



Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Freak-Poli, R;Malta, S

Title:

An overview of sexual behaviour research in later life—Quantitative and qualitative findings

Date:

2020-06-01

Citation:

Freak-Poli, R. & Malta, S. (2020). An overview of sexual behaviour research in later life—Quantitative and qualitative findings. *Australasian Journal on Ageing*, 39 (S1), pp.16-21.
<https://doi.org/10.1111/ajag.12773>.

Persistent Link:

<https://hdl.handle.net/11343/275808>

An overview of sexual behaviour research in later life – quantitative and qualitative findings

Short title: Benefits of sex in later life

Rosanne Freak-Poli^{1,2}, Sue Malta^{3,4}

¹ Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, Australia

² Department of Epidemiology, Erasmus Medical Centre, Rotterdam, The Netherlands

³ Sexual Health Unit, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia

⁴ National Ageing Research Institute, Parkville, Australia

Corresponding author:

Dr Freak-Poli

Public Health and Preventive Medicine, Monash University

Level 4, 553 St Kilda Rd

Melbourne VIC 3004

T +61 (0) 3990 30318

E: Rosanne.Freak-Poli@monash.edu

MESH Key words: sexual behaviour; touch; geriatrics; 80 and over; aged; ageing; age factors; sex factors; sexual partners; sexuality

Author contributions: RFP takes responsibility for the section titled “Quantitative research”. The other sections were jointly written. Both SM and RFP approved the final manuscript.

Acknowledgements: The authors wish to thank the anonymous reviewers for their considered comments.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1111/AJAG.12773](https://doi.org/10.1111/AJAG.12773)

This article is protected by copyright. All rights reserved

Financial disclosures: RFP is affiliated with Erasmus Medical Centre and Monash University. RFP is supported by a Heart Foundation Postdoctoral Fellowship (101927). SM is affiliated with University of Melbourne and the National Ageing Research Institute. RFP and SM declare no conflicts of interest. The writing of the manuscript and the decision to submit the manuscript for publication were solely at the discretion of RFP and SM.

Author Manuscript

DR. ROSANNE FREAK-POLI (Orcid ID : 0000-0003-4072-8699)

DR. SUE MALTA (Orcid ID : 0000-0001-7010-9130)

Article type : Special Issue

An overview of sexual behaviour research in later life – quantitative and qualitative findings

ABSTRACT

Aim:

This article provides an overview of current sexual behaviour research in later life by describing associated factors, including the physical and psychological benefits.

Methods:

Recent systematic reviews were interrogated for findings on sexual behaviour research in adults aged 60+.

Results:

Regardless of research methods employed, all studies showed that there were a range of physical and psychological benefits to remaining sexually active in later life. While quantitative studies placed an emphasis on measuring penile-vaginal intercourse, they provided no definitive conclusion about the benefits due to 'inconsistent results' across studies. Qualitative studies described the myriad ways in which older adults redefine what constitutes sexual activity despite the onset of dysfunction and disability.

Conclusion:

While the different research methods show that engaging in sexual behaviour has physical and psychological benefits at all adult ages, there is limited conclusive evidence about what the overall benefits might be in later life.

Introduction

For decades, ageist stereotypes have perpetuated the myths of an 'asexual' older age [1] and that diminishing sexual interest and sexual capacity are part of the process of ageing [2]. With increasing longevity and a growing focus on staying healthy longer, there has been ample research in recent times to debunk such myths [3-6]. Accordingly, research focusing on sexual activity within long-term [7,8] and in new relationships [9-11] in later life is becoming more prevalent. Such studies encompass a range of research methods – quantitative, qualitative and mixed-methods – across a range of ages, with no one study providing definitive results.

This article seeks to provide an overview of current sexual behaviour research, with the aim of describing factors, including the physical and psychological benefits, associated with being sexually active in later life. The results are based on a pragmatic assessment of recent systematic reviews or large relevant studies, that were interrogated to provide a broad outline of the findings in this area.

Mixed method systematic review

Mixed method research [12], combines both quantitative and qualitative approaches in the one study. As argued by Denzin [13] this method 'adds rigor, breadth complexity, richness, and depth to any inquiry' (page 82). A recent systematic review by Bell and colleagues [14] set out to assess factors associated with sexual activity in adults aged 60+ years in studies reflecting the use of both qualitative and quantitative methods. From 5,652 results from three databases (PsycINFO, Web of Science, and AARP Ageline) searched up until 2016, the review identified 57 eligible publications, with sample sizes ranging from 1 to 3,377. The 57 publications were from 17 countries, 46% of which were from the USA. Hence, findings likely do not reflect diverse cultural differences in sexual activity and ageing.

