

REVIEW ARTICLE  
ARTIGO DE REVISÃO

Health Psychology  
*Psicologia da Saúde*

Editors

João Carlos Caselli Messias, Raquel  
Souza Lobo Guzzo

Support

Coordenação de Aperfeiçoamento  
de Pessoal de Nível Superior (Capes)  
(Funding code: 001).

Conflict of interest

The authors declare they have no  
conflict of interests.

Received

January 6, 2021

Final version

March 18, 2022

Approved

August 5, 2022

# Positive mental health of undergraduate nursing students: scoping review

## *Saúde mental positiva do estudante de graduação em enfermagem: revisão de escopo*

Kayo Henrique Jardel Feitosa Sousa<sup>1</sup> , Leticia Nascimento Chagas<sup>2</sup> , Rodrigo  
Nogueira da Silva<sup>3</sup> , Carlos Alberto da Cruz Sequeira<sup>4</sup> , Cristiane Helena  
Gallasch<sup>5</sup> , Regina Célia Gollner Zeitoune<sup>1</sup> 

<sup>1</sup> Universidade Federal do Rio de Janeiro, Escola de Enfermagem Anna Nery, Programa de Pós-Graduação em  
Enfermagem. Rio de Janeiro, RJ, Brasil. Correspondence to: K. H. J. F. SOUSA. E-mail: <kayohenriquejardel@gmail.com>.

<sup>2</sup> Autonomous Researcher. Rio de Janeiro, RJ, Brasil.

<sup>3</sup> Universidade do Estado do Rio de Janeiro, Faculdade de Enfermagem, Programa de Residência em Enfermagem em  
Saúde da Família. Rio de Janeiro, RJ, Brasil.

<sup>4</sup> Escola Superior de Enfermagem do Porto. Porto, Portugal.

<sup>5</sup> Universidade do Estado do Rio de Janeiro, Faculdade de Enfermagem, Programa de Pós-Graduação em Enfermagem.  
Rio de Janeiro, RJ, Brasil.

**How to cite this article:** Sousa, K. H. J. F., Chagas, L. N., Silva, R. N., Sequeira, C. A. C., Gallasch, C. H., & Zeitoune,  
R. C. G. (2023). Positive mental health of undergraduate nursing students: scoping review. *Estudos de Psicologia*  
(Campinas), 40, e210003. <https://doi.org/10.1590/1982-0275202340e210003>

### Abstract

#### Objective

Aimed to map the constructs used in articles to discuss the mental health of undergraduate nursing students in a positive perspective.

#### Method

A scoping review was carried out with a search in the electronic databases: Scopus, Latin American and Caribbean Health Sciences Literature and Cumulative Index to Nursing and Allied Health Literature, in April 2020, which allowed retrieval of 286 articles. Data selection and extraction was performed in a double check by the group investigators and were assessed using the continuous data comparison technique.

#### Results

We selected 53 articles that allowed detecting a set of 13 constructs associated with positive mental health that are continuously investigated by this audience.

#### Conclusion

It was found that the mental health of undergraduate nursing students is a supportive set of characteristics conditioned to the inter-retroactive circuit, in which each component retroacts on each part of a set of strengths, fostering a dynamic state of internal balance.

**Keywords:** Mental health; Nursing education; Positive psychology.

## Resumo

### Objetivo

Mapear os constructos utilizados em artigos para discutir a saúde mental dos estudantes de graduação em Enfermagem numa perspectiva positiva.

### Método

Realizou-se uma revisão de escopo com busca nas bases de dados eletrônicas: Scopus, Latin American and Caribbean Health Sciences Literature e Cumulative Index to Nursing and Allied Health Literature, em abril de 2020, que retornou 286 artigos. A seleção e extração dos dados ocorreu em dupla checagem por pesquisadores do grupo e analisados segundo a técnica de comparação constante.

### Resultados

Selecionou-se 53 artigos que permitiram levantar um conjunto de 13 constructos relacionados à saúde mental positiva que são constantemente investigados entre esse público.

### Conclusão

Verificou-se que a saúde mental do estudante de graduação em enfermagem é um conjunto solidário de características condicionado ao circuito de inter-retroações, no qual cada componente retroage sobre cada parte de um conjunto de fortalezas, fomentando um estado dinâmico de equilíbrio interno.

**Palavras-chave:** Saúde mental; Educação em enfermagem; Psicologia positiva.

The concept of mental health has been extensively discussed in recent decades. Several perspectives are associated to that concept, including absence of mental illness, positive emotion, feelings of happiness, personality traits, mental well-being, in addition to cultural, salutogenic and quality of life approaches (World Health Organization, 2004). The World Health Organization (WHO) proposes that mental health encompasses but is not limited to, "subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one's intellectual and emotional potential, among others. From a cross-cultural perspective, it is nearly impossible to define mental health comprehensively" (World Health Organization, 2001, p. 5).

The perspectives mentioned point to what scholars call Positive Mental Health (PMH). In this approach, for people to be considered mentally healthy, they should not necessarily express positive feelings and thoughts, but rather present the best possible response to the environment circumstances, ensuring personal growth and good general functioning (Lluch-Canut et al., 2017).

Positive Mental Health is, therefore, a dynamic state of optimal affective, relational, and cognitive functioning, which depends on the ability of the person or group to relate with themselves, with others and the environment – for the development of their potential and the achievement of individual and collective goals –, maintaining the balance between their expectations and the reality experienced (Puri & Sood, 2018; Roldán-Merino et al., 2017).

Being a university student involves several factors, which in themselves are capable of promoting changes in health behaviors and habits. Bresolin et al. (2020) observed that 68.7% college students interviewed in a city in the interior of Brazil exhibited stress symptoms; 65.3% reported poor sleep quality, with 17.0% experiencing sleep disorders. However, data show that undergraduate Nursing students have less general and mental health problems compared to other college students (Oliveira et al., 2020; Wang et al., 2019; Wege et al., 2016).

Other studies with this public have shown that emotional exhaustion is associated with anguish in the face of the suffering of others (Lopes & Nihei, 2020). As for good mental health, it was positively associated with academic success, life satisfaction, good perception of general health, low stress and absence of negative events in the last year, with self-esteem being an important

protective factor (Karaca et al., 2019); and also that academic performance can be decisive for the engagement or exhaustion of students (Paloş et al., 2019).

