UNIVERSIDADE FERNANDO PESSOA

EXPERIÊNCIAS PESSOAIS DE SAÚDE NA FORMAÇÃO DA IDENTIDADE PROFISSIONAL DOS ESTUDANTES DE SAÚDE: ESTUDO QUANTITATIVO

[Personal health experiences in the formation of health students' professional identity: Quantitative study]

Dissertação de Mestrado

[Mestrado Integrado em Medicina Dentária]

Camille Adam Peres

Orientadora:

Profª. Doutora Rute Meneses

Outubro, 2024

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ACKNOWLEDGEMENTS

Gostaria, em primeiro lugar, de agradecer à minha orientadora de dissertação, Prof. Doutora Rute Meneses, que soube estar presente em todos os momentos, com uma capacidade de resposta sem precedentes e um envolvimento total, para me ajudar no decorrer desta dissertação, apesar das dificuldades que lhe possa ter apresentado.

Merci à mes amis de longue date Nathan, Fabien, Asalis et Arthur qui m'ont vu dans les pires moments, comme dans les meilleurs, et qui ont su être là pour moi, comme il fallait au moment où il fallait pour me permettre d'avancer malgré les épreuves

Merci à Mia d'avoir été un des soutiens les plus important de cette dernière année et de l'avoir rendu si exceptionnel

Merci à mes deux amis de Dublin Jean-François et Thaïs, avec qui je vis cet aventure depuis le début, avec qui on a connu les galères et les joies des études à l'étranger

Merci à mes deux colocataires, Mathieu et Nathan, sans qui cette vie à Porto aurait été plus morose et moins drôle chaque jour, meme si ils sont nuls à FIFA

Merci à tous mes amis, toutes ces personnes incroyables que j'ai découvert à Porto qui ont rendu ma vie meilleure par leur simple présence

Merci à mon père Jean-Paul, pour son soutien et son implication grandissante dans ma vie

Merci à Walima d'avoir été là en tant que grand soutien émotionnel depuis le début de ses études

Merci à ma sœur Sophie, ma première amie, pour tout l'amour qu'elle me porte et la force que ça me donne à devenir plus fort chaque jour

Et enfin merci à ma mère Fatiha, sans qui je ne serai jamais arrivé au 10e d'où j'en suis actuellement, merci pour le pilier qu'elle représente, la force qu'elle a su me donner, l'aide et l'amour inconditionnel qu'elle me porte, plus qu'un modèle ou une figure maternelle, ça a su être une amie pour moi chaque jour que Dieu fait.

RESUMO

Objectivo: Esta dissertação foi desenhada o objetivo de compreender a relação entre experiências pessoais de saúde, incluindo práticas de (auto-)cuidados de saúde, convencionais ou complementares e/ou alternativas, e o conhecimento e atitude em relação à Medicina Complementar e Alternativa (MAC), considerados indicadores da identidade profissional de estudantes de ciências da saúde. **Método:** Foi realizado um estudo transversal com 45 estudantes de ciências da saúde em Portugal, entre 31 de maio e 2 de setembro de 2024. A informação obtida foi recolhida através de um questionário com diferentes questões e abrangendo vários aspetos, do qual foram extraídas apenas algumas questões: dados sociodemográficos, saúde auto-relatada, práticas de (auto-)cuidados, conhecimentos e atitudes face à MAC, incluindo a sua importância percebida na futura formação profissional. Os dados obtidos foram analisados através de estatística descritiva e testes de qui-quadrado para verificar se existiam relações entre as diferentes variáveis. **Resultados:** A maioria - 71,11% - dos participantes manifestaram interesse em aprofundar os seus conhecimentos sobre MAC, demonstrando assim uma considerável abertura a estas práticas, muitas vezes percebidas como complementares aos cuidados convencionais. A maioria dos estudantes - 75,55% - consideraram ainda o conhecimento das MAC essencial para a sua futura carreira, demonstrando mais uma vez um real interesse dos estudantes desta geração em integrar estas práticas na sua formação académica e prática profissional. Outros resultados mostram também que a maioria dos estudantes inquiridos julgou a sua própria saúde de forma bastante positiva: 55,55% dos participantes declararam-se satisfeitos com o seu estado geral de saúde. Isto permitiu observar uma relação entre a satisfação dos alunos relativamente às suas práticas de (auto-)cuidados de saúde e o seu nível de conhecimento sobre MAC: os alunos com maior nível de conhecimento sobre MAC, incluindo aqueles que já tinham experimentado estas práticas, estavam mais satisfeitos com as suas práticas de (auto-)cuidado de saúde. Entre os que utilizaram práticas de MAC, 48,88% classificaram os resultados dessas práticas como "bons" ou "muito bons". O estudo permite ainda mostrar que 40% dos participantes consideraram que cuidavam "muito bem" da sua saúde, e que outro grupo (42,22%) indicou que cuidava da sua saúde de forma moderada, sugerindo que estariam propensos a procurar as melhores formas de cuidar. Do ponto de vista da saúde física, 73,33% dos participantes afirmaram não ter problemas de saúde diagnosticados por um profissional de saúde convencional. E do lado das perturbações de saúde psicológica, uma grande maioria (91,11%) dos participantes não referiu qualquer perturbação psicológica diagnosticada por um profissional de saúde convencional. Finalmente, a análise estatística revelou relações significativas entre as conhecimento pessoais de saúde e a adoção de MAC. Os estudantes que tiveram conhecimento anterior com práticas de MAC tinham maior probabilidade de avaliar positivamente os seus resultados de práticas de (auto-)cuidados de saúde, sugerindo assim que a exposição a estas práticas promove uma perceção mais favorável da sua eficácia. Note-se também que aqueles que procuraram activamente informação sobre MAC eram mais propensos a considerar este conhecimento como essencial para a sua prática clínica futura. **Conclusões:** As experiências pessoais de saúde parecem ser determinantes bastante importantes na formação da identidade profissional dos estudantes de ciências da saúde. Parece também que uma potencial integração das CAM na formação académica poderá enriquecer a preparação dos estudantes para uma prática clínica mais global e permitir-lhes atender melhor às necessidades cada vez mais diversas dos doentes. Este estudo mostra também a

importância do acesso a informação fiável sobre CAM, já que actualmente uma grande proporção de estudantes pode ainda obter informação apenas através de fontes informais e, portanto, não seguras, pelo que uma melhor integração de CAM em programas de formação poderia não só fortalecer as competências dos futuros profissionais de saúde, como também melhorar a qualidade dos cuidados que poderão oferecer aos seus doentes.

Palavras-chave: Identidade profissional, Medicina Complementar e Alternativa (MAC), (auto-)cuidado, experiências pessoais de saúde, educação em ciências da saúde.

ABSTRACT

Objective: This dissertation was designed to understand the relationship between personal health experiences, including conventional or complementary and/or alternative health (self-)care practices, and knowledge and attitude towards Complementary and Alternative Medicine (MAC), considered indicators of the professional identity of health science students. **Method:** A cross-sectional study was carried out with 45 health sciences students in Portugal, between May 31 and September 2, 2024. The information obtained was collected through a questionnaire with different questions and covering various aspects, from which it was extracted just a few questions: sociodemographic data, self-reported health, (self-)care practices, knowledge and attitudes regarding CAM, including its perceived importance in future professional training. The data obtained was analyzed using descriptive statistics and chi-square tests to check whether there were relationships between the different variables. **Results:** The majority - 71.11% - of participants expressed interest in deepening their knowledge about CAM, thus demonstrating a considerable openness to these practices, often perceived as complementary to conventional care. The majority of students - 75.55% - still considered knowledge of CAM essential for their future career, demonstrating once again a real interest among students of this generation in integrating these practices into their academic training and professional practice. Other results also show that the majority of students interviewed judged their own health in a very positive way: 55.55% of participants declared themselves satisfied with their general health status. This allowed us to observe a relationship between students' satisfaction with their health (self-)care practices and their level of knowledge about CAM: students with a higher level of knowledge about CAM, including those who had already tried these practices, were more satisfied with their health (self-)care practices. Among those who used CAM practices, 48.88% classified the results of these practices as “good” or “very good”. The study also shows that 40% of participants considered that they took “very good” care of their health, and that another group (42.22%) indicated that they took moderate care of their health, suggesting that they would be inclined to seek better ways of taking care of themselves. . From the point of view of physical health, 73.33% of participants said they had no health problems diagnosed by a conventional healthcare professional. And on the psychological health disorders side, a large majority (91.11%) of participants did not report any psychological disorders diagnosed by a conventional healthcare professional. Finally, statistical analysis revealed significant relationships between personal health knowledge and CAM adoption. Students who had prior knowledge with CAM practices were more likely to positively evaluate their outcomes from (self-)care practices, thus suggesting that exposure to these practices promotes a more favorable perception of their effectiveness. Note also that those who actively sought information about CAM were more likely to consider this knowledge as essential to their future clinical practice. **Conclusions:** Personal health experiences seem to be very important determinants in the formation of the professional identity of health sciences students. It also appears that a potential integration of CAM into academic training could enrich students' preparation for more global clinical practice and allow them to better meet the increasingly diverse needs of patients. This study also shows the importance of access to reliable information about CAM, as currently a large proportion of students can still obtain information only through informal and therefore unsecured sources, so that better integration of CAM into programs Training could not only strengthen the skills of future healthcare professionals, but also improve the quality of care they can provide to their patients.

Keywords: Professional identity, Complementary and Alternative Medicine (CAM), (self-)care, personal health experiences, health sciences education.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAM Medicina Complementar e Alternativa (do inglês Complementary and Alternative Medicine)

n Numero (do inglês Number)

SF-36 Formulário Resumido 36 Pesquisa de Saúde (do inglês Short Form 36 Health Survey)

UCLA Universidade da Califórnia em Los Angeles (do inglês University of California, Los Angeles)

WHO Organização Mundial de Saúde (do inglês World Health Organization)

WHOQOL-BREF Documento de Referência sobre Qualidade de Vida da Melhor Técnica Disponível da Organização Mundial da Saúde (do inglês World Health Organization Quality of Life-Best Available Technique Reference Document)

1. INTRODUCTION

1.1. Overview

Research has shown that the training process for healthcare professionals is often complex, taking into account a variety of factors, including personal health experiences that significantly contribute to the development of professional values, beliefs, and practices (Cornett et al., 2022). Among these influences, personal health experiences play a crucial role in the shaping of professional identity for health students (Cornett et al., 2022). They may also be capable of shaping their future attitudes and clinical practices particularly if they are integrated into their academic training, as suggested by the growing interest in these practices and the lack of formal training on the subject (Doko et al., 2020), like this it may be possible to enrich the training of future healthcare professionals by integrating those experiences, preparing them to adopt more inclusive and personalized approaches to treatment (Doko et al., 2020). Given the significance of personal health experiences in shaping the professional identity of health students (Sarraf-Yazdi et al., 2021), it becomes essential to explore how these experiences influence their knowledge, attitudes and behaviors, particularly in emerging areas like Complementary and Alternative Medicine (CAM).

