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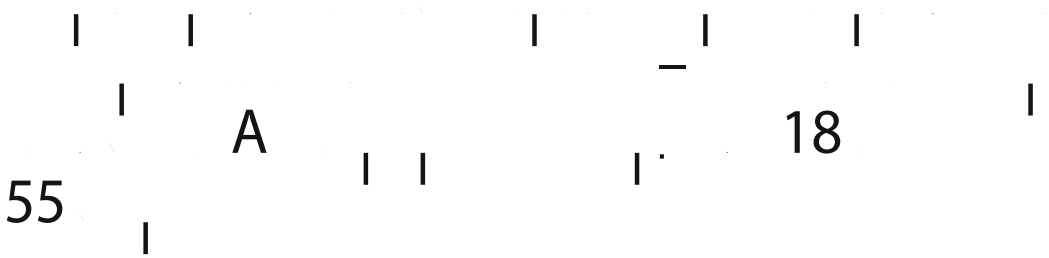

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Abstract

Background: Sexual difficulties (SD) are common among men of all ages and can have considerable impact on quality of life and indications for future health. SD are associated with mental and physical wellbeing and with relationship satisfaction, yet they are rarely discussed with medical professionals who are often ill equipped to assess and manage them. This paper provides an updated overview on the status of SD in Australian men from 18 to 55 years of age and will form a baseline comparison for future analyses of SD based on Ten to Men data.

Methods: We used data from Ten to Men, the Australian Longitudinal Study on Male Health. SD was measured using eight items capturing specific sexual difficulties. We examined associations of a range of health and lifestyle factors (smoking, alcohol consumption, illicit drug use, obesity and new sexual partners, self-rated health status, disability, pain medication, diagnosed physical and mental health conditions) with each SD using logistic regression. The sample included 12,636 adult males who had previously been sexually active. Analysis was stratified by age (18–34 years versus 35–55 years).

Results: This paper shows that experiencing SD is relatively common among Australian men – overall half the sample (54 %; 95 % CI: 0.53–0.55) experienced at least one SD for more than 3 months over the past 12 months. While more common in older men aged 45 to 55 years, almost half the 18 to 24 year old men (48 %) also reported at least one SD highlighting that SD affects men of all ages. We found that SDs were associated with both lifestyle and health factors, although the strongest associations were observed for health factors in both age groups, in particular poor self-rated health, having a disability and at least one mental health condition. Lifestyle factors associated with SDs in men of all ages included smoking, harmful alcohol consumption and drug use in the past 12 months. Obesity was only associated with an increased rate of SD in men aged 35 to 55 years.

Conclusion: Sexual difficulties are common among men of all ages and increasingly more prevalent as men grow older. They are strongly associated with both health and lifestyle factors. With previous literature showing that SDs can be a precursor of an underlying or developing physical and mental health condition, it is imperative that sexual health and sexual functioning is discussed with a doctor as part of a standard health check and across the lifespan.

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Background

Sexual difficulties are common among men and can

12 months because our survey did not differentiate between masturbation and partnered sex. The socio-demographic characteristics of the analysis sample were as follows: 58 % were in major cities, 23 % in inner regional and 19 % in outer regional areas; 12 % were aged 18 to 24 years, 23 % were 25 to 34 years, 31 % were 35 to 44 years and 34 % were 45 to 55 years; 77 % were born in Australia; 60 % completed year 12; 70 % were married or in a de-facto relationship; 86 % were in a

in sex among 18 to 34 year olds and feeling anxiou sex across all ages. Drug use was associated with i odds of each SD across both age groups with the e of lacked interest in sex among 35 to 55 year olds. tions differed for the type of drug consumed. (having an SD was more likely for w-1was87lycu

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Table 2 Correlates of reporting a sexual difficulty for at least 3 months in the last year – psychological SDs

	Lacked interest		Lacked enjoyment		Felt anxious during sex	
	18–34 years	35–55 years	18–34 years	35–55 years	18–34 years	35–55 years

diagnosed physical health condition was associated with increased odds of each SD with the exception of not reaching climax or taking too long in the 18 to 34 year olds and reaching climax too quickly in the 35 to 55 year olds. Being diagnosed with at least one mental health condition in the past 12 months was associated with increased odds of each SD in both age groups, except for reaching climax too quickly, where no association was observed (Tables 2 and 3).

Discussion

This paper shows that experiencing SD is common among Australian men of the general population – over half the sample (54 %; 95 % CI: 0.53–0.55) experienced

at least one SD for more than 3 months in the last 12 months. While more prevalent in older men, almost half the 18 to 24 year old men (48 %) also reported at least one SD highlighting that SD affects men of all ages. Reaching climax too quickly was the most commonly reported SD across all ages (ranging from 32 to 38 %). Depending on age, between 15 and 20 % of men experienced lacking interest, 8 to 12 % experienced lacking enjoyment, 10 to 12 % experienced feeling anxious during sex, 13 to 17 % experienced orgasmic dysfunction, and 10 to 20 % experienced erectile difficulties (ED). Rates for specific SD generally increased with age and were broadly consistent with findings of other Australian and international studies [8, 12, 41, 42].

