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Sexual behaviour during COVID-19: a repeated cross-sectional survey in Victoria, Australia

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ABSTRACT

Background. During 2020, the State of Victoria (Australia) experienced two COVID-19 waves. Both resulted in community lockdowns followed by eased restrictions. We examined variation of sexual behaviour in Victorians over time during COVID-19. **Methods.** We conducted a repeated online survey at four timepoints corresponding with two lockdown (LD1, LD2) and two reduced restriction (RRI, RR2) periods in Victoria. A convenience sample of participants aged ≥ 18 years was recruited via social media and asked about their recent (past 4 weeks) sexual behaviour. Using multivariable logistic regression, we investigated variation in sexual behaviour between surveys. **Results.** A total of 1828 surveys were completed; 72% identified as female, 69% were aged 18–29 years, 90% were metropolitan residents. The proportion reporting recent partnered sex ranged from 54.9% (LD2) to 70.2% (RRI). Across all timepoints, the most common sexual partners were regular (81.5%, $n = 842$) and 10.8% ($n = 111$) reported casual partners (e.g. hook-ups). Compared with LD1, respondents were >2 -fold more likely to report casual partner(s) during reduced restrictions (RRI: aOR 2.0; 95% CI 1.1–3.7; RR2: aOR 2.8; 95% CI 1.3–5.9). Across all timepoints, 26.6% ($n = 486$) reported using dating apps. Compared with LD1, dating app use for face-to-face activities (e.g. dates, hook-ups) was >4 -fold higher during reduced restrictions (RRI: aOR 4.3; 95% CI 2.3–8.0; RR2: aOR 4.1; 95% CI 1.9–8.8). App use for distanced activities (e.g. sexting, virtual dates) was highest during LD1 (48.8%) than other periods. **Conclusions.** In this convenience sample, self-reported sexual behaviours fluctuated between lockdowns and reduced restrictions. While dating apps may provide a mechanism for virtual connections, this may be temporary until physical connections are possible.

Keywords: Australasia, COVID-19, dating apps, pandemic, self-report, sexual behaviours, sexual practices, sexually transmissible infections, survey.

Introduction

The COVID-19 pandemic and ensuing responses toward reducing virus transmission have affected communities across the world. During 2020, a total of 28 624 COVID-19 cases (113 per 100 000 population) were diagnosed in Australia.¹ The majority (71%) were in Victoria (Australia's second most populous state)¹ where two COVID-19 waves occurred. Peaking in March, the first wave affected all of Australia and involved largely returned travellers and their close contacts.^{2,3} Victoria's second wave saw a total of 18 668 cases and was characterised by widespread community transmission and multiple outbreaks in health and aged care settings.^{4–6}

During the first wave, a range of measures were implemented toward reducing COVID-19 transmission. The Australian Federal Government implemented a national lockdown (termed 'Stage 3 restrictions') across the whole of Australia that involved limits on the size of gatherings, closure of non-essential business, and closure of international borders.^{7,8} Australians were asked to stay home except for essential shopping, exercise,

medical care, and work/education that could not occur at home. These national measures were gradually eased from May 2020.⁹ Domestic travel was also restricted by border closures implemented by states and territories at varying times throughout 2020.¹⁰ By July 2020, Victoria was experiencing a rapidly growing second wave and in response, the State Government in Victoria introduced ‘Stage 4 restrictions’ (also termed the hard lockdown) that in addition to ‘Stage 3 restrictions’ involved a nightly curfew, mandated facemasks, and a 5 km travel limit.^{11,12} Victoria’s hard lockdown extended for several months and did not apply to the rest of Australia.

We conducted a repeated online survey at four key timepoints during 2020 to investigate the sexual and reproductive health of people living in Australia during the COVID-19 pandemic. While the survey was open to anyone throughout Australia, we limit the analysis here to those living in Victoria because our survey waves were aligned with two periods of lockdown and two periods of eased restrictions that followed the lockdowns in Victoria. Here, we examine the variation in sexual behaviour of people living in the state of Victoria during four waves of surveys.

