Original Article

Sexual healthcare knowledge, attitudes, and practices among primary care physicians in Trinidad and Tobago

Patrice A. Rabathaly[1], Vijay Kumar Chattu[2]

[1]Department of Social and Environmental Health Research, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine (LSHTM), London, United Kingdom, [2]Public Health and Primary Care Unit, Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago

Abstract

Background: Our understanding of healthcare professionals' competence level in both their sexual history taking practices and their attitudes in addressing sexual health concerns of patients in middle and old age is lacking. This research aimed to assess primary care physicians' (PCPs) knowledge, attitudes, and sexual healthcare practices toward patients who are ≥45 years in Trinidad and Tobago. **Materials and Methods:** A self-reported survey instrument assessing clinical sexual health knowledge, attitudes, and practices was administered nationwide to all registered PCPs (n = 155) in the public healthcare service. Descriptive and inferential statistical analyses were conducted using STATA. **Results:** PCPs, who were foreign medical graduates, middle-aged, male, and worked in urban centers, had improved odds of discussing sexual health with middle-aged and older patients. PCPs with any training in sexual health communication or sexual history taking were three times more likely to initiate a sexual health discussion or take a sexual history. Over 90% of physicians reported taking a sexual history only if the discussion was patient initiated and over 50% of PCPs indicated they will not ask these older patients about their sexual orientation, sexual partners, sexual abuse, or violence. **Conclusions:** Even though PCPs reported having a positive willing attitude toward offering sexual health care to these patients, they had a low level of knowledge of sexual function in later life and inconsistent sexual history taking practices. There is a great need for training physicians' on sexual health communication and history taking and on sexual function in older adults.

Keywords: Caribbean, knowledge attitudes and practices, middle age, old age, primary care, sexual health, sexual history taking, Trinidad and Tobago

Introduction

Primary care (PC) is often the first point of contact for patients with sexual health problems.[1] With the rising prevalence of sexual dysfunction (SD) in middle- and old-aged persons,[2] management of such sexual concerns should be covered in PC. However, PC is known to be a resource poor setting with limited availability of sexual healthcare services for older people.[3] "Youth" is associated with sexuality (conditioned by popular media) which may contribute to the ageist views shared by some Primary Care Physicians (PCPs) that sex becomes less important with age, and older people are sexually less desirable or incapable.[4] Sexual ageism is also reinforced by the natural age-based decline in sexual function.[5] PCPs with such ageist beliefs about sexuality justify why for sexual health, they focus on patients of reproductive age, for pregnancy, sexually transmitted infections (STIs), and contraception.[2] To them, sexual health is a valid topic to discuss with younger, but not older patients because sexual priorities become irrelevant as patients age.[5]

Apart from ageist views about sex, PCPs avoid discussing sex with their older patients for further age-related reasons, but these evoke discomfort and fear. Age discrepancy between PCPs and patients can influence a sexual history consultation: with

Address for correspondence: Ms.Patrice A. Rabathaly, Department of Social and Environmental Health Research, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine (LSHTM), London, UK. E-mail: patrice.rabathaly@lshtm.ac.uk

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_322_18

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Rabathaly PA, Chattu VK. Sexual healthcare knowledge, attitudes, and practices among primary care physicians in Trinidad and Tobago. J Family Med Prim Care 2019;8:614-20.

younger patients, they perceive them as more likely to expect or be open to discuss sex contrary with an older patient. In fact, some PCPs have rated the experience as unwelcoming, as if interrogating your own parents about their sex life.[4,6,7] In studies with PCPs who are uncomfortable discussing sex with someone older, they have expressed fear of offending the older patient due to the perception of sex being nonrelevant to them or to the chief complaint.[4] Some PCPs feel embarrassed or awkward with sexual language and additional fear of the possibility of inciting patient arousal during a consultation.[6] In addition to the influence of age on worldviews about sexuality, lack of training in sexual health knowledge or communication also discourages PCPs. PCPs have reported that the fear is rooted in their feeling of incompetence due to inadequacy or limited knowledge of sexual health in older age patients or how to take an appropriate sexual history with them.[8] In contrast, despite the normal decline in sexual functioning with age, older patients wish to maintain a healthy, satisfying sex life well into their later years.[9,10] PCPs treating older patients should, therefore, be knowledgeable in SD, STIs, and intimacy in later life, and comfortable and proactive in managing these patients' sexual health concerns.[4,11]