In recent years, CAM has increasingly attracted the attention of health sciences students (Champeau, 2010). A study found that 77% of medical students believed integrating CAM with conventional medicine could benefit patient care, and 84% agreed that CAM contains ideas and therapies from which conventional medicine could benefit (Champeau, 2010). Additionally, 49% of students reported using CAM therapies themselves (Champeau, 2010). However there exists a diversity in the understanding and application of CAM treatments among these students (Champeau, 2010). This study aims to complement those studies by examining the personal health experiences, knowledge, attitudes and behaviors towards CAM of health sciences students in Portugal.

1.1.1. Research objectives

The main objective of this research is to understand the relationship between personal health experiences, including healthcare practices, whether conventional or

complementary and/or alternative, and knowledge and attitude towards CAM, that will be considered here as indicators of health students' professional identity.

More specifically, this study aims to:

1. Examine personal health experiences of health sciences students;
2. Analyze knowledge and attitudes towards CAM of health sciences students;
3. Evaluate the relationship between the personal health experiences and knowledge and attitudes towards CAM;
4. Explore the importance participants attach to CAM knowledge for their future health professional identity and practice.

1.1.2. Relevance of the study

This study is relevant because it will contribute to a deeper understanding of how personal health experiences relate to students' knowledge, attitudes and behaviors towards CAM practices. In the end, the results of this research could be used to improve training programs by integrating a more educational, diverse and patient-oriented study. This could lead to the preparation of healthcare professionals who are more competent, empathetic and open to diversified treatment practices, thereby improving the quality of care offered to patients. Indeed, previous studies show that exposure to complementary and alternative healthcare practices can positively influence health students' openness to these approaches, that would lead to thereby enriching their professional training (Medeiros et al, 2019).

1.2. Literature review

1.2.1. Definitions and key concepts

CAM is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories or belief systems other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period (WHO, 2013). For the WHO, the terms 'complementary medicine' and 'alternative medicine' refer to "the sum total of all the knowledge, skills and practices based on the theories, beliefs and experiences of different cultures, whether

explicable or not, and which are used in the preservation of health, as well as in the prevention, diagnosis, improvement or treatment of physical or mental illness" (WHO, 2013, p. 12). This includes practices such as intake of vitamins, minerals, probiotics, herbs, massage, meditation, yoga, acupuncture, homeopathy and many others (WHO, 2013).

This key concept will be in line in this study with the concept of professional identity. As Cruess et al. (2015) explain, professional identity is not limited to the acquisition of medical knowledge, but also includes the attitudes, values and behaviours that students develop as they engage in their educational and clinical environment. This helps them align their professional role with a patient-centred approach, which is essential in their future practice.

1.2.2. Global and regional context of CAM use

Worldwide the use of CAM has grown significantly in recent decades (WHO, 2019). For example, a study conducted in Europe has shown that up to 50% of the population uses some forms of CAM, with even higher rates in regions like Asia and Africa, where the use of traditional medicines is deeply rooted in their culture (WHO, 2019). Furthermore, some CAM practices, like acupuncture and herbal therapies, are beginning to be integrated into conventional healthcare systems (WHO, 2019). This phenomenon raises questions about knowledge and the training required to use them in the healthcare system (WHO, 2019).

The growth in CAM adoption is particularly evident in the so-called developed part of the world, such as United States, Europe and Australia, where CAM use has spread to the large populations as a treatment or in auto-medication use (WHO, 2019). The study by Joyce et al. (2016) found that the use of CAM therapies in the United States had increased significantly, reaching around 30% of the adult population in 2012. In Europe too, around 25.9% of the population used CAM methods in a 12-month period, indicating a growth in the adoption of these practices in traditional care settings (Joyce et al., 2016).

In Portugal, the integration of CAM has been gradual but marked by strict regulation. Indeed, it should be noted that, in 2003, the Portuguese Government adopted Law No. 45/2003, officially recognizing six CAM therapies, including Traditional Chinese Medicine, which marked a real turning point in the integration of these practices into the

Portuguese health system. In addition, in 2013, Law No. 71/2013 confirmed the implementation of this regulation by making the issuance of professional licenses for practitioners mandatory, as well as a minimum university degree for the practice of these CAM. This legislation has, above all, made it possible to define a real educational framework for the training of health professionals in CAM, including the creation of specialized university programs. One of the major advances that marks this turning point is the University of Porto, which now offers a Master's degree in Traditional Chinese Medicine for doctors, covering disciplines such as acupuncture, herbal medicine, and energy therapies. These developments have helped improve the quality and safety of alternative care in Portugal (Zheng et al., 2021).

According to a study conducted in Croatia, the CAM practices most used by the population are natural products like vitamins, minerals, probiotics and herbs (Doko et al., 2020). Mind-body practices, including massage, meditation and deep breathing are also likely to be used (Doko et al., 2020). Much of this adoption is principally driven by a desire to maintain or improve health, particularly among students of the health sciences (Doko et al., 2020). Those changes are representative of a larger trend observable in Eastern Europe, where acupuncture, phytotherapy, aromatherapy and many others have gained popularity as an alternative solution (Doko et al., 2020). Also, Balouchi et al. (2018) explain that these practices are particularly appreciated in Eastern European countries, despite the economic challenges and limitations of healthcare systems. As shown in their study, young adults, particularly those pursuing studies in the health sciences, are more likely to use these practices, indicating a growing interest for alternative healthcare (Balouchi et al., 2018).

In the Balkans, the use of CAM has historically been limited by legislative frameworks and skeptical attitudes among healthcare professionals (Jakovljevic et al., 2013). Jakovljevic et al. (2013) point out that in the second half of the 20th century, CAM was not recognized as an official medical practice due to the communist context that dominated many countries in the region. It wasn't until the 1990s, with the collapse of communist regimes, that interest in CAM therapies began to grow, stimulated in part by disappointment with conventional treatments and the desire for safer, natural treatment methods (Jakovljevic et al., 2013).

Legislation on CAM in the Balkans has evolved slowly (Jakovljevic et al., 2013). For example, in Serbia, CAM was only legalized in 2005 under the term "traditional

medicine" (Jakovljevic et al., 2013). This enabled health practitioners, including doctors, dentists and pharmacists, to officially integrate certain CAM practices into their care services (Jakovljevic et al., 2013). However, Jakovljevic et al. (2013) report that even if formal teaching of CAM therapies remains limited in Balkan health universities, one can note the exception of pharmacognosy, which has a long tradition of therapeutic application of medicinal plants in the region. This situation shows that the Balkans face challenges in fully integrating CAM into their healthcare systems. Yet, there is a growing acceptance and more frequent use of these practices, especially in primary and alternative healthcare (Jakovljevic et al., 2013).

1.2.3. CAM in health students' training

In the Balkans, the study by Jakovljevic et al. (2013) revealed that students of medicine, pharmacy, and other health disciplines were showing a greater interest in CAM, partly due to perceived limitations in conventional approaches to medicine. Students are particularly attracted to this holistic approach to care that can treat the whole person with CAM (Jakovljevic et al., 2013), because they offer a more global approach to care, in contrast to conventional medicine, which often focuses solely on symptoms (Davey, 2023). Despite this growing interest, formal CAM teaching remains limited in Balkan universities (Jakovljevic et al., 2013). According to the same source, curricula continued to focus practically only on conventional methods of care, with little integration of CAM practices into mandatory courses.

In Croatia, interest in CAM among health students is also on the rise. The 2020 study by Doko et al. reports that a significant number of students are using CAM practices, mainly to maintain and improve their own health. These practices are often perceived as complements to conventional care, rather than as a complete alternative solution. The study also reveals that the pieces of information about CAM among the students in Croatia come mainly from the Internet, pointing to a lack of formal training in this field. The problem is that the students regularly obtain their knowledge about CAM through forums, blogs and other non-specialized websites, which may raise questions about the reliability of the information they receive and therefore their capacity to apply it to a care plan.

In Australia, Park et al. (2020) examined the attitudes of health students, and showed that,

as in the Balkans and Croatia, there was a growing interest in CAM among young health students. However, unlike the Balkans, Australia has more formally integrated CAM teaching into health training programs, offering structured courses and specific certifications in CAM therapies. This more advanced integration in Australia reflects a different approach to health education, where CAM is recognized as a complementary and integrated part of overall health care. As a result, Australian students receive CAM training that is more comprehensive and organized (Park et al., 2020), in contrast to training in Croatia and the Balkans, which is less structured and more based on independent learning.

1.2.4. Impact of personal experiences on attitude towards CAM

Personal health experiences can play a key role in shaping health science students' attitudes towards CAM. According to Medeiros et al. (2019), pharmacy students who have had positive personal experiences with CAM were more likely to adopt these practices in their future practice. This study reported that students who have used CAM therapies were more willing to recommend these practices to their future patients, reinforcing the idea that personal experiences can directly influence the perception and the possible adoption of these methods. In the Balkans, health students who have used CAM for their own health needs were more open to integrating these practices into conventional care (Jakovljevic et al., 2013). This openness is often motivated by the desire to offer to their future patients a wider range of therapeutic options, therefore enriching their clinical approach (Medeiros et al., 2019). Those studies show not only that personal experiences shape students' beliefs, but also that they can influence their willingness to learn and find out more about these complementary/alternative practices.

These attitudes, shaped by personal experience, can have a significant impact on how future healthcare professionals integrate CAM into their clinical practice, as in Bangladesh, where Yilmaz et al. (2020) showed that students who had positive experiences with CAM through the media, their entourage or the healthcare system were more likely to integrate these practices into their daily work. This integration often translates into an increased willingness to offer more personalized care, which takes into account patients' specific preferences and needs (Clossey et al., 2023). Furthermore, the 2020 study by Doko et al. indicates that this willingness to integrate CAM into clinical

practice is also influenced by access to information and training on these practices. Students who have access to quality educational resources on CAM, whether through formal courses or self-study, are better prepared to incorporate these practices into their future professional setting (Doko et al., 2020). This could possibly say that there is a need in developing educational programs that include CAM to prepare students to meet the, wanted or maybe needed, diverse expectations of patients in a modern care setting.

1.2.5. Challenges and prospects

Integrating CAM into conventional healthcare systems is a big challenge that presents several important steps, mostly institutionally but also pedagogically, as shown in the study of Joyce et al. (2016), that pointed out the lack of formal CAM training in the curricula of healthcare professionals. This gap in education limits the ability of future professionals to properly evaluate CAM therapies, confidently recommend them and effectively integrate them into patient care, not to mention all the existing prejudices among conventional healthcare practitioners that are another barrier to CAM integration (Joyce et al., 2016). Skepticism about the efficacy of CAM practices, often linked to a lack of robust scientific data, hinders their acceptance within conventional healthcare settings, what is a bit paradoxical when, according to the WHO (2013), this situation is exacerbated by insufficient regulation in many countries, contributing to a lack of confidence in the safety and efficacy of CAM therapies.

