

Physicians' perception of health topics covered by traditional media in Morocco: opinion of physicians as consumers of the media

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Abstract

Introduction. In Morocco, the traditional media allows messages of non-scientific prescriptions for the treatment of diseases and statements criticizing doctors to pass, which are considered by doctors as defamation and attacks on the honor of the medical profession. The aim of this study was to analyze physicians' percep-

tion in Morocco regarding health topics in the traditional media (TM).

Methods. This is a descriptive transversal study of physicians practicing in Morocco. The data were collected using a questionnaire that included questions on reliability, speed, up-to-dateness and influence of TM, also trust and interest in TM, quantity, and quality of health messages in TM.

Results. A total of 417 physicians responded, among them 234 (56.1%) had little or no interest in health topics in TM; 248 (59.5%) considered the quantity of transmitted messages to be low; 234 (56.1%) considered that health messages in TM are of low quality; 248 (59.5%) had little or no trust in health topics in TM. Also, three-quarters, 314 (75.3%), of the physicians recognized a moderate to strong influence of TM on health behaviors.

Conclusions. Our results show that physicians have a perception that seems negative towards TM. This may partially explain the chronic tension situation between physicians and journalists/media in Morocco. To better understand this situation and improve this relationship in favor of health promotion, it is necessary to conduct a research addressing the opinion of journalists and the propositions of solutions of both parties.

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Introduction

The media is among the social determinants of health that are included in the global environment.¹ They can play a role in shaping social norms and changing health behaviours, also improve advocacy strategies for the implementation of evidence-based health policies,² and influence public behavior by directly targeting those affected by health problems and/or indirectly creating beneficial changes in the environments in which people live.³ Health promotion actions should not be limited to individual change efforts (education) and ignore the impact of physical and socioeconomic environments on individuals' health choices.⁴

Health promotion communication action plans adopt the ecosystem approach,⁵⁻⁸ which places physicians among the initial producers/transmitters/diffusers of health norms to the media which in return transmit these norms to the population.⁹ Furthermore, physicians can use the media to "get the message out" and at the same time can be influenced by the media as members of society who also live in a social and media environment.⁵

Traditional media (TM) (print media, radio and TV) still have a place in health information and promotion, and their role has proven to be essential, especially in times of health crises.¹⁰ However, it is mandatory that information should be transmitted without sensationalism and the public should be advised to avoid repeated exposure to information that does not provide much news and to rely only on authentic sources.¹¹

In Morocco, from time to time, controversies arise between doctors and the media because of "herbal medicine programs" and

practices that are not scientifically proven, which occupy a very important place in the program schedule of private radio stations with a large audience and direct interaction with listeners.¹² Another source of conflict is the criticism of doctors in the media which is considered by the doctors as: “defamation and attack on the honor of the medical profession”.¹³ These events have become repetitive in Morocco.

The present work seeks to first describe how physicians in Morocco perceive the TM in terms of health information (issues), by primarily analyzing their points of view as consumers of the media, in order to better identify and understand such a relationship which, theoretically, should contribute to the improvement of the promotion of the health of the Moroccan population and not impede it.

Materials and Methods

Sampling and data collection

This is a descriptive cross-sectional study of physicians practicing in Morocco. Our survey was open to all physicians and dentists. The study participants were randomly selected and agreed to voluntarily answer our questionnaire. Other health professional categories (nurses, administrators, *etc.*), medical students (externs and interns), and physicians who refused to respond to our questionnaire were not included.

The study data were collected using a questionnaire written in french, which is the practice language of medicine in Morocco, and was managed by Google Forms in the social networks of doctors in Morocco and by e-mails between 20/10/2021 and 8/11/2021. A questionnaire pre-test has enabled us to validate the questions and to adjust some styles in order to reduce as much as possible the polysemy of the questions.

Data analysis

Data were inputted into Excel and analyzed using SPSS V21 software. The chi-square test was used for proportion comparisons and the significance level was set at 0.05.

Ethical considerations

The responses were gathered in strict compliance with ethical considerations, namely the free participation and anonymity of the respondents. “Agreeing to respond” is stated in the questionnaire introduction as consent to participate.

Results

We have gathered 435 responses (R), but we have excluded 18 answers: (6 empty responses: (R1, R107, R149, R163, R259, R343); and 5 responses that did not meet the inclusion criteria: 2 Midwives (R217, R384), 2 interns (R307, R308), and 1 pharmacist (R68); 7 responses in which the job title was not listed and it was unclear whether they were physicians or not (R7, R150, R166, R335, R339, R361, R398). Thus, our final sample of survey respondents ended up with 417 physicians.

Sociodemographical and professional data

In total, we have 417 responses from physicians, which are valid and meet the inclusion criteria. (Table 1). The majority of these physicians 272 (65.2%) are over 40 years of age, with an average age of (44 years). We have 213 (51.1%) males and 204 (48.9%) females. The majority of respondents were married 333 (79.9%), compared to 69 (16.5%) single and 12 (2.9%) divorced.

The dominant professional categories were medical specialists (bio-medical-surgical) 118 (28.3%) and general practitioners 116 (27.8%), followed by resident physicians 64 (15.3), public health physicians 53 (12.7%), dental surgeons 37 (8.9%) and university professors of medicine 29 (7%). The vast majority 354 (84.9%) were working in urban (inner city) areas, and only 31 (7.4%) in suburban (city suburbs) areas and also 31 (7.4%) in rural areas.

Table 1. Demographic and socio-professional characteristics.

Variables	n (%)
Age	
25 to 29 years old	50 (12)
30 to 39 years old	95 (22.8)
40 to 49 years old	134 (32.1)
50 to 59 years old	105 (25.2)
60 years and older	33 (7.9)
Gender	
Female	213 (51.1)
Male	204 (48.9)
Nationality	
Missing data	2 (0.5)
Moroccan	414 (99.3)
Chad	1(0.2%)
Family situation	
Missing data	3 (0.7)
Single	69 (16.5)
Divorced	12 (2.9)
Married	333 (79.9)
Region	
Béni Mellal-Khénifra	37 (8.9)
Casablanca-Settat	110 (26.4)
Draa-Tafilalet	8 (1.9)
Fès-Meknès	32 (7.7)
Guelmim-Oued Noun	4 (1.0)
Laâyoune-Sakia El Hamra	1 (0.2)
Marrakech-Safi	51 (12.2)
Oriental	15 (3.6)
Rabat-Salé-Kénitra	57 (13.7)
Souss-Massa	60 (14.4)
Tanger-Tétouan-Al Hoceima	42 (10.1)
Practice location	
Missing data	1 (0.2)
Rural	31 (7.4)
Suburban (city suburbs)	31 (7.4)
Urban (inner city)	354 (84.9)
Funcion	
Dental surgeon	37 (8.9)
General practitioner	116 (27.8)
Resident Physician	64 (15.3)
Public Health Physician	53 (12.7)
Medical specialist (bio-medical-surgical)	118 (28.3)
Professor of Medicine	29 (7.0)
Years of experience	
1 to 5 years	85 (20.4)
6 to 10 years	54 (12.9)
11 to 20 years	131(31.4)
20 years and over	147 (35.3)
Sector	
Private for-profit	124 (29.7)
Private not-for-profit	5 (1.2)
Public	288 (69.1)
Management position	
Missing data	2 (0.5)
No	300 (71.9)
Yes	115 (27.6)