In the last decade, only a small number of population-based studies research sexual health lifestyle preferences or concerns of the middle- and old-aged, such as the large global study in European countries on sexual behavior,[12] or a few national studies focused on aging and sexuality including the national surveys on sexual attitudes and lifestyles (NATSAL) in the United Kingdom[13] and the national social life and health ageing project (NSHAP) in the United States.[14] There are even fewer quantitative surveys reporting on incidence and prevalence of sexual dysfunctions in men and women in this age group,[15] or on appropriate tools to improve sexual health communication.[16] Most of the research is patient centered and a dearth of information exists regarding the physician's perspective. Studies that discover the factors that influence PCPs knowledge about sexual function in later life and their attitudes toward sexuality in consultation with middle-aged and older patient's and insights about how they address their sexual health concerns is warranted.

This study was conducted with PCPs in Trinidad and Tobago and attempts to fill some of these research gaps. As there have been no other studies to date on this subject in the Caribbean region, this research provides some baseline data and future opportunity for comparative analysis with other Caribbean territories. As Trinidad and Tobago is a very culturally and ethnically diverse country, there is opportunity to discover distinctive culturally specific factors that affect their physicians and older patients and a chance to document any unique healthcare experiences associated with communicating sexual health concerns. This paper aimed to quantitatively identify the characteristics of PCPs that influence their knowledge, attitudes, and practices (and the associations among these variables) in sexual health consultation with middle-aged and older patients.

Materials and Methods

This quantitative paper is part of overarching mixed methods study with a sequential exploratory design that consists of a qualitative and quantitative arm.[17] The qualitative arm explored PCPs attitudes towards sexuality and sexual health care of middle-aged and older patients and this data was collected by conducting 'one to one' semi structured interviews with 35 PCPs from public and private sector. These interviews generated two types of qualitative data: interviewer field notes and transcripts of the interviews. The data received was analysed using Framework analysis and a grounded theory approach and the results informed the design of the survey instrument.[18]

Data collection

In April 2012, an anonymous, self-completion questionnaire survey package (with a study questionnaire, study information sheet, and consent form) was manually distributed to 155 PCPs recruited from 106 health centres nationwide. The questionnaire was developed to investigate how PCPs' characteristics were associated with their sexual health knowledge, attitudes and care practices with middle-aged and older patients. The first section of the questionnaire collected demographics, second section probed practitioners' views on six clinical vignettes about sexual health related complaints presented by middle-aged and older patients. Each vignette was followed by at least three questions aimed to assess PCP's knowledge (determine a correct diagnosis), attitudes (comfort level discussing sexual health with the patient) rated on a Likert scale; and practices (preferred diagnostic/treatment approaches) Following were sections 3-4, which were general questions about PCPs attitudes towards sexual health care and sexual history taking and their preferences to undertake further training in sexual health.

Development of survey instrument

As far as could be determined from our review of the literature, there are no existing validated tools for assessing PCPs' KAP towards sexual health in middle-aged and older adults available. Therefore, the survey style, sections especially the clinical scenarios and KAP questions were developed using published literature, and shared experiences in interviews with PCPs,[19] from the qualitative phase of the study. For section 2, the rationale for using the vignette style to present clinical scenarios followed by a series of relative questions is very similar to the format used in continuing medical education (CME), a style that is familiar with most clinicians. Each clinical scenario contained the following fundamental criteria: a clearly stated patient gender, a patient of middle or old age, and presenting complaints with an identifiable sexual health prognosis.

Originally the researcher initiated an online survey dissemination strategy guided by Cochrane's methodology to increase response rate of research using online or postal services.[20] The survey tool was printed and manually distributed to each recruited physician. Ethical approval was obtained from the ethics committee of

the London School of Hygiene and Tropical Medicine, and the Ministry of Health, of Trinidad and Tobago.

Data analysis

Multivariable statistical analysis was carried out using SPSS version 21 and Stata12 to answer hypotheses generated for this study. Predictive analyses presented in the form of scores, odds ratios (ORs) and *P* values were calculated by means of logistic regression models.

Results

From a sample of 155 PCPs, the survey achieved a 60% response rate ($n = 93$). Just over 50% of PCPs who participated were male; under 40 years of age and 60% graduated from a locally based medical university. Around 67% of PCPs reported that they had no formal training in sexual function in later life [Table 1].

