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“It’s just horny fun...” Grindr and its influence on young gay men’s attitudes towards HIV and risky sexual behaviour

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Jack Ives

It's Just Horny Fun..." Grindr and Its Influence on Young Gay Men's Attitudes Towards HIV and Risky Sexual Behaviour.

This research study explores the gay dating smartphone app Grindr and the role it plays in influencing young gay men's attitudes towards HIV and risky sexual behaviour, looking closely at the social norms within the app itself. Grindr was specifically chosen as the focus of this research project as it is the largest gay dating app in Europe, and has begun to be considered an important communications tool for public health and communications professionals looking to tackle the spread of HIV. The study used qualitative research methods, implementing semi-structured interviews to gain a rich and in-depth insight into the knowledge and attitudes of young gay men who use Grindr, aged between 18-25 years old. The research findings identified that while Grindr users perceive the app to be highly sexualised and crude, they do not perceive the social norms of the app to directly influence their attitudes towards risky sexual behaviour and that pressure to engage in risky sexual behaviour is more prevalent in real life scenarios, with Grindr allowing users to easily end conversations or block other users.

Keywords: political branding; Conservative Party; brand image; brand reputation.

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INTRODUCTION

Gay and bisexual men account for less than 2% of the UK population (Office for National Statistics 2017), although nearly half of the estimated 89,400 people living with HIV in England are gay or bisexual men. Although the rate of HIV transmission is going down in England, half of new cases of HIV in 2016 continued to be gay and bisexual men (Public Health England 2017) which suggests the issue of HIV infection is still prevalent and a cause for concern. The continuing relationship between gay men and HIV is happening at a time when MSM (men who have sex with men) are increasingly turning to online and smartphone apps to find sexual partners, with 76% of MSM in non-committed relationships reporting to use an online platform to find one (European Centre for Disease Prevention and Control 2015).

There are a wide range of different dating apps used by MSM, however Grindr (Grindr LLC 2018), which describes itself as “the world’s largest social networking app for gay, bi, trans and queer people” (Grindr 2018a), is the most popular online space used by MSM across the European Union (European Centre for Disease Prevention and Control 2015). It has over 3 million daily active users (Grindr 2018b). With online and smartphone apps now playing an integral part in the sex lives of many MSM, this raises questions over whether this is having an impact on the way HIV and other STIs are transmitted and if this could be encouraging MSM to engage in riskier sexual behaviour.

Many public health professionals have already begun to understand the potential role apps such as Grindr can play in the fight against HIV, with some organisations beginning to use Grindr and other smartphone apps as a key tool for sexual health campaigns, such as by letting users know where their nearest sexual health clinic is, or where they can obtain PEP (Post Exposure Prophylaxis) if exposed to HIV (Kirby and Thornber-Dunwell 2014). In addition to this, Grindr itself has started to introduce features in an attempt to encourage safer sexual practices amongst its users. These include free advertising for qualifying HIV testing sites, the ability for users to show their HIV status on their profile if they wish, and the option to opt-in for HIV testing reminders every three or six months (Grindr 2018c).

Previous studies have found that men who use apps such as Grindr are more likely to have UAI (unprotected anal intercourse) than men who do not (Glaser et al. 2014; Winetrobe et al. 2014), therefore this research paper will set out to look at the role Grindr plays in informing young gay men’s perceptions of HIV and attitudes towards risky sexual behaviour, looking specifically at the role social norms may play in shaping these. This study will begin by reviewing previous literature available on the subjects of perceptions of HIV, online and smartphone apps and their impact on risky sexual behaviour and social norms. Next the research method will be explained and objectives confirmed, following with the data presented and analysed. Finally, the study will be concluded by offering recommendations from the research findings, as well as exploring limitations of the study and opportunities for future research. It should be noted, that although this research project focused on gay men, this paper will use terms such as MSM, gay men, and gay and bisexual men interchangeably to reflect language used by other literature.

LITERATURE REVIEW

Perceptions of HIV

The greatest at-risk group for contracting HIV is men who have sex with men, who are 44 times more likely to become HIV-positive than other men (Groves et al. 2013). This highlights how HIV is a health issue that has disproportionately affects gay men, therefore perception of HIV and risk is likely to impact this group’s sexual behaviour alongside other influences such as social norms. This can be seen clearly in a study by Gallois et al. (1992) looking at sexual behaviour in Australia at the height of the AIDs crisis, when HIV was seen as a death sentence. Only 21% of gay men reported practicing anal intercourse, which is extremely low compared to modern studies such as one undertaken by Glaser et al. (2014) which found that 96.5% of respondents reported anal intercourse in the past three months. This could possibly

be explained by looking at the advances in HIV medicines which are available now compared to those available in 1992. A study by Hope et al. (2000) discovered that following the introduction of combination therapy to treat HIV, a substantial minority reported reduced feelings of concern surrounding HIV and in turn, reduced concern was an indicator for an increase in risky sexual behaviour. In an age where treatment for HIV is now often simply just taking one pill a day with little side effects, this could indicate the reason for high levels of risky sexual behaviour.