The systematic review identified only 32 eligible publications in the past 16 years, highlighting the need for both a contemporary and clearer understanding of sex and desire among older adults internationally. While 67% of included publications exclusively focused on people aged 60 years or more, the other 33% "*included individuals at least 60*". Hence, if a publication's eligibility was for people aged 18 to 85 years of age, the paper was included even if the overall findings were not tested in the older adult subgroup. Bell et al. [14] reported that "*More rigorous, empirically validated measurements of sexual activity were used in only 5% of the reviewed studies*", that equates to only 3 publications. There was a strong focus on penile-vaginal intercourse, with 74% of publications reporting findings. Thirty percent of publications reported findings on masturbation, 23% reported findings for sexual behaviours other than intercourse and/or masturbation, and 16% reported findings on "sexual activity"

that incorporated a range of specified behaviours (rather than leaving it to participants to decide what 'sexual activity' incorporated for them).

From the 57 papers, there were 469 factors assessed as potential associations with sexual activity. While this equates to 8.23 per study, the range was 1 to 67 factors per study. The main factors assessed were demographic, for example, age and sex. From the systematic review, Bell et al. [14] only reported four consistent findings across the included studies: 1. A greater past frequency of sexual behavior was associated with greater likelihood of currently engaging in sexual activity; 2. The greater a partner's interest in sexual activity was associated with greater likelihood of engaging in sexual activity; 3. Presence of erectile dysfunction was associated with less likelihood of engagement in sexual activity; and 4. Partner's illness was associated with less likelihood of engagement in sexual activity. Bell et al. [14] stated "*Noteworthy were significant inconsistencies of findings across studies and contrasting findings of generally assumed factors associated with sexual activity in later years (eg, physical and mental health).*"

Overall, Bell et al. [14] reported that results were inconsistent, with few associations reported by more than two studies. The researchers concluded [14] that the "*literature on sexual activity in older adults is vastly heterogeneous with methodologic caveats and inconsistent results evidenced across studies.*"

Quantitative research

Quantitative research is a statistical method that analyses empirical quantifiable data in sample populations to enumerate prevalence, assess trends and determine correlations. Sample populations are asked questions with defined answers that are in or can be represented by numerical form to test hypotheses, which are hoped to be generalised to a larger population.

Although sexual activity has physical and psychological benefits at all adult ages [5,15-19], there is limited quantitative evidence from older adults. From the quantitative research among older adults which does exist, several patterns are emerging for factors associated with sexual activity. Studies have identified that engaging in sexual activity is generally associated with younger age [5,15], male gender [5,17], partner status [5,6,17], greater social support [5,19], socioeconomic position [5,16-18], engagement in physical and social activities [5,19], healthier behaviours [5,19], and absence of physical and mental health conditions for both themselves and their partner [5,15-17,19-21] including cognitive functioning [6].

Some of the largest studies to assess associations for sexual activity in later life include The National Social Life, Health, and Aging Project (NSHAP) [22], The National Survey of Sexual Attitudes and Lifestyles (Natsal) [23], the Australian Study of Health and Relationships (ASHR) [24,25] and the Rotterdam Study [5,6,26]. The NSHAP [22] is a nationally representative cross-sectional survey, conducted among 'older adults' aged 50+ years (notably a much younger cut-off than The World Health Organization's current definition of 60 years of age [27,28]). NSHAP [22] surveyed 3,005 Americans aged 57-85 years in 2005 on sexual activity, sexual behaviours, and sexual problems, 1,985 of whom were aged 65 years or more. Natsal [23] established British sexual activity prevalence rates in 1990-91 among adults aged 16-59 years, and in 1999-2001 among adults aged 16-74 years. While Natsal-3 expanded the target age range to include those aged 16-74 years, only 1,607 participants were aged 65 years or more. The ASHR [24] surveyed 19,307 Australians aged 16-59 years in 2001-2002 on many aspects of sexual and reproductive health. In 2012-2013, the ASHR-2 [25] expanded the age range to 16-69 years, although only 1,829 of the 20,094 participants were aged 65 years or more. The Rotterdam Study assessed physical tenderness and sexual activity among 4,201 community-dwelling adults aged 60 years or more between 2008 and 2014 in the Netherlands, 2,374 of whom were aged 65 years or more [5,6]. The Rotterdam Study findings were published after the systematic review by Bell and colleagues [14].

