Abstract

Background: In Qatar, health media campaigns and applications (apps) have not been particularly successful among adolescents. Arab culture and Kohlberg’s theory of moral development suggest personal communication as a promising alternative.

Aims: This study asks the question, how important is personal communication for health information among adolescents when compared to other sources?

Methods: A secondary analysis of a representative survey in 2017 with 1117 adolescents in Qatar was performed.

Results: Personal communication is the most important source of health information, together with a few selected internet platforms. There was little difference in selection according to gender or age of adolescents.

Conclusions: Health information for adolescents should take advantage of personal communication and pay attention to which internet channels are used. Parents and friends are particularly relevant.

Keywords: Adolescents, health, health information, health campaigns, Qatar
Introduction

Qatar is a country with severe health problems among its adolescents (1,2,3) and has tried to convince them to become more health-conscious through campaigns and an online application (app) (3,4). So far, not a single recent campaign has reached a majority of Qatari adolescents (3,5) and the app has only been “ever downloaded or used” by 5% of Qatari adolescents (3,6).

Scattered evidence about alternative sources of health information has already hinted at family and friends as the most used channels in Qatar, followed by the internet (7,8). In the Gulf region, personal communication appears important as well (9,10,11), likewise in South America (12,13) and in western countries (14), above all among adolescents (4–6,15–22). Arab culture should even strengthen the role of personal communication since culturally it is more relationship-based (23) where personal connections play an important role (24) and social behaviour tends to be more determined by one’s family, superiors and peers (25).

In particular, adolescents’ friends should be a promising personal source for health information. Kohlberg (26) found that adolescents from 12 years upwards become increasingly less dependent on their parents. Instead, they are receptive to approval or disapproval from peers outside the family; this seems even more the case among females (27). Thus, personal sources seem to be particularly promising for reaching young people with health information, specifically in Arab cultures. Among these sources, Kohlberg (26) emphasizes the importance of adolescents’ friends.

The objectives of this study were to examine when compared to other sources of information,
how popular are personal contacts for general health information among Qatari teens, specifically for the role of friends (RQ)? Research on gender and peer orientation (27) suggests two hypotheses: H1) Female adolescents consult their friends more often than males for health information; and H2) The older adolescents are, the more often they consult their friends for health information (26).

Methods

This study is a secondary analysis of a large representative survey of Qatari adolescents aged 13-20 years in order to gauge their health information behaviour (3). The survey was commissioned by Northwestern University in Qatar, administered by the Social and Economic Survey Research Institute (SESRI), Qatar University, and conducted in Arabic on laptop computers at schools, from 22 April to 17 May 2017. In total 1117 Qatari nationals participated (response rate: 72%).

Which sources for health information Qatar’s adolescents turn to (RQ) was addressed by the question: “People get information about health from many different sources. For each of the following sources please indicate whether you have used them at all to get information about health topics.” Possible answers were “yes” and “no” (3). The 23 sources presented to respondents were compiled into the following categories:

Personal sources: guardians (parents in most cases), brothers or sisters, friends, doctors/nurses;

Websites: YouTube, Wikipedia, SahtakAwalan (Qatari health website), online forums about health information, newspaper articles (online version), magazine articles (online version);

Social media: Facebook, Snapchat, Twitter, Instagram;

Traditional media: TV news, TV shows (talk shows, reality shows, medical or other dramas), newspaper articles (print version), magazine articles (print version), radio, books.

Finally, the list of sources also contained “leaflets/pamphlets from a hospital, clinic, or medical
practice” and “health classes in school.”

To test H1 and H2, the responses of females and males, younger and older adolescents were compared. In the survey, gender was addressed by the question “What is your gender?” with responses “I am a female” and “I am a male” (50% of the respondents each). The age of the respondents was gauged by “What is your age in years?” (3). The median age divided the respondents into a younger cohort (13–15 years, 45% of the respondents) and an older cohort (16–20, 55%). Chi-square (Fisher’s Exact Test, one-sided) is used to gauge the statistical significance of differences between these groups.

**Results**

For more than three quarters of all respondents and for the four subgroups separately, personal sources were found to belong to be the most popular source for health information, in this order: parents, friends, siblings and doctors/nurses. One website (YouTube) and two social-media platforms (Instagram and Snapchat) were equally important. Fewer Qatari adolescents mentioned other social-media platforms and websites, as well as more traditional sources such as medical leaflets/pamphlets, TV, books, and health classes. Radio, printed newspapers and magazines were consulted by approximately 30% of respondents (Table 1).

H1 (females are more friends-oriented) was not confirmed. On the contrary, it was found that parents were more relevant as sources of information for females than for males, yet Instagram was also popular. Males, in contrast, used traditional media channels more often, while health classes had little popularity among males.

H2 (the older adolescent are, the more friends-oriented they become) was not confirmed. Siblings and doctors/nurses were found to be more important for older adolescents, as were Twitter and Wikipedia. Younger respondents relied more on YouTube and health classes when compared to older adolescents.

**Discussion and conclusions**

This analysis supports the assumption that personal sources of health information are the most important among Qatari adolescents. In Qatar, only two social-media platforms (Instagram and Snapchat) and one website (YouTube) were close to comparable in usage to personal sources. This result was valid equally for females and males, younger and older adolescents.
Among the personal sources, and as predicted by Kohlberg (26), friends are extremely important, surpassed only slightly by parents. Females and males, and younger and older adolescents rely equally on their friends as sources of health information. Therefore, assumptions that females and older adolescents should be more friends-oriented (H1 and H2) are not supported. Instead, females still depend slightly more than males on their parents for health information in general, which would contradict previous evidence (27). In contrast to Kohlberg’s concept of moral development, the dominant role of the family in Qatari culture, especially that of parents, would appear to prevail even among females and older adolescents.