Despite the medical advances of HIV medicines, there still seems to be a lack of understanding of the disease across the general population. One study by Carabini (2017) noted the case of a woman who was diagnosed as HIV-positive, which led to her believing her life would shortly be coming to an end. This shows how many people do not have an understanding of HIV today, however it is important to note that as this case study was a woman, it is unlikely modern HIV prevention communications would have targeted her, unlike campaigns which are typically targeted at MSMs, therefore the typical gay man might be more educated on the matter. A study by Holt et al. (2010) found that while most gay men perceive the majority STIs to be just an unpleasant side effect of sex which are hard to avoid, they perceive HIV to be a more considerable risk. This confirms that gay men understand the risks of HIV, however may not understand how easily it is for it to be sexually transmitted, as STIs are only likely to be transmitted through risky sexual practices, in conditions similar to those that would allow HIV infection. As previously stated in the study by Landovitz et al. (2012), 70% of people who took part in UAI perceived their risk of becoming HIV-positive to be low, demonstrating again how even though gay men recognise that HIV is a lifelong condition and want to avoid transmission, they may not take suitable precautions.

Online and Smartphone Apps and Risky Sexual Behaviour

Risky sexual behaviour is defined as "any behaviour that increases the probability of negative consequences associated with sexual contact" (Cooper 2002, p.101), for example failure to use condoms. People who exhibit risky sexual behaviour have an increased risk of HIV infection, with an estimated 80% of new HIV infections in America the result of unprotected sex (Marks et al. 2006). It is therefore important to understand the role Grindr may play in encouraging or facilitating risky sexual behaviour. Studies have discovered that young gay men who use Grindr are significantly more likely to have UAI with a Grindr-met partner (Winetrobe et al. 2014), with one study discovering that 57.7% of their research sample had reported UAI with a casual partner met on the internet or an app in the past three months (Glaser et al. 2014). This could suggest that Grindr users are more likely to engage in UAI as a result of joining the app, however this is unclear and it is possible that people who partake in UAI are more likely to join Grindr than people who use condoms for anal intercourse.

Landovitz et al. (2012) also discovered that Grindr users who took part in one study perceived the risk of catching HIV as low, with 70% of participants who had reported UAI believing that it was "unlikely" or "very unlikely" that they would ever acquire HIV. This could explain the occurrence of high levels of UAI seen amongst Grindr users, however again it cannot be certain whether the app itself is the reason users perceive the risk to be low, or if people who believe they are unlikely to catch HIV are more likely to join Grindr. It should also be noted that it is not certain that

these perceptions are unique to Grindr users, as there is not a suitable study with comparable data for the general gay population.

Despite the low perceived risk of HIV, Grindr users reported high levels of HIV testing. Landovitz et al. (2012) discovered that 83.2% of participants had been tested for HIV within the past year. This suggests that even though a Grindr user may perceive their risk of HIV infection to be low, they will take precautions such as HIV testing, perhaps in place of condom use. A study by Boydell et al. (2017) looking at HIV testing patterns of gay and bisexual men in Scotland also found relatively high testing patterns. It discovered that one third of participants reported regular HIV testing, at least every six months, with another third of participants reporting reactive HIV testing, seeking a test when they believe it is possible, they could have been exposed to HIV. Although it is hard to directly compare these statistics with the results from the study by Landovitz et al. (2012), it suggests that the majority of gay men will at least test for HIV if they believe they could be at risk, therefore the high levels of testing seen amongst Grindr users may not be unique to this group.

The high level of HIV testing amongst Grindr users could be down to sexual health promotion campaigns which have used Grindr as a communications tool. For example, one pilot in the USA used Grindr to promote and distribute free HIV selftest kits (Rosengren et al. 2016), which resulted in 333 self-test kits being distributed. The pilot used banners and adverts within Grindr to promote this scheme. Similar campaigns have taken place in the UK and could begin to explain the high rates of reported HIV and STI testing in Grindr users, however further research would be needed to accurately make this link.