Methods

We undertook a serial cross-sectional analysis of online survey data collected at four distinct time-periods during 2020 to investigate variation in sexual behaviours of Victorians during changing restrictions. Our four survey waves were implemented to correspond with two lockdown (LD1, LD2) and two reduced restriction (RR1, RR2) periods in Victoria (Box 1). Surveys 1–3 were open for approximately 2 weeks and Survey 4 for approximately 3 weeks due to a slower response. Although our survey was open to all Australians, this analysis is limited to people living in Victoria at the time of survey completion.

The methods for Survey 1 have been described previously¹³ and were repeated for subsequent surveys. For all four surveys, people aged 18 years or older and living in Australia at the time of the survey were eligible. Participants were recruited by circulating recruitment flyers via researcher’s networks, snowballing and social media including twitter and paid Facebook advertisements. Interested individuals could click a link to the survey where

they were provided with an explanation of the survey, eligibility criteria, and how to consent if they chose. Each survey asked about sociodemographic information (including state of residence) and the respondents’ current (defined as 4 weeks prior to survey completion) sexual health experiences and practices (e.g. have you had sex in the past 4 weeks). Sex was defined as physical contact with other people for sexual pleasure. Respondents were also asked if they had changed the frequency (less often, the same amount, more often or stopped) they engaged in specific sexual practices (e.g. using sex toys alone, masturbating alone) compared with before the COVID-19 pandemic.

Data management and analysis

Binary outcomes were created for recent sexual partner type categorised as regular sex partners (spouse, partner, boyfriend, girlfriend), casual sex partners (hook-up, casual dating) and occasional sex partners (friend, ‘fuck buddy’, occasional sex partner). Binary outcomes for dating app use were defined as using apps for (1) chatting; (2) for physically distanced activities, which we included responses for sexting, sending pics or videos, or virtual dates; or (3) for face-to-face activities, which we included responses for dates or hook-ups. Because restrictions may limit how people interact with each other, we were interested if the frequency that people engaged in solo sex practices had changed and created binary outcomes for using sex toys alone more often and masturbating alone more often compared to before COVID-19. Categorical variables were created for age group (18–29 years, 30 years or above), gender (male, female, gender diverse), employment status (full time, part time, unemployed and looking for work, other), sexual identity [heterosexual, men who have sex with men (MSM), women who have sex with women (WSW)], relationship status (no steady relationship and no recent sex, no steady relationship and having sex, in a relationship and not cohabitating, in a relationship and cohabitating) and area of residence (metropolitan, rural/regional).

We examined variation in sexual behaviours over our four waves of data collection. Sociodemographic characteristics of respondents between surveys were compared using descriptive statistics. Logistic regression was conducted to see whether sexual partner type, dating app use and solo sex activities differed from our reference category of LD1 (Survey 1), adjusting for sociodemographic characteristics

Box 1. Dates for each survey period and corresponding restriction level

- Survey 1 (23 April–11 May): Lockdown 1 (LD1) – Australia-wide lockdown
- Survey 2 (11–29 June): Reduced Restrictions 1 (RR1) – easing of restrictions nationally
- Survey 3 (13–31 August): Lockdown 2 (LD2) – Victoria’s hard lockdown that did not apply to the rest of Australia
- Survey 4 (24 November–18 December) Reduced Restrictions 2 (RR2) – Victoria’s restrictions eased to a minimal level

to account for changes in the participant profile over time. For solo sex activities, we investigated whether gender modified the association between survey period and our solo sex outcomes by comparing logistic regression models with and without an interaction term between gender and survey period using the likelihood ratio test, and report these if an effect modification was found. Odds ratios (OR) and 95% confidence intervals (95% CI) are reported. All statistical analyses were undertaken in Stata SE V.16 (StataCorp LLC).

