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THESIS

The Relationship between Serostatus Identity, Sexual Disclosure and the Experience of
Stigma among HIV-Positive Gay Men.

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Abstract

Since the beginning of the HIV and AIDS epidemic people living with HIV (PLHIV) have been living with stigma. This stigma has been shown to have severe negative effects on PLHIV's physical and psychological health and is a key factor in the spread of HIV. The present study addresses the question of what influences the experience of stigma in HIV-positive gay men, specifically focusing on the relationship between stigma and the extent to which HIV is seen as part of one's identity (status identity) and disclosure to regular and casual sexual partners (sexual disclosure). An online survey was conducted that recruited 214 HIV-positive gay men aged 19–67 years old ($M = 37.9$) living in Australia. Significant zero-order correlations with experienced stigma were found for status identity ($r = .23, p < .01$), and sexual disclosure ($r = .16, p < .05$). Associations remained when controlling for potential cofounders. A multivariate regression analysis showed significant independent associations between experienced stigma and status identity as well as between experienced stigma and sexual disclosure. Mediation analyses showed that the association between experienced stigma and status identity was not mediated by sexual disclosure in contrast to expectations. The findings suggest that seeing HIV-positivity as an important part of one's identity is associated with more experienced stigma, however the direction of this association remains unclear. Also, status identity seems to be a more important factor associated with experienced stigma than sexual disclosure.

Since the beginning of the HIV/AIDS epidemic, people living with HIV (PLHIV) have, in addition to living with the direct consequences of the disease, also been living with stigma and its consequences. Although it seems that attitudes toward PLHIV have improved over the past decades, a survey conducted by the Kaiser Family Foundation of the public's views in the United States shows that many people still hold beliefs that may lead to stigmatization of PLHIV (Kaiser Public Opinion Spotlight, 2006; Dowshen, Binns, & Garofalo, 2009).

The consequences for PLHIV of experiencing stigma have been shown to be severe in terms of the impact on their psychological and physical health. Notably, Logie and Gadalla (2009) found in their meta-analysis that higher experienced stigma was consistently and significantly associated with lower social support, poorer physical health, and poorer mental health. This was found in spite of a large variability in the ways of measuring HIV-stigma and physical, emotional, and mental health. Furthermore, a meta-analysis conducted by Pascoe and Smart Richman (2009) showed that increased levels of perceived discrimination have a significant negative effect on mental and physical health. This same meta-analysis also showed that perceived discrimination is related to heightened physiological stress responses, more negative stress responses, increased engagement in unhealthy behaviors, and decreased engagement in healthy behaviors; these associations remained after controlling for important demographic variables. The results found by Logie and Gadalla (2009) and Pascoe and Smart Richman (2009) emphasize the importance of research on HIV-related stigma and in particular on what affects the experience of stigma and how this experience can be attenuated.

The aim of the present study is to explore factors that may be associated with the experience of stigma in HIV-positive men who have sex with men (MSM). More specifically, the focus is on a possible positive association between experienced stigma and the extent to which HIV-status is seen as part of one's identity (from here on referred to as status identity).

Also, the study examines whether a positive association exists between experienced stigma and disclosure of one's positive HIV-status to casual and regular sexual partners (from here on referred to as sexual disclosure). Furthermore, an expected positive association between sexual disclosure and status identity will be explored.

What is stigma?

Goffman (1963) described stigma as an “attribute that is deeply discrediting” (p. 13) and that reduces the bearer “from a whole and usual person to a tainted, discounted one” in the minds of others in a society (p. 12). According to Goffman, a stigmatized individual possesses an “undesirable difference” (p. 15). He further theorized that society conceptualizes stigma on the basis of what constitutes a “difference” or “deviance” and that stigma is applied through rules and sanctions. This can in turn result in the stigmatized individual obtaining a kind of *spoiled identity*. According to Parker and Aggleton (2003), this implies that stigma is a “kind of thing”, a characteristic or feature that is relatively static, even though it is one that is at some level culturally constructed. This implication fuels an assumption that people who are being stigmatized possess (or are believed to possess) an attribute that marks them as different, which leads them to be devalued in the eyes of others (Major & O'Brien, 2005). These marks become associated with negative evaluations and stereotypes.