Chemsex, which is defined as “the use of psychoactive substances (typically mephedrone, GHB/GBL or crystal methamphetamine) during sex” (Bourne et al. 2015, p.1171), has frequently been associated with apps such as Grindr in previous research (Ahmed et al. 2016; Bourne et al. 2015; Deimel et al. 2016; Stuart 2014). Research has shown an association between drug use and risky sexual behaviour, with men who engage in chemsex more likely to report sexual activity which presents an HIV transmission risk (Bourne et al. 2015). Deimel et al. (2016, p.1) notes that “... social networks of the MSM and dating apps are highly relevant for experiencing chemsex”, with Bourne et al. (2014) stating that along with saunas and clubs, the main route for drug acquisition was mobile-based apps, and that these apps “may have increased the visibility of drug use and chemsex, with the concern raised that this may influence the broader acceptability of these behaviours” (p.40). This suggests that apps such as Grindr are a key tool used by those wanting to engage in chemsex and therefore the chemsex cult is potentially visible on these apps even to those who may not initially partake in such activities. Young gay men who join Grindr, who may be unaware of chemsex, may become aware of it through the app which could potentially encourage such behaviour. It is also possible that even amongst people who do not use Grindr, it has a reputation for facilitating chemsex, and therefore people who want to seek chemsex will join Grindr to pursue it.

It is clear through the research referenced that there are a high number of unsafe and risky sexual practices amongst users of Grindr occurring, demonstrating that

further research is required to understand if this is due to Grindr's own social norms, or influences outside the app.

Social Norms Attitudes and Behaviours

Social norms are defined as what people in a group believe is the socially appropriate, normal or typical behaviour or action in the eyes of the other group members (Paluck and Ball 2010). This is an especially useful theory for looking at an online space such as Grindr, which may have established its own set of social norms amongst its community of users. Berkowitz's (2004) social norm theory argues that people do not often correctly interpret social norms, and therefore people's behaviour is influenced by misperceptions of how other people think and act. Berkowitz has highlighted how this theory is especially relevant for those working in health promotion as it allows professionals to use this approach to understand and correct inaccurate assumptions. This is relevant to a study concerned with sexual health where many misconceptions may exist, for example with condom use and how HIV is transmitted.

Three common misperceptions of norms were identified by Berkowitz (2004). The first, Pluralistic Ignorance, which is the most common of the three, occurs when an individual whose behaviour fits in with the majority believes they are in the minority, and that most of the people around them think and act differently to themselves. The second, False Consensus, occurs when an individual whose behaviour is aligned with the minority, believes that their behaviour is common amongst their peers. The third and last common misperception is False Uniqueness. This occurs when people who are in the minority believe that the difference between their own behaviour and their peers is greater than it is.

As previous studies have discovered, the perception of social norms can influence factors such as condom use (Farrington and DiBacco 2016; Gallois et al. 1992), therefore it is likely that the misperceptions stated by Berkowitz (2004) as part of the Social Norms Theory will play a part in risky sexual behaviour. One study by Ahmed et al. (2016) looked at how perceived social norms influenced behaviour in relation to chemsex. It discovered that the majority of men interviewed for the study believed that drug use while having sex was highly normalised behaviour and common among gay men, with over half estimating that around 70-90% of the gay male population of South London take drugs. When compared to the percentage of people who had taken one of three popular chemsex drugs in the past four weeks, which is below 6% (Ahmed et al. 2016), this shows a gross overestimation, a clear example of False Consensus, certifying Berkowitz's theory. In this study, there were specific concerns surrounding the role mobile apps may play in communicating drug use, demonstrating the need for further study on this and how Grindr may amplify false social norms.

Online Communities

Bauermeister et al. (2012) studied the way in which online communities can influence young people's behaviour, specifically looking at its impact on alcohol and marijuana use. This study focused on social networks such as Facebook and MySpace, which although are not directly comparable to apps such as Grindr, there are some similarities. For example, users of both are able to fill in profile information, such as personal biographies, and display profile photos. The study

discovered that there is potentially a correlation between young people seeing visualizations of alcohol consumption (photos and videos) and this encouraging young people to themselves consume alcohol. This could play a role on Grindr in encouraging risky sexual behaviour, as users are able to upload profile photos. Although profile photos are not allowed to contain explicit images, there is also the option to send images through private chat, which are not moderated and therefore can be explicit. It is also possible that users could communicate risky sexual behaviour in more visually discrete ways, for example through emoji's, which could have an impact on other users' behaviour.

Jaspal (2016) discovered that Grindr is perceived to be a highly sexualised app by its users. The participants of this study agreed that there is a coercive social norm for using the app for the purpose of seeking sex, with some evidence that users had felt "sucked in" to the sexualization and adopted promiscuous behaviour to fit within the perceived norm. This demonstrates explicitly how perceived social norms on the app can directly impact on users' behaviour, however this research needs to go further to understand the effect on risky sexual practices and perceptions of HIV.

