**SMAD**

**Original Article**

# Cognitive analysis of the social representations of suicide among hospital emergency professionals*

Saulo Sacramento Meira[1,2]
　https://orcid.org/0000-0003-1087-2083
Alba Benemérita Alves Vilela[3]
　https://orcid.org/0000-0002-1187-0437
Claudia Ribeiro Santos Lopes[4]
　https://orcid.org/0000-0001-9735-4603
Jeorgia Pereira Alves[3]
　https://orcid.org/0000-0003-4278-9583
Hernane Borges de Barros Pereira[5,6]
　https://orcid.org/0000-0001-7476-9267

Objective: to analyze the constitutive contents of the social representations of suicide by health professionals in the emergency department through an analysis of the cognitive network. Method: study based on the Theory of Social Representations carried out with 104 emergency room professionals from a hospital in Bahia, Brazil. A free word association task was conducted using the term suicide enabling the creation of a semantic network that was analyzed using the Cognitive Network Analysis model. Results: this network was composed of 42 vertices (i.e., words evoked by the professionals) and 273 edges (i.e., connections between words), with a mean degree of 13. The representational structure was formed by four dimensions (biological, affective-psychological, social, and religious) that explained the interface between the primary (i.e., central core) terms "despair," "depression," "disease," "sadness," "death," "absence of God," and "family fragility" and the secondary (i.e., periphery) terms "loneliness," "lack of love," "weakness," "emotional distress," "frustration," "conflict," "solution," "mistake," "fear," "non-acceptance," "anxiety," "lack of control," and "kill." Conclusion: despite the presence of reductionist aspects, the representational structure created by the healthcare professionals of the investigated hospital conveyed the meaning and image of suicide across its multidimensional aspects, favoring changes in individual and collective practices to improve the understanding of suicide.

Descriptors: Suicide; Emergency; Hospital Emergency Service; Death; Representations; AnCo- REDES.

# Análise cognitiva das representações sociais de profissionais da emergência hospitalar sobre suicídio

Objetivo: analisar os conteúdos constitutivos das representações sociais do suicídio dos profissionais de saúde do setor de pronto atendimento por meio de uma análise da rede cognitiva. Método: estudo baseado na Teoria das Representações Sociais realizado com 104 profissionais de pronto-socorro de um hospital na Bahia, Brasil. A técnica de associação livre de palavras foi realizada com o termo *suicídio*, gerando uma rede semântica analisada pelo modelo de redes cognitivas. Resultados: a rede foi composta por 42 vértices (palavras evocadas pelos profissionais) e 273 arestas (conexões entre palavras), com um grau médio de 13. A estrutura representacional foi formada por quatro dimensões (*biológica, afetivo-psicológica , social e religiosa*) que explicavam a interface entre os termos primários (ie, núcleo central) de "desespero", "depressão", "doença", "tristeza", "morte", "ausência de Deus" e "fragilidade familiar "E os termos secundários (ie, periferia)" solidão "," falta de amor "," fraqueza "," sofrimento emocional "," frustração "," conflito "," solução "," erro "," medo "," não aceitação "," ansiedade "," falta de controle "e" morte". Conclusão: apesar da presença de aspectos reducionistas, a estrutura representacional criada pelos profissionais de saúde do hospital investigado transmitiu o significado e a imagem do suicídio em suas multidimensões, favorecendo mudanças nas práticas para melhorar a compreensão do suicídio.

Descritores: Suicídio; Emergência; Serviço de Emergência Hospitalar; Morte; Representações; AnCo-REDES.

# Análisis cognitivo de las representaciones sociales de los profesionales de emergencias hospalarias sobre el suicidio

Objetivo: analizar los contenidos constitutivos de las representaciones sociales del suicidio por parte de los profesionales de la salud en el servicio de urgencias a través de un análisis de la red cognitiva. Método: estudio basado en la Teoría de las representaciones sociales realizado con 104 profesionales de la sala de emergencias de un hospital en Bahía, Brasil. La técnica de asociación de palabras libres se realizó con el término suicidio, generando una red semántica analizada por el modelo de red cognitiva. Resultados: la red estaba compuesta por 42 vértices (palabras evocadas por profesionales) y 273 aristas (conexiones entre palabras), con una calificación promedio de 13. La estructura de representación estaba formada por (biológica, afectivo-psicológica, social y religiosa) eso explicaba la interfaz entre los términos principales (es decir, núcleo) de "desesperación", "depresión", "enfermedad", "tristeza", "muerte", "ausencia de Dios" y "fragilidad familiar" Y los términos secundarios ( es decir, periferia) "soledad", "falta de amor", "debilidad", "sufrimiento emocional", "frustración", "conflicto", "solución", "error", "miedo", "no aceptación", "ansiedad" "," Falta de control "y" muerte ". Conclusión: a pesar de la presencia de aspectos reduccionistas, la estructura de representación creada por los profesionales de la salud del hospital investigado.