We found that SDs were associated with both lifestyle and health factors, although the strongest associations were observed for health factors in both age groups, in

at least one mental health condition. Poor overall health is consistently found to be associated with SD in men, across all age groups [3, 8, 16, 43, 44]. However, given the cross-sectional nature of our analysis, we do not know the temporal relationship between SD and physical health in our study participants and whether the SD was a consequence of physical health or existed prior to the health conditions. Yet, what is clear is that SDs are common among men with poor physical health, a mental health condition or disability.

SD can also be an indicator of an underlying physical condition. For example, erectile dysfunction has been shown to be a precursor for cardiovascular disease with studies finding that cardiovascular disease is diagnosed within 5 years of development of erectile dysfunction [45]. This highlights the importance of discussing sexual function with a doctor as part of routine or acute health care visits, as it could lead to the diagnosis of an underlying health condition that requires clinical management. However, sexual function is seldom discussed between doctors and patients [46] and research has shown that while embarrassed to initiate sexual health discussions with their doctor, older adults want to be asked and to have the opportunity to discuss their concerns [47, 48].

It has been well established that having a mental health condition is associated with sexual difficulties in men [13, 49–51]. However, this association is complex because anti-depressant and antipsychotic medical treatment can negatively impact on sexual desire, arousal, orgasm and ejaculation problems [35, 52–57], making it difficult to assess whether it is the mental health condition or the treatment or both that is associated with SD. This highlights the importance of discussing SD with any patient being managed for a mental health condition [58]. Practitioners are also advised to revisit and manage these side-effects with their patients on a periodical basis to avoid patients rejecting the treatment and causing worse health outcomes.

The relationship between SD and disability is complicated because it depends on the underlying condition of impairment and its comorbidities [58]. While our findings are consistent with previous studies they display a simplified view of the relationship between disability and SD. However, we were unable to measure specific levels of impairment related to health conditions at this stage of data collection and subsequent longitudinal analyses of Ten to Men will be able to further explore this.

Among lifestyle factors, our findings were consistent with others who have shown that smoking, taking drugs and harmful drinking are associated with SD [59–62]. Smoking tobacco has specifically been linked to erectile difficulties as erectile function relies on normal arterial vascular performance which is adversely affected by smoking [60]. Subsequent analyses with future waves of

correlated, we investigated each factor in a separate model. We will undertake more complex analyses to investigate the independent association of these factors with SD in future analyses of the data. Thirdly, these baseline data are cross-sectional and the temporal association between risk factors and SD cannot be confirmed. However, with future waves of data collection in Ten to Men, we will be able to estimate the incidence of SD and investigate temporal relationships between risk factors and SD, allowing us to assess causal associations. Fourthly, although the measures of physical health included in our analysis were based on validated scales, they are summary measures and as a result, we were unable to investigate specific health conditions such as cardiovascular disease or diabetes. Fifthly, several physical health conditions such as mental health may be confounded by medication used to manage the condition and we cannot be certain whether it is the physical condition or the medication that is associated with the SD [3]. Finally, we were unable to exclude men from the analysis who reported no sexual activity in the last 12 months and were unable to relate the experience of SD back to a particular sexual partner; it is possible that the SD reported may only relate to specific sexual partners in the last 12 months or that SD may have prevented men engaging in sex in the last 12 months.

The strengths of this analysis are that we were able to investigate a broad range of lifestyle and health factors for their associations with SDs in males and we were able to investigate whether reporting of SD varied across several different age groups. Our sample size also allowed us to investigate associations with considerable statistical power. Our results will form a baseline for future longitudinal analyses in subsequent waves of data collection.

Conclusion

Sexual difficulties are common among men of all ages in Australia, but increasingly more prevalent as men grow older. They are strongly associated with both physical and lifestyle factors and can indicate or be a precursor of an underlying physical or mental health condition. Given this, it is imperative that sexual health and sexual functioning be discussed with a doctor as part of the standard health checks and across the lifespan.

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Declaration

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Availability of data and materials

Ten to Men response data are available to researchers via a request and review process. Information on accessing Ten to Men data is available at http://www.tentomen.org.au/index.php/researchers.html.Copies of Wave 1 questionnaires, Wave 1 data books, and the Ten to Men Data User's Manual are also available at that site.

Enquires about potential collaborations including sub-studies involving members of the Ten to Men cohort can be addressed to the Study Coordinator at info@tentomen.org.au.

Authors' contributions

MS, LS and JH were responsible for the analytical design. MS undertook data analysis. MS and JH were involved in interpreting the analysis. MS drafted the manuscript. All authors undertook critical revision of the manuscript and have approved this manuscript version for submission.

Competing interests

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