Knowledge levels of PCPs

Summarized in Table 2, no PCP attained a full knowledge score of 6, in correctly diagnosing every one of the clinical scenarios. The mean knowledge score attained was 2.27 and more than half (57%; $n = 53$) of PCPs scored less than 2 out of 6. PCPs who attained higher than the mean knowledge score were 2.43 times more likely to have had formal postgraduate training in sexual function in later life. Markedly, 19.4% of PCPs indicated that they were never trained in any of the sexual reproductive health (SRH) or sexual health communication topics listed. Furthermore, 42.4% of PCPs were never taught to take a sexual history.

Attitudes of PCPs

Majority of PCPs' agreed that sexual function in later life was important (96%) and support health promotion in this age group (95%). Yet, a few PCPs agreed that sexual healthcare for those aged 45 + had little relevance to their well-being (11%), not a priority (29%), limited time available to discuss in PC (59%) and not apt taking sexual history from older patients (14%). Data analysis of the first five clinical scenarios (STIs; chronic illness; sexual performance difficulties; surgery; medication), revealed that over 90% of PCPs stated they were generally comfortable discussing sexual health given those patients and their presenting complaints. However, in the sixth clinical scenario only 71% of PCPs were comfortable discussing sex with that patient who presented with a psychosexual problem.

Further analysis [Table 3] into the predictors of PCPs comfort when discussing sex with male middle- and old-aged patients suggests that PCPs must also be male [OR = 4.75; $P = 0.00$], over 40 years of age (at least middle-aged) [OR = 3.1; $P = 0.03$] and educated abroad [OR = 4.14; $P = 0.01$]. When these PCP characteristics were applied in the multivariate model, it was noted that "training in sexual health communication" was also statistically significant and it increased the PCPs odds threefold to be comfortable discussing sexual health with the male patients [OR = 3.19; $P = 0.05$]. Predictors of comfort with increased odds were found similarly with gender and age concurrence, foreign education, and training is sexual health communication.

Practices: Discussing sex with their middle-aged and older patients

PCPs that attained any training in sexual health communication during their medical education or professional career were three times more likely to discuss sexual health matters with their older patients (OR = 3.15; $P = 0.032$). Notably, these odds

Table 1: Characteristics of Study Participants (PCPs)

Characteristics	*n*=93	(%)	Characteristics	*n*=93	(%)
Age groups			Graduate school		
<30-year old	12	12.9	Locally based university (UWI)	56	60.3
30-39	44	47.3	Foreign-based university	37	39.7
40-49	20	21.5	Practice location		
50-59	9	9.7	Urban/suburban	66	71.0
≥60-year	8	8.6	Rural area	27	29.0
Gender			Number of years postgraduation		
Female	41	44.1	<10 years	41	44.1
Male	52	55.9	≥10 years and more	52	55.9
Formal training Sexual function in middle and old age (undergraduate level)			Religious Influence		
			Catholic	26	28.0
Yes	30	32.6	Christian	14	15.2
No	62	67.4	Hindu	33	35.5
Sexual function in middle and old age (postgraduate level)			Muslim	13	14.0
Yes	36	39.1	None	4	4.3
No	56	60.9	Other	3	3.3
Sexual history taking skills			Ethnicity		
Yes	53	57.6	Afro-Trinidadian	7	7.5
No	39	42.4	Indo-Trinidadian	45	48.4
			Mixed Heritage	11	11.8
			Tobagonian	1	1.1
			Not from T&T	29	31.2

Table 2: PCPs' knowledge of sexual function and sexual history taking with older patients

Mean knowledge score for sexual function in middle-aged and older patients (out of six questions) = 2.27			
	%	*n* (93)	
PCPs that scored less than the mean	56.99	53	
PCPs that scored more than the mean	43.01	40	
Training in sexual functioning in patients of middle and old age			
PCPs that attained knowledge scores above the mean were more likely to have had formal training in sexual function in later life:			
	Odds ratio	**95% CI**	***P*>|z|**
At any level	1.61	0.70-3.71	0.26
at the Undergraduate level	0.70	0.29-1.72	0.44
at the Postgraduate level	2.43	1.03-5.75	*0.04
Training in sexual history taking with patients in middle and old age			
PCPs with formal training in sexual history taking skills were more likely to be:			
	Odds ratio	**95% CI**	***P*>|z|**
Recently graduated (≤10 years ago)	1.85	0.79-4.32	0.15
Educated locally and recently graduated	2.48	0.83-7.46	0.12
Educated abroad and recently graduated	1.5	0.31-7.25	0.16
Educated abroad (foreign medical graduate)	1.14	0.49-2.64	0.77