From the literature reviewed above, it is clear that many factors can play a key role in influencing the sexual behaviour of gay men. Grindr plays an undeniable sex lives of many gay men, and has clear associations with risky sexual behaviour including UAI and chemsex. The literature also shows that social norms play a clear role in influencing attitudes and behaviour, even if incorrectly perceived. Finally, perceptions of HIV and other STIs can also impact the sexual behaviour of gay men. This presents a research gap looking at how these factors can work together to influence sexual behaviour, looking at the perceived social norms of the Grindr community and how other external factors play against these.

Figure 1. Conceptual framework



METHODOLOGY

This study was designed to specifically address gaps in the role that the social norms of Grindr plays in influencing attitudes towards HIV and risky sexual behaviour in young gay men. As explained in the previous chapter, there has been little research investigating the social norms of Grindr and how this can impact on behaviour and attitudes.

The main aim of this research was to identify perceived social norms on Grindr and investigate how these may affect the attitudes and behaviours of young gay men towards HIV and risky sexual behaviour.

Objectives

RO1: To understand Grindr users' knowledge of and attitudes towards HIV and risky sexual behaviour.

RO2: To identify social norms that exist within Grindr in regards to risky sexual behaviour and HIV.

As demonstrated in the literature review, topics such as HIV and risky sexual behaviour are extremely complex public health issues which require an understanding of the social world to tackle. As interpretivist research aims to create deeper understandings and interpretations of the social world (Saunders et al. 2008), it was identified as the most appropriate approach for this study. As this study is of an exploratory nature and not seeking to prove or disprove a hypothesis, it was decided an inductive approach would be the most suitable. This also provides the researcher with more freedom to change the direction of the study once the process has begun (Saunders et al. 2008).

Queer theory will have an influence on the study as it focuses on the minority group of gay men. Queer theory challenges the normative social hierarchy of heterosexual dominance within society and allows academics to approach issues without using a heteronormative lens (Browne and Nash 2010).

Sampling

An age range of young gay men aged between 18-25 was determined as the appropriate range for the study, as this allows the researcher to focus on younger gay men who may have only recently joined or become active within the gay community. Non-probability purposive sampling, using the snowball method, was used in order to recruit participants. This allows researchers to sample participants in a strategic way to ensure that those sampled are able to give an insight to the questions and research objectives being posed (Bryman 2012). Snowball sampling was deemed the best method to recruit participants, as it is an effective way to reach minority populations such as gay men (Noy 2008 as cited by Bryman 2012), and it also allows the participants to feel like they already have a connection with the researcher, helping to break down any potential barriers.

In order to reach gay men, a population who are a minority, the researcher asked colleagues to refer anyone who may be appropriate for the study and who was happy to take part. Participants who agreed to take part were then also asked to refer anyone who may be interested in taking part. Butler (1990 as cited by Warner 2004) argues that identities such as boy and girl, gay and straight are social constructions that only become naturalised after society encourages people to perform these labels over and over. Warner (2004) argues that because of this, it is difficult to identify a research population when looking at queer issues, as the idea of sexuality is essentially a social construct, and there is no effective test to determine if someone is homosexual or heterosexual. Therefore, for the purpose of this study, the research samples' sexuality was determined by self-identification.

Nine interviews were conducted with a range of men from across the south of England. Ideally, a greater number of interviews would have taken place, however time limitations meant that this was not possible. Initially, ten men were recruited for the study, however unfortunately the last participant dropped out shortly before the interview was due to take place. As this was near the end of the data collection period, it was not possible to recruit another participant in this timeframe.

It should also be noted that one of the participants, Dan* (25), is the manager of a sexual health clinic and therefore able to give a professional insight to the research topics. Despite the small sample, the rich and in-depth nature of qualitative research means that small samples are often common (Daymon and Holloway 2011).

Semi-Structured Interviews

Semi-structured interviews were chosen as the qualitative method as they are flexible, focus on the participants' views and allow an in-depth insight into their attitudes and beliefs (Bryman 2012). The flexibility encouraged by a semistructured interview means that researchers are able to respond to answers provided by the participants and allows interviews to follow a naturally determined course of conversation, only gently led by the interviewer. This method was chosen over other method such as focus groups, as the sensitive nature of the topics discussed meant that participants may feel uncomfortable discussing these topics in front of other people, and therefore may not answer truthfully or fully disclose their true thoughts and feelings. In addition to this, qualitative research tends to support an interpretivist approach, as it focuses on the words and interpretations of individuals and their perceptions of reality, which can constantly shift, rather than hard data like quantitative research does (Bryman 2012).