Approaching the concept of stigma as a relatively static characteristic has encouraged an individualistic approach in research (Parker & Aggleton, 2003). In many studies the focus has mainly been on perceptions of the individual and consequences of these perceptions for social interactions. Stigmatizing is generally seen as something that one individual does to another. However, in a more sociological tradition of research on discrimination, the emphasis has been on patterns of social dominance and oppression, which are viewed as expressions of a struggle for power and privilege (Parker & Aggleton). Parker and Aggleton

(2003) note that this is a functional way of approaching HIV-related stigmatization and discrimination. They argue that the current understandings of stigmatization and discrimination need to be reframed and conceptualized as social processes that can only be understood in relation to the broader notions of power and domination. In this view, stigma and stigmatization play key roles in producing and reproducing relations in specific contexts of power and control. It causes some groups to be devalued and others to feel that they are superior in some way. Therefore, stigma is ultimately linked to the workings of social inequality and it is thus important to recognize that stigmatization takes place in specific contexts of culture and power.

Not only is there variation in the conceptualization of stigma in the literature, substantial variation also exists in the types of HIV-related stigma that are distinguished. Logie and Gadalla (2009) have identified five types of HIV-related stigma: symbolic, instrumental, enacted, internalized, and perceived stigma, which they describe as follows. Symbolic stigma refers to the othering, blaming, and shaping of groups associated with HIV/AIDS (Deacon, 2006; Herek, Widaman, & Capitanio, 2005), while instrumental stigma consists of the measures taken by people to protect themselves and their health driven by concerns about infection (Herek et al. 2005). Enacted stigma encompasses acts of discrimination toward PLHIV, such as violence and exclusion (Nyblade, 2006), while internalized stigma is described as an integration of existing negative beliefs, views and feelings of HIV/AIDS into one's own identity by PLHIV (Lee, Kochman, & Sikkema, 2002; Mak, Poon, Pun, & Cheung, 2007). Perceived stigma is conceptualized by Berger, Ferrans, and Lashley (2001) as PLHIV's awareness of actual or potential HIV-related negative societal attitudes, reduced opportunity, and negative change in social identity. Because men who have sex with men are still most affected by the HIV epidemic in Australia, Western Europe, and North America (Sullivan et al., 2009), and because MSM are generally viewed

more negatively in the context of HIV than heterosexuals (Herek & Capitanio, 1999), the present study will focus in particular on perceived stigma in MSM.

Stigma directed specifically towards HIV-positive MSM may be present for different reasons. One of these reasons could be fear of infection by HIV-negative people. According to Neuberg, Smith, and Asher (2000) this could be derived from the biological need people have to function in effective groups. If the effectiveness of the group is hindered, those who hinder it may experience stigmatization by other members of the group. A particular attribute that is seen as hindering the functionality of the group is carrying an infection (Kurzban & Leary, 2001). An adaptive reaction to people who seem to be carrying an infection is to try to avoid physical contact with these individuals, or even avoid close proximity to them in order to avoid being infected. This instrumental stigma could also overlap with symbolic stigma. Indeed, Herek and Capitanio (1999) found that a substantial proportion of the public expresses concerns even about mere symbolic contact with PLHIV.