Descriptores: Suicidio; Emergencia; Servicio de Emergencia del Hospital; Muerte; Representaciones; AnCo-REDES.

## Introduction

Considered to be either honorable or immoral, an individual act or a social fact, suicide has been present throughout the history of humanity. Nevertheless, discussions about suicide remain dynamic and comprehensive within all societies. As with other forms of death, people do not like to talk about suicide either because of its controversial aspects or the immorality it has acquired over time across societies and institutions.

Addressing this topic is challenging, and its relevance has been gaining media and scientific attention through bulletins and reports highlighting worrisome estimates, including the World Health Organization's (WHO's) report "Preventing Suicide: A Global Imperative" [1], which found that the incidence of suicide is that it occurs every 40 seconds across the globe, corresponding to more than 800 thousand deaths per year. Moreover, it is estimated that for every person who commits suicide, at least 20 others attempt suicide.

A recent survey from the WHO[1] reported that suicides account for 1.4% of all deaths worldwide, making it the 15th major cause of mortality among the general population in 2012. Moreover, the prevalence was higher among men than women in this longitudinal series. Furthermore, it is the fourth leading cause of death among people aged 15 to 29 years, although the prevalence is highest among the elderly population.

The growing global trend in suicide has intrigued different social, political, and economic groups, and the subject remains controversial even among health professionals responsible for the prevention of suicide and the response to and care of individuals with suicidal behavior.

Health services are responsible for responding to cases of suicide. In this context, hospital emergency services stand out because they handle most cases of failed suicide attempts; therefore, the work of health professionals who care for suicidal patients constitutes a privileged space[2].

Despite these services, suicidal behaviors are not always adequately addressed by the hospital staff either because of the intense dynamics of emergency services or the lack of training and difficulty associated with treating suicidal patients. These patients are usually considered as part of a group with stereotyped behaviors rather than as individual patients. For this reason, health professionals, such as nurses, doctors, psychologists and social service professionals, tend to have stereotyped behaviors, characterized by hostility and rejection[3-4].

The literature on this problem remains scarce. However, the daily routine in urgent and emergency care demonstrates the need for adequate care, patient management, and educational interventions on suicide. The Social Representation Theory expresses a kind of knowledge produced socially in everyday practices and can contribute to the investigation of the phenomenon of suicide in the hospital context, through the understanding and explanation of the phenomenon of suicide; in defining the identity of health professionals, as well as safeguarding their specificity and to justify a posteriori, the positions taken for a network in the perspective of comprehensive health care.

In this context, the following questions arise: What are the social representations of suicide created by emergency care professionals? What symbolic elements do hospital staff consider as involved in the care of these patients? The author of Social Representation Theory (SRT)[5], has shown that a social representation is an organized structure and not simply a small reflection of reality. Moreover, this action-directed approach guides social relationships and actions, as well as intergroup behaviors and practices.

Therefore, the objective of this study was to determine the structure of social representations of suicide created by emergency care professionals through a cognitive network analysis.

## Method

This SRT-based, exploratory, qualitative study was conducted at the emergency service of a public hospital located in Jequié, Bahia, Brazil. The participants were selected via non-probabilistic sampling according to the schedule of emergency care professionals working at Hospital. The inclusion criterion was employment, as an emergency care unit professional of different categories including nurses, doctors, psychologists, nursing technicians and social workers, regardless of employment status (temporary or permanent). Employees who were not present due to vacation or maternity leave, as well as those who could not be found after three recruitment attempts on alternating days of the hospital schedule, were excluded from participation. All participating professionals stated in writing or providing free.

The data collection procedure were conducted during the first semester of 2017 at the same hospital after the participants signed an informed consent document and conducted by an researcher to ensure homogeneity in data collection. The mean data collection time per participant was approximately 30 minutes.

The chosen technique was free word association, and the inducing term was "suicide." The maximum number of evocations per participant was five. The spoken words were organized in a *Word* document,

which constituted the *corpus* of analysis. The words or terms were recorded in the order they were mentioned. The task was explained to the participants before collecting data. Afterwards, the participants were asked, whether they had understood the operation of the technique.

The model used for the cognitive analysis was AnCo-REDES[6], and the data was evaluated using Gephi, version 0.8.2 beta.

The use of semantic networks enables, researchers, to identify patterns, representations, and models in complex systems, including information flow and knowledge about a particular theme within narratives. The objective of this study was to identify the meanings of suicide created by emergency care workers. The AnCo-REDES model is based on Graph Theory, where the vertices represented words, and the edges denoted the connections between words, thereby creating a semantic network. This model constitutes a knowledge representation system defined as a set of interconnected words or expressions related to the meaning of the representations of a specific group[6].