For logistical reasons, interviews were conducted through a mixture of face-to-face and telephone interviews. Both interview techniques have advantages and disadvantages. Face-to-face interviews allow the interviewer to interpret social cues given by the participant (Opdenakker 2006), which means that interviewers can understand fully the intent of what the interviewee is expressing when taking into consideration facial expression and body language as well as language and tone of voice. This is something that is lost when doing telephone interviews. A major advantage of telephone interviews is that participants can feel more comfortable talking about sensitive subjects over the telephone rather than face-to-face (Opdenakker 2006). This is especially relevant for this study which focuses on sensitive issues such as HIV and sexuality. Interviews were arranged for a time convenient to the participant. Face-to-face interviews were conducted in a location chosen by the participant to ensure they felt comfortable and at ease.

Trustworthiness and Reliability

Critics of qualitative research have often claimed that because it is difficult to measure, it is hard to ensure the results are valid (Bryman 2012). Unlike quantitative research, qualitative research, especially interpretivist, understands that there are no absolute truths to the social world, but rather multiple interpretations to be explored (Bryman 2012). This led to Guba and Lincoln (1994, cited by Bryman 2012), creating standards alternative to reliability and validity that better suits this understanding of research: trustworthiness and authenticity.

Trustworthiness can be broken into the four criteria below (Guba and Lincoln 1994, cited by Bryman 2012, p.390).

1. Credibility

The researcher must demonstrate they are interpreting the accounts of the participants accurately and in good faith. Respondent validation will ensure findings are credible, by offering participants the chance to review the research findings.

2. Transferability

As qualitative research often uses small research samples, it is important to provide an in depth and rich description during analysis, allowing the study to be put into context. The researcher will use thick description (Geertz 1973a, cited by Bryman 2012) to ensure this.

3. Dependability

This can be proven by following an audit process, allowing the researcher's research data and process to be reviewed. This is demonstrated by this chapter, in addition to a selection of the thematic analysis (see Appendix 5), the interview guide (see Appendix 2), and two fully transcribed interviews (see Appendix 3 and 4).

4. Confirmability

The researcher avoided using leading questions, used a neutral tone of voice and conducted all interviews in a place of the participant's choice to ensure confirmability.

In addition to trustworthiness, authenticity is broken down into five components below (Guba and Lincoln 1994, cited by Bryman 2012, p.393).

1. Fairness

Participants were asked neutral, open and non-leading questions to ensure their view was accurately given. Interviews were recorded and transcribed to avoid researcher errors and allow the use of direct quotes.

2. Ontological authenticity

The research topic allowed participants to reflect on issues that many admitted they had not thought about before and were not widely discussed within the gay community.

3. Educative authenticity

The semi-structured interviews included questions which asked participants to think about not just their own views but those of other people within the gay community and the gay community as a whole, allowing members to understand a wide range of views across the social setting.

4. Catalytic authenticity

As the study caused participants to think about HIV and risky sexual behaviour which may have encouraged them to reconsider their own habits.

5. Tactical authenticity

Discussion as part of the study included discussing options for safer sex

such as condoms and PrEP (Pre Exposure Prophylaxis), therefore giving participants the knowledge to empower themselves to have safe sex.

Ethics

Participants were informed that taking part in the study was voluntary and that they were not obliged to answer any question in the interview if they chose not to. They were also informed that they could withdraw from the study at any time, up until the point their interview data had been anonymised. A range of projective questioning techniques were used in order to make the participant feel more comfortable and to allow the participant to avoid talking about themselves if preferred.

All nine interviews were recorded and transcribed by the researcher to avoid observer error and ensure accuracy. Thematic was undertaken to find common themes that arose during the interview process, allowing the researcher to find consensus within the participants' responses around a number of topics, including HIV, social norms within gay sex, and Grindr.

FINDINGS

RO1: To understand Grindr users' knowledge of and attitudes towards HIV and risky sexual behaviour here 1

Theme 1 - An understanding of HIV

When asked about what they already know about HIV, generally the participants demonstrated a good knowledge of the disease.

Simon¹ (22), student, provided a good understanding of the disease which showed similarities to other participants' knowledge of the virus:

"So HIV is an autoimmune disease, and if not treated it can lead to AIDs which used to be a big killer, I think it was big in the 80s. I know it's still quite bad, but there's a lot of drug treatments for it now. I know that you can have two kinds of HIV, you can have one where it can't be transmitted and one where it can be transmitted and there's lots of drugs that people take, especially on the gay scene called PrEP which reduces the chances of it being transmitted. You can get it through any type of sex, you can't get it through kissing, but it's mainly between blood or semen."