Secondly, HIV-related stigma can be related to the idea that people who have contracted HIV are to blame for it or deserve it (symbolic stigma). This is also connected to homosexuality and heterosexual promiscuity, and MSM are generally evaluated more negatively in this regard than heterosexuals. For example, Herek and Capitanio (1999) found that when an HIV-positive person was described as gay or bisexual respondents reported more feelings of blame and anger, and decreased sympathy towards that person than if the HIV-positive person was described as a heterosexual woman or man. According to a survey conducted by Courtenay-Quirk, Wolitski, Parsons, Gómez, and the Seropositive Urban Men's Study Team (2006), HIV-positive MSM also perceive stigma within the gay community, in the sense that they feel that HIV-negative men treat them differently and judge them because they are HIV-positive. Two thirds of the sample reported perceiving discrimination against PLHIV among MSM. In similar vein, in a qualitative study conducted by Dodds (2006),

HIV-positive gay and bisexual male respondents indicated experiencing stigma within the gay community based on morality (and class). To illustrate, respondents indicated experiencing that HIV-negative people see being HIV-positive as providing evidence of morally culpable behavior.

Status identity

From a social psychological approach, stigmatization can be understood from the perspective of social categorization theory. To structure, simplify, and regulate the social world in terms of our understandings of, and interactions with, others, people form cognitive social categories (Brewer, 2007). In this way the complexity of the social world is reduced and perceived similarities within categories and contrasts between categories are enhanced. These category distinctions influence both the perception of and behavior toward category members, individually as well as collectively. Consequences of social categorization are that people will form social stereotypes and prejudice. Stereotypes can exist in the form of category prototypes, perceived trait distributions, and implicit theories about the social meaning of the category. Prejudice arises when particular social categorizations cause ingroup-outgroup differentiation to occur.

The differentiation of an ingroup involves an additional process of self-categorization or social identification, whereby the sense of self is extended to the group as a whole. More specifically, social identification is the extent to which the ingroup has been incorporated into the sense of self and the extent to which the self is experienced as an integral part of the group (Brewer, 1991). When someone experiences high levels of social identification, the outcomes and welfare of the ingroup become closely connected to one's own sense of well being (Brewer, 2007). Social identity theory proposes that it is this engagement of the self that accounts for positive evaluations of the ingroup and positive orientations towards other

ingroup members. One's self worth is derived from, as well as projected onto, positive ingroup evaluations. From this perspective, being HIV-positive can become part of one's self identity as well as social identity when an HIV-positive individual experiences high levels of identification with being HIV-positive, or, in other words, the HIV-positive group.

At the same time, because social categorization can cause ingroup-outgroup differentiation to occur (Brewer, 2007), PLHIV can be seen as an outgroup by HIV-negative people. A consequence of this can (but does not necessarily have to) be that HIV-negative people will form negative evaluations and prejudice of PLHIV, which can in turn lead to PLHIV experiencing stigma to some degree. The extent to which serostatus is seen as an important part of one's identity (status identity) may be a possible factor influencing how strongly PLHIV experience stigma. When HIV is seen as an important part of one's identity, this could mean that PLHIV are more self-conscious of their potentially stigmatized status and thus experience stigma more strongly than when HIV is not seen as important to one's identity. A reason for this could be that important social identities can influence perceptions of social justice and justice motives (Brewer, 2007). For example, when a PLHIV, for whom being HIV-positive is an important part of his identity, experiences injustice related to HIV, this could be experienced as stigma. Thus, when the identification with being HIV-positive is strong, stigma is expected to be experienced more easily and/or more strongly than when an individual does not necessarily identify strongly with being HIV-positive.

A connection to stereotype threat can perhaps also be made (Spencer, Steele, & Quinn, 1999). People who are part of a stigmatized group are usually aware that their social identity is devalued by others and are likely to be aware of the negative stereotypes that are associated with their group (Dovidio, Major, & Crocker, 2000). This could have stereotype threat as a consequence, whereby experiencing stereotypes can lead to particular vulnerabilities in line with the stereotypes in performance and behavior, but only in situations where the specific

content of the stereotype is salient and directly relevant to one's behavior and attributes. For example, stereotype threat has been shown to be able to interfere substantially with women's performance on a math test (Spencer, Steele, & Quinn, 1999). Moreover, Brown and Pinel (2003) have found that if a person is more self-conscious of their stigmatized status, this effect is found even stronger.