Limitations of quantitative research

As outlined in the systematic review by Bell et al. [14] the specific factors associated with sexual activity vary by each study. For example, among the older Dutch, there were no consistent factors associated with sexual activity or physical tenderness across gender and partner status stratum other than younger age (see Table 1) [5,6,26]. Unfortunately a common limitation of sexual activity research is that very few unpartnered older adults engage in sexual behaviour. Additionally unpartnered men in later life are difficult to find and recruit into research studies. Low prevalence and small samples can limit reporting of prevalence by gender and age stratum and result in low power for analyses assessing potential associated factors [5]. However, while sample sizes and engagement rates may limit exploring the topic of sex and ageing among unpartnered older adults, there is no reason that the associations with sexual behaviour observed for partnered older adults would be greatly different [6].

Table 1 about here

Quantitative research assessing sexual activity among older adults tends to be restricted by small sample sizes [7,16,21,29], marital status [7,15,16,31-34], single gender samples [7,16,17,33,35], or recruitment of mid-life adults (aged below 60 years) and/or with only a few participants older than 80 years [35-38].

These limitations restrict the generalisability of findings and overlook the sexual behaviour of unmarried older adults and the oldest old. Generalisability between countries may be limited because of differences in culture, gender roles, social norms, religion, and law. Furthermore, generational differences restrict generalisability of findings to contemporary older adults.

Qualitative research

Qualitative research has also been criticised for not generating representative results. Although associations between variables cannot be inferred from qualitative data, qualitative studies provide the opportunity to understand ‘meanings, interpretations and subjective experiences’ [39] of groups of people at a point in time. In the context of the current paper, qualitative studies provide direct and personal accounts of the physical and psychological benefits of remaining sexually active in later life.

In recent years, researchers have attempted to synthesise the results derived from qualitative studies. The systematic review by Sinkovic and Towler [40] looked at qualitative research on the sexuality and sexual health of older adults aged 60+ years from 1990-2016. The authors searched three databases (PsycINFO, SocINDEX and MEDLINE) and identified 69 eligible publications from 527 articles based on the NICE guidelines, 11 of which were judged to be of inadequate quality. The authors determined various psychological and relational aspects of sexuality across the included studies, which encompassed personal meanings and understandings of sex, as well as couplehood and sociocultural aspects of sex, among others.

From the included studies, Sinkovic and Towler [40] reported that while sexual activity declined with age, interest did not, and that having a new partner in later life was one of the main ‘influences on quality and frequency’ of sexual engagement. In women, cessation of menopause led to ‘increased sexual desire’ and women’s growing sexual agency (at least in Western countries). Factors generally affecting/limiting sexual desire/expression ranged widely from sociocultural factors such as ageist perceptions of older people as asexual, and gender norms/stereotypes – which positioned women’s desire as subordinate to men’s – to the impact of caregiving, family duties, medication intake and health

status of self and/or partner. As found in the quantitative studies, health was the most frequently reported constraint on the maintenance of sexual activity rather than age [see 3,41, and this edition for further discussion].

Qualitative responses derived from past longitudinal studies have also provided important data about later life sexual engagement and health. Wave 2 of the Australian Longitudinal Study of Health and Relationships (ALSHR) included a small sample of 635 sexagenarians (aged 60-64 years) and asked a series of attitudinal questions about sex. The study found that, for those with a regular partner, remaining sexually active was associated with a personal 'sense of wellbeing' [42]. Likewise, qualitative results from Wave 6 of the English Longitudinal Study of Ageing (ELSA) [43] found that 'sexual difficulties' had a negative impact on 'psychological wellbeing'.

While research has focused on penile-vaginal intercourse and on the maintenance of erections for older men using sexuopharmaceuticals, it is clear from qualitative studies that couple intimacy in later life can be maintained, despite health issues and erection difficulties. Indeed, these studies highlight that older adults actively redefine what it means to be sexually active by engaging in 'alternative sexual practices' such as cuddling, oral sex and frottage [3,40]. Further, these results show that older adults appear to enjoy a range of subjectively-reported physical and psychological benefits from sexual activity, such as quality of life and increased emotional intimacy and connection.