PCP: Primary care physician. *Statistically significant

Table 3: Predictors for comfort when talking about sex

PCPs who were comfortable discussing sexual health with middle-aged or older MALE patients were more likely:						
Characteristics	**Odds ratio (OR) [Crude]**	**95% CI**	***P*>|z|**	**Odds ratio (OR) [Adjusted All]**	**95% CI**	***P*>|z|**
Trained in sexual health communication	2.28	0.92-5.70	0.08	3.19	1.03-9.89	*0.05
Male physicians	4.75	1.79-12.6	*0.00	3.60	1.16-11.19	*0.03
40+years in age	3.1	1.10-8.67	*0.03	2.40	0.53-10.8	0.26
Educated abroad for medical school	4.14	1.412.2	*0.01	2.93	0.69-12.6	0.15
Graduated ≥10 years or more ago	2.39	0.95-5.95	0.06	0.46	0.69-3.12	0.43
Worked locally for ≥10 years or more	1.74	0.64-4.71	0.27	2.38	0.39-14.7	0.35
Rural practice setting	1.63	0.58-4.64	0.36	1.37	0.13-1.08	0.07
PCPs who were comfortable discussing sexual health with middle aged or older FEMALE patients were more likely:						
Characteristics	**Odds ratio (OR) [Crude]**	**95% CI**	***P*>|z|**	**Odds ratio (OR) [Adjusted All]**	**95% CI**	***P*>|z|**
Trained in sexual health communication	2.61	0.78-8.12	0.12	2.43	0.64-9.30	0.19
Female physicians	1.31	0.39-4.35	0.66	1.79	0.43-7.41	0.42
40+years in age	2.46	0.63-9.64	0.20	4.58	0.78-26.7	0.09
Educated abroad for medical school	2.46	0.63-9.64	0.20	1.60	0.31-8.32	0.58
Graduated ≥10 years or more ago	1.10	0.34-3.57	0.87	1.11	0.08-13.90	0.94
Worked locally for ≤10 years or less	1.78	0.54-5.81	0.34	2.46	0.20-30.8	0.49
Rural practice setting	1.43	0.36-5.66	0.61	1.42	0.06-10.8	0.65

PCP: Primary care physician. *Statistically significant

increased to almost four times more likely (OR = 3.74; $P = 0.032$) with multivariable analysis once the other predictors - age, gender, education in abroad, and whether they were recently graduated - were included in the model [Table 4].

Practices: Sexual history taking

Most PCPs commonly asked about their sexual activity and frequency of intercourse (89%), number of sexual partners (93%), condom/contraceptive use, reproductive concerns or history (99%), and STIs and sexual function problems (91%). However, fewer PCPs (≤60%) reported that they would ask their older patients about type of sexual practices, gender, and age of sexual partners and circumstances regarding sexual abuse or violence and markedly <50% of PCPs reported that they would ask about their sexual orientation.

Almost all PCPs (99%) opted to take a sexually history if a sexual health complaint was raised by the patient. Though no statistically significant P values were found in some of the regression models including those that analysed PCPs characteristics and sexual history taking practices, the suggested ORs present the preferred direction of association. Notable PCP's characteristics with stronger directions of association included: training in sexual history taking (OR = 3.37) and working under 10 years in an urban-based clinical practice (OR = 2.32).