As a promising conclusion for health campaigns in Arab countries, health information for adolescents should take advantage of personal communication with parents and friends, and supported by careful usage of specific internet platforms.

**Limitations**

Friends as sources of health information might possibly be more popular than measured in this secondary analysis because they could also be the unmentioned sources of health information on social media. Also, since this study is about health information in general, it could well be that adolescents use personal sources even more extensively the more serious the health issues are (11).

**References**

1. Abdel-Khalek, AM. The relationships between subjective well-being, health, and religiosity among young adults from Qatar. Mental Health, Religion & Culture 2013; 16: 306-318.
2. Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: A systematic analysis for the Global Burden of Disease Study 2013. Lancet 2014, 384: 766-781.
3. Schoenbach K, Wartella E, Saeed M, Khaled SM. Health information and monitoring among Qatari adolescents, 2017. Doha, Qatar: Northwestern University in Qatar; 2017.
4. Colineau N, Paris C. Talking about your health to strangers: Understanding the use of online social networks by patients. New Review of Hypermedia and Multimedia. 2010; 16: 141-160.
5. Lariscy RW, Reber BH, Paek H. Examination of media channels and types as health information sources for adolescents: Comparisons for black/white, male/female, urban/rural. Journal of Broadcasting & Electronic Media 2010; 54: 102-110.
6. Zhao S. Parental education and children’s online health information seeking: Beyond the digital divide debate. Social Science & Medicine 2009; 69(10), 1501-1505.
7. Choudhury SM, Arora T, Alebbi S, Ahmed L, Aden A, Omar O, et al. How do Qataris
source health information? PLoS ONE 2016, 11(11) (http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0166250&type=printable).

8. Northwestern University in Qatar. Media use in the Middle East, 2017. Doha, Qatar: Northwestern University in Qatar; 2017.

9. Al Ghamdi KM, Almohedib AM. Internet use by dermatology outpatients to search for health information. International Journal of Dermatology 2011; 50: 292-299.

10. Al Ghareeb AA. The role of health information resources in forming the health awareness of Saudi women: Applied study in Riyadh. Journal of the Social Sciences 2009; 37(2).

11. Arnott Smith A, Keselman A. Meeting health information needs outside of healthcare: Opportunities and challenges. Amsterdam: Elsevier; 2015.

12. Airhihenbuwa CO. Health and culture: Beyond the Western paradigm. Thousand Oaks, CA: Sage; 1995.

13. Elder JP, Ayala GX, Para-Medina D, Talavera DA. Health communication in the Latino community: Issues and approaches. Annual Review of Public Health 2009; 30: 227-251.

14. Rossmann C, Lampert C, Stehr P, Grimm M. Nutzung und Verbreitung von Gesundheitsinformationen: Ein Literaturueberblick zu theoretischen Ansaetzen und empirischen Befunden [Use and distribution of health information: A literature review of theoretical approaches and empirical evidence]. Guetersloh, Germany: Bertelsmann Stiftung; 2018.

15. Center on Media and Human Development. Teens, health, and technology: A national survey. Evanston, IL: Northwestern University, School of Communication; 2015.

16. Diiorio C, Pluhar E, Belcher L. Parent-child communication about sexuality: A review of the literature from 1980-2002. Journal of HIV/AIDS Prevention & Education for Adolescents & Children 2003; 5: 7-32.

17. Ennett ST, Bauman KE, Foshee VA, Pemberton M, Hicks KA. Parent-child communication about adolescent tobacco and alcohol use: Who do parents say and does it affect youth behavior? Journal of Marriage and Family 2004 (https://doi.org/10.1111/j.1741-3737.2001.00048.x).

18. Gowen LK. Online mental health information seeking in young adults with mental health challenges. Journal of Technology in Human Services 2013; 31(97): 97-111.

19. Harakeh Z, van Nijnatten CHCJ. Young people smokers’ reactions on peer influence not to smoke. Substance Use & Misuse 2016, 51: 1693-1700.

20. Harvey KJ, Brown B, Crawford P, Macfarlane A, McPherson A. ‘Am I normal?’ Teenagers, sexual health and the internet. Social Science & Medicine 2007, 65: 771-781.

21. Hu Y, Sundar SS. Effects of online health sources on credibility and behavioral intentions. Communication Research 2009, 37: 105-132.

22. Hutchinson MK, Jemmott III JB, Jemmott LS, Braverman P, Fong JT. The role of mother-daughter sexual risk communication in reducing sexual risk behaviors among urban adolescent females: A prospective study Journal of Adolescent Health 2003; 33: 98-107.

23. Hooker JN. Cultural differences in business communication. In Paulston, CB, Kiesling, SF, Rangel ES. (Eds.), Handbook of intercultural discourse and communication (pp. 389-407).
Maladen, MA: Wiley-Blackwell; 2012.

24. Hofstede G. Culture's consequences: International differences in work-related values (2nd ed.). Beverly Hills, CA: Sage; 1984.

25. Riesman D, Glazer N, Denney R. The lonely crowd: A study of the changing American character. New Haven, CT: Yale University Press; 1950.

26. Kohlberg L. Stage and sequence: The cognitive-developmental approach to socialization. In Goslin, DS (Ed.), Handbook of socialization theory and research. Chicago: Rand McNally; 1969:347–480.

27. Rose AJ, Rudolph KD. A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. Psychological Bulletin 2006; 132: 98-131.