It is noticed, in fact, that the university setting has the potential to influence the student's mental health, and the student's adaptation is related not only to individual factors, but also to institutional factors (Fogaça et al., 2016). Investigations have shown that the curricular organization, interpersonal relationships, and the feeling of unpreparedness to deal with practical activities (Hirsch et al., 2018), care practice associated with dealing with suffering and death, and organizational problems inherent to health institutions – such as scarcity of material and team conflicts (Lopes & Nihei, 2020; Suen et al., 2016) – are extremely harmful factors for mental health.

Despite the vast literature that has investigated factors associated with the mental health of this public, it is not clear what type of information is available, considering the positive perspective of the mental health concept. In this connection, the question that guided this study was: which constructs have been used in published articles to discuss positive mental health among undergraduate nursing students? The objective was to map the constructs used in published articles to discuss undergraduate Nursing students' mental health in a positive perspective.

## Method

This is a scoping review, that is, a systematic search for mapping the literature that, among its purposes, offers the possibility of exploring how terms have been used in a given field. The steps proposed by the Joanna Briggs Institute were followed: identification of the research question; identification of the relevant studies; selection of studies; data analysis; and grouping, synthesis, and presentation of data (Peters et al., 2020).

The research question presented followed the proposition of the PCC mnemonic (P: Population, C: Concept and C: Context) (Peters et al., 2020), considering: P – college students, C – mental health in a positive perspective, and C – undergraduate course in Nursing. Articles that investigated components of the mental health of undergraduate nursing students, considering the positive perspective, published in the last decade – between 2010 and April 2020 –, in English, Portuguese or Spanish, were included. The scoping review does not provide for the exclusion of records; however, records digitally not available were suppressed from the analysis, as well as those that did not have an operational definition of the construct under analysis.

The selection of studies took place in April 2020, in a double checking by the investigators of the group, and any disagreement was settled by a third investigator. The databases Scopus, Latin American and Caribbean Health Sciences Literature (Lilacs) and Cumulative Index to Nursing and Allied Health Literature, via EBSCOhost (CINAHL) were used.

Comprehensive search strategies were developed by combining terms appropriate to the databases, selected from the thesauri Medical Subject Headings (MeSH), Descriptors in Health Sciences (DeCS) and CINAHL Subject Heading. Descriptors were terms routinely used in research using the WHO definitions as a reference (World Health Organization, 2001, 2004). In Table 1, the search strategy adopted in the Lilacs database is presented, according to the literature guidelines (Tricco et al., 2018).

The selection was performed in five phases: 1) identification through search strategies and eligibility criteria; 2) identification of duplicate records; 3) organization of articles in the Mendeley® reference manager (New York, United States of America); 4) reading the titles/abstracts to verify alignment with the objective; and 5) full reading and extraction of data of interest. The

methodological quality and risk of bias of the articles are not issues in this type of research; therefore, they were not considered (Tricco et al. 2018).

**Table 1**

*Search strategy applied in Latin American and Caribbean Health Sciences Literature*

Latin American and Caribbean Health Sciences Literature
(mh:(“Estudantes de Enfermagem” OR “Bacharelado em Enfermagem” OR “Educação em Enfermagem”) OR tw:(“estudantes de enfermagem” OR “estudante de enfermagem” OR “alunos de enfermagem” OR “aluno de enfermagem” OR “alunas de enfermagem” OR “aluna de enfermagem” OR “bacharelado em enfermagem” OR “faculdades de enfermagem” OR “faculdade de enfermagem” OR “escola de enfermagem” OR “escolas de enfermagem” OR “graduação em enfermagem” OR “curso de enfermagem” OR “cursos de enfermagem” OR “ensino de enfermagem” OR “nursing students” OR “nursing student” OR “undergraduate nursing” OR “baccalaureate nursing” OR “nursing baccalaureate” OR “nursing school” OR “nursing schools” OR “school of nursing” OR “schools of nursing” OR “nursing college” OR “nursing colleges” OR “college of nursing” OR “colleges of nursing” OR “nursing education” OR “estudiantes de enfermería” OR “estudiante de enfermería” OR “pregrado en enfermería” OR “bachillerato em enfermería” OR “bachillerato de enfermería” OR “escuela de enfermería” OR “escuelas de enfermería” OR “colegio de enfermería” OR “colegios de enfermería” OR “educación en enfermería” OR “educación de enfermería”)) AND (tw:(“saúde mental positiva” OR “positive mental health” OR “salud mental positiva” OR “auto-conceito” OR “self-concept” OR autoconcepto OR autoestima OR “self esteem” OR “self-esteem” OR autoimagem OR “self image” OR autoimagen OR “satisfação pessoal” OR “personal satisfaction” OR “satisfacción personal” OR otimismo OR optimism OR optimismo OR “pró-social” OR “pro-social” OR prosocial OR autocontrole OR “self control” OR “self-control” OR autocontrol OR “controle emocional” OR “emotional control” OR “control emocional” OR autonomia OR autonomy OR autoconfiança OR “self confidence” OR “self-confidence” OR autoconfianza OR autoatualização OR “self-actualization” OR “self actualization” OR “autorrealización” OR “auto-actualización” OR “autoactualización” OR “habilidades relacionais” OR “relational skills” OR “habilidades relacionales” OR “habilidadde relacional” OR “relational skill” OR “habilidad relacional” OR empatia OR empathy) OR mh:(“Autonomia Pessoal” OR “Satisfação Pessoal” OR autoimagem OR otimismo OR autocontrole OR empatia)) AND tw:(menta”) AND (db:(“LILACS”)) AND (year_cluster:[2010 TO 2020])

As for the extraction of data of interest, an adaptation was made to the form developed by the Joanna Briggs Institute (Peters et al., 2020) and contained: author(s), title, year, and journal of publication, investigated attribute, method, participants, country of acquisition of data, data collection instruments, data analysis techniques and main results.

Data were transferred to the NVIVO® 12 program (Melbourne, Australia) and automatically filed, being called research sources, summarized by means of tables, and identified according to the initial letter of the index base and order of entry in the study. Data analysis took place according to the continuous comparison technique: reduction, display, data comparison, conclusion, and verification (Whittemore & Knalf, 2005).

