A new study titled "The relationship between age and sex partner counts during the mpox outbreak in the UK, 2022" and published in the journal PLOS ONE shows the number of sexual partners we have changes as we age—and there are some surprising results.

Researchers from the University of East Anglia (UEA), in collaboration
with King's College London and University College London, surveyed more than 5,000 people aged 18 years and older during the 2022 mpox (previously known as "monkeypox") outbreak.

The team wanted to better understand how sexual behaviors change with age, so that mathematical models of sexually transmitted infections can be made more accurate. Key findings included in the paper show that many gay and bisexual men over age 70 continue to have a sex life with multiple partners, while straight women become less sexually active after age 50.

Lead researcher Dr. Julii Brainard, from UEA's Norwich Medical School, said, "Before this study, many models about sexually transmitted diseases assumed that everyone over a certain age—say 40 or 65—stopped being sexually active, or at least stopped having multiple partners."

"Or there might be an assumption that young people have the most sex. But the answer is more nuanced, and it partly depends on people's sexuality."

The study is based on a survey of 5,164 British people, including 3,297 sampled from the general population and 1,036 men who have sex with men (MSM) recruited via Facebook and Instagram. A further 831 people responded to adverts on the gay dating app Grindr.

"The 2022 mpox cases spread mostly among men who have sex with men, so we particularly surveyed this group," explained Dr. Brainard.

The participants were asked for their gender, sexual identity (gay, bisexual or heterosexual) and how many sexual partners they had had in the last three weeks and in the last three months. The answers were divided into the three largest groups that each had more than a thousand
responses: women who have sex with men, men who have sex with women, and men who have sex with men.

The team focused on the relationship between sex partner counts in last three weeks and respondent age, using statistical models to see how much a person's age was linked to their recent partner count.

The researchers shared the following key findings:

- Most people surveyed had either zero or one sexual partner at any age in the preceding three weeks.

- About 65% of heterosexual women reported having one partner in the last three weeks consistently until they were 50—after which there was a steep climb in reporting no partners. 79% of women age 70+ who identified as heterosexual or had any male partners in last three months, had had no male partners in the last three weeks.

- Of the heterosexual men surveyed (all age groups), 50% reported having one partner in the last three weeks. But they were increasingly likely to report no partners as they got older. 50% of men age 70+ who were heterosexual or had had sex with any women in last three months, didn't have a female partner in the most recent three weeks, compared to just 44% of men having heterosexual sex who had no recent female partners when age under 70.

- Partner concurrency—which is more than one recent sex partner—was uncommon in the general population, but common among the social media samples. 42% of MSMs recruited on Facebook or Instagram and 52% of Grindr respondents had at least two recent male partners.
Partner concurrency declined among older people, with least decline among social media respondents. Seventy-seven men who have sex with men, age 70+, answered the survey. 17% of them reported more than one recent partner in the most recent three weeks. 25% of the MSM age 70+ recruited via social media had concurrent partners.

Only 2% of straight people over 70 reported multiple partners.

Dr. Brainard said, "Most people in our survey, regardless of their gender identity or sexuality, had zero or one recent partner at any age."

"We managed to collect a lot of data from MSM who practiced partner concurrency. About 45% of them sustained partner concurrency from age 27 to 63. Even at age 65+ the respondents recruited via social media still tended to have more sexual contact than the general population sample at the same age.

"It would be interesting to see if these findings were replicated if we targeted heterosexuals most likely to practice partner concurrency.

"Models of disease spread shouldn't assume that young people are necessarily most at risk or that having multiple partners just stops happening at a strict age threshold."

The information about age profiles and sexual habits is useful because it helps to tailor safe sex messages at the right demographics and using media channels that best reaches these subgroups. Research Fellow Dr. Louise Smith at Kings College London coordinated the survey in autumn 2022 to collect information about public awareness of mpox and what public health messages might be most motivating for different subgroups.
Dr. Smith said, "This study underscores the importance of considering how data were collected. For instance, we can't conclude from this survey that MSM who use social media are particularly likely to have concurrent partners. But it may be that the algorithms that Facebook or Instagram use to identify MSMs are also very good at finding that subset of people.

"At the time, mpox mostly affected gay and bisexual men so we focused recruitment on this group. Because we didn't recruit very many lesbian and bisexual women, or members of the trans community, our statistical analyses would have been less reliable for these groups.

"Further research into other minority sexualities and gender identities could be beneficial to better understand the granularity of sexual behavior and optimal public health messaging suited to different groups of people in the UK."


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