Two-thirds of the physicians responding to our questionnaire 278 (66.7%) had been working for more than 10 years. Physicians in the public sector were predominant 288 (69.1%), while only about one-third of the physicians in our sample, 129 (30.9%), were practicing in private sector (for-profit and not-for-profit). The majority of respondents, 300 (71.9%), did not have a management or leadership position versus 115 (27.6%) physicians who had a leadership position. Among the 12 regions of Morocco, four are the most represented, accounting for two thirds of the respondents, 278 (66.7%): Casablanca-Settat 110 (26.4%), Souss-Massa 60 (14.4%), Marrakech-Rabat-Salé-Kénitra 57 (13.7%) and Marrakech-Safi 51 (12.2%). The regions of the South, South-East and Oriental are poorly represented (Table 1).

Doctors' perceptions of traditional media

Doctors' perceptions of traditional media are shown in Tables 2-5.

The most frequently consulted traditional media in health topics

A large number of the physicians interviewed, 155 (37.2%), do not consult any TM on health topics, while a set of 112 (26.9%) consult most often the print media, 101 (24.2%) consult TV, and only 49 (11.8%) consult radio. Physicians over 40 years of age consumed more TM than those under 40 years of age [print media: N112 (77.6% vs. 22.4%); TV: N101 (62.4% vs. 37.6%); radio: N 49 (81.7% vs. 18.4%) (P=0.001). With a significant difference (P=0.041), two-thirds of the doctors who consulted the radio most often (30/49=61.2%) were male, while two-thirds of the doctors who consulted TV most often on health topics (61/101=61.2%) were female, while there was not a big difference related to gender in the consultation of the print media [N112, M: 58 (51.8%) vs F: 54 (48.2%)]. As for function, general practitioners and specialist physicians (biomedical-surgical) used the media more than other functions (P=0.01). In relation to the years of experience, the older doctors (more than 10 years) use more TM than those who had less than 10 years of experience (P=0.001). As well as for married physicians, they used the media more than unmarried physicians (P=0.002). No significant association was observed between consultation of TM by the surveyed physicians and practice location (P=0.623), nor with activity sector (P=0.250) or management position (P=0.165).

The most reliable traditional media in health topics

The largest number of doctors in our sample 174 (41.7%) consider that none of the TM are reliable in health topics, while 124 (29.7%) are with TV, 79 (18.9%) for print media, and only 39 (9.4%) for Radio. These opinions were not affected by any of the variables: age (P=0.641), gender (P=0.282), family situation (P=0.634), practice location (P=0.470), job title (P=0.231), years of work experience (P=0.773), activity sector (P=0.620), and management position (P=0.806)

The fastest traditional media in health topics

Nearly a third of the respondent physicians 131 (31.4%) consider TV as the fastest, among them a significant majority (73/131=55.7%; P=0,029) are female. A quarter of the surveyed 105 (25.2%) are in favor of Radio as the fastest TM with a significant majority of males (59/105=56.2% - P=0.029); and only 83 (19.9%) consider Print Media as the fastest with a female majority (47/83=56.6% - P=0.029); while 96 (23%) of the respondents do not see any of the three traditional media as fast with a significant male predominance (58/96=60.4% - P=0.029).

No significant differences were found in terms of age (P=0.62), family situation (P=0.569), practice location (P=0.790), job title (P=0.240), years of work experience (P=0.258), activity sector (P=0.584), or management position status (P=0.913)

The most up-to-date traditional media on health topics

According to 133 (31.9%) of our survey respondents, none of the TM is up to date on health issues, and 109 (26.1%) consider TV to be the most up-to-date, while the print media is the most up-to-date medium for 101 (24.2%) of the respondents, and last but not least, Radio is the most up to date for only 71 (17%) of the responding doctors. Meanwhile, a significant difference was found in terms of family situation, with married people in the majority (P=0.022). On the other hand, these perceptions were not affected

Table 2. Physicians' perception of the media (views as a consumer).

Variables	n (%)
The most frequently consulted TM in health topics	
None	155 (37.2)
Print media	112 (26.9)
Radio	49 (11.8)
TV	101 (24.2)
The most reliable TM in health topics	
No response	1 (0.2)
None	174 (41.7)
Print media	79 (18.9)
Radio	39 (9.4)
TV	124 (29.7)
The fastest TM in health topics	
No response	2 (0.5)
None	96 (23.0)
Print media	83 (19.9)
Radio	105 (25.2)
TV	131 (31.4)
The most up-to-date TM in health topics	
No response	3 (0.7)
None	133 (31.9)
Print media	101 (24.2)
Radio	71 (17.0)
TV	109 (26.1)
The easiest TM to use in health topics	
No response	2 (0.5)
None	64 (15.3)
Print media	86 (20.6)
Radio	119 (28.5)
TV	146 (35.0)
Level of physicians' interest in health matters in TMs	
None	60 (14.4)
Little interest	174 (41.7)
Moderate interest	135 (32.4)
A lot of interest	48 (11.5)
Level of physicians' trust in health matters in TMs	
No response	2 (0.5)
None	50 (12.0)
Low trust	198 (47.5)
Average trust	153 (36.7)
High Trust	14 (3.4)
The amount of health messages delivered in TMs	
Low	248 (59.5)
Average	144 (34.5)
High	25 (6.0)
The scientific quality of health messages delivered in TMs	
Low	234 (56.1)
Average	170 (40.8)
High	13 (3.1)
Influence of TMs on health behaviors	
No influence	6 (1.4)
Low influence	97 (23.3)
Average influence	164 (39.3)
High influence	150 (36.0)

Table 3. Perceptions associated with some socio-demographic characteristics.