Disclosure

HIV has become a more concealed stigma for many PLHIV since the introduction of antiretroviral therapy, in the sense that it is not obvious from mere appearance whether one is HIV-positive or not. Therefore, PLHIV regularly have to make the complex decision whether or not, and to whom, to disclose their HIV-status (Mayfield Arnold, Rice, Flannery, & Rotherham-Borus, 2008). Disclosing one's positive HIV-status has been argued to be beneficial in a number of ways (e.g. Smith, Rossetto, & Peterson, 2008). Firstly, disclosing to one's casual or regular sexual partner(s) could decrease the chance of further spread of HIV, especially if the topic of having HIV is then discussed more thoroughly (Crepaz & Marks, 2003). However, this is not always found in the literature (e.g. Marks & Crepaz, 2001). As Holt, Rawstorne, Worth, Bittman, Wilkison, and Kippax (2009) point out, disclosure of HIV-status is not always necessary for the prevention of HIV when condoms are used correctly for penetrative sex or when other forms of safe sex are practiced, for example non-penetrative practices or other practices where no exchange of body fluids is involved. Also, the benefits in this instance (i.e. prevention of HIV transmission) are not directly related to the PLHIV but rather to the potential sexual partner. Nevertheless, research does suggest that increased safer sex activities are associated with HIV-status disclosure in casual sexual encounters (Golden, Brewer, Kurth, Holmes, & Handsfield, 2004).

The second reason that disclosure may be beneficial is that it could alleviate tension as well as lead to receiving more social support (Kalichman, DiMarco, Austin, Luke, & DiFonzo, 2003). If people close to a PLHIV are unaware of his positive status, giving support is impossible. Thus, in order to receive social support one must disclose one's status. The received social support would allow PLHIV to cope with health concerns by increasing their perceived efficacy to enact healthy behaviors (Cohen & Wills, 1985). However, disclosing one's positive HIV status could also lead to experiencing more stigma. The reasoning behind this is that the more a person discloses, the more people know about this individual's positive HIV-status, which in turn gives the discloser more chance to experience stigma. In other words: the more people know about someone being HIV-positive, the higher the risk of people expressing stigma and the discloser experiencing stigma. Stigma might even be experienced more strongly when disclosure is to a sexual partner or during a sexual encounter when the reaction to the disclosure is negative. A positive association could therefore be expected between sexual disclosure and experienced stigma.

Identity and disclosure

In addition to expecting an association between the amount of sexual disclosure and levels of experienced stigma, a positive association between sexual disclosure and status identity is also predicted. One reason for this expectation can be derived from the fever model of disclosure of secrets proposed by Stiles (1995). This model proposes that highly self-relevant information is likely to create emotional investment and anxiety. In turn, high levels of psychological distress can be expected to lead to more disclosure according to the model. In other words, the fever model proposes that individuals who are more distressed (as a result of the anxiety and importance of the secrets they are hiding) would disclose more than less distressed individuals. Because of the assumption that withholding highly self-relevant

information causes distress, which in turn can lead to more disclosure, it is expected that when a PLHIV sees HIV as an important part of his identity, he will disclose more often than when he does not consider it as relevant to his identity.

A second reason to expect a positive association between status identity and sexual disclosure comes from research conducted by Vangelisti, Caughlin, and Timmerman (2001). They found in their study on criteria for revealing family secrets, that identification (conceptualized as the tendency to perceive a secret as part of one's identity) was related to disclosure of the secret depending on the relationship with the other person (to whom the secret-keeper might consider disclosing), in particular when relational security with the other person is high and when the other person is a family member. Thus, following this study by Vangelisti et al. (2001) a PLHIV would be expected to disclose more often when status identity is high, particularly when disclosing to a family member or a relationship or sexual partner.