Notably, the participants were realistic about the implications of the disease, understanding that it is not a death sentence anymore:

"Although there's no cure yet, the treatment has really advanced so that people with HIV can live a long and happy life." Liam* (20), student

As the case study by Cabrini (2017) demonstrated, knowledge of HIV across the wider population in the UK is generally low, with misconceptions about the disease rife. The higher level of knowledge about the disease shown among the research sample could be explained by the fact that many HIV campaigns typically target gay

¹ Names changed to anonymise participants

men, and as all participants use Grindr, may see campaigns frequently. It should also be noted that all but one of the participants have a university level of education, which may not be representative of the research population, but could also be an explanation for the higher knowledge.

PrEP

A common topic that was brought up by participants was PrEP, a relatively new medication that can protect HIV-negative men from contracting HIV if engaging in risky sexual behaviour:

"There's a struggle with PrEP at the moment, some countries offer it and some don't. I'm sure most gay people have heard of it." Dan* (25), manager of a sexual health clinic.

The topic was brought up by all but two participants, showing that Grindr users may have a good awareness of the medication

Participants also noted that they believed the increase of PrEP use amongst gay men could be encouraging a reduction in condom use:

"A lot of gay men are taking [PrEP], almost as an alternative to condoms... which will just spread other STIs." Liam

As the study by Hope et al. (2000) demonstrated, advances in medicine can result in reduced feelings of concern amongst the wider population. Although PrEP does have a high effectiveness at protecting people against HIV, it does not protect against other STIs. This could mean that as a result of engaging in more UAI due to feeling protected by PrEP, the spread of other STIs could be increased.

Theme 2 – An Underestimation of HIV

There was a feeling amongst the participants that in general, gay men view the risk of catching HIV as low:

"I think [gay men] probably view [the risk of catching HIV] as quite low, even though it's probably quite high. Everyone thinks it's something that wouldn't happen to them." Ollie* (20), student.

Jake* (21), student, agreed, going further to claim that it's treated just like any other STI:

"I think it's treated like chlamydia or something like that, one of the minor ones. It's just another STI, that you just avoid. I don't think gay men understand the severity of it. The long-term implications of it."

This research directly contradicts the study conducted by Holt et al. (2010) which concluded that gay men perceive the risk of HIV as more serious than other STIs. This could be down to the younger age of the participants, who did not live through the AIDS crisis of the 80s and 90s and therefore are less likely to remember the fatality of the disease if not treated.

When looking specifically at Grindr users' views of HIV risk, there was some consensus that they are probably more knowledgeable about the risks of catching HIV than gay men who do not use Grindr, although there was also a feeling that this knowledge could go further and the risk may still be underestimated:

"If you're on Grindr, I'd assume you'd kind of expect a casual side to meeting people. I assume they are probably aware and cautious about it however I have

met a couple of people who are on it and don't take those safety precautions."

Stephen* (22), teacher.

This idea somewhat contradicts the study by Landovitz et al. (2012) which found that Grindr users perceive the risk of contracting HIV as low, but would support the finding in the same study that Grindr users are likely to test for HIV.

It has been established however that a majority of gay men will at least test for HIV if they believe they have been exposed to it (Boydell et al. 2017) so it is not clear if this is unique to Grindr users.

Theme 3 – Risky Sex is Better Sex

There was a clear opinion that risky sexual behaviour was seen as desirable within the gay community and that risky sex is much better than safe sex:

"I think it's viewed as proper sex. Like, unprotected sex is seen as the best sex, and it's kind of idealised and almost fantasised." Jake.

Dan agreed with this viewpoint, going further to explain why he believed gay men enjoy risky sexual behaviour so much:

"I think a lot of them find it quite exciting to be honest, because I think something that's very sad but very true about the gay community is because a lot of people have felt on the outside of society growing up, it's given them a careless attitude towards their own health."

The participants generally did not feel that an attraction to risky sexual behaviour was exclusive to Grindr either:

"I don't think Grindr users view risky sexual behaviour differently to nonGrindr users, but on Grindr it's a lot more obvious which probably makes it seem like it's going on more on Grindr than in real life." Adam* (24), performer.

As Bourne et al. (2014) noted, Grindr is becoming a key tool for those seeking out acts such as chemsex and therefore this would explain why it is becoming more visible on the app, although it is not clear whether this visibility will influence users' behaviour. This discovery, however, goes against the findings of Winetrobe et al. (2014) who suggested that Grindr users are more likely to have UAI with a Grindrmet partner, and therefore more likely to look upon risky sexual behaviour favourably.