Despite these challenges, there are promising prospects for the increased integration of CAM into healthcare systems. According to the WHO (2013), a more integrated approach is recommended, where CAM is not only taught more formally in health training programs, but is also more strictly regulated to ensure the safety and efficacy of treatments. The WHO (2013) also advocates the adoption of harmonized international regulatory frameworks to oversee the use of CAM, particularly in countries where it is already widely used. In addition, Balouchi et al. (2018) suggest that increased research into the efficacy of CAM therapies could play a crucial role in their future integration, as rigorous clinical studies, supported by academic and medical institutions, can provide the evidence needed to overcome skepticism about their effectiveness and therefore promote wider adoption of CAM practices in conventional care. This approach could not only contribute to greater acceptance of CAM among healthcare professionals but also to a

greater confidence from the patients about those possible alternatives (Odegard et al., 2022).

Another area for development would be the continuing education of practicing healthcare professionals - by offering additional training in CAM, medical institutions can ensure that practitioners are well-informed about available therapies and able to advise their patients in an informed manner. Such skills enhancement could also facilitate a more comprehensive approach to care, where conventional and alternative treatments are used in complementary ways to improve patient outcomes physically but also mentally, because in the end everything is connected.

2. DEVELOPMENT

2.1. Methodology

2.1.1. Study design

This cross-sectional study adopts a quantitative approach to explore the relationship between personal health experiences and the formation of health science students' professional identity, specifically, their knowledge and attitudes towards CAM.

2.1.2. Participants

The sample included higher education health science students enrolled in several institutions in Portugal. In order to participate in the research, individuals needed to be health sciences students and be 18 years old or older.

2.1.3. Material

The data collection instrument employed in this study was a structured questionnaire, part of larger questionnaire, developed by Rute Meneses, based on literature review, for the research project "Práticas de (Auto-)Cuidados de Saúde em Portugal e Factores Associados".

The following items were selected for analysis in this study:

A. Socio-demographic data:

- Age (years)

- Level of education (last level successfully completed)

B. Health data:

- In general, would you say your health is? (item 1. from SF-36)

- How satisfied are you with your health? (item 2. From WHOQOL-BREF)

- Indicate how much do you generally take care of your health.

- Do you have any physical health problem diagnosed by a conventional health professional?

- Do you have any psychological health problem diagnosed by a conventional health professional?

C. Knowledge of non-conventional (self)healthcare practices:

- To what extent do you have knowledge of non-conventional (self)healthcare practices?

- Have you ever looked for information on non-conventional practices?

- Are you interested in having (more) knowledge about non-conventional practices?

- Is knowledge of non-conventional practices important to you as a (future) healthcare professional?

D. Experience with conventional and non-conventional (self-)healthcare practices:

- When was the last time you carried out a (self)healthcare practice?

- How would you rate the results?

- How satisfied are you with this practice?

- Do you consider this practice as: Conventional practice, Non-conventional practice, Not sure

- If you have already used a non-conventional practice, did you do so: By consulting a professional, By self-administration, Both.

2.1.4. Data collection procedure

Various methods were used to recruit participants, such as sending email invitations and making announcements on social media. Participation was completely voluntary and anonymity was guaranteed.

Data for this study was collected over between May 31 and September 2 2024. The questionnaire was made available to participants via a unique online link given in the invitation, ensuring controlled and secure distribution. Responses were anonymous, with no personally identifiable information associated with individual responses. To garantee anonymity, the principal researcher/supervisor excluded from the database created for the researcher/student the variable 'sex'. Subsequently, the data was meticulously stored in a secure database to guarantee its integrity and protection. This approach enables us to guarantee a rigorous and reliable analysis of the data collected, in accordance with the

ethical and academic standards that have been set.

2.1.5. Data analysis methods

The statistical analysis was performed using Google Sheets. Firstly, descriptive analyses were conducted to provide an overview of the participants' socio-demographic characteristics and responses to the subsequent questionnaire items. These analyses included the calculation of means, medians, standard deviation and frequencies for each variable, which provided a clear overview of the respondents' profile.

Following this, chi-square tests were used to examine the links between personal health experiences and participants' knowledge and attitudes towards CAM practices. This analysis took into account variables as indicators of health experiences, such as the use of conventional and non-conventional health practices. This permited to determine whether significant differences existed or not between the groups, such as variations in attitudes according to the factors considered in the questionnaire.

The chi-squared test is a statistical tool that helps measure the association between two categories of variables by comparing the observed frequencies to the anticipated frequencies, which normally would occur if the variables were independent and if the difference is considerable, then it indicates that the variables are related. The test has two crucial elements: the test statistic and the p-value. The p-value indicates the probability of observing a potential difference of this magnitude or bigger, only if the variables were actually independent. In general, if the p-value is less than a specific cut-off number, here such as 0.05, the link would be considered statistically significant.

Finally, the results of these analyses were presented in the form of tables and graphs, to make it easier to interpret, allowing significant trends and relationships to be clearly identified.

2.1.6. Ethical considerations

For this study, all the rules of informed consent, anonymity and confidentiality, data protection, respect for participants' privacy and the right of withdrawal were respected for the protection of the rights and dignity of the participants.

The study has been approved by the University Ethics Committee.

Before anything else, participants were informed in the invitation about the study, including its aims, what data would be collected and how the information would be used. They were assured of the confidentiality of their responses and of their right to withdraw from the study at any time without any consequence.

Informed consent was obtained from each participant, indicating that they fully understood the information provided and agreed to participate voluntarily.

2.2. Results

2.2.1. Overview

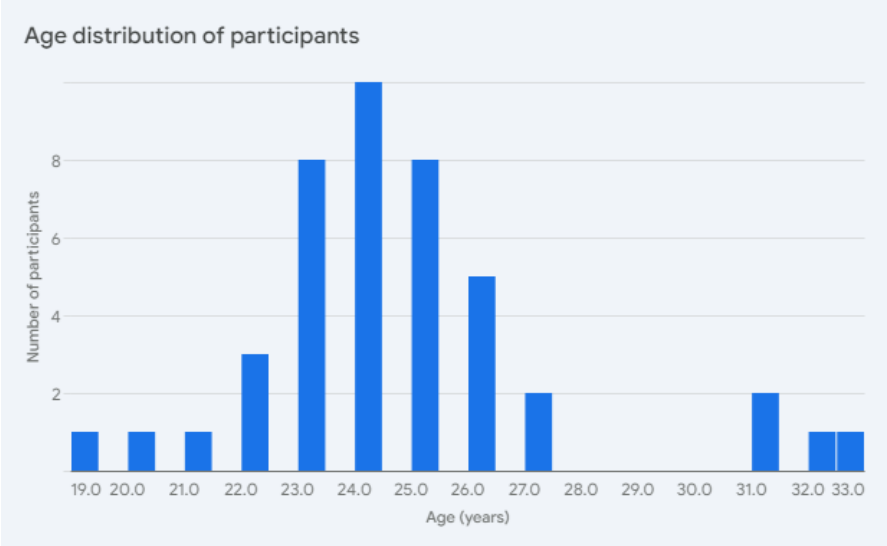
This section presents the results of the analysis of the data collected from health sciences students in Portugal. First each questionnaire question will be reviewed, including descriptive data and outlining the key findings. In order to find one or more significant links between the participants' responses, the chi-square test will be used to analyze potential associations between the various variables in a second section. Finally, a summary of the main findings will be provided.

2.2.2. Socio-demographic characteristics of the sample

The study comprised 45 participants. Age distribution data of the study participants was analyzed using descriptive statistics and illustrated in Graphic 1. The mean age for the whole sample was 24.67 years, with a standard deviation of 2.84 years. The median age is 24, thus implying half of the participants are 24 years or below. The minimum age is 19 while the maximum age is 33.

Graphic 1

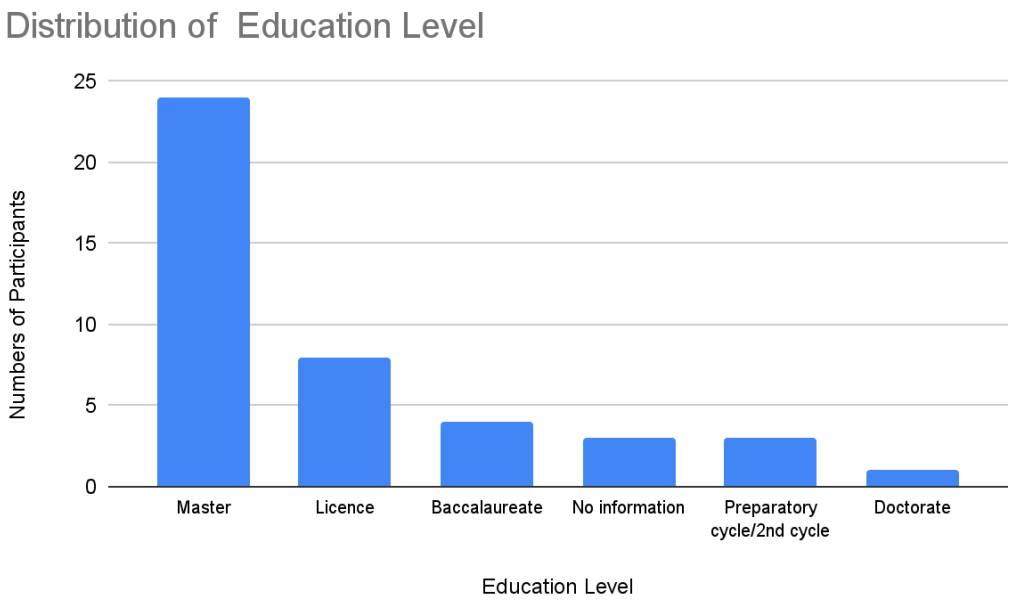
Age distribution of participants.



Most of the participants were highly educated, with the majority having a Master's degree (53.33%, n = 24) followed by the Bachelor's degree (17.77%, n = 8). Graphic 2 illustrates the distribution of education levels.

Graphic 2

Distribution of education level.