The chosen network analysis parameters were based on the Network Theory and included the number of vertices ($n = |V|$), the number of edges ($m = |E|$), the mean degree ($<k>$), and two parameters used for analyzing social networks: Degree Centrality (DC) and Eigenvector Centrality (EC). The mean degree of the network ($<k>$) was used as a cut-off point for the analysis, whereas DC corresponded to the number of connections between a vertex (word) and other words within the network, indicating the local centrality of the vertex. The AnCo-REDES model enabled, researchers, to identify elements for a cognitive analysis of the structure of social representations (i.e., the central core, first periphery, contrast elements, and second periphery) by establishing metrics based on the following vertex measures[7]: central core (DC > k and EC ≥ 0.75); first periphery (DC > k and 0.60 ≤ EC < 0.75); contrast element (DC > k and 0.45 ≤ EC < 0.60); and second periphery (DC < k or DC > k with EC < 0.45).

This study meets the requirements of the Declaration of the World Medical Association of Helsinki and was approved by the Research Ethics Committee of the State University of Southwest Bahia - (CEP/UESB) through Opinion Number: 1.269,923 and CAAE: 05900012.2.0000.0055.

## Results and discussion

The total of 104 professionals participated in the study and their sociodemographic, religious, and hospital

care data are described in table 1. It is revealed that, considering the 12 losses to follow up, the study sample was heterogeneous regarding professional training because the nature of hospital work created different perspectives about the object of study. Previous care provided to suicidal patients, and adherence to religious practices, are relevant variables, as well as the predominance of females, and might affect the representation of suicide.

Table 1 - The sociodemographic characteristics of hospital emergency professionals regarding sex, profession, care provided to suicidal patients, and religion. Jequié, Ba, Brazil, 2017 (n = 104)

| Variable | N | % |
|---|---|---|
| **Sex** | | |
| Female | 72 | 69.2 |
| Male | 32 | 30.8 |
| **Profession** | | |
| Nurse | 41 | 39.4 |
| Physician | 29 | 27.9 |
| Nursing technician | 26 | 25.0 |
| Psychologist | 2 | 1.9 |
| Social worker | 5 | 4.8 |
| Occupational therapist | 1 | 1.0 |
| **Care provided to suicidal patients** | | |
| Yes | 91 | 87.5 |
| No | 13 | 12.5 |
| **Adherence to religious practice** | | |
| Yes | 90 | 86.5 |
| No | 14 | 13.5 |
| **Religion** | | |
| Catholic | 42 | 46.7 |
| Evangelical | 28 | 31.1 |
| Spiritist | 12 | 13.3 |
| Agnostic | 8 | 8.9 |

The semantic network presented in Figure 1 stands out because it has a single component configuration, i.e., a connection between all of the vertices of the network. It is added, considering the 42 vertices (i.e., the words evoked by each of the 104 professionals) and the 273 edges (i.e., the connections between words), that the mean degree of the network was 13. This result indicates that the vertices with *DC < 13 were elements of the second periphery in the social representation structure.

The words evoked by emergency care professionals were grouped according to the structural approach of the SRT and are shown in Table 2.