Limitations of qualitative research

As for the review by Bell and colleagues [14], the focus of qualitative studies is wide and illustrates a variety of factors influencing sexual engagement in later life. Issues of inadequate reporting of qualitative methods or a lack of 'rich data' as noted by Sinkovic and Towler [40] can limit clarity, but this is usually due to external constraints such as word limitations imposed by journals, which tends to favour the reporting of quantitative data. Data derived from personal accounts are difficult to interpret and can be subjectively influenced by researchers' own lived experiences as well as the experiences of the research participants [3]. However, today's qualitative researchers are highly aware of such criticisms, and strive to ensure that research practices and analyses are (1) standardised and (2) systematic, by making use of thematic technology (such as NVivo) to reduce interpreting bias, and (3) that results are checked by others to ensure validity [44].

Strengths & Limitations: This paper provides an overview about the benefits of sexual activity in later life using different research methods. The collection of studies outlined in the systematic reviews

highlighted here were from Western countries, highlighting the need for future cross-cultural research. While the authors of the quantitative systematic review noted an emphasis on penile-vaginal intercourse as the exemplar of later life sexual activity, the authors of the qualitative systematic review noted the ways in which older adults redefine what it is to be sexually active beyond intercourse. Future national surveys should consider incorporating the oldest old. Future research studies would do well to employ mixed-methods approaches, and would benefit from using co-design principles to ensure that both quantitative surveys and interview questions reflect the language and meanings of what older adults mean by “sexual activity”.

Conclusion

It is clear from the research reported herein that the scope of later life sexual behaviour research is limited, with many large-scale studies failing to include older adults. For example, Natsal-4 was initiated this year and again restricted recruitment to 16-59 years of age (see <http://www.natsal.ac.uk/online-consultation/information-about-natsal-4.aspx>). This decision appears short-sighted given the increasing ageing population and the health impacts associated with ageing (as summarised in this special edition[41]), including the rising rates of sexually transmitted infections among older populations [45]. Additionally, by excluding older adults from sexual behaviour surveys we are missing the opportunity to document changing trends in late life sexual behaviour across generations and as generations age. Moreover, many of these larger studies are conducted in Western populations, with a high proportion of the data focused on instances of penile-vaginal penetration as the ‘gold standard’ for determining whether sex occurred [46].

It is difficult to definitively ascertain what the physical and psychological benefits are of late life sexual behaviour, given limited uniformity across sample age ranges, inclusion criteria, and the wide range of measures used. However, older adults’ personal ‘lived’ accounts of later life sexual activity – which describe a redefinition of intimate behaviour beyond intercourse – result in a range of subjectively-reported physical and psychological benefits such as increased agency (for women) and a higher quality of life for both women and men.

Policy Impact Statement: Given the scale of population ageing, the associated health impacts (including rising rates of sexually transmitted infections among older populations) are set to increase if we do not gain a better understanding of the changing trends in late life sexual behaviour across generations and as generations’ age.

References

1. Butler R. Ageism: Looking back over my shoulder. *Generations* 2005; 3: 84-86.
2. Denmark FL. Myths of aging. *Psi Chi (The National Honor Society in Psychology)*: Distinguished Lectures/Special Topics 2002; 7(1): 14-21.
3. Malta S. *Love, Sex and Intimacy in New Late Life Romantic Relationships* [dissertation]. Hawthorn, VIC: Swinburne University; 2013). Available from: <https://pdfs.semanticscholar.org/60f6>
4. Lyons A, Heywood W, Fileborn B, Minichiello V, Barrett C, Brown G, Hinchliff S, Dow B, Malta S, Cramer P. *Sex, Age & Me: A national study of sex, sexual health and relationships among older Australians*. Broadsheet published online, Australian Research Centre in Sex, Health and Society, LaTrobe University, Melbourne, Australia. August 2017; available at: https://www.latrobe.edu.au/data/assets/pdf_file/0009/788355/Sex-Age-and-Me-Broadsheet-20170817.pdf
5. Freak-Poli R, Kirkman M, De Castro Lima G, Direk N, Franco OH, Tiemeier H. Sexual activity and physical tenderness in older adults: Cross-sectional prevalence and associated characteristics. *J Sex Med* 2017; 14(7): 918-27.
6. Freak-Poli R, Licher S, Ryan J, Ikram MA, Tiemeier H. Cognitive impairment, sexual activity and physical tenderness in community-dwelling older adults: A cross-sectional exploration. *Gerontology* 2018: 1-14.
7. Muller B, Nienaber CA, Reis O, Kropp P, Meyer W. Sexuality and affection among elderly German men and women in long-term relationships: Results of a prospective population-based study. *PLoS One* 2014; 9(11): e111404.
8. Stulhofer A, Jurin T, Graham C, Janssen E, Traeen B. Emotional intimacy and sexual well-being in aging European couples: A cross-sectional mediation analysis. *European Journal of Ageing* 2019: Online: <https://doi.org/10.1007/s10433-019-00509-x>
9. Connidis I A, Borell K, Ghazanfaraee Karlsson S. Ambivalence and living apart together in later life: A critical research proposal. *Journal of Marriage and Family*, 2017; 79(5): 1404-1418. <https://doi.org/10.1111/jomf.12417>
10. Kim J, Waite LJ. Relationship quality and shared activity in marital and cohabiting dyads in the National Social Life, Health, and Aging Project, Wave 2. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 2014; 69(8):S64–S74. <https://doi.org/10.1093/geronb/gbu038>
11. Malta S, Farquharson K. The initiation and progression of late-life romantic relationships. *Journal of Sociology* 2014; 50:237-251.