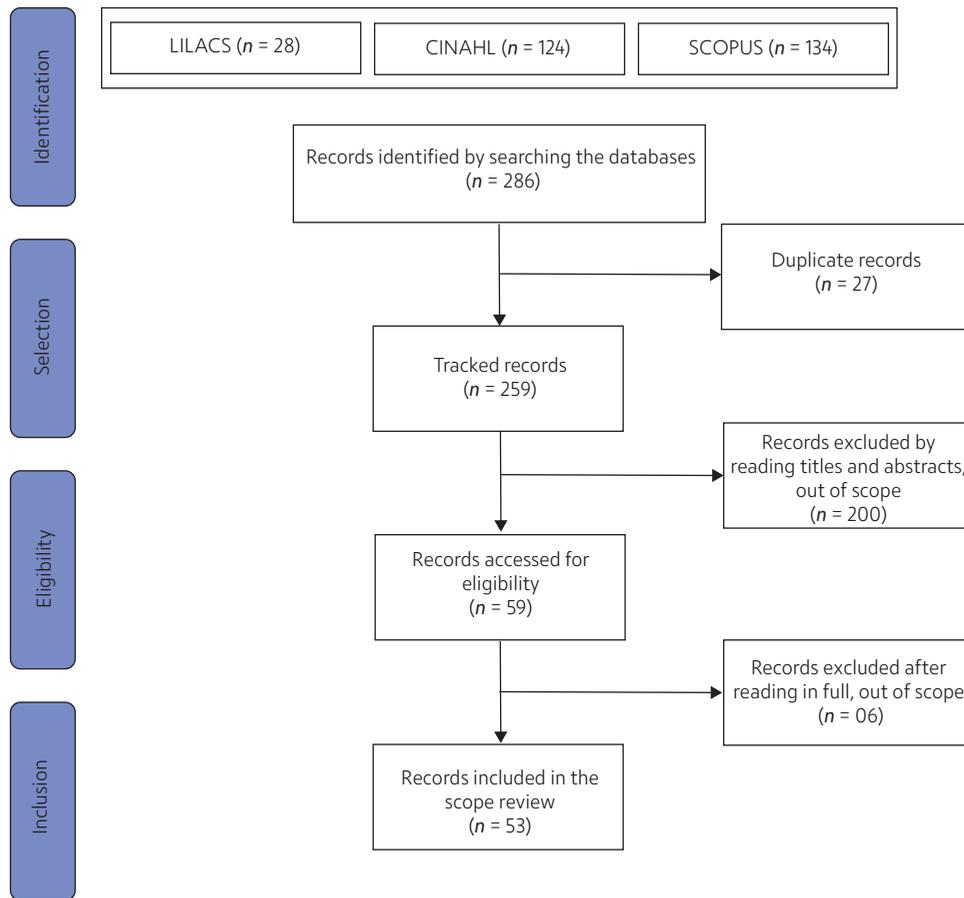
The data extracted from the articles were reduced to thematic “nodes” through content decomposition. Each “node” represented a construct used in the articles. The development of thematic “nodes” followed the phases: (1) full reading of the articles; (2) identification of the subject and construct used; (3) extraction of the concept used by the author to investigate the subject; and (4) selection of the main results and/or reflections on the topic. We proceeded to the interpretation of the text fragments inserted in the thematic “nodes” and their differentiation, analyzing regularities and discrepancies. In the end, the investigators sought to understand the data set and identify their relationships.

## Results

The search retrieved 286 articles; after excluding duplicates and reading the abstracts and full text of the articles, the sample was reduced to 53 articles; the others were excluded because they did not address the scope/topic of this review, as shown in Figure 1.

Table 2 presents the distribution of articles. The alphanumeric codes represent the articles reviewed and included in the stratification category of the table.

**Figure 1**  
Study selection flowchart



Note: CINAHL: Cumulative Index to Nursing and Allied Health Literature; LILACS: Latin American and Caribbean Health Sciences Literature.

**Table 2**  
Characterization of selected studies

Distribution of Studies	
Year	2010 (C1, C2, S3), 2011 (L1, C3), 2012 (C5, C6, L2, S6), 2013 (C7,S12), 2014 (C9, C10, L3, L4), 2015 (C11, C12, L5, L6, S17), 2016 (C13, C14, C15, C17, L7, S18, S20), 2017 (C18, C19, C21, C23, S24, S25, S27), 2018 (C22, C24, C25, S34), 2019 (C26, C27, C28, C29, S40, S41, S42, S45), 2020 (C30, C31, C32, C33, S30, S31, S46)
Country	China (C2,C13,C21,C28,S12,S20,S24,S34), Brazil (L1,L2,L4,L5,L7,C14,S30,S31), United States of America (C1,S3,C19,S6,S18,S41), United Kingdom (C5,C10,C11,C15,C32), Australia (C6,C24,C29,C30,C33), Iran (C25,C31,S17), Portugal (C7,L3,S42), South Korea (C9,C17,C22), Spain (C18,C23,S42), Turkey (C26,S45), Thailand (C3), Mexico (L6), South Africa (C12), Croatia (S25), India (S27), Slovenia (S40), North Ireland (S40), Sweden (C27), Israel (S46)
Method	Cross-sectional quantitative (C3,C9,C10,C14,C18,C21,C25,C26,C28,C29,L1,L6,S6,S18,S20,S25,S27,S30,S40,S41,S42,S45), qualitative (C11,C12,C19,C22,C27,C31,C33,L4,S12), cross-cultural adaptation and validation of instruments (C7,C13, L3,L5,L7), quasi-experimental (C23,C30,S3,S17,S31), mixed or qualitative-quantitative (C1,C15,S34), randomized controlled trial (C17,S24), case-control (C2), experience report (C32,S46), reflection (C24)
Indexing Journal	Nurse Education Today (C2, C3, C5, C11, C22, C24, C26, C30, S20, S34), Revista Latino-Americana de Enfermagem (L2, L3, L5, L7, S31), Journal of the American Psychiatric Nurses Association (S6, S41, S42), International Journal of Mental Health Nursing (C29, C33, S24), American Journal of Men's Health (S12, S45), Journal of Christian Nursing (C19, S18), Journal of Psychiatric and Mental Health Nursing (C13, C18), Journal of Professional Nursing (C28, S46), International Journal of Community Based Nursing and Midwifery (C31), Texto&Contexto Enfermagem (S30), Issues in Mental Health Nursing (S3), Journal of Nursing Education (C1), Acta Paulista de Enfermagem (L1), International Journal of Nursing Practice (C6), Pensar Enfermagem (C7), Investigación y Educación en Enfermería (L4), International Nursing Review (C9), Journal of the American Association of Nurse Practitioners (C10), Revista Electrónica Enfermería Actual en Costa Rica (L6), Global Journal of Health Science (S17), African Journal of Nursing and Midwifery (C12), Revista Portuguesa de Enfermagem de Saúde Mental (C14), Art & Science (C15), Nursing and Health Sciences (C17), The Open Public Health Journal (S25), Journal of Clinical and Diagnostic Research (S27), The Journal of Nursing Research (C21), Enfermería Clínica (C23), Iranian Journal of Psychiatric (C25), Nurse Education in Practice (S40), Health Education & Behavior (C27), Nursing Times(C32)
Investigated Concept	Self-esteem (C2,C9,C17,C26,C28,L4,S25,S30,S31), self-efficacy (L3,S3,S24,S30,S34), well-being (C3,C5,C13,S25,S40), empathy (C1,C6,C25), interpersonal relationship skills (C15,C22,L2,S25), positive mental health (C14,C18,S42), coping/managing crisis/stress (C24,C26,C27,S45), general mental health (C31,S41), optimism (C10,L1), confidence/ self-confidence (L3,S6), resilience (C7,S27), self-awareness (C11,S18), satisfaction (L5,L7), emotional intelligence (C33,S20), self determination(C29,C30), self image (S12), autonomy (L4), happiness (L6), self-regulation/self-direction (S17), emotional support (C12), spirituality (C19), mental self-sufficiency (C21), self-control (C23), social support (C26), collaborative practice (C32), communication skills (S46)