Associations found between PCPs knowledge, attitudes, and practices

Analyzed and summarized in Table 5 are the suggested associations based on the hypotheses that emerged from the overarching research question: *What are the associations between PCPs*

Table 4: Predictors for discussing sex

PCPs who are MORE LIKELY to have discussions about sexual health with their middle-aged AND older patients are:						
Characteristics	**Odds ratio (OR) [Crude]**	**95% CI**	***P* > |z|**	**Odds ratio (OR) [Adjusted All]**	**95% CI**	***P* > |z|**
Trained in sexual health communication	3.15	1.10-9.02	*0.03	3.74	1.16-12.06	*0.03
Male physicians	1.19	0.43-3.28	0.74	1.42	0.43-4.75	0.56
40+years in age	1.64	0.56-4.79	0.37	4.09	0.9617.45	0.06
Educated abroad for medical school	1.16	0.41-3.29	0.79	0.85	0.21-3.43	0.82
Graduated ≤10 years	1.37	0.48-3.89	0.56	3.27	0.51-20.9	0.21
Worked locally for ≤10 years	1.45	0.52-4.09	0.48	1.05	0.19-5.78	0.95
Rural practice setting	1.23	0.39-3.84	0.72	1.07	0.31-3.79	0.91

PCP: Primary care physician. *Statistically significant

Table 5: Associations between PCPs' sexual health knowledge, attitudes, and practices with middle-aged and older patients

Knowledge and attitudes			
PCPs with a higher than average knowledge score are more comfortable discussing sexual health with:			
	Odds ratio	**95% CI**	***P* > |z|**
Female middle-aged and older patients	1.24	0.37-4.14	0.72
Male middle-aged and older patients	2.24	0.86-5.82	0.10
Knowledge & practices			
Knowledge and practices			
PCPs with a higher than average knowledge score are more likely to:			
	Odds ratio	**95% CI**	***P* > |z|**
Discuss sexual health with their middle aged and older patients	1.04	0.37-2.89	0.94
Be educated in sexual history taking	1.59	0.68-3.72	0.28
Take a sexual history annually	3.44	1.14-10.34	*0.03
Take a sexual history at the first visit	1.04	0.33-3.32	0.94
Initiate a sexual history if medical consultation warrants one	3.90	0.43-35.09	0.22
Attitudes and practices			
Attitudes and practices			
PCPs who are comfortable talking about sexual health with middle and old age patients are more likely to:			
	Odds ratio	**95% CI**	***P* > |z|**
Discuss sexual health with a female patient	2.86	0.8-10.05	0.10
Initiate an annual sexual history with a female patient	1.91	0.37-9.80	0.44
Discuss sexual health with their male patients	2.18	0.78-6.27	0.15
Initiate a sexual history on the first visit with a male patient	3.09	0.63-15.08	0.16
Initiate a sexual history if medical consultation warrants one with a male patient	1.16	0.20-6.80	0.87
Initiate an annual sexual history with a male patient	2.59	0.66-10.18	0.17

PCP: Primary care physician. *Statistically significant

knowledge, attitudes, and practices? The multivariable analysis revealed that PCPs with greater knowledge scores were three times more likely to take a sexual history annually (OR = 3.44; $P = 0.03$). Other associations were not found to be statistically significant but attained favorable associations as shown in Table 5.

Discussion

Gender and age concordance, training in sexual health communication, and medical training from a foreign-based medical school were statistically significant predictors for a PCP to be generally comfortable when discussing sexual health with an older patient. PCPs with formal training in sexual functioning in later life were 2.4 times ($P = 0.04$) more likely to identify more of the sexual health conditions presented in the clinical vignettes in the survey. Perhaps, these scores matched as PCPs reported, 19% of them were never trained in SRH, only 32% were trained in sexual functioning in later life at medical school, and 39% after graduating. About 57% of participating PCPs were not able to correctly identify more than two of the six sexual health conditions prevalent in later life. Of clinical importance were predictors such on training. PCPs trained in sexual history taking were three times more likely to be comfortable diagnostically taking a sexual history from older patients. Only just over 50% of PCPs reported that they would ask these patients about sexual violence, type of sex, gender, or age of their sex partners and <50% ask about sexual orientation.

The study achieved a response rate of 60%, which is a major strength as the trend of response rates usually is much lower for clinician surveys in PC.[21-23] However, a limitation of this study was its relatively small sample size. It should be noted that the

total number of PCPs in the entire population was n = 175 and those who were available (on island and at work) when the survey was disseminated was n = 155 and they were all targeted and successfully a 60% response rate (n = 93) was achieved. When interpreting these, results this should be taken into consideration, and therefore, the direction of association (ORs) for those variables that attained nonstatistically significant P values should still be considered. Possibly, the purely private PCPs could not be included only because it was not possible to denote the parameters of their sample, if included may have reduced the effects of type 2 error.

