

A study about knowledge and attitudes towards complementary and alternative medicine (CAM) among teacher training students. A pilot study based on open-ended questionnaires

Carolina Moreno-Castro¹

University of Valencia, Valencia, Spain

Emilia Lopera-Pareja

Research Unit in Scientific Culture of the CIEMAT, Madrid, Spain

Mavi Corell-Doménech

Florida Universitària, Valencia, Spain

Introduction

This pilot study has been carried out as part of the project entitled *Study, taxonomic and coverage of complementary, alternative, natural therapies on media and social networks. Ideas and values reported into the social imaginary*. The main objective of this exploratory research is to improve the methodological tool for assessing the attitudes and knowledge of university students about CAM.

Over the course of four years, we have been analyzing the image of complementary and alternative therapies that are transmitted by the media, and we wanted to assess what is the perception of students about complementary therapies. We also wanted to know what the public perception is about these complementary therapies in Spain. Above all, identify if there is a relationship between the image that diffuses media about therapies and the perception of citizenship. We realized that the closed questionnaires did not offer us too relevant data. Therefore, we carried out a pilot study with a questionnaire with open and closed questions.

Method

For this purpose, a pilot study was carried out with the accomplishment of 209 surveys to teacher training students from Florida Universitària and University of Valencia (Valencia, Spain). For this survey, we used the questionnaire known as *Complementary and Alternative Medicines Health Belief Questionnaire* (CHBQ), designed and validated by Lie and Boker in 2004.

This questionnaire is based essentially on ten items of closed response with Likert scale (from 1 to 7). You can see the ten questions on the survey in Table 1. These questionnaire is available on Internet. Also, to the closed questions, we added one more question, closed. Our special question was through what means/channels have you known complementary and alternative therapies? We wanted to know through this question how students learn on different CAMs. In other words, to know if the media influenced more than acquaintances.

¹ Corresponding author, e-mail: Carolina.moreno@uv.es

To analyze all the closed questions, we used the SPSS program. The results of different data were obtained by the variance analysis (ANOVA).

1. The physical and mental health are maintained by underlying energy or vital force.
2. Health and disease are a reflection of balance between positive life-enhancing forces and negative, destructive forces.
3. The body is essentially self-healing, and the task of a health care provider is to assist in the healing process.
4. A patient's symptoms should be regarded as a manifestation of a general imbalance of dysfunction affecting the whole body.
5. A patient's expectations, health beliefs, and values should be integrated into the patient care process.
6. Complementary therapies are a threat to public health.
7. Treatments not tested in a scientifically recognized manner should be discouraged.
8. Effects of complementary therapies are usually the result of a placebo effect.
9. Complementary therapies include ideas and methods from which conventional medicine could benefit.
10. Most complementary therapies stimulate the body's natural therapeutic powers.

Tab. 1. CAM Health Belief Questionnaire (CHBQ).

This questionnaire is available on <https://www.surveymonkey.com/r/9RDXJ86>. It is Open Access.

Also, three open-ended questions for the qualitative study were added to this questionnaire CHBQ. The three questions were:

1. What does an alternative and complementary therapy mean to you?
2. If you have used alternative and complementary therapies, explain the reasons why you have chosen to them; and,
3. What differences do you find between conventional medicine and alternative and complementary therapies?

For analyzing the spontaneous answers, we used T-LAB 9.1 linguistic corpus software.

Results

Quantitative results were the following: The most disagreed question, with an average of 2.26 (reverse value 5.74), was number six (Complementary therapies are a threat to public health). The most common answer was the total disagreement with the statement. Regarding the added closed question to the survey, the results showed a large percentage of students reporting that they knew CAM through what is known as the mouth-ear (word of mouth), 61.2%; through friends, 60.3%; through relatives and 43.1% by acquaintances or neighbors.

Qualitative results from the three open questions allowed us to access to different experiences in their lives and to analyze the central perception. In general, the attitudes were positive and optimists on CAM. It got very interesting results.

