled by the higher income, might also justify this paradox between the numbers of the studies in relation to the state's general population.

Psychological follow-up was strongly related to severe suicidal ideation during the pandemic. This highlights the apparent benefits of psychological treatment on severe psychic pain, as in self-mutilation and suicide, despite the hard analysis of this approach due to methodological issues[61]. During the pandemic, the help of psychological care could be seen through the emergency interventions[62], which helped to deal with the fear of death and with the mourning[63]. ICPs also helped on behaviour and lifestyle through meditation[64] and on the improvement of mood with Bioenergetic therapies, like Reiki[65, 66].

SPIRITUAL BELIEF

Self-classified spiritism and the preference for the spiritist doctrine presented a higher chance of mild and moderate suicidal ideation, and the Catholic self-classification was protective of severe suicidal ideation. The search for the spiritist doctrine due to mental pain has presented a higher possibility of severe suicidal ideation. On the other hand, to work in Public Lectures or on Spiritual Care has also protected any level of suicidal ideation. Before COVID-19, a higher LSE and catholic self-classification protected severe suicidal ideation. The multinomial analysis demonstrated that self-classifying oneself as a spiritist has presented a higher risk for mild and moderate depression, but a high LSE before COVID-19 protected against severe suicidal ideation.

Participants' religious self-classification was predominantly christian and the fact of one's declaring as spiritist did not interfere with the identification with other religions, since according to the doctrine, spiritism is not a religion in the traditional sense, rather is a scientific-philosophical doctrine[16]. Brazilian population comprises more than 90% Christians, and of these, more than 60% reported to be catholics and 2% spiritists[7]. The high prevalence might be explained due to the predominance of Catholics in the general population. On the other hand, spiritism was highlighted due to bias, since the participants had some LSE. Nevertheless, the association of spiritism with mild to moderate suicidal ideation might be understood through the disease profile of these persons, as spiritism attracts people with psychological quest[19].

The search for spiritism due to the scientific/philosophical interest was not a risk factor for severe suicidal ideation and might be understood because the persons were healthy, which is in direct opposition with the search due to mental pain as it presented a higher risk for severe suicidal ideation. Depression, a mental disorder quite related to suicide , was the most prevalent disease among goers of spiritism houses in São Paulo, with more than 45% of the total[67]. Furthermore, the active practice of any religion or spiritual practice, regardless of the religion, helps a good mental health[68,69], which corroborates that, to work on the Public Lectures and on the Spiritual Care of spiritism houses was a protective factor against suicide.

MULTINOMIAL REGRESSION: ALL FACTORS

Multinomial analysis of all significant factors demonstrated that high LSE before COVID-19 served as a protective factor against severe suicidal ideation, despite self-identified spiritists showing an increased risk of mild/moderate suicidal ideation. Consequently, to be a spiritist represented a milder suicide ideation, as spiritism attracts people with mental suffering, but having a higher LSE protected against severe suicidal ideation. Some research has demonstrated the potential beneficial effects of spiritism on the psyche, such as the improvement and remission of depression[70,71], a reduction of emotional exhaustion, the improvement of negative attachments[72] and the relief of pain associated with mourning and to the fear of death[73,74]. About suicide, it is known that the spiritist literature has been playing an important role to spread information[75], and has helped on the prevention through emotional strengthening[76].

Multinomial analysis showed that mild/moderate suicidal ideation was higher among single individuals with psychological follow-up before COVID-19 and that reported to be spiritists. Moreover, severe suicidal ideation was linked to be single, unemployed, with a worse perception of self-mental health, with psychological follow-up before the pandemic and self-classified as a spiritist. From this data, pre-COVID-19 psychotherapy follow-up, a worse self-perception of mental health and self-classification with spiritism associated with a higher risk of suicidal ideation might present uncertain connections, due to this population's higher profile of psychic disease attracted by spiritism. Despite this, the higher the LSE before the pandemic, the lower the chance of having severe suicidal ideation during the pandemic. Therefore, even with a higher psychic disease of the population engaged with spiritism, a higher LSE might protect against severe suicidal ideation.