The concepts investigated in the articles were extracted and inserted into thematic “nodes” considering the similarity of the content and construct reviewed. Next, the constructs associated with the mental health of undergraduate nursing students are presented, in a positive perspective, identified in the literature.

**Construct 1 – Self-esteem.** Nursing undergraduate students demonstrated a moderate level of self-esteem (S30), associated with personal fulfillment, satisfaction, and positive meaning in life (L6) and anger control (C9). Self-esteem proved to be a preventive factor for mental health, through the reduction of psychological suffering (C2, C26, C28), an inverse relationship was also observed with the levels of depression (C9). A study identified that 27.1% of the participants did not like themselves, and 37.7% always or almost always experienced a feeling of worthlessness (S42). Two studies evaluated the impact of interventions to strengthen self-esteem, an in-person program in three sessions to promote self-acceptance, improve relationships and problem solving (C17), and an online intervention via Facebook with weekly posts, totaling 10 sessions, aiming to test interventions from the Nursing Interventions Classification (S31). Both showed effectiveness in raising self-esteem levels (C17, S31).

**Construct 2 – Self-control.** It was related to other concepts, such as: self-regulation associated with the interaction between cognition, behaviors, and motivation (S17); self-awareness that involves the ability to understand the inner self and how it is affected by the outside world (S18, S46); and self-perception (S12). Nursing undergraduate students declared being able to control their emotions and deal with adversities (S42); however, another study revealed that they do not know how to deal with stress (C15). Strategies were pointed out to help students in their development, such as reflective writing, for the development of self-awareness (C11); emotional support (C12); spiritual care (C19); psychotherapy (C24); cognitive-behavioral therapy (C27); teamwork (S17) and the development of communicative skills, through mentalization, to deal with emotional overwhelming situations (S46).

**Construct 3 – Autonomy.** It may be associated with motivation and self-regulation mechanisms (C29). Studies reveal that undergraduate Nursing students are independent and confident in the decisions and choices they make (C14); however, they consider it difficult to develop them (S42). Nursing undergraduate students recognize autonomy as an important factor for strengthening self-esteem and achieving mental well-being (C31). Also, self-determination, self-knowledge, self-confidence, and self-responsibility are factors that increase the willingness to exercise critical thinking (C21). Studies have shown that innovative teaching methodologies in environments that allow freedom for students to express themselves (L4), through support for autonomy in the clinical setting (C30) and collaborative practice (C32), allow them to be more proactive.

**Construct 4 – Optimism, also called life orientation.** Nursing undergraduate students in Brazil were optimistic about the future (C14); in contrast, students from Spain and Portugal were concerned (S42). Two studies evaluated this construct: one identified that the lower the degree of optimism, the greater the use of sedatives (L1); while the other evaluated the impact of a training module on therapeutic optimism – that is, the belief in the effectiveness of a therapy – and observed that, after the module, the students’ degree of optimism increased (C10).

**Construct 5 – Personal satisfaction.** Data of undergraduate Nursing students were ambivalent, sometimes indicating personal dissatisfaction (S42) and sometimes satisfaction (C14). A study showed that school satisfaction is an important factor for the mental health of those students (C26). Two studies carried out cross-cultural adaptation of scales, one used to assess satisfaction

and self-confidence acquired in high-fidelity simulation environments (L5), and another to assess satisfaction with the course, involving curriculum/teaching, social/professional interactions and learning environment (L7).

Construct 6 – Interpersonal Relations. Communication and interpersonal skills are essential skills for Nursing (C22). Nursing undergraduate students, in general, show low levels of social difficulties (C3); however, they recognize themselves as not very sociable (C14) and have difficulties in offering emotional support (C14, S42). An important variable assessed among Chinese students was the fact that male students experience psychological distress, interfering with interpersonal relationships in the academic performance and in the intention to drop out of the course (C28). Negative events in the field of interpersonal relationships, however, are associated with psychological suffering, and this one with the study pressures and the difficulties in adaptation (S20). The effect of group psychotherapy is highlighted as a way for students to express their feelings and personal difficulties (C22), and to relieve depressive symptoms and improve self-efficacy among them (S24). Other studies have shown that drama workshops are effective pedagogical strategies for emotional, communication and interpersonal skills development (C15), and that emotional intelligence coaching improves teamwork confidence, listening and empathy (C33).

Construct 7 – Resilience. Nursing undergraduate students are moderately resilient, and this ability is positively associated with mindfulness and empathy, and negatively associated with repeated negative thoughts (S27). Through emotional intelligence coaching and emotion management, students reported an improvement in their ability to deal with stressful and critical situations (C33). A study adapted a scale for the assessment of resilience and demonstrated a two-dimensional configuration, namely: problem-solving competence, and personal competences and social support, enhancing the concept that resilience permeates psychological and intersubjective characteristics in connection with the environment, to promote the ability to cope with adverse situations (C7).