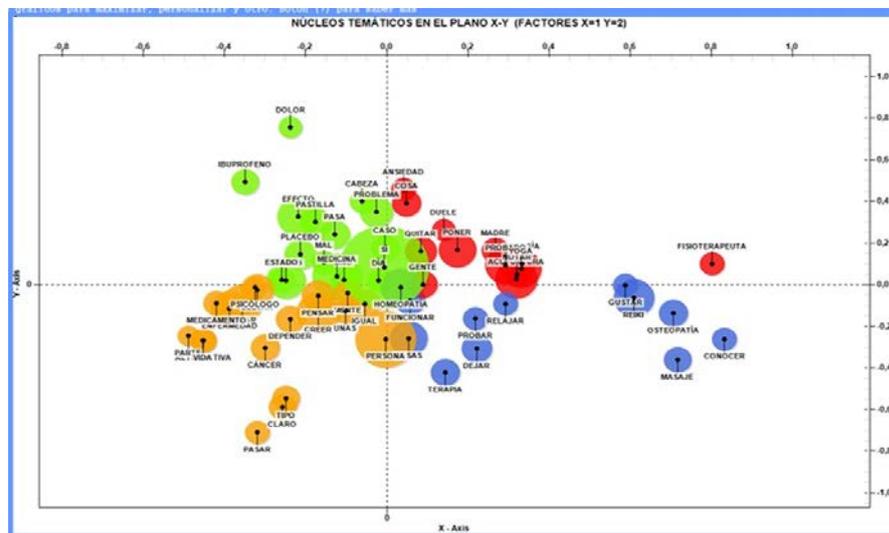


Fig. 1. Analysis of the three open questions with the linguistic corpus software (T-Lab)

Therefore, figure 1 registers the concentration and the agreement level of the topics treated in one of the open questions. It can see how the Education students showed themselves to be mostly open and favorable to alternative therapies. Students explained a lot of private situation and which were their position about CAM, with concrete examples.

Conclusions

According to the results of the CHBQ, the students surveyed are undecided about their beliefs and perceptions of CAM with a slight tendency towards been in favor. They do not believe that CAM are a threat to public health and they consider that they include ideas and methods that conventional medicines could benefit from. As regards the qualitative results, a large percentage of students reported that their knowledge of CAM was by word of mouth: friends (61.2%), family (60.3%) and acquaintances or neighbors (43.1%). The students surveyed have a favorable impression of CAM as 'natural' and distrust scientific medicine for using 'chemical' drugs with harmful side effects. We identified the relevance of the educational system compared to the traditional media.

This pilot study has gleaned a great deal of information about the attitudes and knowledge of CAM held by teacher training students. It illustrates the usefulness of combining quantitative and qualitative questions for future studies. We confirmed that the amount of information obtained through open questions is much more exciting and offers many data. Finally, the instrument is more robust and yields more detailed information.

References

- Ballesteros-Peña, S., & Fernández-Aedo, I. (2015). Conocimientos y actitudes sobre terapias alternativas y complementarias en estudiantes de ciencias de la salud. *Investigación en educación médica*, 4(16), 207-215.
- Chang, B. H. (2010). Complementary and Alternative Medicine (CAM) Education and Medical Students' Attitudes toward CAM. *Hanyang medical reviews*, 30(2), 136-141.
- Jakovljevic, M. B., Djordjevic, V., Markovic, V., Milovanovic, O., Rancic, N. K., & Cupara, S. M. (2013). Cross-sectional survey on complementary and alternative medicine awareness among health care professionals and students using CHBQ questionnaire in a Balkan country. *Chinese journal of integrative medicine*, 19(9), 650-655.
- James, P. B., & Bah, A. J. (2014). Awareness, use, attitude and perceived need for Complementary and Alternative Medicine (CAM) education among undergraduate pharmacy students in Sierra Leone: a descriptive cross-sectional survey. *BMC complementary and alternative medicine*, 14(1), 438.
- Pokladnikova, J., & Lie, D. (2008). Comparison of attitudes, beliefs, and resource-seeking behavior for CAM among first-and third-year Czech pharmacy students. *American journal of pharmaceutical education*, 72(2), 24.
- Riccard, C. P., & Skelton, M. (2008). Comparative analysis of 1st, 2nd, and 4th year MD students' attitudes toward Complementary Alternative Medicine (CAM). *BMC research notes*, 1(1), 84.
- Walker, B. F., Armson, A., Hodgetts, C., Jacques, A., Chin, F. E., Kow, G. ... & Wright, A. (2017). Knowledge, attitude, influences and use of complementary and alternative medicine (CAM) among chiropractic and nursing students. *Chiropractic & manual therapies*, 25(1), 29.

Acknowledgments

The research presented in this paper has been supported by the Spanish Ministry of Economy and Competitiveness, and co-financed with FEDER funds from the European Commission. The study has been carried out on the framework of the project entitled *Study, taxonomic and coverage of complementary, alternative, natural therapies on media and social networks. Ideas and values reported into the social imaginary* (CSO2014-57778-R). Carolina Moreno-Castro (University of Valencia) led this research project. Moreover, we want to thank our colleague Isabel Mendoza for her valuable support in data gathering and data manipulation.