The representational structure was organized by biological, affective-psychological, social, and religious dimensions (Figure 2). The biological dimension included the terms "disease," "depression," and "death" in the central core and "anxiety," "solution," and "lack of control" in the contrast zone. The affective-psychological dimension was composed of the terms "hopelessness," "depression," "sadness," and "low self-esteem" in the central core and "lack of love," "emotional distress," "frustration," "conflict," "fear," and "nonacceptance" in the first periphery. The social dimension included the terms "family fragility," "loneliness," and "weakness" in the first periphery and "mistake" and "kill" in the zone of contrast. The religious dimension included the term "absence of God".
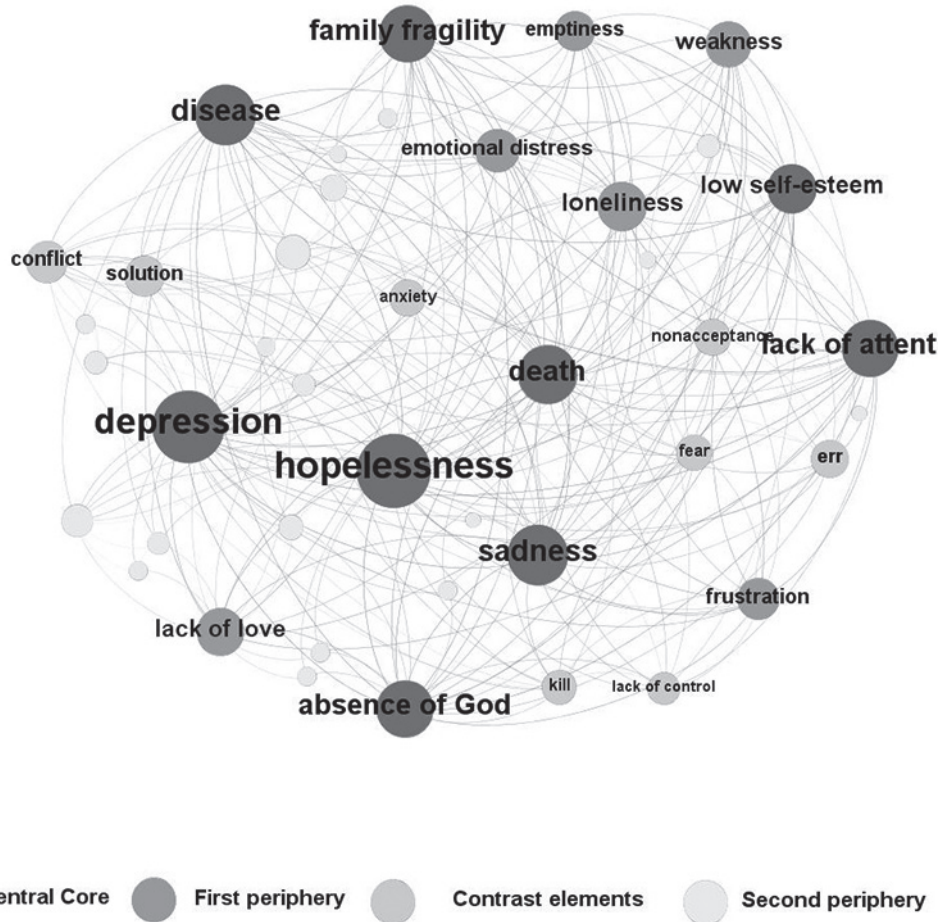


*DC = Degree Centrality; †EC = Eigenvector Centrality

Figure 1 - The network of words evoked by emergency care workers with an emphasis on the central core vertices and periphery elements with higher DC* and EC† values. Jequié, Ba, Brazil, 2017

Table 2 - The classification of the words comprising the structure of the social representations of suicide in the network with the respective DC* and EC† values for each element. Jequié, Ba, Brazil, 2017

| Social representation elements | Vertex | | |
|---|---|---|---|
| | Label | DC* | EC† |
| | Hopelessness | 33 | 1.0 |
| | Depression | 32 | 0.97 |
| | Disease | 26 | 0.89 |
| | Sadness | 26 | 0.89 |
| Central core | Death | 25 | 0.89 |
| | Absence of God | 24 | 0.84 |
| | Family fragility | 24 | 0.82 |
| | Low self-esteem | 20 | 0.77 |

*(to be continued...)*

Table 2 – *continuation*

| Social representation elements | Vertex | | |
| --- | --- | --- | --- |
| | Label | DC* | EC† |
| **Elements of the first periphery** | Loneliness | 20 | 0.74 |
| | Lack of love | 19 | 0.61 |
| | Weakness | 18 | 0.72 |
| | Emotional distress | 17 | 0.63 |
| | Frustration | 16 | 0.66 |
| **Elements of contrast** | Conflict | 16 | 0.57 |
| | Solution | 15 | 0.56 |
| | Mistake | 14 | 0.54 |
| | Fear | 13 | 0.58 |
| | Non-acceptance | 13 | 0.56 |
| | Anxiety | 13 | 0.46 |
| | Lack of control | 11 | 0.51 |
| | Kill | 12 | 0.46 |
| **Elements of the second periphery** | Other vertices in the network with DC* < k or DC* ≥ k and EC† < 0.45 included "medication," "unemployment," "social fragility," "treatment," "prejudice," "betrayal," "idiot," "drug addiction," "mutilation," "premature death," "human," "selfishness," "psychologist," "man," "faith," "premeditate," "resentment," "young," and "innocence" | | |

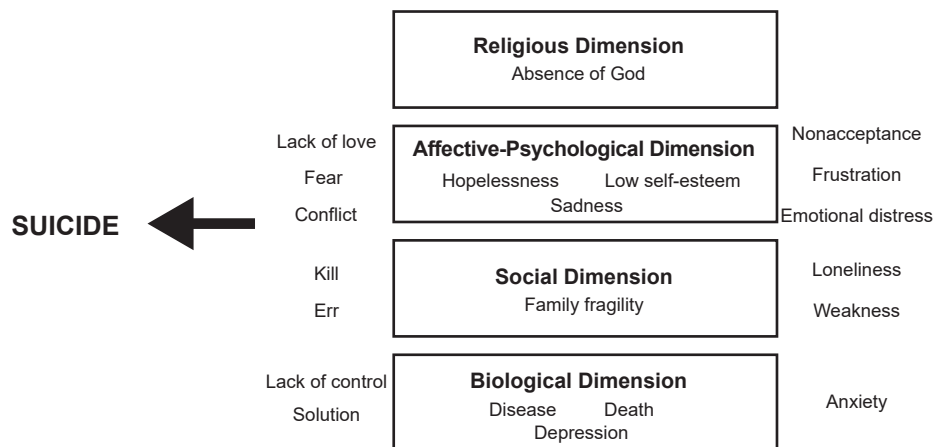**\***DC = Degree Centrality; †EC = Eigenvector Centrality