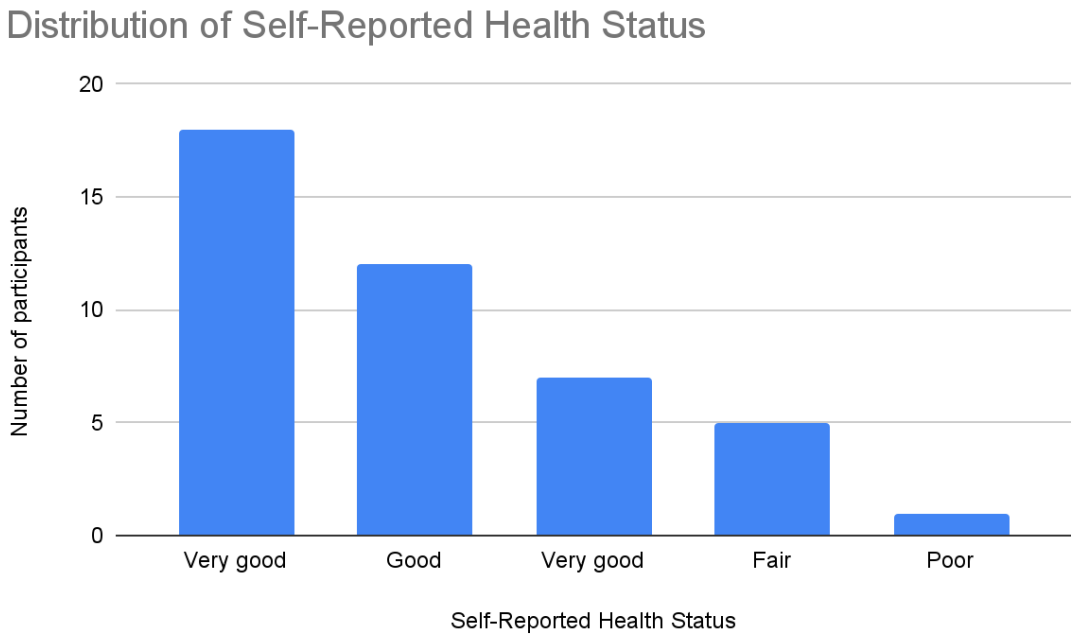


2.2.3. Health characteristics of the sample

The majority of participants had a favorable perception of their health, rating it as "Very Good" (40%; n = 18) or "Good" (26.66%; n = 12). The frequency distribution of self-reported health status is shown in Graphic 3.

Graphic 3

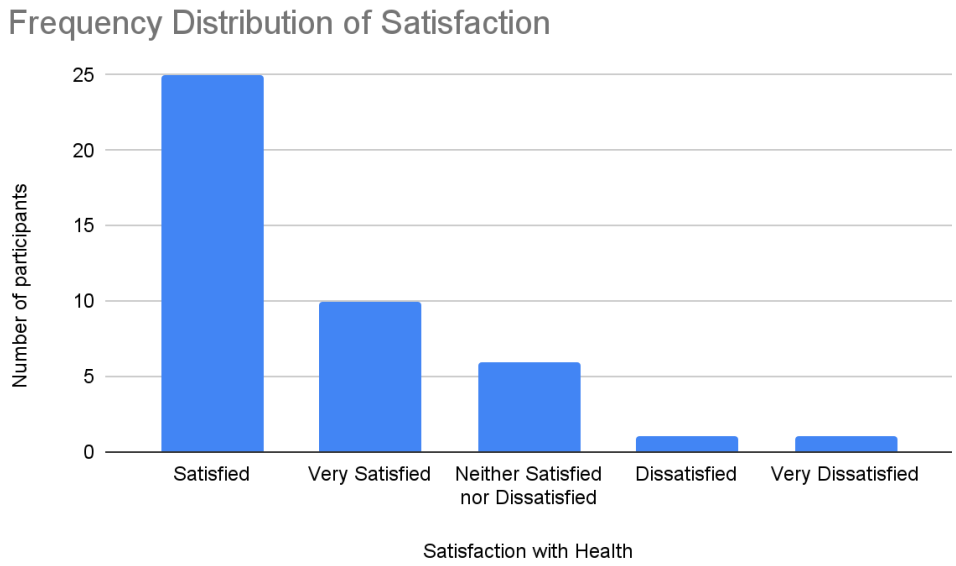
Distribution of self-reported health status



The majority of the participants appeared to be satisfied with their health (55.55%, n=25), which aligns with their generally positive perception of their overall health. Graphic 4 summarizes these results.

Graphic 4

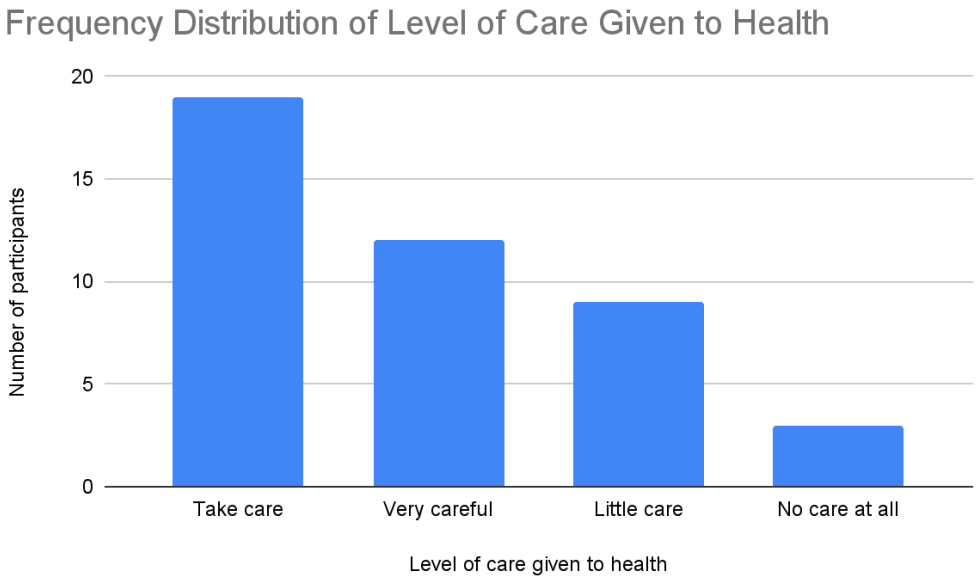
Frequency distribution of satisfaction with own health



Most of the respondents felt that they took care of their health ("Take care": n=19, 42.22%), though with varying levels of attention ("Very careful": n=12, 26.66% / "Little care": n=9, 20%). This can be seen in Graphic 5, titled "Frequency Distribution of level of care given to health".

Graphic 5

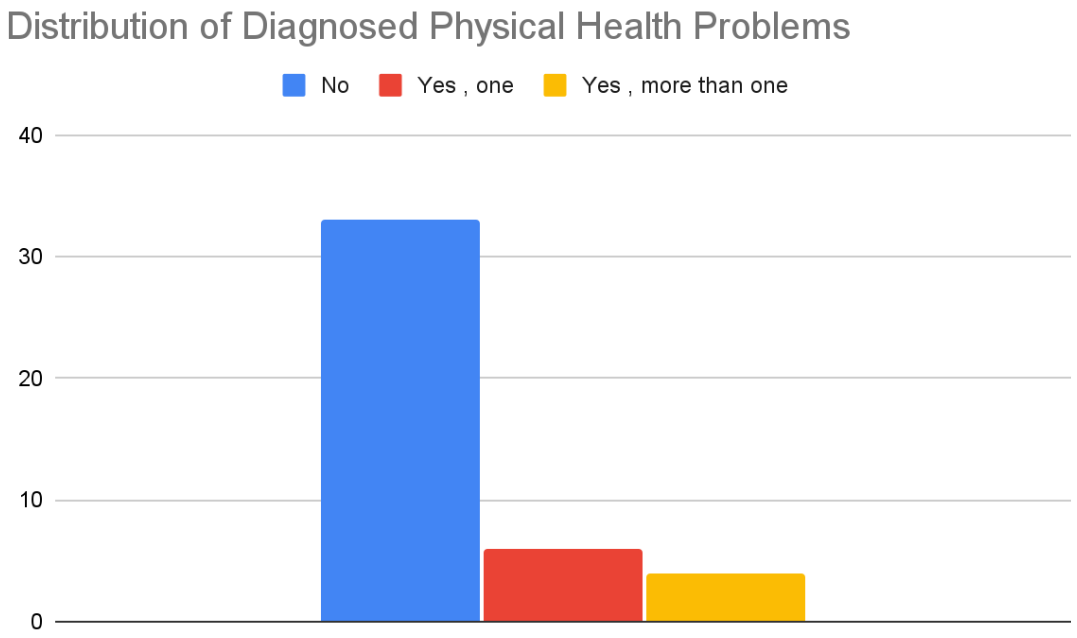
Frequency Distribution of level of care given to health



The majority of those questioned reported that they had not received a diagnosis for any physical health issues ("No": n=33, 73.33%). These results are visually represented in the graphic titled "Distribution of Diagnosed Physical Health Problems" (cf. Graphic 6).

Graphic 6

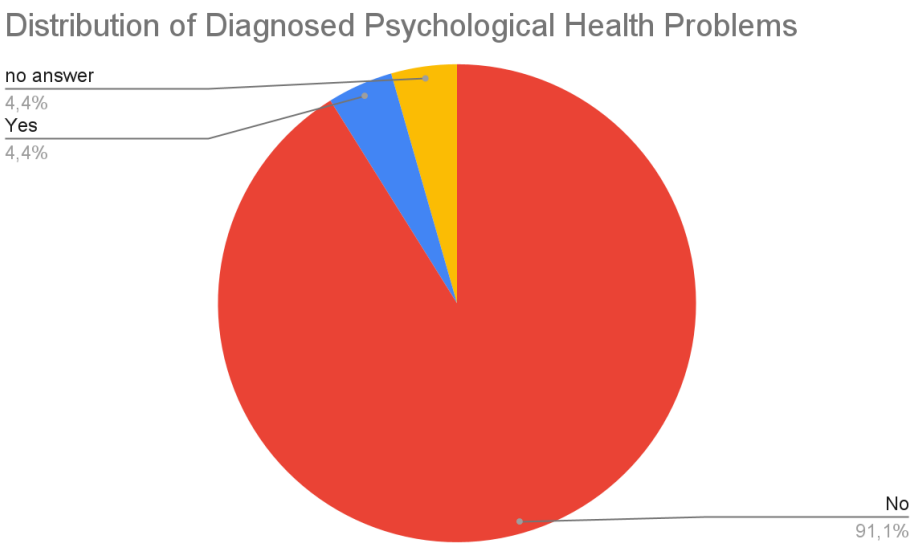
Distribution of Diagnosed Physical Health Problems



As can be seen in the Graphic 7, the large majority of participants did not report suffering from any diagnosed psychological health problems ('No': n=41, 91.11%).