	The most frequently consulted TM in health topics, n(%)					The fastest TM in health topics, n(%)					The most up-to-date TM in health topics, n(%)					Level of physicians' interest in health matters in TM, n(%)				
	None (N=155)	Print media (N=112)	Radio (N=49)	TV (N=101)	None (N=96)	Print media (N=83)	Radio (N=105)	TV (N=131)	None (N=133)	Print media (N=101)	Radio (N=71)	TV (N=109)	None (N=60)	Little interest (N=174)	Moderate interest (N=135)	A lot of interest (N=48)				
Age																				
25 to 29 years old	29(18.7)	6(5.4)	5(10.2)	10(9.9)	10(10.4)	10(12.0)	10(9.5)	20(15.3)	10(7.5)	14(13.9)	7(9.9)	18(16.5)	9(15.0)	23(13.2)	15(11.1)	3(6.3)				
30 to 39 years old	44(28.4)	19(17.0)	4(8.2)	28(27.7)	23(24.0)	18(21.7)	20(19.0)	34(26.0)	30(22.6)	23(22.8)	13(18.3)	29(26.6)	19(31.7)	51(29.3)	18(13.3)	7(14.6)				
40 to 49 years old	47(30.3)	37(33.0)	21(42.9)	29(28.7)	27(28.1)	29(34.9)	36(34.3)	42(32.1)	45(33.8)	31(30.7)	25(35.2)	33(30.3)	14(23.3)	57(32.8)	46(34.1)	17(35.4)				
50 to 59 years old	31(20.0)	33(29.5)	15(30.6)	26(25.7)	31(32.3)	19(22.9)	34(32.4)	19(14.5)	38(28.6)	21(20.8)	22(31.0)	22(20.2)	15(25.0)	34(19.5)	42(31.1)	14(29.2)				
60 years and older	4(2.6)	17(15.2)	4(8.2)	8(7.9)	5(5.2)	7(8.4)	5(4.8)	16(12.2)	10(7.5)	12(11.9)	4(5.6)	7(6.4)	3(5.0)	9(5.2)	14(10.4)	7(14.6)				
Chi-square test	P-value = 0.000																			
Gender																				
Female	70(45.2)	54(48.2)	19(38.8)	61(60.4)	38(39.6)	47(56.6)	46(43.8)	73(55.7)	56(42.1)	57(56.4)	32(45.1)	57(52.3)	27(45.0)	87(50.0)	64(47.4)	26(54.2)				
Male	85(54.8)	58(51.8)	30(61.2)	40(39.6)	58(60.4)	36(43.4)	59(56.2)	58(44.3)	77(57.9)	44(43.6)	39(54.9)	52(47.7)	33(55.0)	87(50.0)	71(52.6)	22(45.8)				
Chi-square test	P-value = 0.041																			
Family situation																				
Single	33(21.3)	8(7.1)	5(10.2)	23(22.8)	18(18.8)	13(15.7)	11(10.5)	27(20.6)	26(19.5)	14(13.9)	4(5.6)	25(22.9)	15(25.0)	32(18.4)	18(13.3)	4(8.3)				
Divorced	6(3.9)	4(3.6)	1(2.0)	1(1.0)	5(5.2)	2(2.4)	2(1.9)	3(2.3)	5(3.8)	3(3.0)	2(2.8)	1(0.9)	5(8.3)	2(1.1)	4(3.0)	1(2.1)				
Married	116(74.8)	100(89.3)	43(87.8)	74(73.3)	73(76.0)	68(81.9)	91(86.7)	99(75.6)	101(75.9)	84(83.2)	64(90.1)	82(75.2)	40(66.7)	139(79.9)	112(83.0)	42(87.5)				
Chi-square test	P-value = 0.002																			
Function																				
Dental surgeon	11(7.1)	8(7.1)	8(16.3)	10(9.9)	7(7.3)	7(8.4)	11(10.5)	12(9.2)	9(6.8)	11(10.9)	8(11.3)	9(8.3)	5(8.3)	20(11.5)	9(6.7)	3(6.3)				
General practitioner	38(24.5)	39(34.8)	10(20.4)	29(28.7)	26(27.1)	21(25.3)	27(25.7)	41(31.3)	36(27.1)	28(27.7)	15(21.1)	36(33.0)	15(25.0)	40(23.0)	43(31.9)	18(37.5)				
Resident physician	36(23.2)	8(7.1)	5(10.2)	15(14.9)	18(18.8)	13(15.7)	7(6.7)	26(19.8)	17(12.8)	17(16.8)	5(7.0)	24(22.0)	14(23.3)	30(17.2)	15(11.1)	5(10.4)				
Public health physician	12(7.7)	20(17.9)	8(16.3)	13(12.9)	7(7.3)	15(18.1)	18(17.1)	13(9.9)	17(12.8)	13(12.9)	13(18.3)	10(9.2)	3(5.0)	19(10.9)	20(14.8)	11(22.9)				
Medical specialist (bio-medical-surgical)	43(27.7)	34(30.4)	14(28.6)	27(26.7)	33(34.4)	24(28.9)	32(30.5)	28(21.4)	46(34.6)	28(27.7)	20(28.2)	23(21.1)	22(36.7)	48(27.6)	38(28.1)	10(20.8)				
Professor of medicine	15(9.7)	3(2.7)	4(8.2)	7(6.9)	5(5.2)	3(3.6)	10(9.5)	11(8.4)	8(6.0)	4(4.0)	10(14.1)	7(6.4)	1(1.7)	17(9.8)	10(7.4)	1(2.1)				
Chi-square test	P-value = 0.01																			
Experience, years																				
1 to 5 years	47(30.3)	11(9.8)	5(10.2)	22(21.8)	21(21.9)	15(18.1)	15(14.3)	34(26.0)	24(18.0)	20(19.8)	10(14.1)	30(27.5)	17(28.3)	41(23.6)	19(14.1)	8(16.7)				
6 to 10 years	19(12.3)	16(14.3)	3(6.1)	16(15.8)	10(10.4)	16(19.3)	13(12.4)	15(11.5)	17(12.8)	17(16.8)	6(8.5)	14(12.8)	11(18.3)	28(16.1)	12(8.9)	3(6.3)				
11 to 20 years	50(32.3)	32(28.6)	21(42.9)	28(27.7)	27(28.1)	25(30.1)	35(33.3)	44(33.6)	38(28.6)	30(29.7)	29(40.8)	34(31.2)	16(26.7)	56(32.2)	42(31.1)	17(35.4)				
20 years and over	39(25.2)	53(47.3)	20(40.8)	35(34.7)	38(39.6)	27(32.5)	42(40.0)	38(29.0)	54(40.6)	34(33.7)	26(36.6)	31(28.4)	16(26.7)	49(28.2)	62(45.9)	20(41.7)				
Chi-square test	P-value = 0.000																			

Table 4. Overall recap of physicians' perceptions based on socio-demographic characteristics.