Construct 8 – Self-confidence/confidence. A study enhances the character of repeated action aimed at confidence acquisition, as, after experience in internships, students showed a significant improvement in confidence for the performance of clinical skills (S6). Another study observed high scores of satisfaction and self-confidence in learning among students who participated in high-fidelity simulation activities (L5). Similarly, a study pointed to the possibility that simulation is a strategy to enhance self-confidence (L3). Such investigations adapted scales to measure self-confidence among groups of Portuguese (L3) and Brazilian students (L5).

Construct 9 – Self-efficacy. Nursing undergraduate students demonstrated medium to high levels of self-efficacy (S30). Studies have visualized positive effects of online intervention via Facebook (S31) and simulation (S33) on self-efficacy levels. Another study revealed the importance of overcoming the theory-practice divide to improve self-efficacy in learning (S34).

Construct 10 – Empathy. Students demonstrate that they like to help others and feel that other people are reliable even though they almost always have difficulties to hear them or accept opinions different from their own (S42). Nursing undergraduate students demonstrated high levels of empathy (C1, C6); however, there was an exception, which indicates that they did not like to help others in need (C14). A study revealed that empathy is a skill that can be developed (C25).

Construct 11 – Troubleshooting. A study found that undergraduate Brazilian Nursing students find it difficult to solve their problems (C14) which is not the case with Portuguese and Spanish students (S42). Another study showed that self-fulfillment is a preventive mental health factor (C2). Nursing undergraduate students showed greater anxiety symptoms when compared

with students in other areas (S41); thus, without a doubt, the promotion of strategies that favor adaptation to the university environment is important for the nursing student positive functioning (C7).

Construct 12 – Welfare. Considered an indicator of mental health (C13). Mental well-being is defined as a multidimensional construct, a component of quality of life and general health, which involves general assessments of circumstances and a balance of positive and negative effects of experiences throughout life. A study pointed out that undergraduate Nursing students have greater mental well-being than those from other areas (C3); in Slovenia and Northern Ireland, they showed average values (S40). On the other hand, a study used the constructs satisfaction with life, anxiety, depression, self-esteem, and self-efficacy as indicators of well-being, and found that physical activity was positively associated with self-esteem and self-efficacy, and that the higher the body mass index, the lower the life satisfaction (C5).

Construct 13 – Happiness. Nursing undergraduate students showed a moderate happiness score, being associated with family cohesion, social support, self-esteem, behavioral coping strategies, affective and cognitive or focused on the problem situation (S25). In Mexico, favorable levels of happiness were identified, and self-esteem was positively associated with two dimensions of happiness: personal fulfillment and life satisfaction (L6). In this context, a study suggested that positive psychotherapy – that is, one based on the promotion of happiness – significantly alleviated depression and increased the self-efficacy of undergraduate nursing students (S24).

## Discussion

The literature on the PMH components for undergraduate Nursing students was mapped, in line with the field of health promotion, as it was observed that the constructs converge toward the expanded concept of health (World Health Organization, 2004) – which considers different aspects of life, and which requires that the university be a healthy environment. In this connection, the concept of health-promoting universities (Mello et al., 2010) is brought up, insofar as it evokes the creation of an organizational culture that promotes human development and improves people's quality of life in that environment, through knowledge, skills, and competences for self-care and for the adoption of healthy lifestyles (Hurley et al., 2020).

Higher education represents a turning point in the life of many students. It is in this setting that they spend most of their day; therefore, it is a strategic location for the development of health promotion programs. The WHO 2030 Agenda, conceived by the United Nations Government members in 2015, has among its objectives the promotion of a healthy life and well-being for all, a fact that may have encouraged scientific research in the field of mental health of undergraduate students in Nursing starting with the year 2015 (World Health Organization, 2015).

In this connection, the American College Health Association develops guidelines for the quality of health promotion programs in the college setting, which involve integration with the university's mission, through collaborative practices of theoretical-practical support and an ethical, sociocultural, and ecological approach, understanding that these will be the social policymakers who will impact people's quality of life and well-being (American College Health Association, 2019). This assumption was observed insofar as studies (Guo et al., 2017; Perlman et al., 2020) showed the effectiveness of teaching strategies with active methodologies to enhance mental health components.

The operational definitions extracted from the studies assessed allowed the survey of 13 constructs related to PMH, which are important for health promotion. Due to their defining

characteristics, those constructs are interrelated in a kind of hologram – that is, each component presents almost the totality of the phenomenon; however, at the same time it is part of a larger component (Morin, 2018). This system operates in a circular fashion, i.e., while they are produced, they further generate other qualities

The discussions related to the definitions of mental health constructs led us to the multifactorial construct PMH. This perspective has been gaining prominence, considering the need to respond to the growing number of cases of mental illness, also involving undergraduate Nursing students (Fonseca et al., 2019; Jun & Jo, 2016; Wang et al. 2019), being associated with thoughts of dropping out of the course (Vasconcelos et al., 2020). In addition, the training of professionals capable of caring for others involves several requirements, which can be a source of stress (Hirsch et al., 2018).

The review of the articles revealed constructs to be worked on to improve students' mental health. Self-esteem, for example, at higher levels, is considered a safety factor for mental health and is associated with increased self-efficacy, body image and leadership, which can reduce levels of depression and stress (Ni et al., 2010). People with a high level of self-esteem develop self-confidence, which facilitates socialization (Cha & Sok, 2014) and security in the development of clinical skills.

The set of these phenomena is very subjective, and their relationships are difficult to measure. University students with low levels of optimism had higher anxiety scores, which confirmed the importance of developing coping strategies for mental illness focused on protective factors (Chaves et al., 2015). Thus, what is perceived is the attempt to seek evidence for the assumptions that efforts to enhance the capacities and potential of individuals are essential to reduce the levels of mental illness.

Another point that stands out is the development of autonomy. This is a valuable component for the development of a professional profile, in which the individual is able to make decisions, communicate and obtain satisfactory interpersonal relationships. In addition, autonomy enhances self-esteem, which, in turn, is associated with self-confidence, which directly influences the assertiveness of decision-making in the clinical context (Martins et al., 2014). The autonomous exercise of the profession confers a greater degree of personal satisfaction (Santos et al., 2017), and this can be translated as a feeling of pleasure or disappointment, according to the result or expectations related to a given situation (Almeida et al., 2015).