An interesting point was raised by participants of this study was that so many gay men now use Grindr it is often hard to separate it from reality:

"I feel like so many gay people I know are on Grindr, the vast majority, that it's almost impossible to separate Grindr from real life, because it's all so merged."

Liam.

This raises questions over whether comparisons can be accurately made between Grindr users and non-Grindr users, when participants may be beginning to perceive the two groups to be synonymous.

RO2: To identify social norms that exist within Grindr in regards to risky sexual behaviour and HIV.

Theme 4 – Grindr as a Sexualised Space

There was unanimous agreement that the primary purpose of the app was to find sexual partners:

"It's just horny fun... it's all filth. First thing when you go on there, first message you get is usually a dick pic." Ollie.

Grant* (21), student, agreed:

"Sleazy... everyone knows why people are on there. There's a constant undertone of people trying to hook up."

In addition to this, participants noted the explicit messages often received by other users of the app:

"People will message you and send you unsolicited photos of their dicks, and send creepy messages like 'I wanna cum in your ass'... it's really weird and it happens a lot, and this is before I've even sent them a message." Liam.

This finding demonstrates how a clear social norm of the app is to be sexual, and reinforces the discovery by Jaspal (2016) that Grindr is perceived to be a highly sexual app and raises questions whether the frequency of explicit pictures and sexualised discussion could influence behaviour, as discovered in the study by Bauermeister et al. (2012).

Risky Sexual Behaviour

A clear majority of participants had seen users who exhibited a preference for risky sexual behaviour, and there was a feeling that this happens regularly on the app:

"It's not uncommon for it to be [a user's] name or in their bio, for example 'chemsex' or 'bb' [bareback], or some people just put a needle or a pill emoji." Grant.

This could suggest that risky sexual behaviour is fairly common amongst Grindr users, which would validate the study by Glaser et al. (2014) which suggested Grindr users are more likely to engage in UAI than non-Grindr users, however it is possible that the participants could be overestimating this behaviour.

Looking at Berkowitz's (2004) social norm theory which suggests that people do not interpret social norms correctly, it is possible that participants could be exhibiting Pluralistic Ignorance, or False Consensus, where they overestimate negative behaviour, depending on the participants own sexual behaviour. As this study did not investigate the participants own sex life, it is not possible to determine this.

Sexual Pressure

When asked whether they thought Grindr users may feel under pressure to engage in risky sexual behaviour as a result of the sexualised nature of the app, the majority of participants felt that it was actually easier to avoid pressure whilst using the app compared to in real life:

"There's less pressure. You're controlling your own phone, you can choose to stop talking to somebody if you wish." Jonny (23), telecommunications specialist.

"It's easier to say no on Grindr. You're not in that moment, you're not in someone's house. You can just be like 'nah I'm not into that'." Adam

This conflicts with Jaspal's (2016) finding that some Grindr users perceive there to be coercive social norms on the app which encourage gay men to adopt more promiscuous behaviour. This could be because participants felt that generally, men

who joined Grindr are typically more likely to participate in promiscuous behaviour anyway:

"Maybe not pressure, because I feel like you go to Grindr if you know what you're wanting." Simon.

It is possible that whilst participants did not feel that Grindr users would feel consciously pressured to engage in risky sexual behaviour, they may, however, be subconsciously influenced and adopt preferences for risky sexual behaviour without making a conscious decision to do so.

Theme 5 – Confident, Crude, Aggressive

There was unanimous consensus that behaviour on Grindr tends to be more confident, crude and even to an extent, more aggressive than in real life:

"People can be very upfront, very aggressive, blunt and direct, and quite rude."
Dan

There was a feeling that this norm of being very direct and to the point means that topics such as risky sexual behaviour are discussed more openly and more freely, as people do not bother with small talk but straight away begin discussing sexual topics:

"It's like, so to the point. There's no 'hey, how are you?', it's more like 'hey, where are you?'. It's so much more invasive." Simon

This is relevant because this means that the open and invasive discussion of sexual themes could influence how Grindr users perceive normative sexual behaviour.

This finding could offer an insight to the discovery by Jaspal (2016) that Grindr users felt there were coercive social norms that encouraged men to adopt more sexually promiscuous behaviour, with the aggressive and crude behaviour playing a role in this. However, as the participants in this study noted, it is easy to end conversations on Grindr, although if straightforward, crude and aggressive behaviour is common it will be difficult for Grindr users to avoid, which could subconsciously impact them.

Theme 6 – Chemsex, more common; UAI, the same

Generally, participants estimated that Grindr users were more likely to engage in chemsex than non-Grindr counterparts but when looking at UAI, estimated that Grindr users had the same likelihood of having UAI as non-Grindr users.