Crossed variables	The most frequently consulted TM in health topics, n(%)				The most reliable TM in health topics, n(%)				The fastest TM in health topics, n(%)				The most up-to-date TM in health topics, n(%)				The easiest TM to use in health topics, n(%)			
	None N=155	Print media N=112	Radio N=49	TV N=101	None N=174	Print media N=79	Radio N=39	TV N=124	None N=96	Print media N=83	Radio N=105	TV N=131	None N=133	Print media N=101	Radio N=71	TV N=109	None N=64	Print media N=86	Radio N=119	TV N=146
Age																				
25 to 29years	29 (18.7)	6 (5.4)	5 (10.2)	10 (9.9)	22 (12.6)	10 (12.7)	5 (12.8)	13 (10.5)	10 (10.4)	10 (12.0)	10 (9.5)	20 (15.3)	10 (7.5)	14 (13.9)	7 (9.9)	18 (16.5)	8 (12.5)	10 (11.6)	13 (10.9)	19 (13.0)
30 to 39years	44 (28.4)	19 (17.0)	4 (8.2)	28 (27.7)	40 (23.0)	20 (25.3)	8 (20.5)	27 (21.8)	23 (24.0)	18 (21.7)	20 (19.0)	34 (26.0)	30 (22.6)	23 (22.8)	13 (18.3)	29 (26.6)	12 (18.8)	15 (17.4)	24 (20.2)	44 (30.1)
40 to 49years	47 (30.3)	37 (33.0)	21 (42.9)	29 (28.7)	58 (33.3)	20 (25.3)	13 (33.3)	43 (34.4)	27 (28.1)	29 (34.9)	36 (34.3)	42 (32.1)	45 (33.8)	31 (30.7)	25 (35.2)	33 (30.3)	21 (32.8)	27 (31.4)	45 (37.8)	40 (27.4)
50 to 59years	31 (20.0)	33 (29.5)	15 (30.6)	26 (25.7)	43 (24.7)	17 (21.5)	12 (30.8)	32 (25.8)	31 (32.3)	19 (22.9)	34 (32.4)	19 (14.5)	38 (28.6)	21 (20.8)	22 (31.0)	22 (20.2)	31 (31.3)	26 (30.2)	31 (26.1)	27 (18.5)
60 years and older	4 (2.6)	17 (15.2)	4 (8.2)	8 (7.9)	11 (6.3)	12 (15.2)	1 (2.6)	9 (7.3)	5 (5.2)	7 (8.4)	5 (4.8)	16 (12.2)	10 (7.5)	12 (11.9)	4 (5.6)	7 (6.4)	3 (4.7)	8 (9.3)	6 (5.0)	16 (11.0)
Chi-square test	P-value = 0.000																			
Gender																				
Female	70 (45.2)	54 (48.2)	19 (38.8)	61 (60.4)	76 (43.7)	39 (49.4)	22 (56.4)	67 (54.0)	38 (39.6)	47 (56.6)	46 (43.8)	73 (55.7)	56 (42.1)	57 (56.4)	32 (45.1)	57 (52.3)	25 (39.1)	41 (47.7)	54 (45.4)	84 (57.5)
Male	85 (54.8)	58 (51.8)	30 (61.2)	40 (39.6)	98 (56.3)	40 (50.6)	17 (43.6)	57 (46.0)	58 (60.4)	36 (43.4)	59 (56.2)	58 (44.3)	77 (57.9)	44 (43.6)	39 (54.9)	52 (47.7)	39 (60.9)	45 (52.3)	65 (54.6)	62 (42.5)
Chi-square test	P-value = 0.282																			
Family situation																				
Single	33 (21.3)	8 (7.1)	5 (10.2)	23 (22.8)	33 (19.0)	12 (15.2)	5 (12.8)	19 (15.3)	18 (18.8)	13 (15.7)	11 (10.5)	27 (20.6)	26 (19.5)	14 (13.9)	4 (5.6)	25 (22.9)	10 (15.6)	13 (15.1)	14 (11.8)	32 (21.9)
Divorced	6 (3.9)	4 (3.6)	1 (2.0)	1 (1.0)	6 (3.4)	4 (5.1)	2 (5.1)	0 (0.0)	5 (5.2)	2 (2.4)	2 (1.9)	3 (2.3)	5 (3.8)	3 (3.0)	2 (2.8)	1 (0.9)	4 (6.3)	1 (1.2)	2 (1.7)	5 (3.4)
Married	116 (74.8)	100 (89.3)	43 (87.8)	74 (73.3)	134 (77.0)	63 (79.7)	32 (82.1)	103 (83.1)	73 (76.0)	68 (81.9)	91 (86.7)	99 (75.6)	101 (75.9)	84 (83.2)	64 (90.1)	82 (75.2)	50 (78.1)	72 (83.7)	102 (85.7)	107 (73.3)
Chi-square test	P-value = 0.002																			
Practice location																				
Rural	10 (6.5)	12 (10.7)	3 (6.1)	6 (5.9)	16 (9.2)	2 (2.5)	3 (7.7)	10 (8.1)	5 (5.2)	7 (8.4)	9 (8.6)	10 (7.6)	7 (5.3)	8 (7.9)	9 (12.7)	7 (6.4)	3 (4.7)	8 (9.3)	11 (9.2)	9 (6.2)
Suburban	9 (5.8)	10 (8.9)	3 (6.1)	9 (8.9)	11 (6.3)	4 (5.1)	1 (2.6)	15 (12.1)	7 (7.3)	10 (12.0)	7 (6.7)	7 (5.3)	9 (6.8)	11 (10.9)	2 (2.8)	9 (8.3)	5 (7.8)	9 (10.5)	7 (5.9)	10 (6.8)
Urban	136 (87.7)	90 (80.4)	43 (87.8)	85 (84.2)	146 (83.9)	73 (92.4)	35 (89.7)	99 (79.8)	84 (87.5)	66 (79.5)	88 (83.8)	114 (87.0)	117 (88.0)	82 (81.2)	59 (83.1)	93 (85.3)	56 (87.5)	69 (80.2)	100 (84.0)	127 (87.0)
Chi-square test	P-value = 0.623																			
Function																				
Dental surgeon	11 (7.1)	8 (7.1)	8 (16.3)	10 (9.9)	8 (4.6)	6 (7.6)	8 (20.5)	15 (12.1)	7 (7.3)	7 (8.4)	11 (10.5)	12 (9.2)	9 (6.8)	11 (10.9)	8 (11.3)	9 (8.3)	3 (4.7)	5 (5.8)	14 (11.8)	15 (10.3)
General practitioner	38 (24.5)	39 (34.8)	10 (20.4)	29 (28.7)	50 (28.7)	22 (27.8)	7 (17.9)	36 (29.0)	26 (27.1)	21 (25.3)	27 (25.7)	41 (31.3)	36 (27.1)	28 (27.7)	15 (21.1)	36 (33.0)	19 (29.7)	23 (26.7)	24 (20.2)	48 (32.9)
Resident physician	36 (23.2)	8 (7.1)	5 (10.2)	15 (14.9)	27 (15.5)	14 (17.7)	5 (12.8)	18 (14.5)	18 (18.8)	13 (15.7)	7 (6.7)	26 (19.8)	17 (12.8)	17 (16.8)	5 (7.0)	24 (22.0)	10 (15.6)	15 (17.4)	13 (10.9)	26 (17.8)
Public health physician	12 (7.7)	20 (17.9)	8 (16.3)	13 (12.9)	19 (10.9)	11 (13.9)	7 (17.9)	16 (12.9)	7 (7.3)	15 (18.1)	18 (17.1)	13 (9.9)	17 (12.8)	13 (12.9)	13 (18.3)	10 (9.2)	6 (9.4)	15 (17.4)	18 (15.1)	14 (9.6)
Medical specialist (bio-medical-surgical)	43 (27.7)	34 (30.4)	14 (28.6)	27 (26.7)	51 (29.3)	22 (27.8)	10 (25.6)	35 (28.2)	33 (34.4)	24 (28.9)	32 (30.5)	28 (21.4)	46 (34.6)	28 (27.7)	20 (28.2)	23 (21.1)	25 (39.1)	23 (26.7)	38 (31.9)	32 (21.9)
Professor of medicine	15 (9.7)	3 (2.7)	4 (8.2)	7 (6.9)	19 (10.9)	4 (5.1)	2 (5.1)	4 (3.2)	5 (5.2)	3 (3.6)	10 (9.5)	11 (8.4)	8 (6.0)	4 (4.0)	10 (14.1)	7 (6.4)	1 (1.6)	5 (5.8)	12 (10.1)	11 (7.5)
Chi-square test	P-value = 0.01																			
Chi-square test	P-value = 0.240																			
Chi-square test	P-value = 0.170																			
Chi-square test	P-value = 0.092																			

Table 4. Overall recap of physicians' perceptions based on socio-demographic characteristics.