Figure 2 - The representational structure of suicide created by emergency care professionals. Jequié, Ba, Brazil, 2017 (n = 104)

### Biological dimension

The biological dimension explains the representation by including the terms "disease," "depression," and "death" in the central core. Importantly, the central core structures the social representation, exert a generating function and produce the basic meaning of the representation, while also organizing the representation by determining the distribution of the elements[8-9]. In this respect, emergency care professionals explained suicide as an organic dysfunction and therefore as an individual according to the psychiatric theory of Pinel and Esquirol from the 19th century. This theory was the first to identify the causes of suicide as associated with madness and whose pathological nature was historically treated with solely clinical interventions, including violent shocks to correct "mental defects"[10].

Suicide was and is frequently associated with psychiatric disorders; more recently, it has been associated with schizophrenia and the abuse of alcohol and other drugs in particular[11]. The participants professionals also assigned a strong meaning to depression, agreeing with the WHO's[12] report stating that depression and suicide attempts are the main predictors of suicide risk. These assumptions are derived from the psychiatric literature and are corroborated by the major health guidelines, including those of the International Classification of Diseases and Related Health Problems (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), as well as internationally known scales and inventories such as

Beck's Depression Inventory, which assesses depressive symptoms[13]. The association between suicide and depression is indisputable. However, these problems are multifactorial and that both risk (i.e., predisposing) factors and their causes (i.e., precipitating factors) should be analyzed beyond individual factors to consider social and cultural biases[14].

The most relevant meaning of disease in the context of representations of suicide is supported by the secondary (periphery) elements, which express individual experiences and histories, including the heterogeneity of the group and its contradictions[9]. Moreover, these elements strengthen the ideas of centrality by including other factors associated with the use of medication and treatment (second periphery elements), possibly because of the interventionist nature of professionals given the difficulty associated with predicting whether an individual will commit suicide.

The correlation between the element "death" (central term of the nucleus) and the terms of the second periphery "solution" and "lack of control" indicates ambivalence in relation to the representation of suicide. It appears that the lack of control is a thought association disorder and considered an important criterion for the diagnosis of schizophrenia[15]. Moreover, this author believed that a lack of control causes ambivalence within the individual: a feeling between the desires to want to live and to provoke one's death as a solution to end suffering, a decision leading to a type of new life.

In this context, the presence of the contrast element "anxiety" is justified. Importantly, terms with a low frequency are positioned in the contrast zone or, in the case of a cognitive network analysis, with DC > k and $0.45 \leq EC < 0.60$. However, these terms are equally important for participants because they were evoked[9], demonstrating that anxiety is included in the internal structure of representations, both by individuals who experience the internal conflict caused by ambivalence and by health professionals who are trained to maintain and save lives at any cost and feel their therapeutic interventions are questioned when confronted by these patients[16]. Another process that demonstrates anxiety is the possibility of suicides among patients in medical care, strongly affecting other patients, relatives, and the care team, as well as producing feelings of guilt, anger, and anxiety[17].

Therefore, central elements, constitutive of social thought, are present in these representations and help organize and to understand the reality experienced by individuals or groups[8].

### Social dimension

The social dimension created by emergency care professionals included the term "family fragility." These professionals stressed the importance of this element with regard to the representational structure of suicide, possibly through an understanding of its primary function as an integrator of individual characteristics and social relationships. Results of research on family fragility concluded that unstable structural families have great difficulty in dealing with external events. In addition, families expose uncomfortable and depreciated environments, developing feelings of confusion, inadequacy and low self-esteem, strongly related to suicide[18].

Also note that interconnections can be used with the terms of the second periphery "premature death", "young person" and "innocence", because they reflected the critical role that a family fragility plays as a risk factor among children and adolescents[19]. These professionals believe that family integration is highly relevant to the development of relationships, interactions and executions.

In addition, social integration is maintained by mechanisms such as work activities, school environment and other social obligations, in the perspective that the likelihood of suicide increases as social cohesion decreases in association with situations present in the contrast zone (for example, unemployment and social fragility). This social separation, recognized in suicide as "selfish suicide", is more likely to occur when individuals feel excluded from social groups and life loses meaning[20].

