Evaluation of attitudes toward CAM among budding storytellers: medicine, nursing, journalism and teaching undergraduate students

Emilia H. Lopera Pareja[1]

Research Unit on Scientific Culture, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Spain

Carolina Moreno Castro

Department of Theory of Language and Communication, University of Valencia, Spain

Introduction

The present work is just a piece of a broader investigation aimed to study and classify CAM in order to identify the dominant ideas and values transferred to the social imaginary in the Spanish context. In particular, we are focused on analyzing the attitudes and beliefs toward CAM, as well as its awareness and use, among a sample of budding science storytellers such as medicine, nursing, journalism and teaching undergraduate students from the Valencia University. With this purpose, we administered a validated Spanish version of the 10-item Complementary and Alternative Medicines Health Belief Questionnaire (CHBQ) (Lie and Boker, 2004) to 234 undergraduate students. Some authors have already revealed that there is no relationship between the frequency of publication of news about CAM therapies in online newspapers and the frequency of use by Spanish citizens. These researchers suggest that the increasing use of CAM is spreading by other means such as by word of mouth (Moreno Castro and Lopera Pareja, 2016). Last findings also pointed out that there is no evidence of a relationship between the Internet searches and the use of CAM therapies (Cano-Orón, 2016). Because media influence and Internet as sources of information don't seem to be playing a decisive role in the increasing of CAM use, health professionals and educators should also be taken into account -along with journalists- as sensitive collectives when analyzing new social trends involving healthcare and science communication.

Method

- *Study sample*

Final respondents were 234 undergraduate students in medicine, nursing, journalism, and teaching at the University of Valencia. Although initially the questionnaire was administered to 327 students, only 234 respondents were retained for this study, those who completely answered the ten items without selecting the "do not know / no answer" option in any item.

- *Data analysis*

Descriptive statistics were used (proportions, mean, standard deviations) to analyze respondents' scores to dependent variables (attitudes and beliefs toward CAM, CAM awareness, and CAM use). All the scores were analyzed in aggregate and also compared. Attitudes toward CAM were

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[1] Corresponding author, email: emilia.lopera@ciemat.es

calculated by summing up the responses for all the CHBQ 10-items as well as for each of the items. To carry out the study, the following statistics were used: a) the association or independence relations between the independent variables (age, gender, place of residence, type of university studies) and the dependent variables were explored; b) an analysis of variance was used for contrasting the relation between categorical and quantitative variables; and c) Pearson correlation coefficient test was run for contrasting the relationship between the quantitative variables mentioned before.

Results

The results revealed that CAM awareness was quite widespread across the sample: 99% of the respondents knew at least 4 CAM modalities, 90% of them knew at least 8 CAM modalities and 50%, at least 13. Significant differences on CAM awareness were found by age and type of university studies ($p < 0.05$). Students under the age of 21 and especially over 35 showed greater knowledge of CAM therapies. By type of studies, medicine students registered the higher score on CAM awareness (Tab. 1). Acupuncture (99%), yoga (97%), massage (96%) and meditation (94%) were the most well-known therapies, followed by relaxation (89%), music therapy (86%), tai chi (84%) and homeopathy (82%). On the other hand, the less well-known modalities were biofeedback (11%), therapeutic touch (12%) and acupressure (14%).

		Frequency	%	Mean	SD	P^a
Overall n = 234				**13.61**	**3.61**	
Gender						NS
	Male	64	27	13.20	3.98	
	Female	166	71	13.69	3.45	
Age						0.003
	<21	160	68	14.05	3.27	
	21-25	61	26	12.61	4.00	
	26-35	7	3	10.71	3.30	
	>35	5	2	15.60	5.98	
Place of residency						NS
	Urban	159	68	13.58	3.79	
	Rural	70	30	13.60	3.28	
Type of university studies						0.010
	Teaching	16	7	11.38	4.44	
	Journalism	30	13	13.07	4.33	
	Medicine	103	44	14.29	3.30	
	Nursing	85	36	13.19	3.36	

[a]An analysis of variance (ANOVA) or Kruskall-Wallis test was used depending on normal distribution at a level of significance <0.05.

Tab. 1: CAM awareness (from a check list of 23 therapies).

As expected, CAM use was much more limited than CAM awareness across the sample. First of all, 15% of the respondents had never used CAM therapies; 85% of all students reported the use of at least 1 CAM modality, 50% used of at least 2 CAM modalities and only an 11% reported the use of more than 5 CAM therapies. Significant differences on CAM use were found by age and type of university studies ($p < 0.05$). As with awareness, again students under the age of 21 and, especially over 35, showed greater use of CAM therapies. By type of studies, teaching and nursing

students registered the higher score on CAM use (Tab. 2). Massage (63%), relaxation (40%), yoga (26%) and meditation (24%) were the most used therapies, followed by dance therapy (19%) and homeopathy (18%). On the contrary, naturopathy (0%), therapeutic touch (1%) and acupressure were the less used modalities.

		Frequency	%	Mean	SD	P^a
Overall n = 234				**2.84**	**2.60**	
Gender						NS
	Male	64	27	2.50	2.94	
	Female	166	71	2.97	2.48	
Age						0.002
	<21	160	68	3.00	2.52	
	21-25	61	26	2.16	2.56	
	26-35	7	3	2.14	1.68	
	>35	5	2	6.60	3.78	
Place of residency						NS
	Urban	159	68	2.98	2.75	
	Rural	70	30	2.53	2.33	
Type of university studies						0.001
	Teaching	16	7	4.13	4.94	
	Journalism	30	13	1.83	1.62	
	Medicine	103	44	2.38	2.21	
	Nursing	85	36	3.51	2.51	

[a]An analysis of variance (ANOVA) or Kruskall-Wallis test was used depending on normal distribution at a level of significance <0.05.

Tab. 2: CAM use (from a check list of 23 therapies).

Regarding attitudes toward CAM, the CHBQ overall mean score was 41.75 (SD: 11.04), ranging from 40.33 to 43.17 at a 95% confidence interval and a 0.7 margin of error, confirming slightly positive attitudes and beliefs toward CAM and in any case much higher than the neutral score of 35 points.

Conclusions

Overall, the next generation of storytellers –medicine, nursing, journalism and teaching students- showed a broad knowledge of CAM modalities and much more limited use of them. Acupuncture, yoga, massage, and meditation were the most well-known therapies while massage, relaxation, yoga, and meditation were the most used. Significant differences were found by age and type of university studies in CAM awareness and use. Respondents under 21 and especially over 35 reported a higher level of knowledge and use. On the other hand, medicine and nursing students reported a higher level of knowledge, but teaching and nursing students showed the more excellent use of CAM. On the contrary, journalism students did not stand out either because of their knowledge or their use. In this regard, journalism students were the most skeptical below the neutral rating while teaching and nursing students reached the greatest endorsement to CAM.

The most cautious attitude among future journalists and physicians might be due to their social role as the "gatekeepers" of evidence-based knowledge, especially in the case of journalists. As for the nursing attitude scores, since in Spain nurses are not allowed to prescribe conventional medications, they are likely to be more willing to consider and even recommend CAM therapies.

References

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