Another factor identified, important for mental health, was relational ability. Communication skills are essential for satisfactory interpersonal relationships, since, in establishing bonds, people must be able to establish satisfactory communication. When it comes to the practice of nursing, Choi (2018) points out that excellent clinical practice requires good communication and ability to relate to co-workers and patients and that such skills can be developed through group activities.

It was observed that mental health involves several factors, which can potentially prevent mental illness in the face of life mishaps. Adaptation to stress and the ability to cope with unfavorable situations – defined as resilience – can also add to this definition the skills to thrive in the face of adversity (Vilelas et al., 2013). Resilience is considered a non-technical work skill and is essential for students to be able to deal with the stress experienced in the clinical practice. This environment also demands a self-confidence posture, as students with greater confidence are more likely to be successful in their interventions (Martins et al., 2014).

Nursing studies demand skills, including the ability to solve problems, self-control, and stress management, capable of leading the individual to overcome obstacles, both in undergraduate studies and in the nursing practice. During clinical practice, nurses face situations that require decisions.

The stimulation of this ability may be carried out within the university, so that the ability to decide, in the case of some setback, is already present in the student. Therefore, it is recommended to adopt complementary practices that enhance students' emotional balance (Hurley et al., 2020; Vasconcelos et al., 2020).

In the positive perspective of mental health, it is considered that people experience stressful situations that involve stress, anxiety, and frustration, whether they are healthy or sick; however, what differentiates them is the ability to maintain the balance of integration that the person has achieved. In this perspective, we do not discuss very specific terms to talk about self-control; for example, we do not talk about the absence of anxiety as a criterion of mental health, but about tolerance to anxiety without crumbling down (Jahoda, 1958).

Confidence and self-confidence are important elements of the individual's cognitive self-efficacy component (Almeida et al., 2015). It refers to the ability to organize and perform tasks with the desired effect, and is correlated with academic performance, facing challenges, and overcoming obstacles in a healthy way (Ribeiro et al., 2020). In this way, self-efficacy proves to be a fundamental attribute in academic life and in the Nursing practice. Besides the factors associated with the development of professional skills and competences, one should reflect on these students getting ill and their consequences, such as, for example, the reduction of self-efficacy and perception of the quality of experiences within universities, which sometimes culminate in dropouts (Ornellas-Ariño & Bardagi, 2018; Vargas-Porras et al., 2019).

About Nursing practice, there is another non-technical and necessary attribute for excellent care, that is: empathy, which is the understanding of the patient's expectations, concerns, and perspectives, combined with the ability to communicate this understanding (Vilelas et al., 2013). According to Webster (2010), nurses with a higher level of empathy can convey this understanding, using verbal and non-verbal communication. Empathy can be taught and observed (McKenna et al., 2012).

The afore mentioned constructs, when present, favor the subject's well-being. The WHO defines health as a complete state of well-being and not merely the absence of disease (World Health Organization, 2004). Such relevance can be perceived from such definition since there is no health if there is no well-being. Focusing on mental well-being, which this study is about, we emphasize the need for greater support and investment, within the scope of graduation, in programs that help students to identify the points to be worked on for a better mental health, as this allows the individual to deal with the "normal" stress of life (Hawker, 2012).

The results also offer a discussion about happiness, described as the goal of life, which is linked to personal satisfaction and self-esteem. Happiness is triggered by a higher level of self-esteem, while low self-esteem can lead to depression (Brajša-Zganec et al., 2017). It is observed the intertwining of self-esteem with some constructs and its importance for well-being. Thus, investing in projects that assess and promote self-esteem in undergraduate Nursing students would be beneficial for the training of healthier professionals capable of coping with the different situations encountered in life.

The data presented converge to the scientific nature of how the phenomenon has been investigated, showing gaps in the production of knowledge. It was noticed that the investigations carry out a compartmentalization of the phenomenon, considering only the parts, causing disjunction – separating what is connected – and reduction – unifying the diverse –, which alone are insufficient (Morin, 2018). In this way, it should be considered that the methodological plurality should be referred to the urgency in treating in relative terms all the knowledge, insofar

as the investigations reflect the investigator's vision which is supported by different current of thoughts (Santos, 2018). In this connection, the need to consider PMH as a multifactorial construct is enhanced.

The findings of this study are in line with the previous question, showing that the constructs are interconnected with varying degrees of sharing of meanings. This enhances the multifactorial and complementary nature of the constructs, demonstrated, for example, when studies showed that self-esteem proved to be a preventive factor for mental health (Paloş et al., 2019), associated with personal fulfillment and satisfaction (McKenna et al., 2012), two other constructs reviewed. Likewise, the happiness construct was associated with self-esteem in terms of personal fulfillment and life satisfaction (Brajsa-Zganec et al., 2017) and self-efficacy (Guo et al., 2017). Therefore, it is believed that talking about the positive components of mental health alone is insufficient to understand the phenomenon in question.

## Conclusion

The comparative analysis of the findings revealed that the mental health of college nursing students is a supportive set of characteristics, conditioned to a recursive circuit of inter-retroactions. The constructs identified in the articles were: self-esteem, self-control, autonomy, optimism, personal satisfaction, interpersonal relationships, resilience, self-confidence/confidence, self-efficacy, empathy, problem solving, well-being and happiness.

It appears from the literature that in the circuit formed by these constructs, the student – in a kind of hologram – enriches his/her daily functioning system, through life habits, acquisition of skills and abilities and exercise to promote physical and mental health, which retroacts on each part of the set, promoting a dynamic state of internal balance.

As a limitation of this study, we emphasize the selection bias associated with the temporal and idiomatic cut off point. In addition, as this is a scoping review, relevant studies may have been lost due to the reduced number of databases. However, it should be noted that the sources used include journals with international circulation. It is worth mentioning that PMH related constructs research has been expanding and showing important results for the implementation of health promotion programs in the university environment.