The contrast element "kill" is also related to "family fragility" (a central core term), indicating its similarity with the description of the elements that contribute to suicide. The desire to kill might be directed to the self or the outside world (including loved ones). In the case of the latter, when the emotional instability invested in one or more objects detaches from the self, the liberated homicidal impulse is directed toward the person originating it, as a substitute object, thus, comprising a type of displaced homicide[21].

The representational element "loneliness" is directly associated with "social fragility" and is described as a manifestation of selfish suicide[20]. The low integration of individuals in society is due to the increase in marginalization, voluntary or not, combined with the reduction or lack of social confidence, which can trigger feelings of emptiness and isolation, increasing the mental suffering of these individuals.

### Affective-psychological dimension

The affective-psychological dimension includes the emotional aspects of suicide governed by negative and pessimistic feelings. The central elements "hopelessness," "sadness," and "low self-esteem" reflect the opinions of the participants about their patient's feelings

regarding suicide. The combination of hopelessness and sadness as feelings of lack of success and displeasure about the future not expecting true satisfaction[22] causes "frustration" (a first periphery term) about the perspective of interrupting life as something precious and "non-acceptance"; it is a "premature death." The anomic or selfish suicides can be understood not as punishments but as attempts to escape that occur when the overwhelming forces of society make individuals feel lost or alone[20].

Mental health professionals have studied the symbolic representation of "hopelessness" in detail. Evidence points out that the feeling of hope is validated as an element of significant importance in measures of suicide risk, acting as a protection mechanism against suicidal desires[23], and that the early diagnosis of hopelessness levels can help prevent suicide[24].

Studies show that suicidal patients tend to confuse emotions. This finding was corroborated by the presence of the terms "conflict" and "fear" in the zone of contrast[25-28]. The literature also indicates that these elements are part of the self-concept, in the perspective that the limits of the self are uncertain among unhealthy relationships, in which individuals do not know where their desires and fantasies end or where those of others begin[27]. In the face of broken relationships and/or the loss of a partner, this synergistic relationship causes a loss of part of the self.

Health professionals realize that many individuals who attempt suicide do not want to die. However, they feel unhappy about life and experience fear and non-acceptance, which are caused by indecision and complex emotional problems such as anxiety.

In this context, the suicide attempts by young people were analyzed and it was observed that a lack of love (a first periphery term) limited the capacities to self-evaluate and self-correct when the love was unrequited, and it led to the anguish of experiencing death[28]. In this respect, low self-esteem is a central element of suicide produced by a lack of love. Health professionals should view suicide as having a psychological origin through the manifestation of identity traits within relationships.

### Religious dimension

Religious aspects emerged from the health professionals investigated through the evocations of the term "absence of God", signaling the existence of possible relationships between biological and metaphysical aspects in representations about suicide.

Historically, the spirituality, in its most varied conceptions, constitutes the sociocultural identity of different societies, especially western ones, and is manifested almost directly in the daily lives of individuals, communities and services. It is believed that to avoid the horror of human finitude, the suffering associated with the deterioration of the body after death and an obsession with life, humanity created religions and beliefs that would guarantee immortality to escape the loss of individuality, to become nothing, and emptiness[29] being any act contrary to the maintenance of life faced with a certain reserve and moralization on the part of health professionals.

Some explanations for these symbolic constructions by health professionals originate from their shared historical knowledge, given that religion was paramount in forming representations and attitudes toward suicide. St. Augustine, and later, St. Thomas Aquinas described the position of the church and considered suicide as sinful and morally evil[30] because life was the representation of the sacred to monotheistic cultures and had high theological relevance. These symbolic components are relevant to the construction of knowledge about suicide.

The explanation about the influence of social and spiritual factors with the connection between the individual and the community based on the sociological analysis of suicide emerged in 19th century France[20] and questioned the demonization directed at suicide, suggesting that religious individuals showed greater cohesion from the configuration of religious cults. This tendency to maintain community meetings increased the social cohesion that associated with other stimuli surrounding the faith boosted human resilience and reinforced the existential meaning and a purpose to stay alive.

The correlation between the "absence of God" (a central core term) and "faith" (a second periphery term), expressed by data collection, indicates generic aspects of this nonphysical dimension related to spirituality, conveying a more transcendent meaning of life, devoid of forms, references, and symbols[31], that enables an understanding of existence from a broader and deeper perspective than the more immediate reality. For this subgroup of health professionals, faith represents patience and hope for the future, and its absence represents suicide.

The strong relationships among religion, family, and politics are evident in a hospital environment and create perceptions, attitudes, practices, relationships, and opinions about the care of suicidal patients.