Ethics approval

The study was approved by the University of Melbourne Human Research Ethics Committee (ID 2056693).

Results

Overall 2258 surveys were initiated by Victorian residents; of these 81.0% ($n = 1828$) completed the survey (Survey 1: 85.4%, $n = 485$, Survey 2: 75.2%, $n = 521$, Survey 3: 78.0%, $n = 606$, Survey 4: 98.2%, $n = 216$). Participant characteristics are provided in Table 1. The characteristics of participants varied over time. More females completed Surveys 2 (79.6%) and 4 (73.1%) than Surveys 1 (69.7%) and 3 (65.9%), more younger participants completed Surveys 2 (75.8%) and 3 (71.6%) than Surveys 1 (61.9%) and 4 (59.5%), and more participants in a relationship but not cohabitating completed Surveys 2 (30.0%) and 3 (27.0%) than other surveys. Most participants were Australian-born and lived in metropolitan areas.

Sexual activity

The proportion of respondents reporting partnered sex in the past 4 weeks ranged from 54.9% during LD2 (Survey 3) to 70.2% during RR1 (Survey 2), with a median number of sexual partners of 1 (IQR 1–1) for each survey. Multivariable analysis (Table 2) found that compared with LD1 (Survey 1), respondents were more likely to report partnered sex in the past 4 weeks during RR1 (Survey 2) [adjusted odds ratio (aOR) 1.7; 95% CI 1.3–2.3], with no other differences observed.

Among respondents reporting partnered sex, the most common sexual partners were regular partners (range 77.4–86.1%; Fig. 1). Compared with LD1 (Survey 1) multivariable analysis found that during periods of reduced restrictions (Surveys 2 and 4), participants were less likely to report partnered sex with regular partner(s) (RR1: aOR 0.5; 95% CI 0.3–0.8; RR2: aOR = 0.5; 95% CI 0.3–0.9), and, more likely to report partnered sex with casual partner(s) (RR1: aOR 2.0; 95% CI 1.1–3.7; RR2: aOR = 2.8; 95% CI 1.3–5.9). The proportion reporting partnered sex with occasional sex partner(s) did not differ by survey period.

Dating app use

Between 25.4% and 29.6% of respondents reported using dating apps in the past 4 weeks. Multivariable analysis found that this did not vary between surveys (Table 2). Among dating app users, chatting was the most common reason for use (range 73.2–93.5%; Fig. 2). Multivariable analysis found that compared with LD1 (Survey 1) chatting was less likely in all other periods (Surveys 2–4; Table 2). Use of dating apps for face-to-face activities was lowest during LD1 (Survey 1) and LD2 (Survey 3) at 19.5% and 14.9%, respectively. Multivariable analysis found that compared with LD1 (Survey 1), dating app use for face-to-face activities was over four times more likely during periods of reduced restrictions (Surveys 2 and 4) (RR1: aOR 4.3; 95% CI 2.3–8.0; RR2: aOR 4.1; 95% CI 1.9–8.8). The proportion using dating apps for physically distanced activities was highest during LD1 (Survey 1) at 48.8% and lowest during RR2 (Survey 4) at 25.0%. Multivariable analysis found that compared with LD1 (Survey 1) that dating app use for physically distanced activities was less likely during RR2 (Survey 4; aOR 0.3; 95% CI 0.2–0.8).

Changes in solo sexual activity compared with pre-COVID-19

While up to a half of respondents reported never using sex toys alone, 14.5–19.9% reported using them more often than before COVID-19. Between 43.6% and 53.2% of respondents reported that they had not changed how often they masturbated alone while 26.0–34.3% reported doing this more often than before COVID-19. Compared with LD1 (Survey 1), respondents during LD2 (Survey 3) were more likely to report more frequent use of sex toys alone (aOR 1.4; 95% CI 1.0–2.1) and masturbation alone (aOR 1.4; 95% CI 1.0–1.9).