## References

- Almeida, R. G. S., Mazzo, A., Martins, J. C. A., Baptista, R. C. N., Girão, F. B., & Mendes, I. A. C. (2015). Validation to Portuguese of the Scale of Student Satisfaction and Self-Confidence in Learning. *Revista Latino-Americana de Enfermagem*, 23(6), 1007-1013. <https://dx.doi.org/10.1590%2F0104-1169.0472.2643>
- American College Health Association. (2019). *Standards of practice for health promotion in Higher Education*. ACHA Guidelines. Retrieved from [https://www.acha.org/documents/resources/guidelines/ACHA\\_Standards\\_of\\_Practice\\_for\\_Health\\_Promotion\\_in\\_Higher\\_Education\\_October2019.pdf](https://www.acha.org/documents/resources/guidelines/ACHA_Standards_of_Practice_for_Health_Promotion_in_Higher_Education_October2019.pdf)
- Brajsa-Zganec, A., Lipovcan, L. K., Ivanovic, D., & Larsen, Z. P. (2017). Well-being of nursing students: role of affect regulation, self-esteem, family cohesion and social support. *Open Public Health Journal*, 10, 69-79. <http://dx.doi.org/10.2174/1874944501710010069>
- Bresolin, J. Z., Dalmolin, G. L., Vasconcellos, S. J. L., Barlem, E. L. D., Andolhe, R., & Magnago, T. S. B. S. (2020). Depressive symptoms among healthcare undergraduate students. *Revista Latino-Americana de Enfermagem*, 28, e3239. <https://doi.org/10.1590/1518-8345.3210.3239>
- Cha, N. H., & Sok, S. R. (2014). Depression, self-esteem and anger expression patterns of Korean nursing students. *International Nursing Review*, 61(1), 109-115. <https://doi.org/10.1111/inr.12076>

- Chaves, E. C. L., Iunes, D. H., Moura, C. C., Carvalho, L. C., Silva, A. M., & Carvalho, E. C. (2015). Anxiety and spirituality in university students: a cross-sectional study. *Revista Brasileira de Enfermagem*, 68(3), 444-9. <http://dx.doi.org/10.1590/0034-7167.2015680318i>
- Choi, Y. J. (2018). The value of psychosocial group activity in nursing education: a qualitative analysis. *Nurse Education Today*, 64, 65-70. <https://doi.org/10.1016/j.nedt.2018.02.012>
- Fogaça, M. C., Matos, D. C., Borsetti, J., Di Rienzo, V. D., Ribeiro, L. P., Martins, R. Z., & Silva, I. G. (2016). Academic experience of Psychology students: differences between beginners and graduating. *Estudos de Psicologia (Campinas)*, 33(3), e515023. <http://dx.doi.org/10.1590/1982-02752016000300014>
- Fonseca, J. R. F., Calache, A. L. S. C., Santos, M. R., Silva, R. M., & Moretto, S. A. (2019). Association of stress factors and depressive symptoms with the academic performance of nursing students. *Revista da Escola de Enfermagem da USP*, 53, e03530. <https://doi.org/10.1590/s1980-220x2018030403530>
- Guo, Y. F., Zhang, X., Plummer, V., Lam, L., Cross, W., & Zhang, J. P. (2017). Positive psychotherapy for depression and self-efficacy in undergraduate nursing students: a randomized, controlled trial. *International Journal of Mental Health Nursing*, 26(4), 375-83. <https://doi.org/10.1111/inm.12255>
- Hawker, C. L. (2012). Physical activity and mental well-being in student nurses. *Nurse Education Today*, 32(3), 325-331. <https://doi.org/10.1016/j.nedt.2011.07.013>
- Hirsch, C. D., Barlem, E. L. D., Almeida, L. K., Tomaschewski-Barlem, J. G., Lunardi, V. L., & Ramos, A. M. (2018). Stress triggers in the educational environment from the perspective of nursing students. *Texto & Contexto Enfermagem*, 27(1), e0370014. <https://doi.org/10.1590/0104-07072018000370014>
- Hurley, J., Hutchinson, M., Kozlowski, D., Gadd, M., & Vorst, S. (2020). Emotional intelligence as a mechanism to build resilience and non-technical skills in undergraduate nurses undertaking clinical placement. *International Journal of Mental Health Nursing*, 29(1), 47-55. <https://doi.org/10.1111/inm.12607>
- Jahoda, M. (1958). *Current concepts of positive mental health*. Basic Books.
- Jun, W. H., & Jo, M. J. (2016). Factor affecting happiness among nursing students in South Korea. *Journal of Psychiatric and Mental Health Nursing*, 23, 419-426. <https://doi.org/10.1111/jpm.12330>
- Karaca, A., Yildirim, N., Cangurb, S., Acikgoza, F., & Akkusa, D. (2019). Relationship between mental health of nursing students and coping, self-esteem and social support. *Nurse Education Today*, 76, 44-50. <https://doi.org/10.1016/j.nedt.2019.01.029>
- Lluch-Canut, M. T., Sequeira, C., & Roldán-Merino, J. (2017). La salud mental positiva desde una perspectiva multifactorial. In V. Fragoso & M. Sotto-Mayor (Eds.), *Gerontologia e Transdisciplinaridade*. Portal do Envelhecimento.
- Lopes, A. R., & Nihei, O. K. (2020). Burnout among nursing students: predictors and association with empathy and self-efficacy. *Revista Brasileira de Enfermagem*, 73(1), e20180280. <https://doi.org/10.1590/0034-7167-2018-0280>
- Martins, J. C. A., Baptista, R. C. N., Coutinho, V. R. D., Mazzo, A., Rodrigues, M. A., & Mendes, I. A. C. (2014). Self-confidence for emergency intervention: adaptation and cultural validation of the Self-Confidence Scale in nursing students. *Revista Latino-Americana de Enfermagem*, 22(4), 554-561. <https://doi.org/10.1590/0104-1169.3128.2451>
- McKenna, L., Boyle, M., Brown, T., Williams, B., Molloy, A., Lewis, B., & Molloy, L. (2012). Levels of empathy in undergraduate nursing students. *International Journal of Nursing Practice*, 18(3), 246-251. <https://doi.org/10.1111/j.1440-172X.2012.02035.x>
- Mello, A. L. S. F., Moysés, S. T., & Moysés, S. J. (2010). A universidade promotora de saúde e as mudanças na formação profissional. *Interface*, 14(34), 683-92. <https://doi.org/10.1590/S1414-32832010005000017>
- Morin, E. (2018). *A cabeça bem-feita: repensar a reforma - reformar o pensamento*. Bertrand Brasil.
- Ni, C., Liu, X., Hua, Q., Lv, A., Wang, B. O., & Yan, Y. (2010). Relationship between coping, self-esteem, individual factors and mental health among Chinese nursing students: a matched case-control study. *Nurse Education Today*, 30(4), 338-43. <https://doi.org/10.1016/j.nedt.2009.09.003>
- Oliveira, E. S., Silva, A. F. R., Silva, K. C. B., Moura, T. V. C., Araújo, A. L., & Silva, A. R. V. (2020). Stress and health risk behaviors among university students. *Revista Brasileira de Enfermagem*, 73(1), e20180035. <https://doi.org/10.1590/0034-7167-2018-0035>