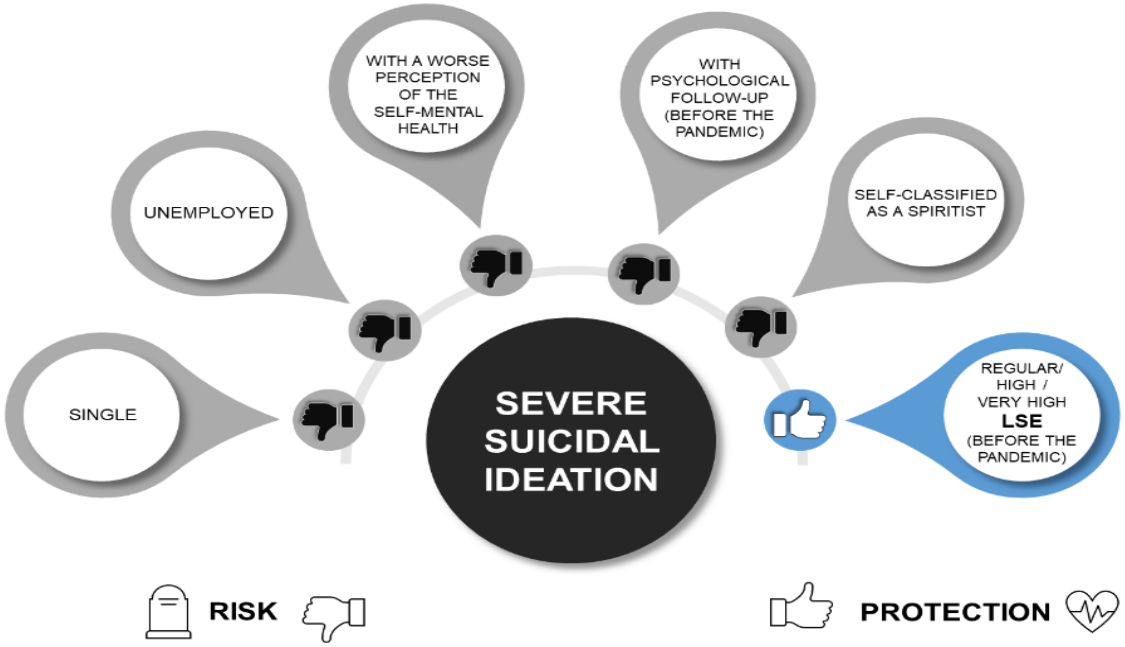
LIMITATIONS AND FUTURE RESEARCH

Although the findings, causal relations among variables were not possible to be established because this investigation is cross-sectional. Longitudinal investigations are necessary to establish the cause and impact of spiritist engagement on the improvement or worsening of mental health, as well as quality research to yield knowledge on the subjectivity of the psychological effect of spiritism over the mind.

Conclusion

Individuals with spiritist engagement at risk of having mild/moderate suicide ideation were single, had been attending psychotherapy before COVID-19, and self-classified as spiritists. Severe suicidal ideation was connected to the above-mentioned factors and to unemployment and the regular/bad/worse self-perception of emotional health. The meaningful association of severe suicidal ideation with psychotherapy follow-up and with the worse self-perception of emotional health might have shown a higher level of mental sickness in individuals with some spiritist engagement when compared to the general population. The relation of suicidal ideation at any level with people engaged with spiritism has reinforced the perspective that spiritism corresponds to a religion of psychological quest that attracts people in psychic pain and because of this gathers people with this profile. Moreover, a higher spiritist engagement before the pandemic has proven to be a relevant protective factor to severe suicidal ideation during the pandemic (FIGURE 1). Although spiritism attracts people mentally ill, a higher engagement with spiritism might help to protect against suicide. Further research is necessary to improve the understanding of this relationship.

Figure 1: Summary of the results of the multinomial regression of all significantly factors associated to severe suicidal ideation of people with spiritist engagement in the state of Ceará. Fortaleza/CE, 2022.



Ethics approval and consent to participate

The research met the Law 466/2012 of the National Council of Health (NCH), related to Research Ethics involving Human Beings, with approval of the Ethics Committee of the Federal University of Ceará (n. 2.237.838).

Human and animal rights

No animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

Consent for publication

Informed consent was obtained from all participants.

Availability of data and materials

The authors confirm that the data supporting the findings of this study are available within the manuscript.

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Conflict of interest

The authors declare no conflict of interest, financial or otherwise.

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