## Final considerations

Despite the constitution of the representations of this group, it adds a lot of reified or, at least, technical-professional knowledge and considering the greater emphasis on the biological dimension, the representations created by the health professionals of the investigated hospital conveyed different meanings to suicide including biological, affective-psychological, social, and religious

aspects, that favor changes in individual and collective practices for a better understanding of suicide.

In this respect, social representations were structured in a central core in which despair, depression, disease, sadness, death, the absence of God, family fragility, and low self-esteem were elements of greater significance, and these central elements were supported by secondary (periphery) elements.

Regarding the implications for healthcare practice, the ideas, convictions, and thoughts of health professionals can be used to improve the acceptance and care of suicidal patients.

## Aknowledgements

## References

1. World Health Organization. Mental health. Suicide data. 2014 [Internet]. [cited July 4 2019]. Available from: https://www.who.int/mental_health/suicide-prevention/exe_summary_english.pdf?ua=1

2. Vidal CEL, Gontijo ED. Suicide attempts and reception in emergency services: the perception of those who try. Coll. Health Coll. [Internet]. 2013;21(2): 108-14. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-462X2013000200002&lng=en. http://dx.doi.org/10.1590/S1414-462X2013000200002

3. Patterson P, Whittington R, Bogg J. Measuring nurse attitudes towards deliberate self-harm: the Self-Harm Antipathy Scale (SHAS). J Psychiatr Ment Health Nurs. [Internet]. 2007. [cited 2020 Feb 6]; 14(1):438-45. Available from: https://www.ncbi.nlm.nih.gov/pubmed/17635251

4. Gonçalves PIE, Silva RA, Ferreira LA. Suicidal behavior: perceptions and care practices? Hosp Psychol. [Internet]. 2015 [cited 2020 Feb 6]; 13(2):64-87. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1677740920150002000 05&lng=pt&tlng=pt

5. Moscovici S. La psychanalyse: son image et son public. Voices. 2012 .

6. Lopes CRS. AnCo-Redes_modelo for cognitive analysis based on semantic networks: an application from the structural approach of social representations [Doctoral Theses]. Salvador: Federal University of Bahia; 2015. Available from: https://repositorio.ufba.br/ri/handle/ri/17751

7. Lopes CRS, Vilela ABAV, Pereira HBB. AnCo-REDES: Modelo para análise cognitiva de representações sociais. Apris editora. 2018.

8. Abric JC. The structural approach to social representations: recent developments. In: Campos PHF, Loureiro MCS. Social representations and educational practices. Goiânia, GO: Ed.UCG; 2003. 37-57.

9. Sá CP. Social psychology studies: history, behavior, representations and memory. Rio de Janeiro, RJ: EdUERJ; 2015.

10. Pacheco MVPC. Esquirol and the emergence of contemporary psychiatry. Latin Am J Fundamental Psychopathol. [Internet]. 2003. [cited 2020 Feb 6]; 6(2): 152-7. Available from: https://dx.doi.org/10.1590/1415-47142003002011

11. Cantão L, Botti NCL. Suicidal behavior among drug addicts. Rev Bras Enferm. [Internet]. 2016 Apr [cited 2020 Feb 6]; 69(2):389-96. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672016000200389&lng=en. http://dx.doi.org/10.1590/0034-7167.2016690224i.

12. World Health Organization. Preventing suicide: a global imperative. Geneva: World Health Organization; 2014. 94 p. Available from: https://www.who.int/mental_health/suicide-prevention/world_report_2014/en/

13. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. Porto Alegre: Artmed; 2014. Available from: http://www.niip.com.br/wp content/uploads/2018/06/Manual-Diagnosico-e-Estatistico-de-Transtornos-Mentais-DSM-5-1-pdf.pdf

14. Fukumitsu KO. The psychotherapist in the face of suicidal behavior. Psicol USP. [Internet]. 2014. [cited 2020 Feb 6]; 25(3): 270-5. Available from: https://dx.doi.org/10.1590/0103-6564D20140001

15. Tenório F. Psychosis and schizophrenia: effects of changes in psychiatric classifications on the clinical and theoretical approach to mental illness. Hist Cienc Saúde-Manguinhos. [Internet]. 2016 Dec [cited 2020 June 18]; 23(4): 941-963. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-59702016000400941&lng=en.

16. Zana ARO, Kovacs MJ. The Psychologist and the assistance to patients with ideation or attempted suicide. Estud Pesqui Psicol. [Internet]. 2013. [cited 2020 Feb 6]; 13(3): 897-921. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_abstract&pid=S1808-42812013000300006

17. Oliveira CT, Collares LA, Noal MHO, Dias ACG. Perceptions of a mental health team about suicidal behavior. Gerais, Rev Interinst Psicol. [Internet]. 2016 [cited 2020 Jun 18]; 9 (1): 78-89. Available in: http://

pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S
198382202016000100007&lng=pt.