Years of experience	1 to 5 years	47 (30.3)	11 (9.8)	5 (10.2)	22 (21.8)	41 (23.6)	12 (15.2)	7 (17.9)	25 (20.2)	21 (21.9)	15 (18.1)	15 (14.3)	34 (26.0)	24 (18.0)	20 (19.8)	10 (14.1)	30 (27.5)	11 (17.2)	15 (17.4)	20 (16.8)	39 (26.7)	
	6 to 10 years	19 (12.3)	16 (14.3)	3 (6.1)	16 (15.8)	19 (10.9)	15 (19.0)	3 (7.7)	17 (13.7)	10 (10.4)	16 (19.3)	13 (12.4)	15 (11.5)	17 (12.8)	17 (16.8)	6 (8.5)	14 (12.8)	10 (15.6)	10 (11.6)	15 (12.6)	19 (13.0)	
	11 to 20 years	50 (32.3)	32 (28.6)	21 (42.9)	28 (27.7)	52 (29.9)	25 (31.6)	14 (35.9)	40 (32.3)	27 (28.1)	25 (30.1)	35 (33.3)	44 (33.6)	38 (28.6)	30 (29.7)	29 (40.8)	34 (31.2)	34 (29.7)	19 (29.7)	27 (31.4)	40 (33.6)	44 (30.1)
	20 years and over	39 (25.2)	53 (47.3)	20 (40.8)	35 (34.7)	62 (35.6)	27 (34.2)	15 (38.5)	42 (33.9)	38 (39.6)	27 (32.5)	42 (40.0)	38 (29.0)	54 (40.6)	34 (33.7)	26 (36.6)	31 (28.4)	34 (33.7)	24 (37.5)	34 (39.5)	44 (37.0)	44 (30.1)
		Chi-square test P-value = 0.000																				
Sector	Private	48 (31.0)	36 (32.1)	18 (36.7)	22 (21.8)	51 (29.3)	28 (35.4)	11 (28.2)	33 (26.6)	28 (29.2)	21 (25.3)	32 (30.5)	41 (31.3)	39 (29.3)	36 (35.6)	22 (31.0)	26 (23.9)	20 (31.3)	23 (26.7)	34 (28.6)	46 (31.5)	
	Private not-for-profit	1 (0.6)	1 (0.9)	0 (0.0)	3 (3.0)	3 (1.7)	0 (0.0)	1 (2.6)	1 (0.8)	2 (2.1)	1 (1.2)	1 (1.0)	1 (0.8)	2 (1.5)	0 (0.0)	3 (4.2)	0 (0.0)	1 (1.6)	1 (1.2)	1 (0.8)	2 (1.4)	
	Public	106 (68.4)	75 (67.0)	31 (63.3)	76 (75.2)	120 (69.0)	51 (64.6)	27 (69.2)	90 (72.6)	66 (68.8)	61 (73.5)	72 (68.6)	89 (67.9)	92 (69.2)	65 (64.4)	46 (64.8)	83 (76.1)	43 (67.2)	62 (72.1)	84 (70.6)	98 (67.1)	
		Chi-square test P-value = 0.250																				
Management position	No	113 (72.9)	72 (64.3)	36 (73.5)	79 (78.2)	126 (72.4)	52 (65.8)	30 (76.9)	91 (73.4)	65 (67.7)	62 (74.7)	77 (73.3)	95 (72.5)	95 (71.4)	73 (72.3)	53 (74.6)	76 (69.7)	42 (65.6)	63 (73.3)	86 (72.3)	107 (73.3)	
	Yes	42 (27.1)	39 (34.8)	12 (24.5)	22 (21.8)	48 (27.6)	26 (32.9)	9 (23.1)	32 (25.8)	30 (31.3)	21 (25.3)	28 (26.7)	35 (26.7)	38 (28.6)	27 (26.7)	18 (25.4)	32 (29.4)	22 (34.4)	23 (26.7)	33 (27.7)	37 (25.3)	
	Chi-square test P-value = 0.165																					
Chi-square test P-value = 0.806																						
Chi-square test P-value = 0.913																						
Chi-square test P-value = 0.890																						
Chi-square test P-value = 0.798																						
Chi-square test P-value = 0.284																						
Chi-square test P-value = 0.258																						
Chi-square test P-value = 0.773																						
Chi-square test P-value = 0.584																						
Chi-square test P-value = 0.156																						
Chi-square test P-value = 0.994																						
Chi-square test P-value = 0.619																						

Table 5. Overall recap of physicians' perceptions based on socio-demographic characteristics (continued).