- Ornellas-Ariño, D., & Bardagi, M. P. (2018). Relação entre fatores acadêmicos e a saúde mental de estudantes universitários. *Psicologia em Pesquisa*, 12(3), 44-52. 2018. <http://dx.doi.org/10.24879/2018001200300544>
- Palos, R., Maricuțoiu, L. P., & Costea, J. (2019). Relations between academic performance, student engagement and student burnout: a cross-lagged analysis of a two-wave study. *Studies in Educational Evaluation*, 60, 199-204. <https://doi.org/10.1016/j.stueduc.2019.01.005>
- Perlman, D., Patterson, C., Moxham, L., & Burns, S. (2020). Examining mental health clinical placement quality using a self-determination theory approach. *Nurse Education Today*, 87, 104346. <https://doi.org/10.1016/j.nedt.2020.104346>
- Peters, M. D. J., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C., & Khalil, H. (2020). Chapter 11: Scoping Reviews (2020 version). In E. Aromataris & Z. Munn (Eds.), *JBI Reviewer's Manual*. JBI. <https://doi.org/10.46658/JBIMES-20-12>
- Puri, D., & Sood, S. (2018). Significance of positive mental health in student athletes. *Indian Association of Health, Research and Welfare*, 9(4), 608-615.
- Ribeiro, R. M., Bragiola, J. V. B., Eid, L. P., & Pompeo, D. A. (2020). Impact of self-esteem and of the sociodemographic factors on the self-efficacy of undergraduate nursing students. *Texto & Contexto Enfermagem*, 29, e20180429. <https://doi.org/10.1590/1980-265x-tce-2018-0429>
- Roldán-Merino, J., Lluch-Canut, M. T., Casas, I., Sanromà-Ortiz, M., Ferré-Grau, C., Sequeira, C., Falcó-Pegueroles, A., Soares, D., & Puig-Llobet, M. (2017). Reliability and validity of the Positive Mental Health Questionnaire in a sample of Spanish university students. *Journal of Psychiatric and Mental Health Nursing*, 24, 123-33. <https://doi.org/10.1111/jpm.12358>
- Santos, B. S. (2018). *Um discurso sobre as ciências*. Cortez.
- Santos, E. I., Gomes, A. M. T., Marques, S. C., Ramos, R. S., Silva, A. C. S. S., & Oliveira, F. T. (2017). Comparative study of representations of professional autonomy produced by first and last-period undergraduate nursing students. *Revista Latino-Americana de Enfermagem*, 25, e2927. <https://doi.org/10.1590/1518-8345.1919.2927>
- Suen, W. Q., Lim, S., Wang, W., & Kowitlawakul, Y. (2016). Stressors and expectations of undergraduate nursing students during clinical practice in Singapore. *International Journal of Nursing Practice*, 22(6), 574-83. <https://doi.org/10.1111/ijn.12473>
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA Extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of Internal Medicine*, 169(7), 467-473. <https://doi.org/10.7326/m18-0850>
- Vargas-Porras, C., Parra, D. I., & Roa-Díaz, Z. M. (2019). Factores relacionados con la intención de desertar en estudiantes de enfermería. *Revista Ciencia y Cuidado*, 16(1), 86-97. <https://doi.org/10.22463/17949831.1545>
- Vasconcelos, E. M., Trindade, C. O., Barbosa, L. R., & De Martino, M. M. F. (2020). Predictive factors of burnout syndrome in nursing students at a public university. *Revista da Escola de Enfermagem da USP*, 54, e03564. <https://doi.org/10.1590/s1980-220x2018044003564>
- Vilelas, J., Lucas, I., Silva, I. S., Nunes, A. P., & Neves, I. C. (2013). Escala de Fatores de Resiliência de Takviriyannun: propriedades psicométricas da versão portuguesa. *Pensar Enfermagem*, 17(1), 2-16.
- Wang, A. H., Lee, C. T., & Espin, S. (2019). Undergraduate nursing students' experiences of anxiety-producing situations in clinical practicums: a descriptive survey study. *Nurse Education Today*, 76, 103-108. <https://doi.org/10.1016/j.nedt.2019.01.016>
- Webster, D. (2010). Promoting empathy through a creative reflective teaching strategy: a mixed-method study. *Journal of Nursing Education*, 49(2), 87-94. <https://doi.org/10.3928/01484834-20090918-09>
- Wege, N., Muth, T., Li, J., & Angerer, P. (2016). Mental health among currently enrolled medical students in Germany. *Public Health*, 132, 92-100. <https://doi.org/10.1016/j.puhe.2015.12.014>
- Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing*, 52(5), 546-553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>

- World Health Organization. (2001). *The world health report 2001. Mental Health: New Understanding, New Hope*. <https://apps.who.int/iris/handle/10665/42390>
- World Health Organization. (2004). *Promoting mental health: concepts, emerging evidence and practice*. <https://apps.who.int/iris/handle/10665/42940>
- World Health Organization. (2015). *Transformando nosso mundo: a Agenda 2030 para o desenvolvimento sustentável*. <https://brasil.un.org/pt-br/91863-agenda-2030-para-o-desenvolvimento-sustent%C3%A1vel>

## Contributors

L. N. CHAGAS, K. H. J. F. SOUSA, and R. C. G. ZEITOUNE were responsible for the conception and design, analysis and interpretation of data, review and approval of the final version of the article. R. N. SILVA contributed to the analysis and interpretation of data, review and approval of the final version of the article. C. A. C. SEQUEIRA and C. H. GALLASCH contributed to the review and approval of the final version of the article.