12. Symonds JE, Gorard S. Death of mixed methods? Or the rebirth of research as a craft. *Evaluation & Research in Education* 2010; 23 (2): 121 – 36.
13. Denzin NK. Triangulation 2.0. *Journal of Mixed Methods Research* 2012; 6 (2): 80 – 88
14. Bell S, Reissing ED, Henry LA, VanZuylen H. Sexual activity after 60: A systematic review of associated factors. *Sexual Medicine Reviews* 2017; 5: 52-80.
15. DeLamater J, Moorman S. Sexual behavior in later life. *Journal of Aging and Health* 2007; 19(6): 921-45.
16. Lochlainn MN, Kenny RA. Sexual activity and aging. *J Am Med Dir Assoc* 2013; 14(8): 565-72.
17. Beckman N, Waern M, Ostling S, Sundh V, Skoog I. Determinants of sexual activity in four birth cohorts of Swedish 70-year-olds examined 1971-2001. *Journal of Sexual Medicine* 2014; 11(2): 401-10.
18. DeLamater J, Sill M. Sexual desire in later life. *Journal of Sex Research* 2005; 42(2): 138-49.
19. Bach LE, Mortimer JA, VandeWeerd C, Corvin J. The association of physical and mental health with sexual activity in older adults in a retirement community. *Journal of Sexual Medicine* 2013; 10(11): 2671-8.
20. Lichtenberg PA. Sexuality and physical intimacy in long-term care. *Occupational Therapy in Health Care* 2014; 28(1): 42-50.
21. Jeong HC, Kim SU, Lee WC, Kim MT, Lee WK, Kim HY, Kim SY, Yang DY. Sexual behavior of the elderly in urban areas. *The World Journal of Men's Health* 2012; 30(3): 166-71.
22. Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muirheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. *The New England Journal of Medicine* 2007; 357(8): 762-74.
23. Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, Macdowall W, Lewis R, Field N, Datta J, Copas AJ, Phelps A, Wellings K, 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(9907): 1781-94.
24. Smith AM, Rissel CE, Richters J, Grulich AE, de Visser RO. Sex in Australia: a guide for readers. *Australian and New Zealand Journal of Public Health* 2003; 27(2): 103-5.
25. Richters J, Badcock PB, Simpson JM, Shellard D, Rissel C, de Visser RO, Grulich AE, Smith AM. Design and methods of the Second Australian Study of Health and Relationships. *Sexual Health* 2014; 11(5): 383-96.
26. Freak-Poli R, De Castro Lima G, Direk N, Jaspers L, Pitts M, Hofman A, Tiemeier H. Happiness, rather than depression, is associated with sexual behaviour in partnered older adults. *Age Ageing* 2017; 46(1): 101-7.