Graphic 7

Distribution of diagnosed psychological health problems

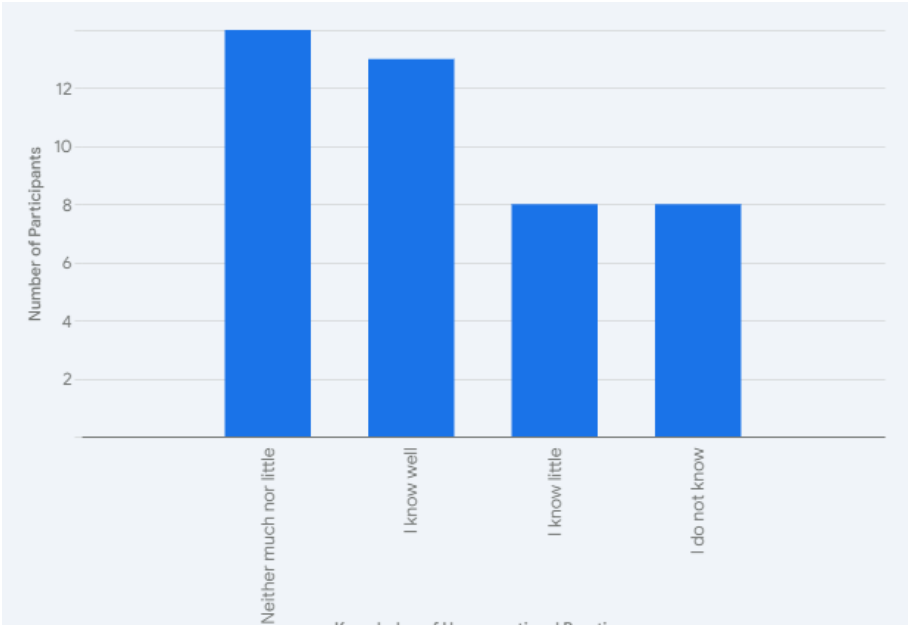


2.2.4. Knowledge and attitudes towards CAM

Graphic 8 shows that knowledge of CAM was varied, with a relatively balanced distribution between the different response categories. Most of the participants answered 'Neither much nor little' (n=14, 31.11%) and 'I know well' (n=13, 28.88%).

Graphic 8

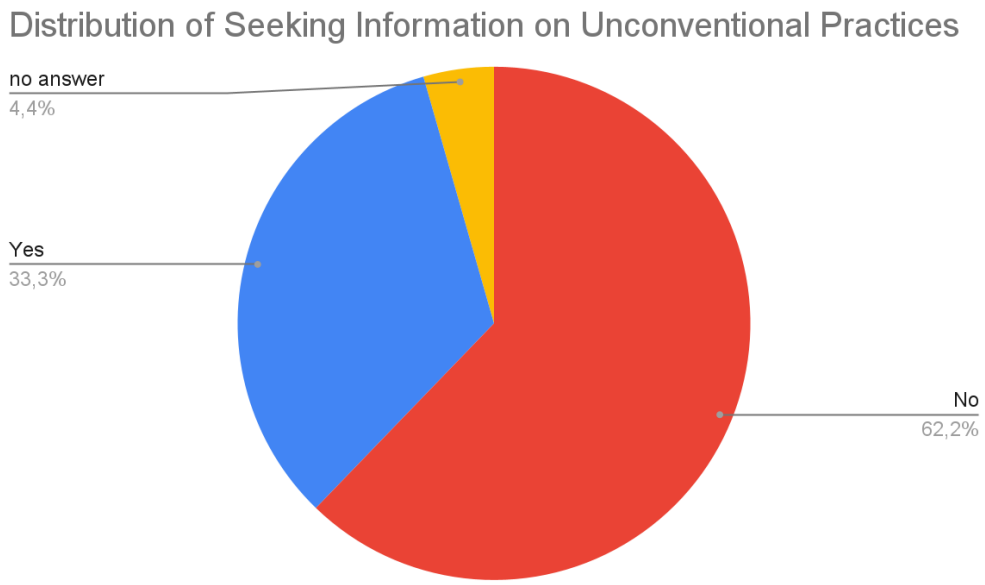
Frequency distribution of knowledge about CAM



Even though the majority did not actively seek information (n=28, 62.22%), a considerable portion of participants showed interest in CAM by looking up information about it (n=15, 33.33%). Graphic 9 illustrates the frequency distribution of seeking for information on non-conventional practices.

Graphic 9

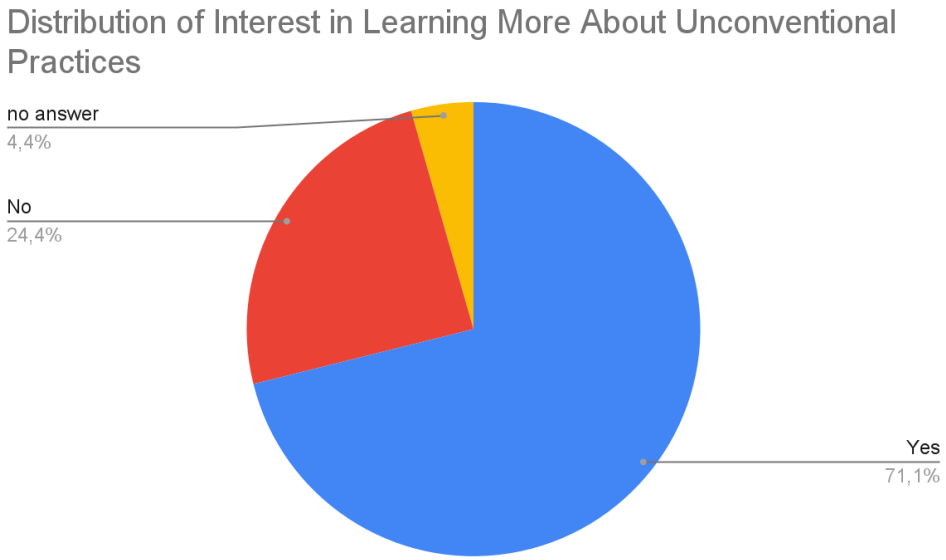
Distribution of seeking information on non-conventional practices



Although the vast majority of participants have not yet searched for information on CAM, as seen before, Graphic 10 suggests that most were interested in acquiring (more) knowledge about it ("Yes": n=32, 71.11%).

Graphic 10

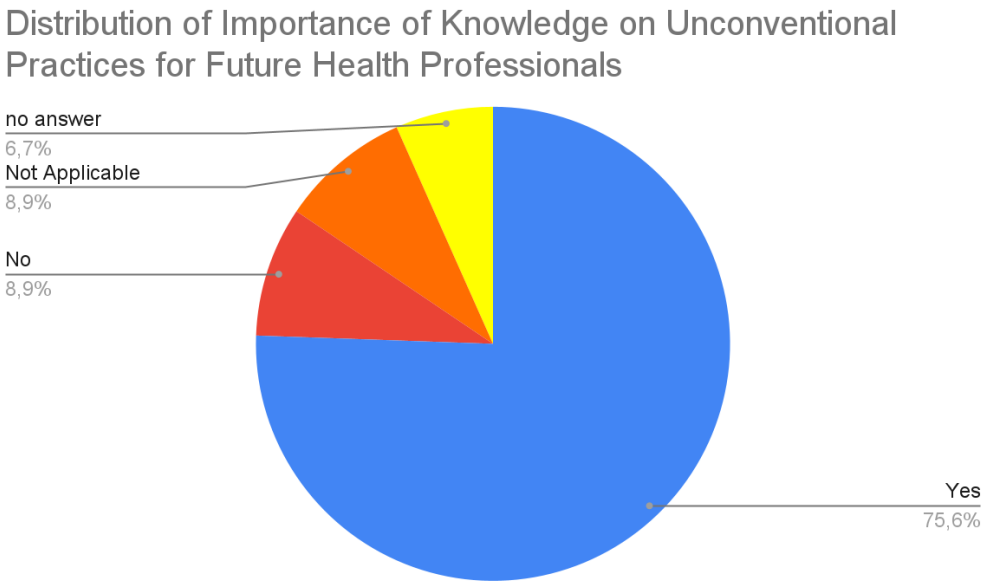
Distribution of Interest in Learning More About Non-conventional Practices



The majority of participants considered that knowledge of non-conventional practices is important for them as future healthcare professionals (n=34, 75.55%). The graph titled "Distribution of Importance of Knowledge of Unconventional Practices for Future Health Professionals" illustrates these results (cf. Graphic 11).

Graphic 11

Distribution of Importance of Knowledge on Non-conventional Practices for Future Health Professionals



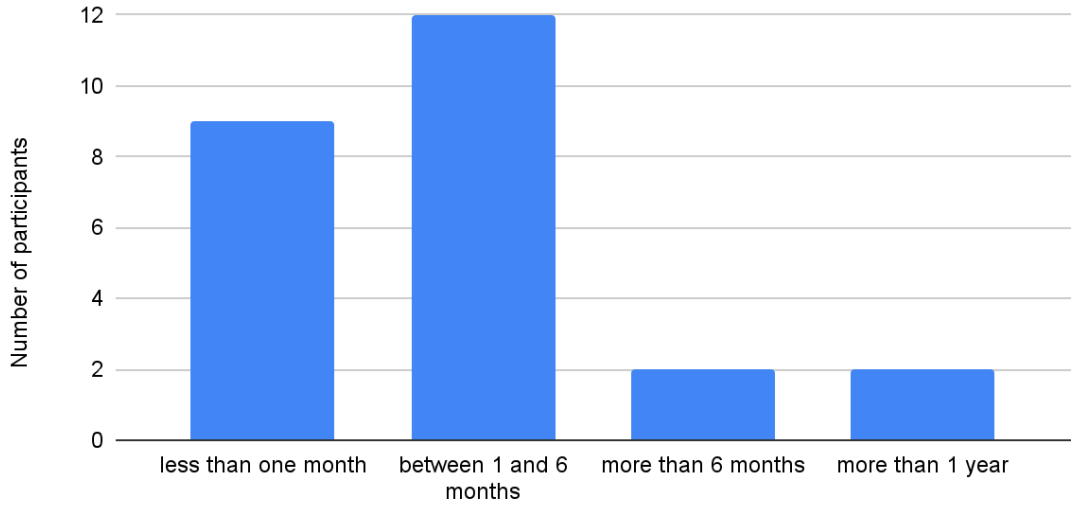
2.2.5. Experience with conventional and non-conventional (self-)healthcare practices

A notable number of participants did not answer the question "When was the last time you carried out a (self-)healthcare practice?" (n=20, 44.44%), possibly due to a lack of clarity in the question.

Among those who responded (n=25), most had recently performed a (self)healthcare practice ("between 1 and 6 months": n=12, 48% / "less than a month": n=9, 36%). This is illustrated in Graphic 12, titled "Distribution of Last Self-Care Practice".