18. Lemos MFL, Salles AMB. Some thoughts on the suicide of children. Rev Psicol. [Internet]. 2015. [cited 2020 Feb 6]; 14(1): 38-42. Available from: http://pepsic.bvsalud.org/pdf/revpsico/v14n1/a04.pdf

19. Braga LL, Dell'Aglio DD. Adolescent suicide: risk factors, depression and gender. Contextos Clínicos. [Internet]. 2013[cited 2020 Jun 18]; 6(1):2-14. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S19833482201300010000 2&lng=pt&nrm=iso

20. Durkheim E. Suicide. São Paulo: WMF Martins Fontes; 2016.

21. Menninger K. Eros and Thanatos: man against himself. São Paulo: Ibrasa. 1970.

22. Cunha J. Beck Scales Portuguese Manual. São Paulo: Casa do Psicólogo; 2001.

23. Anestis MD, Moberg FB, Arnau RC. Hope and the interpersonal-psychological theory of suicidal behavior: replication and extension of prior findings. Suicide Life Threat Behav. [Internet]. 2014. [cited 2020 Feb 6]; 44(2):175-87. Available from: https://www.ncbi.nlm.nih.gov/pubmed/24237390

24. O'connor RC, Cassidy C. Predicting hopelessness: The interaction between optimism/pessimism and specific future expectancies. Cognition Emotion. [Internet]. 2007. [cited 2020 Feb 06]; 21(3): 596-613. Available from: https://psycnet.apa.org/record/2007-06987-008

25. Freuchen A, Groholt B. Characteristics of suicide notes of children and Young adolescents: An examination of the notes from suicide victims 15 years and younger. Clin Child Psychol Psychiatry. [Internet]. 2015. [cited 2020 Feb 6]; 20(2):194-206. Available from: https://www.ncbi.nlm.nih.gov/pubmed/24096369

26. Martins FRS, Brito MA. Education and mental health: ways to prevent suicide. Dialogues and Counterpoints: interdisciplinary studies. [Internet]. 2017. [cited 2020 Feb 6]; 1(2):18-30. Available from: http://www.scielo.br/pdf/sausoc/v27n1/1984-0470-sausoc-27-01-185.pdf.

27. Coca OS, Salles RJ, Granado LC. A psychoanalytical understanding about the grieving process in the romantic separation. Psychol Study. [Internet]. 2017[cited 2020 Jun 18]; 22(1):27-39. Available from: https://doi.org/10.4025/psicolestud.v22i1.33428

28. Brunhari MV, Moretto MLT. Loving suicide: a metapsychological proposition. Psychol Rev. [Internet]. 2015[cited 2020 Jun 18]; 21(1):108-25. Available in:

http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S167711682015000100008&lng=pt&nrm=iso.

29. Guerreiro E. The Idea of death: from fear to liberation. Diacritic Rev. [Internet]. 2014. [cited 2020 Feb 6]; 28(2):169-97. Available from: http://www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=S0807 89672014000200012&lng=pt&tlng=pt

30. Feijoo AMLC. Suicide: an understanding from the perspective of existential psychology. Arq Bras Psychol. [Internet]. 2019 [cited 2020 Jun 18]; 71(1):158-73. Available in: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S18095267201900010001 2&lng=pt.

31. Santos CS, Gomes AMT, Souza FS, Marques SC, Lobo MP, Oliveira DC. Social representations of health professionals about neglected diseases. Esc Anna Nery. [Internet]. 2017 [cited 2020 May 21]; 21(1): e20170016. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S14148145201700010021 6&lng=en

## Author's Contribution

Study concept and design: Saulo Sacramento Meira and Alba Benemérita Alves Vile. Obtaining data: Saulo Sacramento Meira and Alba Benemérita Alves Vile. Data analysis and interpretation: Saulo Sacramento Meira, Alba Benemérita Alves Vile, Claudia Ribeiro Santos Lopes, Hernane Borges de Barros Pereira and Jeorgia Pereira Alves. Statistical analysis: Saulo Sacramento Meira, Claudia Ribeiro Santos Lopes, Hernane Borges de Barros Pereira and Jeorgia Pereira Alves. Obtaining financing: Saulo Sacramento Meira and Alba Benemérita Alves Vile. Drafting the manuscript Saulo Sacramento Meira and Alba Benemérita Alves Vile. Critical review of the manuscript as to its relevant intellectual content: Saulo Sacramento Meira, Alba Benemérita Alves Vile, Claudia Ribeiro Santos Lopes, Hernane Borges de Barros Pereira and Jeorgia Pereira Alves.

All authors approved the final version of the text.

Conflict of interest: the authors have declared that there is no conflict of interest.

Corresponding Author:
Saulo Sacramento Meira
E-mail: saulo_meira@hotmail.com
https://orcid.org/0000-0003-1087-2083