Crossed variables	Level of physicians' interest in health matters in TM, n (%)				Level of physicians' trust in health matters in TM, n (%)				The amount of health messages delivered in TM, n (%)				The scientific quality of health messages delivered in TM, n (%)				Influence of TM on health behaviors, n (%)			
	None N=60	Little interest N=174	Moderate interest N=135	A lot of interest N=48	None N=50	Low trust N=198	Average interest N=153	High interest N=14	Low N=248	Average N=25	High N=144	Low N=234	Average N=170	High N=13	No influence	Low influence	Average influence	High influence		
Age	P-value = 0.010																			
25 to 29years	9 (15.0)	23 (13.2)	15 (11.1)	3 (6.3)	9 (18.0)	25 (12.6)	14 (9.2)	2 (14.3)	22 (8.9)	26 (18.1)	2 (8.0)	20 (8.5)	29 (17.1)	1 (7.7)	0 (0.0)	15 (15.5)	19 (11.6)	16 (10.7)		
30 to 39years	19 (31.7)	51 (29.3)	18 (13.3)	7 (14.6)	13 (26.0)	46 (23.2)	32 (20.9)	4 (28.6)	61 (24.6)	29 (20.1)	5 (20.0)	59 (25.2)	35 (20.6)	1 (7.7)	1 (16.7)	20 (20.6)	35 (21.3)	39 (26.0)		
40 to 49years	14 (23.3)	57 (32.8)	46 (34.1)	17 (35.4)	9 (18.0)	68 (34.3)	54 (35.3)	3 (21.4)	84 (33.9)	43 (29.9)	7 (28.0)	75 (32.1)	54 (31.8)	5 (38.5)	2 (33.3)	23 (23.7)	60 (36.6)	49 (32.7)		
50 to 59years	15 (25.0)	34 (19.5)	42 (31.1)	14 (29.2)	15 (30.0)	47 (23.7)	37 (24.2)	4 (28.6)	61 (24.6)	34 (23.6)	10 (40.0)	65 (27.8)	35 (20.6)	5 (38.5)	3 (50.0)	27 (27.8)	41 (25.0)	34 (22.7)		
60 years and older	3 (5.0)	9 (5.2)	14 (10.4)	7 (14.6)	4 (8.0)	12 (6.1)	16 (10.5)	1 (7.1)	20 (8.1)	12 (8.3)	1 (4.0)	15 (6.4)	17 (10.0)	1 (7.7)	0 (0.0)	12 (12.4)	9 (5.5)	12 (8.0)		
Chi-square test	P-value = 0.107																			
Gender	P-value = 0.195																			
Female	27 (45.0)	87 (50.0)	64 (47.4)	26 (54.2)	24 (48.0)	94 (47.5)	77 (50.3)	8 (57.1)	122 (49.2)	69 (47.9)	13 (52.0)	117 (50.0)	81 (47.6)	6 (46.2)	2 (33.3)	42 (43.3)	78 (47.6)	82 (54.7)		
Male	33 (55.0)	87 (50.0)	71 (52.6)	22 (45.8)	26 (52.0)	104 (52.5)	76 (42.9)	6 (42.9)	126 (50.8)	75 (52.1)	12 (48.0)	117 (50.0)	89 (52.4)	7 (53.8)	4 (66.7)	55 (56.7)	86 (52.4)	68 (45.3)		
Chi-square test	P-value = 0.933																			
Family situation	P-value = 0.776																			
Single	15 (25.0)	32 (18.4)	18 (13.3)	4 (8.3)	14 (28.0)	30 (15.2)	23 (15.0)	2 (14.3)	42 (16.9)	23 (16.0)	4 (16.0)	40 (17.1)	28 (16.5)	1 (7.7)	2 (33.3)	22 (22.7)	17 (10.4)	28 (18.7)		
Divorced	5 (8.3)	2 (1.1)	4 (3.0)	1 (2.1)	3 (6.0)	3 (1.5)	6 (3.9)	0 (0.0)	6 (2.4)	3 (2.1)	3 (12.0)	8 (3.4)	3 (1.8)	1 (7.7)	0 (0.0)	3 (3.1)	3 (1.8)	6 (4.0)		
Married	40 (66.7)	139 (79.9)	112 (83.0)	42 (87.5)	33 (66.0)	164 (82.8)	122 (79.7)	12 (85.7)	198 (79.8)	117 (81.3)	18 (72.0)	184 (78.6)	138 (81.2)	11 (84.6)	4 (66.7)	72 (74.2)	142 (86.6)	115 (76.7)		
Chi-square test	P-value = 0.043																			
Practice location	P-value = 0.223																			
Rural	1 (1.7)	15 (8.6)	9 (6.7)	6 (12.5)	3 (6.0)	15 (7.6)	12 (7.8)	1 (7.1)	17 (6.9)	12 (8.3)	2 (8.0)	16 (6.8)	13 (7.6)	2 (15.4)	0 (0.0)	7 (7.2)	11 (6.7)	13 (8.7)		
Suburban	4 (6.7)	10 (5.7)	12 (8.9)	5 (10.4)	4 (8.0)	6 (3.1)	11 (7.2)	4 (28.6)	21 (8.5)	9 (6.3)	1 (4.0)	22 (9.4)	6 (3.5)	3 (23.1)	1 (16.7)	7 (7.2)	16 (9.8)	7 (4.7)		
Urban	55 (91.7)	148 (85.1)	114 (84.4)	37 (77.1)	43 (86.0)	170 (85.9)	130 (85.0)	9 (64.3)	209 (84.3)	123 (85.4)	22 (88.0)	195 (83.3)	151 (88.8)	8 (61.5)	5 (83.3)	83 (85.6)	136 (82.9)	130 (86.7)		
Chi-square test	P-value = 0.502																			
Function	P-value = 0.917																			
Dental surgeon	5 (8.3)	20 (11.5)	9 (6.7)	3 (6.3)	4 (8.0)	13 (6.6)	19 (12.4)	1 (7.1)	22 (8.9)	15 (10.4)	0 (0.0)	22 (9.4)	14 (8.2)	1 (7.7)	0 (0.0)	7 (7.2)	20 (12.2)	10 (6.7)		
General practitioner	15 (25.0)	40 (23.0)	43 (31.9)	18 (37.5)	14 (28.0)	55 (27.8)	39 (25.5)	7 (50.0)	71 (28.6)	36 (25.0)	9 (36.0)	71 (30.3)	41 (24.1)	4 (30.8)	4 (66.7)	28 (28.9)	49 (29.9)	35 (23.3)		
Resident Physician	14 (23.3)	30 (17.2)	15 (11.1)	5 (10.4)	12 (24.0)	31 (15.7)	18 (11.8)	3 (21.4)	31 (12.5)	30 (20.8)	3 (12.0)	29 (12.4)	34 (20.0)	1 (7.7)	0 (0.0)	21 (21.6)	19 (11.6)	24 (16.0)		
Public health Physician	3 (5.0)	19 (10.9)	20 (14.8)	11 (22.9)	3 (6.0)	22 (11.1)	25 (16.3)	2 (14.3)	31 (12.5)	18 (12.5)	4 (16.0)	28 (12.0)	21 (12.4)	4 (30.8)	0 (0.0)	12 (12.4)	20 (12.2)	21 (14.0)		
Medical specialist (bio-medical-surgical)	22 (36.7)	48 (27.6)	38 (28.1)	10 (20.8)	16 (32.0)	59 (29.8)	42 (27.5)	1 (7.1)	77 (31.0)	33 (22.9)	8 (32.0)	69 (29.5)	46 (27.1)	3 (23.1)	2 (33.3)	26 (26.8)	46 (28.0)	44 (29.3)		
Professor of medicine	1 (1.7)	17 (9.8)	10 (7.4)	1 (2.1)	1 (2.0)	18 (9.1)	10 (6.5)	0 (0.0)	16 (6.5)	12 (8.3)	1 (4.0)	15 (6.4)	14 (8.2)	0 (0.0)	0 (0.0)	3 (3.1)	10 (6.1)	16 (10.7)		
Chi-square test	P-value = 0.220																			
Chi-square test	P-value = 0.166																			

Table 5. Overall recap of physicians' perceptions based on socio-demographic characteristics (continued).