27. World Health Organization. *World report on Ageing and Health*. Luxembourg: WHO, 2015
<https://www.who.int/ageing/events/world-report-2015-launch/en/> (Accessed 24/01/2019).
28. World Health Organization (WHO). *Ageing and Health* (infographic). 2015
<https://www.who.int/ageing/events/world-report-2015-launch/healthy-ageing-infographic.jpg?ua=1>
(Accessed 19/02/2019).
29. DeLamater J. Sexual expression in later life: A review and synthesis. *J Sex Res* 2012; 49(2-3): 125-41.
30. Mahieu L, Gastmans C. Older residents' perspectives on aged sexuality in institutionalized elderly care: A systematic literature review. *International Journal of Nursing Studies* 2015; 52(12): 1891-905.
31. Wang V, Depp CA, Ceglowski J, Thompson WK, Rock D, Jeste DV. Sexual Health and function in later life: A population-based study of 606 older adults with a partner. *American Journal of Geriatric Psychiatry* 2015; 23(3): 227-33.
32. Stroope S, McFarland MJ, Uecker JE. Marital characteristics and the sexual relationships of U.S. older adults: An analysis of National Social Life, Health, and Aging Project data. *Archives of Sexual Behavior* 2014; 2015 Jan;44(1):233-47. <https://link.springer.com/article/10.1007%2Fs10508-014-0379-y>
33. Fileborn B, Thorpe R, Hawkes G, Minichiello V, Pitts M. Sex and the (older) single girl: Experiences of sex and dating in later life. *J Aging Stud* 2015; 33: 67-75.
34. Waite LJ, Iveniuk J, Laumann EO, McClintock MK. Sexuality in older couples: Individual and dyadic characteristics. *Archives of Sexual Behavior* 2015; 46(2): 605-18.
35. Karraker A, Delamater J, Schwartz CR. Sexual frequency decline from midlife to later life. *J Gerontol B Psychol Sci Soc Sci* 2011; 66(4): 502-12.
36. NFO Research Inc. AARP/Modern Maturity Sexuality Study. In: McKinlay JB, editor 1999;
<http://assets.aarp.org/rgcenter/health/mmsexsurvey.pdf>
37. Woloski-Wruble AC, Oliek Y, Leefsma M, Hochner-Celnikier D. Sexual activities, sexual and life satisfaction, and successful aging in women. *J Sex Med* 2010; 7(7): 2401-10.
38. Lee DM, Vanhoutte B, Nazroo J, Pendleton N. Sexual health and positive subjective well-being in partnered older men and women. *J Gerontol B Psychol Sci Soc Sci* 2016; 71(4): 698-710.
39. Liamputtong P. *Researching the Vulnerable: A Guide to Sensitive Research Methods*, 2007. Sage Publications. Thousand Oaks, CA.
40. Sinkovic M, Towler L. Sexual Aging: A systematic review of qualitative research on the sexuality and sexual health of older adults. *Qualitative Health Research* 2018; 1-16 (online first):
<https://doi.org/10.1177/1049732318819834>

41. Freak-Poli R. It's not age that prevents sexual activity later in life. *Australasian Journal on Ageing* 2019.
42. Ferris JA, Smith AMA, Pitts MK, Richters J, Shelley JM, Simpson J. Self-reported sexual activity in Australian sexagenarians. *British Medical Journal* 2008; 337:a1250. <https://doi.org/10.1136/bmj.a1250>
43. Tetley J, Lee DM, Nazroo J & Hinchliff S. Let's talk about sex – what do older men and women say about their sexual relations and sexual activities? A qualitative analysis of ELSA Wave 6 data. *Ageing & Society* 2018; 38:497-521.
44. Waller V, Farquharson K, Dempsey D. *Qualitative Social Research: Contemporary Methods for the Digital Age*. London, UK: Sage Publications 2016.
45. Lyons A, Heywood W, Fileborn B, Minichiello V, Barrett C, Brown G, Hinchliff S, Malta S, Cramer P. Sexually active older Australian's knowledge of sexually transmitted infections and safer sexual practices. *Australian and New Zealand Journal of Public Health* 2017; 41(3): 259-61.
46. Gott M. Sexual health and the new ageing. *Age and Ageing* 2006; 35:106-107.

Table 1: A rudimentary summary of the factors associated with physical tenderness and sexual activity in the past 6 months among older adults participating in the Rotterdam Study, stratified by partner status and gender[5,6,26].

	All	Female	Male
All	↓ Age		Bicycle riding (<i>aka</i> physical activity)
Partnered	↑ Social support ↑ Happiness ↑ Life satisfaction ↑ Cognitive functioning		↑ Education Not smoking ↑ Vegetable ↓ Waist ↑ Functional ability ↑ Glucose
Unpartnered		↑ Vegetable Cardiovascular disease	