Discussion

This study found self-reported sexual activity and behaviours for a sample of Victorian Australians fluctuated during 2020 as COVID-19 restrictions were implemented and eased. We found that recent partnered sexual activity was reported by 55–57% of respondents during lockdowns and by 61–70% of respondents as restrictions were eased. Lockdowns were associated with more frequent physically distanced activities (e.g. virtual dates). Less restrictive periods saw respondents more likely to report casual sex partners and using dating apps to support face-to-face activities.

To date, there have been few if any studies investigating trends in sexual behaviours since the COVID-19 pandemic began. Aligning our survey waves with four distinct timepoints in the COVID-19 response provided us a unique opportunity to capture the experiences of Australians living in Victoria as they were subject to tightening and easing of

Table 1. Sociodemographic characteristics of participants, by survey.

Survey (restriction period)	1 (Lockdown 1), N = 485		2 (Reduced Restrictions 1), N = 521		3 (Lockdown 2), N = 606		4 (Reduced Restrictions 2), N = 216		P-value*
	n/N	%	n/N	%	n/N	%	n/N	%	
Gender ^A									
Female	338/485	69.7	413/519	79.6	398/604	65.9	141/193	73.1	<0.01
Male	122/485	26.2	93/519	17.9	196/604	32.5	48/193	24.9	
Gender diverse	20/485	4.1	13/519	2.5	10/604	1.7	4/193	2.1	
Age (years)									
18–29	299/483	61.9	392/517	75.8	430/601	71.6	128/215	59.5	<0.01
≥30	184/483	38.1	125/517	24.2	171/601	28.5	87/215	40.5	
Sexual identity ^B									
Heterosexual/Straight	307/485	63.3	348/520	66.9	381/606	62.9	120/191	62.8	0.092
MSM	39/485	8.0	28/520	5.4	55/606	9.1	11/191	5.8	
WSW	99/485	20.4	92/520	17.7	106/606	17.5	47/191	24.6	
Other	40/485	8.3	52/520	10.0	64/606	10.6	13/191	6.8	
Relationship status ^C									
In a relationship and cohabitating	145/465	31.2	135/494	27.3	158/578	27.3	51/175	29.1	0.008
In a relationship and not cohabitating	109/465	23.4	148/494	30.0	156/578	27.0	39/175	22.3	
No steady relationship and no recent sex	124/465	26.7	103/494	20.9	175/578	30.3	50/175	28.6	
No steady relationship and having sex	87/465	18.7	108/494	21.9	89/578	15.4	35/175	20.0	
Country of birth									
Australia	385/476	80.9	420/515	81.6	474/601	78.9	149/191	78.0	0.581
Other	91/476	19.1	95/515	18.5	127/601	21.1	42/191	22.0	
Aboriginal and/or Torres Strait Islander									
Yes	6/485	1.2	4/521	0.8	9/606	1.5	1/216	0.5	<0.01
Highest level of education									
Primary/Secondary school	109/483	22.6	127/520	24.4	119/606	19.6	26/193	13.5	0.015
Certificate/Diploma/Apprenticeship	47/483	9.7	65/520	12.5	68/606	11.2	18/193	9.3	
University	327/483	67.7	328/520	63.1	419/606	69.1	149/193	77.2	
Employment at time of survey									
Employed full time	149/483	30.9	133/519	25.6	186/606	30.7	58/191	30.4	<0.01
Employed part time, casual, self employed	162/483	33.5	241/519	46.4	259/606	42.7	92/191	48.2	
Unemployed and looking for work	91/483	18.8	71/519	13.7	69/606	11.4	11/191	5.8	
Other ^D	81/483	16.8	74/519	14.3	92/606	15.2	30/191	15.7	
Region									
Metropolitan	415/482	86.1	460/519	88.6	557/603	92.4	197/215	91.6	0.005
Regional or rural	67/482	13.9	59/519	11.4	46/603	7.6	18/215	8.4	

^AGender diverse includes transgender and non-binary.