Years of experience	17 (28.3)	41 (23.6)	19 (14.1)	8 (16.7)	14 (28.0)	40 (20.2)	26 (17.0)	5 (35.7)	42 (16.9)	40 (27.8)	3 (12.0)	46 (19.7)	37 (21.8)	2 (15.4)	1 (16.7)	22 (22.7)	29 (17.7)	33 (22.0)
1 to 5 years	11 (18.3)	28 (16.1)	12 (8.9)	3 (6.3)	6 (12.0)	28 (14.1)	19 (12.4)	1 (7.1)	34 (13.7)	15 (10.4)	5 (20.0)	31 (13.2)	22 (12.9)	1 (7.7)	0 (0.0)	11 (11.3)	23 (14.0)	20 (13.3)
6 to 10 years	16 (26.7)	56 (32.2)	42 (31.1)	17 (35.4)	12 (24.0)	66 (33.3)	50 (32.7)	3 (21.4)	87 (35.1)	38 (26.4)	6 (24.0)	75 (32.1)	51 (30.0)	5 (38.5)	2 (33.3)	24 (24.7)	56 (34.1)	49 (32.7)
11 to 20 years	16 (26.7)	49 (28.2)	62 (45.9)	20 (41.7)	18 (36.0)	64 (32.3)	58 (37.9)	5 (35.7)	85 (34.3)	51 (35.4)	11 (44.0)	82 (35.0)	60 (35.3)	5 (38.5)	3 (50.0)	40 (41.2)	56 (34.1)	48 (32.0)
20 years and over																		
Chi-square test	P-value = 0.012																	
Sector	P-value = 0.082																	
Private	22 (36.7)	59 (33.9)	30 (22.2)	13 (27.1)	16 (32.0)	56 (28.3)	49 (32.0)	2 (14.3)	77 (31.0)	41 (28.5)	6 (24.0)	76 (32.5)	45 (26.5)	3 (23.1)	2 (33.3)	27 (27.8)	54 (32.9)	41 (27.3)
Private non-lucrative	1 (1.7)	3 (1.7)	1 (0.7)	0 (0.0)	2 (4.0)	2 (1.0)	0 (0.0)	1 (7.1)	3 (1.2)	1 (0.7)	1 (4.0)	3 (1.3)	2 (1.2)	0 (0.0)	0 (0.0)	2 (2.1)	2 (1.2)	1 (0.7)
Public	37 (61.7)	112 (64.4)	104 (77.0)	35 (72.9)	32 (64.0)	140 (70.7)	104 (68.0)	11 (78.6)	168 (67.7)	102 (70.8)	18 (72.0)	155 (66.2)	123 (72.4)	10 (76.9)	4 (66.7)	68 (70.1)	108 (65.9)	108 (72.0)
Chi-square test	P-value = 0.627																	
Management position	P-value = 0.696																	
No	43 (71.7)	126 (72.4)	98 (72.6)	33 (68.8)	37 (74.0)	142 (71.7)	110 (71.9)	9 (64.3)	173 (69.8)	111 (77.1)	16 (64.0)	168 (71.8)	123 (72.4)	9 (69.2)	3 (50.0)	70 (72.2)	124 (75.6)	103 (68.7)
Yes	17 (28.3)	46 (26.4)	37 (27.4)	15 (31.3)	13 (26.0)	56 (28.3)	41 (26.8)	5 (35.7)	75 (30.2)	31 (21.5)	9 (36.0)	66 (28.2)	45 (26.5)	4 (30.8)	3 (50.0)	27 (27.8)	38 (23.2)	47 (31.3)
Chi-square test	P-value = 0.544																	

by age ($P=0.337$), gender ($P=0.195$), practice location ($P=0.353$), job title ($P=0.170$), years of work experience ($P=0.284$), activity sector ($P=0.156$) and management position ($P=0.89$)

The easiest traditional media to use in health topics

The majority of respondents 146 (35%) have considered TV to be the easiest TM to use, 119 (28.5%) were for Radio as easier, 86 (20.6) for print media, and only 64(15.3%) stated that none of these TM is easier to use. These perceptions were similar among all physicians in our survey sample regardless of age ($P=0.333$), gender ($P=0.052$), family situation ($P=0.412$), practice location ($P=0.881$), job title ($P=0.092$), years of work experience ($P=0.798$), activity sector ($P=0.994$), and management position ($P=0.619$).

Level of interest in health topics in traditional media

The majority of physicians who answered our questionnaire, 234 (56.1%), have little or no interest in health issues in TM [little interest: 174 (41.7%); no interest: 60 (14.4%)]. While 135 (32.4%) have moderate interest, and only 48 (11.5%) have great interest in health topics in TM. A significant difference was observed regarding age ($P=0.010$), family situation ($P=0.043$), job title ($P=0.022$) and years of work experience ($P=0.012$). On the other hand, this assessment was not influenced by gender ($P=0.776$), practice location ($P=0.483$), health sector ($P=0.212$) and management position ($P=0.783$).

Level of trust in health matters in traditional media

In the same pattern, nearly two-thirds of our study population, 248 (59.5%), have low or no trust in health topics in TM [low trust: 198 (47.5), no trust: 50 (12%)]. While 153 (36.7%) of the respondents have medium trust and only 14 (3.4%) give high trust to health topics in TM. These representations are similar to our entire study population without distinction of age ($P=0.416$), gender ($P=0.953$), family situation ($P=0.469$), practice location ($P=0.502$), function ($P=0.220$), years of work experience ($P=0.559$), activity sector ($P=0.161$), nor management position status ($P=0.777$).

The quantity of health messages transmitted by the traditional media

The quantity of health messages transmitted in the TM was considered low by 248 (59.5%) of our respondents, average by 144 (34.5%), and only a minority of our sample, 25 (6.0%), considered the quantity of these messages as high. These perceptions are not impacted by any of the following variables: age ($P=0.195$), gender ($P=0.923$), family situation ($P=0.223$), practice location ($P=0.917$), job title ($P=0.337$), years of work experience ($P=0.082$), activity sector ($P=0.627$), and management position ($P=0.095$).

Quality of health messages transmitted by traditional media

In the same way, the majority of the surveyed physicians, 234 (56.1%), consider that the scientific quality of health topics transmitted in TM is poor, while a set of 170 (40.8%) participants in our survey consider it medium quality, and only 13 (3.1%) evaluate it as strong quality. Likewise, these representations are not impacted by age ($P=0.107$), gender ($P=0.878$), family situation ($P=0.810$), place of practice ($P=0.058$), function ($P=0.375$), years of work experience ($P=0.983$), activity sector ($P=0.696$), and management position ($P=0.544$).

Influence of traditional media on health behaviors

Three-quarters of the surveyed physicians, 314 (75.3%), consider that the TM has a moderate or strong influence on health behaviors [moderate influence: 164 (39.3%), strong influence 150 (36%)]. While nearly a quarter of the survey respondents consid-

ered that the TM has a weak or no influence on behaviors [weak influence: 97 (23.3%); no influence: 6 (1.4%)]. No significant differences were observed in terms of age ($P=0.408$), gender ($P=0.271$), family situation ($P=0.222$), practice location ($P=0.742$), job title ($P=0.166$), years of work experience ($P=0.748$), activity sector ($P=0.871$), or management position status ($P=0.318$).