If Cochrane's method remained, the response rate would have been compromised, and as a result, a manual method (though time consuming as it doubled the data collection period as some health centers were in very difficult to access locations and some PCPs just took long to complete the survey) maximized returns and were most effective.[24]

Other limitations could include the fact that the survey was designed using a CME style as well as the fact that the study was endorsed by the local Ministry of Health; these may have influenced participant reporting bias.[25] Additionally, as this study focused primarily on the physicians' characteristics, notably the patient perspectives and experience on sexual health consultations were not examined here and warrants further research. Previous researchers have reported that physicians lack knowledge in aging on sexual health.[26,27] Perhaps, considerations to address curriculum and training in medical school on sexual health in later life to ensure the inclusion of the impact of aging on sex should be reiterated. In the local setting in Trinidad and Tobago, further examination as to why certain sexual health topics are favored, such as the typical STIs and reproductive health needs to be investigated. Sexual heath communication and diagnostic sexual history taking skills needs to be reinforced especially since local graduates account for most practicing physicians in the country. Also, specific to Trinidad and Tobago was the factor that being educated was a predictor of comfort to discuss sexual health with these patients. Not statically significant but the direction of association inferred that PCPs working in urban-based practices were more likely to take a sexual history with their older practices. These findings are unique and warrant further research as it can be concerning as previously mentioned most of the PCPs are locally trained and rural-based communities account for about 30% of the population. Also, investigators have qualitatively studied sex issues in a primary care setting and concluded that addressing sexual histories should be part of routine care.[3] However, in Trinidad and Tobago, this study revealed that <50% of the PCPs ask about sexual orientation and <60% ask about sexual partners and preferences. In addition to the reduced frequency of sexual history taking (as it is dependent on patient initiation), this is coupled with it not being conducted completely as questions are omitted. Not addressing sexual concerns or taking inappropriate diagnostics in sexual health leaves these older patients at greater risk for sexual dysfunction and poorer sexual health-related quality of life.[28] STIs may also be often be misdiagnosed or unrecognized in older adult patients when physicians do not discuss sexual health, frequently far less take a sexual history from them.[29] There is a need to amend primary care policy to include sexual health in later life a priority and future research to attain the private physician sector perspectives as well as the older patients.

Conclusions

Training in sexual health education on sexual health in later life at the local medical schools in their compulsory curriculum is critical. This will inevitably develop graduating physicians' overall knowledge and competence on prevalent sexual health issues among patients in middle and old age. Sessions on sexual health in later life, sexual history taking, and communication need to become available and possibly even mandatory as it is critical for practicing physicians who routinely treat this age group to become up to date. National Health promotion strategies using the media, educational materials, or educational opportunities at the clinics needs to include sex education for those in middle and old age and not only focus on those in reproductive age groups. This may help to decrease taboos associated with sexuality at the community level and decrease the discomfort level faced in the medical consultation as information about sexual concerns at this age become readily available.

Acknowledgments

The authors would like to thank Dr. Avery Q.J. Hinds MBBS MSc, Dr Joel Francis MD PhD, Dr Rebecca S French PhD and Sarah Smith PhD for their inputs, support and timely advice. The authors also thank all the PCPs who have contributed significantly to this study through their active participation.

Authors contributions

RP contributed to conception, design and data analysis of the study; RP developed the initial draft, and VC revised the manuscript and provided final draft. The final version is approved by both the authors and agrees to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Read S, King M, Watson J. Sexual dysfunction in primary medical care: Prevalence, characteristics and detection by the general practitioner. J Public Health 1997;19:387-91.
2. Laumann, Edward O. Sexual dysfunction among older

adults: Prevalence and risk factors from a nationally representative U.S. probability sample of men and women 57–85 years of age. J Sex Med 2008;5:2300-11.