Graphic 12

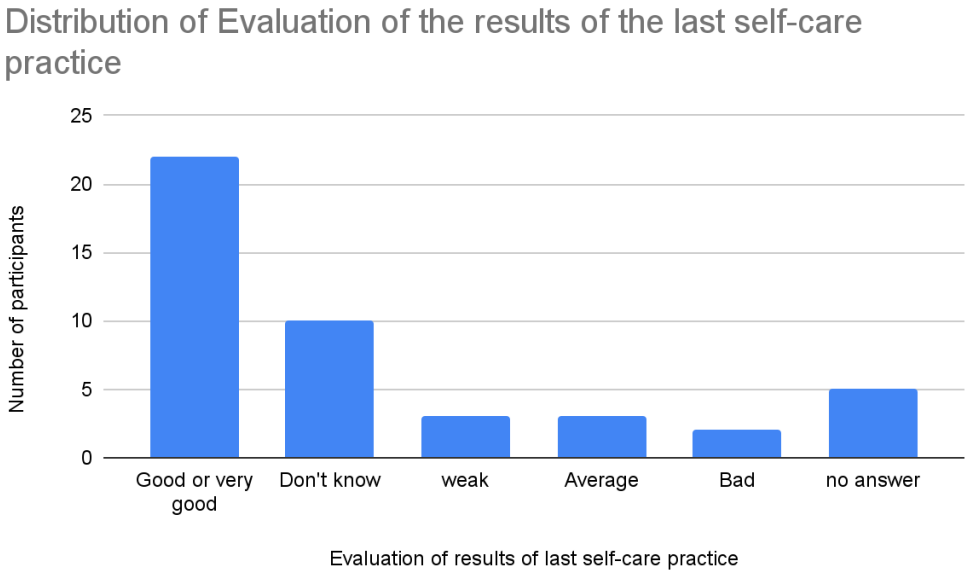
Distribution of last (self)healthcare practice



Most participants who rated the results of their last (self-)healthcare practice considered them to be 'Good or very Good' (n=22, 48.88%). However, a considerable number of participants were unable to evaluate the results (n=10, 22.22%) or found them 'weak' (n=3, 6.66%) or 'Bad' (n=2, 4.44%). Graphic 13 presents these data visually.

Graphic 13

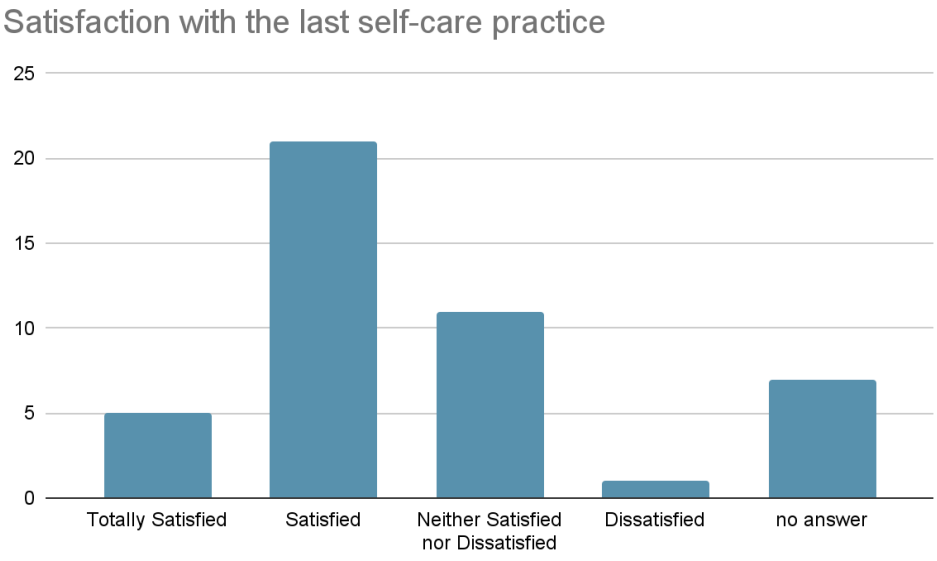
Distribution of the Evaluation of the Results of the Last Self-Care Practice



The majority of participants reported being 'Satisfied' (n=21, 46.66%) with their last (self) healthcare practice, followed by 'Neither Satisfied nor Dissatisfied' (n=11, 24.44%). A smaller percentage reported being 'Totally Satisfied' (n=5, 11.11%) or 'Dissatisfied' (n=1, 2.22%). These findings are visually summarized in Graphic 14.

Graphic 14

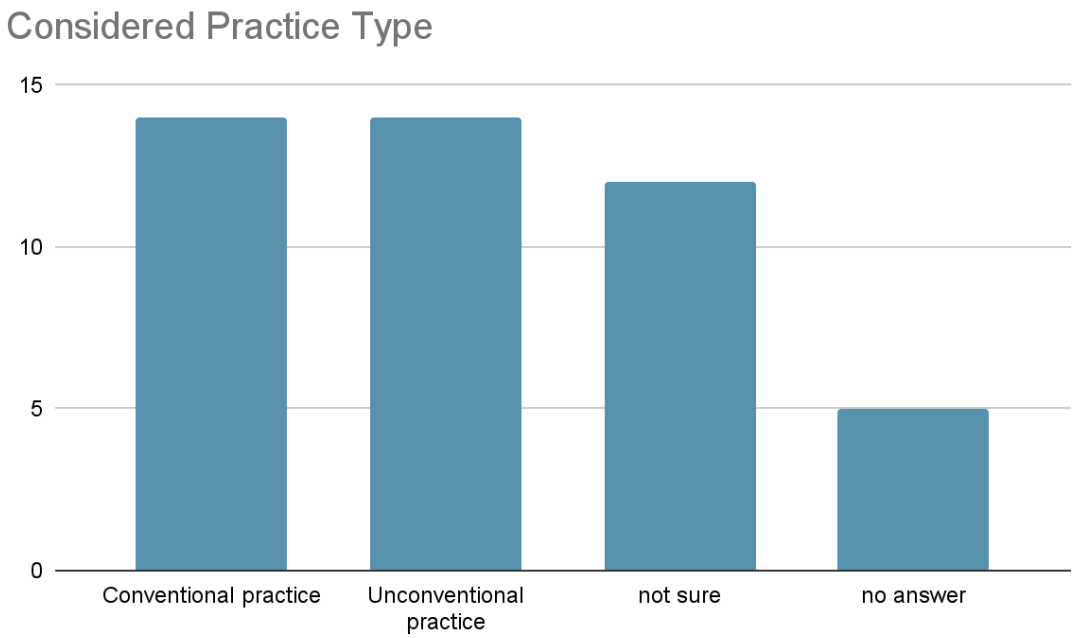
Distribution of Satisfaction with Last Self-Care Practice.



The distribution of responses regarding the type of (self) heathcare practice, whether conventional or non-conventional, is equal, with 'Conventional practice' (n=14, 31.11%) and 'Non-conventional practice' (n=14, 31.11%) having the same highest frequencies. A considerable number of participants (n=12, 26.66%) were unsure about the classification of their practice. The bar chart titled "Considered Practice Type" visually represents these findings (cf. Graphic 15).

Graphic 15

Considered Practice Type

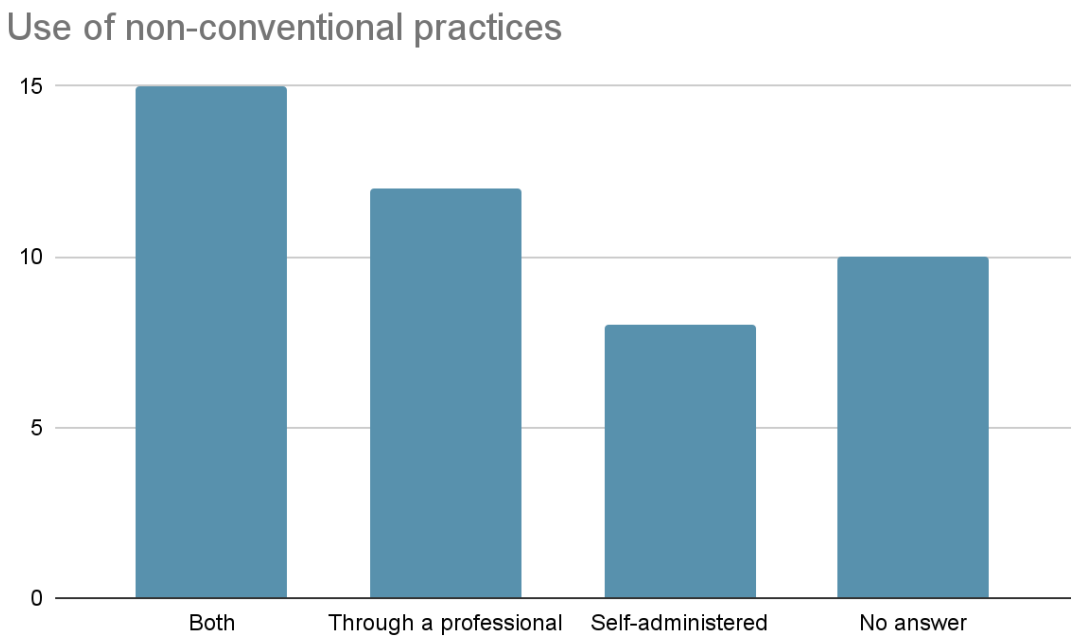


Of the participants who had already used a non-conventional practice, most used both self-administration and professionals (n=15, 33.33%). The second most responded use of professionals (n=12, 26.66%), and the third part answered self-administration (n=8, 17.77%). The Graphic 16 titled 'Use of Non-Conventional Practices' provides a visual representation of these results.

The answer to this question offers an overview of participants' experience with CAM and their approach to self-care. It is of interest to note that a considerable proportion of participants (n=10, 22.22%) did not respond to this question.

Graphic 16

Use of Non-Conventional Practices



2.2.6. Relation between variables

In the analysis, the chi-squared test was used on each pair of relevant category of variables, doing this, it allowed us to determine whether health perception, satisfaction with (self-)healthcare practices, and interest in non-conventional practices were independent or related to one another. The conclusions were conducted using p-values, which helped in the process of identifying significant relations between those analyzed variables.

A statistical examination was carried out to verify the possible relation between self-reported general health and satisfaction with health. After calculating the chi-square test for these two variables, we find a statistical figure of 24.14 with a p-value of less than 0.0001, which is much smaller than the 0.05 threshold. This allows us to refute the null hypothesis of independence, indicating a relationship between these two variables. We can therefore assume that people who consider their health to be good or very good are more satisfied with their condition. This examination allows us to show how subjective perception comes to play a crucial role in determining satisfaction with health.

We analysed the relation between the way in which the results of the last (self-)healthcare

practices were evaluated and the levels of satisfaction with this practice. The test gives us a statistic of 17.76 and a p-value equal to 0.0069, giving us a significance at the 0.05 level chosen for this study. That said, we can reject the null hypothesis and determine that there is indeed a relationship between these variables. We can therefore state that, in this study, people who obtained positive results from their (self-)healthcare practice showed higher levels of satisfaction, which shows the advantages of personal perception about (self-)healthcare practice over their levels of satisfaction over that practice.

Here we will try to show a significant relation between the evaluation of self-care results and the previous use of non-conventional methods. A chi-square analysis for these variables of this study gave a statistical value of 16.27 as well as a p-value of 0.0390, which allows us to reject the null hypothesis and demonstrate a relationship between these 2 variables. This suggests that, for this study, previous exposure to CAM techniques could indeed have an impact on how individuals perceive and evaluate the results of their (self-)healthcare practice. People who have used non-conventional (self-)healthcare methods are therefore more likely to evaluate them in a subjectively positive way.