The present study

Based on findings in the current literature on the experience of stigma, status identity, and (sexual) disclosure, the present study aims to shed more light on an expected positive association between status identity and experienced stigma. This association is expected to be mediated by sexual disclosure. Thus, a positive association is also expected between disclosure of positive HIV-status to a regular or casual sexual partner and experienced stigma. Furthermore, a positive association is expected between status identity and sexual disclosure. These assumptions will be tested by means of a survey conducted among HIV-positive MSM in Australia.

Methods

Procedure and participants

The current study was conducted as part of a larger survey called the HIV Stigma Barometer. This was an online anonymous self-complete survey designed to measure different aspects of HIV-stigma in gay and other MSM. The survey took place between the 1st of December 2009 and the 31st of January 2010. Participants were recruited through banner advertisements on the following websites: gaydar.com.au (a gay chat site), samesame.com.au (a gay social networking site), and facebook.com. Participants were also recruited through gay community organizations and HIV-related organizations, who were asked to distribute an e-mail containing the banner advertisement for the survey to their members and e-mail lists. A total of 1,855 clicks-through to the survey website were measured. Of these, 1,655 individuals provided consent and started the survey. The inclusion criteria for the present study, which were to be HIV-positive, to be a gay or bisexual man currently living in Australia, and to have responded to the items on HIV-related stigma, were met by 214 participants. Within this sample, age ranged from 19 to 67 years with a mean age of 43.97 ($SD = 8.68$) years. See Table 1 for details of participants' social demographic and behavioral characteristics.

Measures

Experienced stigma

Experienced stigma ($\alpha = .97$) was measured with 22 items that assessed four different aspects of experiencing stigma. Participants were asked to what extent they agreed to the items given and this was indicated on a 5-point Likert scale, with answers varying from (1) 'completely disagree' to (5) 'completely agree'.

Table 1

Participants' Social Demographic and Behavioral Characteristics

Social demographic or behavioral characteristic	Options	N	%
Highest level of completed education	Still in, or left high school early/up to year 10/ up to year 12/ tertiary diploma/ trade certificate/ TAFE	123	57.5
	Undergraduate/ postgraduate university degree	91	42.5
State of residence	New South Wales	117	54.7
	Other	97	45.3
Location of residence	Capital City	149	69.6
	City/ regional/ rural area	65	30.4
Country of birth	Australia	161	75.2
	Other	53	24.8
Aboriginal or Torres Strait Islander origin	Yes	8	3.7
	No	206	96.3
Sexual orientation	Gay/bisexual/queer	210	98.1
	Other	4	1.9
Regular sexual relationship in the last year ^a	Yes	127	59.4
	No	72	33.6
Number of sexual partners in the last year ^b	10 or less	89	44.7
	10 – 50	78	39.2
	50 or more	121	16.1

^{a b} 15 participants did not answer this question.

To assess factors underlying the experience of stigma an exploratory factor analysis with varimax rotation was conducted. Three factors were identified, with the exception of two items, factor loadings were $> .45$. The two items with lower factor loadings were dropped (experiencing HIV-negative people being overly kind and experiencing HIV-negative people being irritated). The first factor, *experienced avoidance*, consisted of 8 items ($\alpha = .95$). Items in this factor are for example “HIV-negative people that I know are careful not to touch me” or “HIV-negative people that I know avoid interacting with me”. The second factor, *negative attributions*, also consisted of 8 items ($\alpha = .95$). Examples of items in this factor include “HIV-negative people that I know think I should be ashamed of being infected” and “HIV-negative people that I know think I got what I deserved”. The third identified factor, *sexual exclusion and fear*, consisted of 4 items ($\alpha = .84$). Examples of items in this factor include “HIV-negative people that I know refuse to become romantically involved with me” and “HIV-negative people that I know refuse to have sex with me”.