Discussion

The choice of dealing with traditional media in our topic is a deliberate choice, given the importance that these communication channels still keep in health promotion despite the rise and growth of new media and social media. Indeed, recently in the current pandemic context, studies have shown that people wishing to learn about the Coronavirus trusted and resorted to doctors and traditional sources of information (television, radio and print media). In addition, they have used official websites such as government websites or agencies like WHO and newspaper websites.^{10,14} Thus, it turned out that new media and social media cannot replace traditional channels, but they complete each other. The need for complementarity has been highlighted in times of crisis in order to increase the overall richness of the media environment by combining multiple channels to reach different audiences.^{8,15}

Regarding our population sample, a total of 417 respondent physicians were selected from a parent population of physicians and dentists practicing in Morocco which was estimated at 30865: 26575 doctors (14028 private sector, 12548 public sector) and 4289 dentists (3643 private sector, 323 public sector) (source: Maroc en chiffres | Téléchargements | Site institutionnel du Haut-Commissariat au Plan du Royaume du Maroc (hcp.ma) (2021). This sample meets overall statistical representativeness with a confidence level (CI) of 95%. The selection of respondents was random, based on voluntary participation, and even though we did not include any mandatory questions in our survey, we were able to obtain what we consider to be a large sample, which shows the attractiveness of and interest in our study topic among Moroccan physicians.

Our sample consisted of as many women as men and most of the regions were represented, except for the southern and southeastern regions and the eastern region which had a low participation. Rural areas, the private sector, and dentists were also relatively poorly represented. While the low participation of rural and suburban areas may suggest exclusion, the low participation of the private sector (including dental doctors), despite multiple solicitations, is probably related to the marginal place that this sector occupies in the management of public health issues in Morocco. This management is monopolized by the public structures of the Health Ministry, and over time, the private sector has become accustomed to this monopoly and does not get much involved in public health issues.

The majority of physicians surveyed had little or no interest in health topics in TM [234 (56.1%)]. They considered the quantity of messages conveyed by TM in Morocco to be low [248 (59.5%)] and thought that health messages in TM are of poor quality [234 (56.1%)]]; they had little or no trust in health topics in TM [248 (59.5%)].

In addition, a significant proportion of the respondents did not view any of the TM as reliable [147 (41.7%)], did not consider any TM to be up-to-date [133 (31.9%)], and did not consult any TM on health matters [155 (37.2%)]. Yet, almost all (three-quarters) [314 (75.3%)] of the physicians had acknowledged a moderate to strong influence of TM on health behaviors. These physicians' perceptions of TM were not greatly affected by socio-demographic and

professional variables, with few exceptions.

From these figures, we can conclude that physicians in Morocco are low consumers of traditional media and have a perception that appears negative towards the media. We can also conclude that the respondent physicians distinguish between the TM as communication tools and the media content (journalistic product), because even though the majority of them are convinced that the TM has an influence on the behaviors and health of individuals and populations, and the majority also qualified one of the 3 communication channels (TV, print, radio) as fast and easy to use with a preponderance for TV and the print media, at the same time, the respondent physicians consider the health journalistic product in TM to be low both in quantity and quality which makes the messages not beneficial for the population, considering the fact that it has been proven in the literature that quality information is beneficial for patients: It can improve the sense of control, reduce anxiety and emotional distress, increase compliance with treatment, make expectations more realistic and generate feelings of safety and reassurance.¹⁶⁻¹⁸ Therefore, it is understandable why the majority of physicians do not consult any of the TM in health issues and show little interest in TM, and this highlights the distance/gap between two important actors in health promotion: physicians and TM journalists.

But if these perceptions and practices can help us to understand to a certain extent the causes of this constant tension between doctors and TM journalists in Morocco, this distancing position between these two actors cannot be explained only by the low quantity and quality of the journalistic products, because it seems that physicians in Morocco, like physicians in other countries, are also influenced by the biomedical vision that still reigns in the world. These paradigms lead us to believe that physicians are only concerned with the media to give advice to the population, whereas health goes far beyond this technicist vision. Thus, in our sample, the management position variable, which is supposed to make a difference in the relationship with the media, which are part of the external environment as an indispensable partner for any manager, did not impact the representations of physicians who had a management position. Their perceptions remain similar to those of other physicians who are not managers (no statistically significant difference).

In a study, it has been shown that psychiatrists rarely provide information that would allow more responsible media treatment of suicide, especially since they have a distrustful relationship with the media and journalists, and only psychiatrists who have had a satisfactory previous experience with journalists gave significantly more advice than those who have had a negative experience, or no experience at all. Hence the interest is in setting up awareness-raising and training work for psychiatrists on communication with journalists, in order to guide the latter towards a more responsible media handling of suicide.¹⁹ This relationship of poor cooperation on the part of doctors, which is noticed in biomedical matters, is even more accentuated in issues dealing with the social determinants of health. While physicians would probably agree that patient advocacy is their appropriate role, advocacy for the social, economic, educational and political changes that determine health is much less accepted. And even public health physicians may limit their advocacy to issues concerning individual behavior (vaccinations, smoking cessation, cancer screening, and seatbelt use) rather than expanding it to advocacy for structural societal change.²⁰

As a result, we are facing a gap between physicians and journalists. In fact, if media professionals in journalistic practice are interested in health issues, health information in the media is not always broadcasted in a very clear way, nor in a completely neutral way, and even some dossiers do not get to be published in the

media, which may be problematic in terms of effectiveness of the broadcasting sources or the initial producers of information (communicators) of which physicians are part.²¹ These communicators (initial producers of information, of which physicians are a part) and journalists are generally rivals because they are likely to have different definitions of what constitutes “good” publishable information. A better understanding of the dynamics of a relationship in which neither (actor) can impose all of its laws on the other is a condition for beneficial coexistence.²² On the other hand, the gap between journalists and physicians also seems to be a matter of ignorance rather than a conflict of interest or maliciousness, and neither side seems to understand or recognize the role and duties of the other, with cynical attitudes towards each other, which ultimately hurt the public and patients. But if journalists and physicians, working independently or as opponents, will not solve these problems, both communities must understand each other’s professional training, education, timelines, duties, ethical codes and internal tensions. Only then can physicians and journalists truly serve the public and their profession.²³

Limitations of the study

Among the limitations of this study, we have noted the low participation of physicians from rural areas and the private sector as well as dental doctors; not to mention the likely defensive position taken in answering our survey would be a selection bias. But in spite of this, our results could be very useful in order to address new aspects of reflection to generate recommendations for better collaboration between physicians and the media in order to improve health promotion in Morocco.

Conclusions

Our results show that physicians have a perception that appears to be negative towards the traditional media. This might partially explain the constant tension situation between physicians and journalists/media in Morocco. It is, therefore, necessary to carry out other studies to complete this outline of understanding in order to build bridges of collaboration between physicians and the media. To this end, a research project is being conducted that examines the opinions of journalists and proposes solutions for both parties in order to co-construct health promotion in Morocco.

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