3. Sarkadi A, Rosenqvist U. Contradictions in the medical encounter: Female sexual dysfunction in primary care contacts. Fam Pract 2001;18:161-6.
4. Gott CM. Sexual activity and risk-taking in later life. Health Soc Care Community 2001;9:72-8.
5. Andrews CN, Piterman L. Sex and the older man: GP perceptions and management. Aus Fam Physician 2007;36:867.
6. Temple-Smith M, Hammond J, Pyett P, Presswell N. Barriers to sexual history taking in general practice. Aus Fam Physician 1996;25:S71-4.
7. Gott M, Galena E, Hinchliff S, Elford H. Opening a can of worms: GP and practice nurse barriers to talking about sexual health in primary care. Fam Pract 2004;21:528-36.
8. Rabathaly P, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. J Family Med Prim Care 2018. DOI: 10.4103/jfmpc.jfmpc_325_18.
9. Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. N Engl J Med 2007;357:762-74.
10. Lindau ST, Gavrilova N. Sex, health, and years of sexually active life gained due to good health: Evidence from two US population based cross sectional surveys of ageing. BMJ 2010; 340:c810.
11. Meston CM. Aging and sexuality. West J Med. 1997;167:285-90.
12. Nicolosi A, Buvat J, Glasser DB, Hartmann U, Laumann EO, Gingell C, *et al*. Sexual behaviour, sexual dysfunctions and related help seeking patterns in middle-aged and elderly Europeans: The global study of sexual attitudes and behaviours. World J Urol 2006;24:423-8.
13. Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, Johnson AM. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: Findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). Lancet 2013;382:1781-94.
14. Galinsky AM, McClintock MK, Waite LJ. Sexuality and physical contact in national social life, health, and aging project wave 2. J Gerontol B Psychol Sci Soc Sci 2014;69(Suppl 2):S83-98.
15. McCabe MP, Sharlip ID, Lewis R, Atalla E, Balon R, Fisher AD, *et al*. Incidence and prevalence of sexual dysfunction in women and men: A consensus statement from the fourth international consultation on sexual medicine 2015. J Sex Med 2016;13:144-52.
16. Macdowall W, Parker R, Nanchahal K, Ford C, Lowbury R, Robinson A, *et al*. 'Talking of Sex': Developing and piloting a sexual health communication tool for use in primary care. Patient Edu Couns 2010;81:332-7.
17. Creswell JW, Plano Clark VL, Gutmann ML, Hanson WE. Advanced mixed methods research designs. In: Tashakkori A, Teddlie C, editors. Handbook of Mixed Methods in Social and Behavioral Research. Thousand Oaks, CA: Sage; 2003. p. 209-40.
18. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med Res Methodol 2013;13:117.
19. Durand M-A, Yen R, Barr PJ, Cochran N, Aarts J, Légaré F, Elwyn G. Assessing medical student knowledge and attitudes about shared decision making across the curriculum: Protocol for an international online survey and stakeholder analysis. BMJ Open 2017;7:e015945.
20. Edwards PJ, Roberts I, Clarke MJ, DiGuiseppi C, Reinhard W, Kwan I, *et al*. Methods to increase response to postal and electronic questionnaire. Cochrane Database Sys Rev 2009;3. doi: 10.1002/14651858.MR000008.pub4.
21. Vangeest JB, Johnson TP, Welch VL. Methodologies for improving response rates in surveys of physicians: A systematic review. Eval Health Prof 2008;30:303-21.
22. Wiebe ER, Kaczorowski J, MacKay J. Why are response rates in clinician surveys declining? Can Fam Physician 2012;58:e225-8.
23. Li A, Cronin S, Bai YQ, Walker K, Ammi M, Hogg W, *et al*. Assessing the representativeness of physician and patient respondents to a primary care survey using administrative data. BMC Fam Pract 2018;19:77.
24. Nardi PM. Doing Survey Research: A Guide to Quantitative Methods. Routledge; 2018.
25. Krumpal I. Determinants of social desirability bias in sensitive surveys: A literature review. Qual Quant 2013;47:2025-47.
26. Smith LJ, Mulhall JP, Deveci S, Monaghan N, Reid MC. Sex after seventy: A pilot study of sexual function in older persons. J Sex Med 2007;4:1247-53.
27. Bouman W, Arcelus D. Are psychiatrists guilty of 'ageism' when it comes to taking sexual history? Int J Geriatr Psychiatry 2001;16:27-31.
28. Williams E, Donnelly J. Older Americans and AIDS: Some guidelines for prevention. Soc Work 2002;47:105-11.
29. Bilenchi R, Poggiali S, Pisani C, DePaola M, Sculco R, DePadova L, *et al*. Sexually transmitted diseases in elderly people: An epidemiological study in Italy. J Am Geriatr Soc 2009;57:938-40.