^BMSM includes bisexual and transmen; WSW includes bisexual and trans women; other includes asexual and non-binary respondents and those who selected 'something else'.

^CIn a relationship' includes those who selected married/de facto/boyfriend/girlfriend/living apart together or long distance relationship; 'cohabitating' defined as living with partner(s); 'No steady relationship and no recent sex' includes those who selected single, divorced/widowed (and did not select another relationship) and did not report recent partnered sexual activity; 'No steady relationship and having sex' includes those who selected single, divorced/widowed, polyamorous, multiple partners (and did not select another relationship) and who reported recent partnered sexual activity.

^DIncludes retired, parent/carer, disability support pension, unemployed but not looking for work and students who are not working.

*P-value comparing the sociodemographic characteristics of respondents between surveys.

n, number who answered the question; denominator is not always the same because of missing data.

Table 2. Types of sexual partners, dating app use, and changes in sexual practices, by survey.

	Survey (restriction period)	n/N (%) ^A	OR (95% CI)	aOR (95% CI)
Sexual activity and partners^B				
Sex in past 4 weeks	1 (Lockdown 1)	271/472 (57.4)	1.0	1.0
	2 (Reduced Restrictions 1)	348/496 (70.2)	1.8 (1.3–2.3)	1.7 (1.3–2.3)
	3 (Lockdown 2)	318/579 (54.9)	0.9 (0.7–1.1)	0.9 (0.7–1.1)
	4 (Reduced Restrictions 2)	112/183 (61.2)	1.2 (0.8–1.7)	1.1 (0.7–1.6)
Regular sex partners, past 4 weeks ^C	1 (Lockdown 1)	229/266 (86.1)	1.0	1.0
	2 (Reduced Restrictions 1)	267/345 (77.4)	0.6 (0.4–0.9)	0.5 (0.3–0.8)
	3 (Lockdown 2)	258/310 (83.2)	0.9 (0.6–1.4)	0.8 (0.5–1.4)
Casual sex partners, past 4 weeks ^D	1 (Lockdown 1)	19/266 (7.1)	1.0	1.0
	2 (Reduced Restrictions 1)	41/345 (11.9)	1.7 (0.9–2.9)	2.0 (1.1–3.7)
	3 (Lockdown 2)	33/310 (10.7)	1.4 (0.8–2.6)	1.6 (0.8–3.0)
Occasional sex partners, past 4 weeks ^E	1 (Lockdown 1)	32/266 (12.0)	1.0	1.0
	2 (Reduced Restrictions 1)	59/345 (17.1)	1.4 (0.9–2.3)	1.5 (0.9–2.4)
	3 (Lockdown 2)	34/310 (11.0)	0.8 (0.5–1.4)	0.8 (0.5–1.5)
Dating app use ^F	1 (Lockdown 1)	123/485 (25.4)	1.0	1.0
	2 (Reduced Restrictions 1)	138/521 (26.5)	1.0 (0.8–1.3)	1.0 (0.7–1.5)
	3 (Lockdown 2)	161/606 (26.6)	1.0 (0.8–1.3)	0.9 (0.7–1.3)
	4 (Reduced Restrictions 2)	64/216 (29.6)	1.2 (0.8–1.7)	1.2 (0.7–1.9)
Used dating apps for chatting, past 4 weeks	1 (Lockdown 1)	115/123 (93.5)	1.0	1.0
	2 (Reduced Restrictions 1)	101/138 (73.2)	0.2 (0.1–0.4)	0.2 (0.1–0.4)
	3 (Lockdown 2)	134/161 (83.2)	0.4 (0.2–0.8)	0.4 (0.1–0.9)
Used dating apps for face to face activities, past 4 weeks	1 (Lockdown 1)	24/123 (19.5)	1.0	1.0
	2 (Reduced Restrictions 1)	71/138 (51.5)	4.5 (2.6–8.0)	4.3 (2.3–8.0)
	3 (Lockdown 2)	24/161 (14.9)	0.7 (0.4–1.4)	0.7 (0.4–1.4)
Used dating apps for physically distanced activities, past 4 weeks	1 (Lockdown 1)	60/123 (48.8)	1.0	1.0
	2 (Reduced Restrictions 1)	47/138 (34.1)	0.5 (0.3–0.9)	0.6 (0.4–1.1)
	3 (Lockdown 2)	64/161 (39.8)	0.7 (0.4–1.1)	0.6 (0.4–1.1)
Changes in solo sexual activities compared with before COVID-19 ^F	4 (Reduced Restrictions 2)	16/64 (25.0)	0.3 (0.2–0.7)	0.3 (0.2–0.8)
	1 (Lockdown 1)	65/447 (14.5)	1.0	1.0
	2 (Reduced Restrictions 1)	76/438 (17.4)	1.2 (0.8–1.7)	1.0 (0.7–1.5)
	3 (Lockdown 2)	101/507 (19.9)	1.4 (1.0–2.0)	1.4 (1.0–2.1)
Using sex toys alone more frequently, compared with before COVID-19 ^D	4 (Reduced Restrictions 2)	30/170 (17.7)	1.1 (0.7–1.8)	1.2 (0.7–2.0)