This research also explored how previous exposure to non-conventional (self-)healthcare practices could be related to individuals' perception of (self-)healthcare practices as conventional or non-conventional. The results of this study show us a significant statistical link between these two variables. The chi-square test performed indicated a statistical value of 15.72 with a significance level of 0.0035, thus lower than the threshold of 0.05. Therefore, it can be stated that the null hypothesis was not accepted and that therefore people who have already used non-conventional practices do indeed have a tendency to consider their (self-)healthcare practices as non-conventional, which suggests that despite past exposure to non-conventional practices this does not influence their perception of CAM as more conventional techniques.

The possible link between the interest in having (more) knowledge about non-conventional practices and the perceived value as a tool for future health professionals was studied. The results show a direct link between curiosity for exploring complementary/alternative approaches and the perceived importance of this knowledge for future health professionals with a statistical value of 6.98 following the chi-square test but also a p-value of 0.0305, which clearly indicates a significance lower than the usual threshold given of 0.05. This suggests that students who value researching this type of education are more likely to see these non-conventional practices as useful to future health

professionals considering them important in order to explore different approaches to health care.

In the last test, a significant link between the participants' knowledge of non-conventional practices and their satisfaction with their most recent (self-)healthcare practice was explored. The results of the chi-square test showed a statistic of 16.29 and a significant p-value of 0.0387, allowing us to reject the null hypothesis. This lets us suppose that the participants of this study with a better knowledge of the different CAM have a greater ease in making better decisions in terms of (self-)healthcare, which translates into higher levels of satisfaction with them, reflecting the saying that access to information on Complementary and Alternative Medicine would seem crucial to improve (self-)healthcare practices.

2.3. Discussion

2.3.1. Overview

This section follows the same structure as the Results section. Firstly, a set of hypothesis regarding all the figures will be presented. Then, a comparison with existing literature will be presented.

2.3.2. Socio-demographic characteristics of the sample

The results in Graphic 1 suggest that the majority of participants are young adults, which is in line with the fact that all of them are students, as wanted by the study. This predominance of young adults in the sample carries some implications for the interpretation of the results, especially perceptions of health and knowledge and attitudes towards CAM. Young adults may be more open to new approaches to health care and more likely to experiment with different modes of care, including CAM.

It is also worth considering that the sample represented a relatively small age range, which limits the generalizability of the results for other age groups. An interesting avenue for future research would be to examine how knowledge, attitudes and behaviors related to health and CAM change over the life course with a more age-diverse population.

The sample's level of education shown in Graphic 2 might be linked to a greater openness to new information and a stronger capacity for critical analysis, which could influence

their knowledge and attitudes towards CAM and their willingness to integrate it into their future professional practice. The results of this study also confirm similar trends to those observed in other research on CAM. Many health science students are increasingly interested in CAM, partly due to the perceived limitations of conventional medicine and an increased awareness of more holistic and patient-centred approaches. The majority of participants in this study stated that knowledge of CAM was important for their future professional practice, which is consistent with studies conducted in Australia and Croatia. Furthermore, the results highlight that personal health experiences strongly influence students' attitudes towards CAM, reinforcing the idea that these experiences play a crucial role in their training. Finally, although students are interested in learning about CAM, they often have difficulty accessing reliable information, highlighting the need to integrate formal training on these practices into the curricula of health students in Portugal.

2.3.3. Health characteristics of the sample

The participants' interest in CAM and other healthcare service-using behaviors may be impacted by their subjective health perception, shown in Graphic 3. It's possible to suggest that people who believe they are in good health are more likely to look into CAM as a preventive approach to keep up their good health perception and stay healthy. On the other hand, a favorable view of their health can make them less dependent on conventional medical care.

The level of satisfaction seen in Graphic 4 may influence the participants' tendency to seek healthcare, including CAM, as well as their adherence to treatment.

The level of attention paid to one's health seen in Graphic 5 may be related to the use of CAM, as more health-conscious individuals might be more inclined to explore different care options.

The presence of physical health problems, that is shown in Graphic 6, may influence the use of CAM, as individuals with chronic conditions might be more inclined to seek complementary treatment options.

The presence of psychological health conditions, presented in Graphic 7, could potentially influence the use of CAM, as practices like meditation or yoga may be used to cope with stress and anxiety.

2.3.4. Knowledge and attitudes towards CAM

The level of knowledge of CAM practices, as seen in Graphic 8, may influence the willingness to use or recommend them.

The active search for information, pictured in Graphic 9, may indicate greater openness and a desire to learn more about non-conventional practices, which is a favorable attitude towards CAM.

The interest in search for information, seen in Graphic 10, can be considered a favorable attitude towards CAM and may be linked to a desire to expand treatment options, adopt a more holistic approach to health, or simply to be better informed about the different care modalities available.

The results seen in the Graphic 11 suggests a favorable attitude and an openness to integrating non-conventional practices into participants' future careers, which could lead to a more holistic and patient-centered approach to care.

2.3.5. Experience with conventional and non-conventional (self-)healthcare practices

Among those who responded to the question about distribution of the last (self-)healthcare practice, illustrated in Graphic 12, most had recently performed a (self-)healthcare practice, suggesting that (self-)healthcare practices are relatively common among these health science students.

Most participants who rated the results of their last (self-)healthcare practice, as seen in Graphic 13, considered them to be 'Good or very Good' suggesting that (self-)healthcare practices are generally perceived as effective in improving health and well-being. However, a significant number of participants were unable to evaluate the results or found them 'Weak' or 'Bad', highlighting the need for better information and professional support in selecting and implementing self-care practices.

The result of Graphic 14 suggests that, overall, participants had a positive experience with their (self-)healthcare practices, although there is room for improvement in achieving higher levels of satisfaction.

The result in Graphic 15 suggests ambiguity in defining and distinguishing between conventional and non-conventional practices, which could impact research and clinical

practice. It also indicates a need for better education and communication regarding different types of (self-)healthcare practices. This question provides insight into the participants' understanding and perception of their (self-)healthcare practices. It is important to note that the classification of a practice as conventional or non-conventional can be subjective and influenced by factors such as cultural background, personal beliefs, and access to information (Jakovljevic et al., 2013).

As seen in Graphic 16, of the participants who used non-conventional practices, most used both self-administration and professionals, suggesting that health science students are open to different ways of accessing CAM, depending on their needs and preferences. The use of professionals may indicate a search for safety and personalized advice, while self-administration may reflect a desire for autonomy and control over their health.

2.3.6. Comparison with existing literature

Overall, the results of the study overlap with many similar studies on CAM, whether in terms of students' knowledge or their appreciation of these practices, we arrive at fairly similar conclusions. As seen in many previous studies, there has been a growing trend among health science students to be interested in CAM (Doko et al., 2020), probably due to the perceived limitations of conventional medicine, as well as a greater awareness of more holistic and patient-centered approaches to care (Joyce et al., 2016).

As seen previously, the results of this study show that a majority of the participants felt that knowledge about CAM is important for their future professional practice. This conclusion is consistent with the work of Park et al. (2020) in Australia, who showed that health students recognize the added value of CAM in a more integrated and comprehensive approach to health care. Quite similarly, research conducted in Croatia by Doko et al. (2020) shows that health students often use CAM to maintain their own well-being/health and are often very open to integrating these practices into their future careers.

Also, it should be noted that the interest of students in CAM in the present study is comparable to the results obtained in other regions of the world, particularly in the United States and Europe, as noted in the study by Joyce et al. (2016), which revealed that the adoption of CAM was increasing among medical and pharmacy students, with a prevalence of 30% of adults in the United States having used CAM in the previous 12 months. Similarly, in the present study, among the participants who responded, more than

46% of participants indicated that they had recently practiced forms of (self-)healthcare (less than 6 months), including non-conventional practices.

Furthermore, the results evaluated in the present study regarding the influence of personal health experiences on attitudes towards CAM reinforce the conclusions of research conducted by Medeiros et al. (2019) where it was shown that students who had positive personal experiences with CAM were more likely to adopt these practices in their future practice. Indeed, this conclusion is also noted in the present study, we had in fact observed a significant relationship between the previous use of CAM and the positive evaluation of the results of personal care practices. These results suggest that lived health experiences play a central role in the training of future health professionals in the face of the different CAM treatment, a phenomenon that has already been documented in many existing literature.

Finally, the research findings of the present study show an interesting divergence between the levels of knowledge or their desire for documentation on CAM and access to reliable information on these practices. We mainly note that although the majority of participants declared themselves interested in learning CAM, a significant number of them have not yet actively sought information, probably because of the difficulty for students to find simple and accessible training on the different CAM techniques. This situation reflects quite well the results of the research conducted by Doko et al. (2020) in Croatia, where the main source of information for students on CAM often came from online forums and blogs, also raising major concerns among them about the quality and reliability of the information received. The present study clearly highlights a similar need to integrate formal training on CAM into the curricula of health students in Portugal, in order to ensure a more informed and critical use of these practices thus ensuring good practice and the safety of the patients.

Overall, one can safely say that the present study is part of a general trend observed in previous literature: a growing interest in CAM among health students, motivated by the search for more comprehensive and personalized care, but limited by unequal access to structured training on these practices. These different conclusions corroborate the idea that the integration of CAM in medical training could surely greatly enrich the professional practice of future caregivers, thus offering them a wider range of therapeutic solutions to meet the diverse needs of patients by being able to offer them the most personalized care possible.

2.3.7. Implications for the training of health professionals

The results of the present study raise a real question about the implications for the training of future health professionals, mainly regarding the integration of CAM in educational programs. First, we note the clear interest of students for CAM and their perception of the importance of these practices for their future career, suggesting that it is time to rethink the way these topics are addressed in health curricula. Currently, although some programs include elements related to CAM, formal teaching remains insufficient in many institutions, particularly in Europe, as Jakovljevic et al. (2013) have shown.

The present study has shown that the students who participated in the study who have a better knowledge of CAM seem indeed more satisfied with the results of their own personal care practices, which highlights the importance of education and information in the different areas of CAM and mainly in the adoption of these practices. One could conclude that integrating some specific courses on CAM into health training programs could not only increase students' understanding of different and varied areas, but also improve their ability to apply these practices effectively and maximizing patient safety in their future clinical practice. This would also allow professionals to better meet the expectations of patients, who are increasingly interested in these alternative practices as shown by Doko et al. (2020), and so to complement conventional care and better personalize treatment.

In addition, training on CAM could certainly help fill some of the gaps observed in the present study regarding the problem of access to reliable information on these practices. As previously seen, although the students in the present study seem to be interested in CAM, many may only manage to obtain their information through certain informal channels, such as blogs or online forums. This raises real questions about the quality of the information they receive and their ability as future health professionals to critically evaluate these sources enough to be able to draw a safe practice from them. The establishment of official training modules on CAM in health curricula would allow to provide students with solid theoretical and practical bases, based on evidence, thus allowing them to integrate these practices into their care in a rigorous, effective and above all safe manner.