This could suggest that gay men assume UAI to be normative behaviour across the whole of the gay population, whereas chemsex is something that is preferred by Grindr users. This suggests that perceived social norms surrounding condom use reach much further than Grindr and are not unique to the app, however as Winetrobe et al. discovered (2014), Grindr users are indeed more likely to have UAI. It is, however, important to note that perceived social norms often do not reflect actual behaviour, which could be the case here.

It is also important to note that all participants overestimated the percentage of gay men who engage regularly in chemsex. Estimations ranged from 10%-50%, with the majority estimating that around 10%-20% of the general gay population regularly engages in chemsex, with the figure generally rising 5%-10% when asked about Grindr users. When compared to the figure of men who engage in chemsex established by Ahmed et al. (2016), who discovered that less than 6% of gay men

had taken one of the popular chemsex drugs in the past four weeks, this shows a gross overestimation.

From this finding, it may suggest that Grindr users have more exposure to those who participate in chemsex than non-Grindr users, whereas Grindr users and nonGrindr users have equal exposure to UAI.

CONCLUSION

From the research conducted, it suggests that young gay men who use Grindr have a good knowledge of HIV. This may be thanks to campaigns such as those described by Rosengren et al. (2016) which use Grindr as a communications tool. Despite this, Grindr users may choose to engage in risky sexual behaviour anyway as it is seen as "proper" sex. This supports the findings from the studies by Glaser et al. (2014) and Winetrobe et al. (2014) that Grindr users are likely to engage in risky sexual behaviour, however participants of this study disagreed that nonGrindr users were less likely to engage in such behaviour and perceived that the two groups exhibit similar behaviour. A possible explanation for reduced concern regarding HIV which could be influencing young gay men's attitudes towards risky sexual behaviour is PrEP, which was frequently discussed by the participants, as the recent introduction of this medication could be following a similar pattern discovered by Hope et al. (2000) where the introduction ART (antiretroviral treatment) also caused reduced concern regarding HIV. Another notable finding was that participants felt that it is becoming difficult to separate the wider gay male community from the Grindr community, as its user base grows and becomes synonymous with gay men in general. This could mean that participants in this study may have found it difficult to differentiate between the two groups, which future studies would have to take into consideration.

Participants perceived Grindr to be a highly sexualised environment, confirming the findings in the study by Jaspal (2016). In addition to this, participants felt that Grindr users can often be direct, open and unafraid to discuss explicit topics in messages. However, unlike in the study by Jaspal (2016), there was not a feeling that this environment creates coercive social norms, with participants feeling that pressure to engage in risky sexual behaviour was lower on Grindr than in real life as the app provides such ease to end conversations or block other users. When looking more specifically at UAI and chemsex, it was perceived by participants that there is no unique attitude towards UAI on Grindr which differs from real life, however chemsex was seen as more frequent on Grindr than real life.

Overall, the study suggests that Grindr users do not perceive the social norms of the app to influence their attitudes or behaviour, with the participants stating that in real life situations, the pressure to engage in risky sexual behaviour can be far worse than on the app. In addition to this, the findings suggest that gay men who have a preference for risky sexual behaviour are more likely to join the app as they know it is a platform to facilitate these acts, rather than the app influencing people to wanting to engage in risky sexual behaviour.

Recommendations

Public health and communication professionals looking at tackling the issue of HIV infection amongst gay men should continue to use Grindr as a communications tool in fighting the epidemic. It is clear that gay men who use Grindr demonstrate a good knowledge of HIV and methods to prevent the spread, such as PrEP, however a good knowledge does not always mean that gay men will take these steps to protect their sexual health. As gay men idealise risky sexual behaviour, future campaigns could look at using the social norms approach (Berkowitz 2004) to dispel any myths about social norms surrounding sexual behaviour. For example, participants of this study grossly estimated the occurrence of chemsex, therefore future campaigns could educate gay men that the majority of men are having safe sex. Professionals should also bear in mind that as this study suggests, gay men feel more pressure to engage in risky sexual behaviour in real life scenarios than through Grindr, and therefore campaigns to empower gay men to not only practice safe sex themselves but encourage other men to practice safe sex could help to solve this issue.

Although qualitative research gave an in-depth insight to Grindr user's perceptions and experiences, a mixed method approach in the future may allow researchers to contrast opinions and perceptions with statistics and facts. For example, perceptions of sexual behaviour amongst men could be compared to statistics of sexual behaviour amongst gay men, providing a more rounded view. It is also important to note that out of the research sample, eight were educated to a university level, and all participants were white. A future researcher should seek a more diverse sample with a range of ethnicities and education levels to gain a better representation of society as a whole

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