(Continued on next page)

Table 2. (Continued).

	Survey (restriction period)	n/N (%) ^A	OR (95% CI)	aOR (95% CI)
Masturbating alone more frequently, compared with before COVID-19	1 (Lockdown 1)	117/446 (26.2)	1.0	1.0
	2 (Reduced Restrictions 1)	132/432 (30.6)	1.2 (0.9–1.6)	1.2 (0.9–1.7)
	3 (Lockdown 2)	176/513 (34.3)	1.5 (1.1–1.9)	1.4 (1.0–1.9)
	4 (Reduced Restrictions 2)	44/169 (26.0)	0.9 (0.6–1.3)	1.0 (0.6–1.5)

Note: results highlighted in bold are statistically different to the other findings for that category ($P \leq 0.05$).

^ADenominator is not always the same because of missing data.

^BAdjusted for gender, age group, sexual identity, education, employment, region.

^CRegular sex partners includes spouse, partner, boyfriend, girlfriend.

^DCasual sex partners includes hook-ups casual dating.

^EOccasional sex partners includes friend, 'fuck buddy', occasional sex partner.

^FAdjusted for gender, age group, sexual identity, relationship status, education, employment, region.

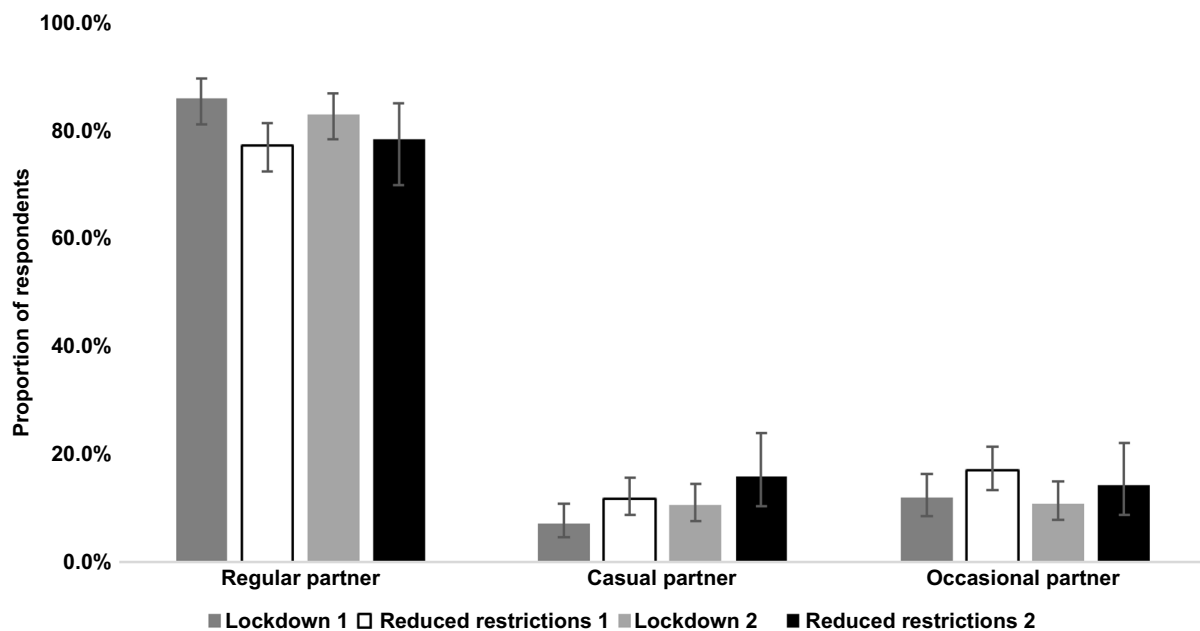


Fig. 1. Type of sexual partners reported at each survey period.

restrictions. Our study is strengthened by our multivariable analysis where we were able to adjust for sociodemographic changes in participants across surveys, which may have confounded our findings. However, there are several limitations to consider. First, our recruitment methods provided a convenience sample that is unlikely to be representative of Victoria's diverse population groups. When compared with population data, our participants were more likely to be female, Australian-born (80% vs 65%),¹⁴ university educated (67% vs 18%), and 19% identified as WSW (vs 3.4%).