These implications would not only be limited to the initial education of health students but also the establishment of continuing education programs for health professionals

already in practice which is also a crucial issue if one wants to maintain a health system at a good level. Society is experiencing a rapid evolution of medical knowledge and practices, presenting a real challenge for the various health professionals who must constantly update their skills to meet the changing needs of patients. This integration of continuing education on CAM could allow health institutions to ensure that practitioners remain informed of the various new care approaches, thus enabling them to strengthen their capacity to offer multidimensional and personalized care.

Finally, the integration of CAM in different training courses for health professionals could potentially play an important role in promoting a more patient-centered approach. Indeed, CAM, beyond being a health practice, allows us to focus on the globality of the different aspects of the person but also on a preventive approach to health, thus offering complementary tools to conventional methods to treat the symptoms but also the physical and moral state of the patient, which are too often left aside. This approach could well prove particularly relevant in a context where patients' expectations are evolving towards more personalized care as seen in Jakovljevic et al. (2013) study, also taking into account their preferences and their individual needs as a person defined according to their own experiences, a defined geopolitical environment and personal beliefs. By training future professionals in these approaches, one could thus promote access to a more humanistic practice centered on the specific needs of each patient, thus improving the quality of care.

2.3.8. Limitations of the study

As with any research, the present study has some limitations that should be taken into account when interpreting the results. First, we have a very small sample size (45 participants), which makes it impossible to generalize the conclusions to all health science students in Portugal. A larger sample would have allowed us to obtain more robust results that are representative of the different perspectives and experiences among health science students in Portugal.

Next, another important limitation concerns the self-reported nature of the data. Participants reported their health perceptions and (self-)healthcare practices, which may introduce subjective biases that may lead to overestimating their level of knowledge or underestimating negative aspects of their health experiences, especially due to the desire to potentially present a positive image of themselves. Although this approach is common

in questionnaire-based research, it may of course limit the precision of the results.

A major limitation of this study is that the study relies on cross-sectional data, meaning that information was collected at a specific point in time, thus preventing the establishment of evolutionary causal relationships between the variables studied. For example, although the study shows a relation between knowledge of CAM and satisfaction with personal care practices, it is difficult to determine whether greater knowledge of CAM actually leads to greater satisfaction, or whether students who are more satisfied with their care practices are simply more motivated to deepen their knowledge. Therefore, it can be said that a longitudinal study would be necessary to better understand these dynamics over time.

Finally, the absence of qualitative data constitutes another limitation. It would have been very interesting to know the personal intentions of students regarding their desire to deepen their knowledge of CAM, so it would have been possible to have a better understanding of the individual motivations that influence their willingness to explore these practices in more depth and to identify the factors that encourage them to learn more.

These limitations highlight the need for complementary research approaches to enrich the findings of this study. It would be relevant to conduct larger studies, including diverse samples and mixed methods, in order to strengthen the validity of the results and offer a more complete view of the attitudes of health science students in Portugal towards CAM.

2.3.9. Suggestions for future research

The results of the present study still allow us to open several interesting avenues for future research on the impact of CAM care practices in the training of health science students in Portugal or elsewhere, first by having a larger sample, which would be more relevant and interesting from a statistical stability point of view, which would allow us to have more robust and representative results of health students in Portugal.

One of the other potentially enriching lines of research would be a longitudinal analysis of attitudes towards CAM. By taking a sample group of students followed throughout their training or at least their last year of studies and in the first years of their career following specific training on CAM, it would be possible to better understand how prior CAM education influences their practice and patient care. A similar study could also

verify whether students who show interest in CAM at the beginning of their training end up integrating these practices into their professional practice or whether they adopt a more conventional approach over time.

Finally, a qualitative approach could greatly enrich knowledge about students' motivations for CAM. Through individual interviews or focus groups, we could explore in detail the reasons why some students are attracted to these practices, and why others reject or are skeptical of them. An approach like this would especially allow us to better understand the perceived barriers to the adoption of CAM in clinical practice, whether they are related to training, personal beliefs, or social pressure within the community.

In conclusion, although our study has some limitations, particularly due to the sample size and the absence of qualitative data, it still allows us to open several avenues of reflection for future research. A larger sample would allow us to obtain more robust and representative results. Furthermore, a longitudinal analysis of students' knowledge and attitudes towards CAMs, throughout their training and at the beginning of their career, could provide interesting data on the evolution of their identities as practitioners and practices. Finally, the integration of a qualitative approach would allow us to better understand students' motivations and obstacles when faced with CAM. Although this study is a modest first step, it suggests avenues to explore to deepen our understanding of CAM in the training of future health professionals in Portugal and elsewhere.

3. CONCLUSION

Overall, the results of this study reveal several important trends regarding the knowledge and attitudes of health science students towards CAM. One of the main conclusions that can be drawn from it would be that the majority of participants that have a positive perception of their health and declare themselves satisfied with their general state of health, are more inclined to be able to explore alternative care practices, not only to improve their personal well-being, but also as part of their future professional career.

The majority of participants expressed a strong interest in CAM, as 71.11% of them indicated that they wished to acquire more knowledge about these practices.

In addition, it was possible to observe a relation in these students between their knowledge of CAM and their satisfaction with care practices, which suggests that those who have a higher level of knowledge are better prepared to appreciate non-conventional care and therefore may be able to use it better. It should also be noted that students who have used CAM in the past seemed more inclined to positively evaluate the results of their personal care practices. This clearly shows the importance of access to information and especially education for effective use of CAM, which could well be a key factor in satisfaction and perceived effectiveness of care.

Another of the major results of this study is that the participants considered CAM to be something important for their future practice as healthcare professionals. Indeed, approximately 75.55% of the participants felt that knowledge of CAM was essential for their professional development, reflecting an openness to the integration of these practices into mainstream healthcare and would therefore appreciate learning more about CAM during their student training. This trend is in line with recent developments in some healthcare systems, where CAM is gradually being integrated into training programmes and clinical practices, notably in Australia (Park et al., 2020) and Europe (Jakovljevic et al., 2013).

The results also indicate that the use of non-conventional healthcare practices, whether self-administered or in consultation with professionals, is relatively common among participants, given that 84% of students (who answered this question) indicated that they had practised a form of (self-)healthcare in the last six months. This figure highlights the popularity of CAM among young healthcare professionals, who nonetheless consider it

to be a complement to conventional care rather than an exclusive alternative.

Finally, the statistical analyses show us a real relationship between the personal health experiences of the students taking part in the study and their consideration of CAM. Indeed, we can see that among these students, those who had already used non-conventional practices in the past were more inclined to consider these practices as effective and really relevant to their future as health professionals. These results underline the importance of various personal health experiences in the formation of professional identity and future therapeutic choices.

In the end, the present study has allowed us, as best we can, to clarify the importance of the personal experiences of health science students in the formation of their professional identity, mainly in an aspect taking into account their knowledge and attitude towards CAM. The results allow us to show a trend among our participating students, who have a positive perception of their own health for those who have already used CAM, making them tend to consider these practices as effective and relevant, both for their personal well-being and for a future professional practice.

Throughout this study, we have defended some main notions pushing us to certain conclusions. First of all, a significant interest is clearly distinguished for the deepening of knowledge of CAMs by our health science students, thus reinforcing us in the idea that health students perceive these practices as real potential complements to conventional care. This conclusion is mainly accompanied by the fact that 75.55% of participants consider a good knowledge of these practices important for their future profession, thus showing a recognition of their importance for the formation of their professional identity.

The statistical analysis also allowed us to show a significant correlation between the level of knowledge of CAM and satisfaction with personal care practices. This leads us to a new conclusion, being that, among the students who participated, those who had a better understanding of CAM were indeed more inclined to be able to positively evaluate their personal care experiences, thus highlighting the importance of more adequate school training on CAM practices. But this conclusion makes us submit to a new problem, making it even more relevant, in a context where access to reliable information on CAM remains quite limited, students wanting to get information often find themselves obliged to turn to informal sources such as blogs or online forums, thus revealing real questions about the quality and reliability of the information received by these future health

practitioners.

Another conclusion that we can draw from this study is the highlighting of a crucial role in the construction of professional knowledge and attitudes: personal health experiences. Indeed, when we look at the present study study, we notice that students who have used CAM in the past seem more likely to want to integrate them into their future practice. This observation suggests that integrating these personal experiences into students' curriculum could not only enrich their training, but also improve their ability to keep an eye as critical as open to the different practices available to them, thus allowing them to meet the expectations of patients growing and becoming more complex with medical advances, who also show a growing interest in CAM.

Although conclusions could be drawn from this study, it must be kept in mind that it has several limitations. Whether it is by a too small number of participants (N=45), which limits the generalization of the results, or the use of declarative data introducing subjective biases, this study has flaws in its ability to present robust results representative of a population of health science students in Portugal more broadly. Not to mention the cross-sectional design of the study, making it impossible to follow a potential evolution of the attitudes and knowledge of students over time in order to judge more pertinently the potential changes made during the training of these students in health sciences.

Finally, although this study is modest, it still allows us to highlight promising avenues for the integration of CAM in the training of future health professionals. However, a more in-depth exploration, combining quantitative and qualitative approaches, may be relevant, allowing us to obtain a more complete vision of the motivations and obstacles encountered by students when faced with CAM and their impact on the formation of the identity of these future practitioners. It is also interesting to keep in mind that the inclusion of official and well-constructed modules on CAM in training programs could not only improve the skills of future professionals, thus strengthening their ability to offer more comprehensive and personalized care to their patients, but also allow them to have an opening to different future new practices, which can only be a beneficial aspect when you are a practitioner who must stay up to date with new technologies and health practices. Therefore, this study mainly serves us to open up important perspectives for future studies aimed at enriching healthcare training and better responding to the diverse and growing needs of patients, in a constantly evolving healthcare system.

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ANNEXES

Annex A. Parecer da Comissão de Ética da UFP

Universidade Fernando Pessoa
www.ufp.pt

Dar conhecimento à docente.
22.12.2020

Exmo. Senhor
Prof. Doutor Pedro Reis
Diretor da FCHS

Nº	Data
FCHS/PI – 112/20	22 de Dezembro de 2020

Exmo. Senhor Prof. Doutor,

A Comissão de Ética, depois de apreciar o projeto de investigação da Prof. Rute Meneses, intitulado "Práticas de (Auto-)Cuidados de Saúde em Portugal e Factores Associados", considera nada haver a opor à sua realização, desde que a resposta para a utilização do MHI-5 seja positiva. Recomenda-se que, quando solicitado o e-mail ao participante, se indique, se possível, que seja utilizado um endereço que não inclua o nome real/completo do participante (ex. tininha98@gmail.com), assim como que se informe o participante que, se isto não for possível, a informação será eliminada, tal como se indica no procedimento

Com os melhores cumprimentos.

P/ A Presidente da
Comissão de Ética da UFP

Teresa Toldy