¹⁵ Victoria's second COVID-19 wave disproportionately impacted those who were born outside of Australia, lived in more disadvantaged areas and worked in lower paid employment.¹⁶ Our findings need to be considered in the context of our sample. Second, the characteristics of our sample varied over time which despite adjustment in

our multivariable analysis may have contributed to our findings. Third, survey responses were based on recall and may have been subject to recall bias, particularly questions about activities in 2019. Finally, our fourth survey received a lower number of responses and a higher completion rate than the preceding three surveys. Although we do not know the exact reasons for these differences, it is possible that when restrictions were eased after Victoria's extended lockdown, many potential respondents were enjoying freedom to socialise rather than completing an online survey. Also, a higher proportion of respondents to Survey 4 were university educated compared to earlier surveys, potentially contributing to the higher completion rate.

The changes in self-reported sexual behaviours observed in this study are consistent with a growing evidence base of the impacts of COVID-19 on sexual behaviours. During Australia's

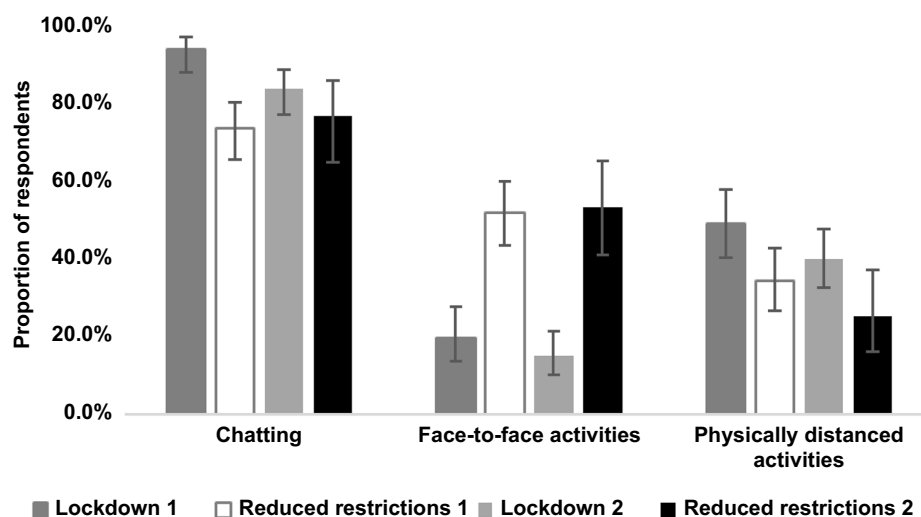


Fig. 2. Reasons for dating app use reported at each survey period.

first nationwide lockdown (March–May 2020), responses to our first survey indicated that many people reported reduced partnered sexual activity and increases in solo activities compared to before COVID-19.¹³ Also during this period, substantial reductions in sex with casual partners were reported by gay and bisexual men in Australia.¹⁷ In the United Kingdom, a large quasi-representative survey found after 3 months lockdown that half of participants reported no change in partnered sex frequency and those in non-cohabitating relationships were more likely to report a decrease in partnered activity and an increase in non-partnered activities.¹⁸ Declines in partnered activities and increases in masturbation alone during COVID-19 restrictions have also been reported in several German speaking countries, China and the United States,^{19–21} in particular for males.²¹ Our observed changes over time did not vary by gender identity.

Notably, in this study we found that patterns of sexual activity fluctuated over time as lockdowns were implemented or subsequently eased. Regular sexual partners were most commonly reported across all surveys but less frequently during reduced restrictions periods. Conversely, casual sexual partners were reported more often when restrictions were eased compared with the first lockdown. These and other reported changes in sexual behaviours¹⁷ could potentially alter patterns in diagnosis of sexually transmissible infections (STIs). A large metropolitan Victorian sexual health clinic reported marked reductions in attendance and diagnosis of mild conditions (e.g. nongonococcal urethritis) during the first lockdown compared to before and after the lockdown. However, no difference in diagnosis rates for symptomatic STIs were found when comparing pre, during and post-lockdown periods, suggesting that attendance was prioritised based on urgency of need.²² Delays in attending sexual health services since the start of the pandemic have also been reported in Canada, with users of online services less likely to report unmet sexual health needs.²³ Continued

availability of sexual health services is vital during the evolving pandemic.

We also observed some small differences in self-reported behaviours between Victoria's first and second lockdown. Respondents were more likely to report that they engaged in solo activities, particularly masturbation during the second extended lockdown than the first, which could suggest that the duration of lockdowns affected sexual activity differently. However, given the substantial variation in our sample over time it is possible this finding reflects differences in the characteristics of our respondents. Other reports indicate that Victoria's extended lockdown placed a significant toll on the Victorian population²⁴ including their mental health.²⁵

While overall dating app use remained constant between surveys, the way that respondents interacted with dating apps varied over time. During lockdowns, dating apps were more likely to be used for physically distanced activities such as virtual dates. However, when restrictions were eased, use of dating apps to support face-to-face activities such as organising dates or hook-ups was more common. As the COVID-19 pandemic unfolded during 2020, dating app companies reported an increase in engagement and a shift in how dating apps were used, in particular increased use of video dating functions.^{26,27} Dating app companies also responded to the COVID-19 pandemic by including health messages (e.g. advice about physical distancing), promoting virtual dating, and self-care to address loneliness or isolation.²⁸ It is uncertain whether additions to dating apps impacted the findings in this study.

Conclusion

The COVID-19 pandemic and the public health response it prompted was associated with fluctuations in sexual activity

and behaviours in this convenience sample of Victorian residents. While this repeated survey provided a valuable means to investigate the experiences of Victorians at key points during the COVID-19 response, it is possible that variation in our sample between surveys contributed to our findings. However, we did find changes in self-reported partnered and solo sexual activity during lockdown and reduced restriction periods. While dating apps can provide a mechanism for virtual connections, this may only be temporary until physical connections are possible. The importance of intimate connections for wellbeing should be considered within public health measures toward reducing COVID-19 transmission.

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Data availability. The data that support the findings of this study are not publicly available due to information that could compromise the privacy of research participants. Please contact the authors to request a copy of the questionnaire.

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