Status identity

The extent to which participants viewed their positive HIV-status as part of their identity was measured with 4 items ($\alpha = .94$). These items measured the importance of HIV-status to the person they currently are, want to be, should be, and will be in the future. Participants were again asked to identify on a 5-point Likert scale to what extent they agreed with these items, with answers varying from (1) ‘completely disagree’ to (5) ‘completely agree’.

Disclosure of positive HIV-status

Sexual disclosure of HIV-status ($\alpha = .70$) consisted of two items which were disclosure to casual, as well as regular sexual partners. To assess sexual disclosure, participants were asked to indicate on a 5-point Likert scale, ranging from (1) none to (5) all, to what extent they had disclosed their positive HIV-status to their (casual and regular) sexual partners.

Statistical analyses

To determine whether any relationship existed between experienced stigma, status identity, and disclosure, correlation tests were conducted. Also, to assess whether associations were potentially confounded by social demographic and behavioral characteristics (see Table 1), correlations were assessed between experienced stigma, status identity, disclosure, and age, highest level of completed education, state of residence, location of residence, country of birth, Aboriginal or Torres Strait Islander origin, sexual orientation, relationship history in the last year, and the number of sexual partners participants had in the last year. To test whether the association between status identity and experienced stigma was mediated by disclosure, the procedures specified by Baron and Kenny (1986) were followed.

Results**Experienced stigma**

The mean score on overall experienced stigma was 2.02 (on a scale from 1 to 5, with 1 being not experiencing any stigma at all and 5 experiencing it very strongly). The percentage of participants who experienced stigma strongly or very strongly was 5.1%. Scores on the different subscales identified by factor analysis were as follows. On experienced avoidance the mean score was 1.80, with 2.4% of participants experiencing avoidance strongly or very strongly. The mean score on negative attributions was 1.91, with 6.5% of respondents

experiencing negative attributions towards them strongly or very strongly. Lastly, the mean score on sexual exclusion and fear was 2.73, with 11.3% of participants indicating that they have experienced being sexually and/or romantically excluded, and have experienced fear and pity by others towards them either strongly or very strongly.

The relationship between status identity, sexual disclosure, and experienced stigma

Correlations were calculated between status identity, disclosure, and experienced stigma (see Table 2). A significant positive correlation was found between status identity and experienced stigma, as well as between sexual disclosure and experienced stigma. Also, a marginally significant correlation was found between status identity and sexual disclosure. Correlations of social demographic and behavioral characteristics with status identity, disclosure, and experienced stigma are shown in Table 3. As can be seen, a significant negative association is found between status identity and sexual orientation. Status identity is also significantly negatively correlated with number of sexual partners in the last year. A significant negative association is also found between sexual disclosure and highest level of completed education. Because these three social demographic and behavioral characteristics are significantly associated with one of the three variables of interest, they may be potential confounders. They are therefore controlled for in the regression analyses.

Table 2

Summary of Correlations between Experienced Stigma, Status Identity, and Sexual Disclosure.

Measure	1	2	3	M	SD
1.Experienced stigma	-	.23**	.16*	2.02	.93
2. Status identity		-	.12 [#]	2.99	1.23
3. Sexual disclosure			-	3.60	1.21

Note. * $p < .05$, ** $p < .01$, [#] $p < .10$

Table 3

Summary of Correlations with the Social Demographics and Behavioral Characteristics

Social Demographics and Behavioral Characteristics	Status identity	Sexual disclosure	Experienced stigma
Age	-.05	.10	-.09
Highest level of completed education	-.01	-.14*	-.12
State of residence	-.01	.02	.07
Location of residence	.04	.11	-.06
Country of birth	-.04	.03	.07
Aboriginal or Torres Strait Islander origin	-.01	.00	.10
Sexual orientation	-.09**	.07	.02
Regular sexual relationship in the last year	.02	.12	-.04
Number of sexual partners in the last year	-.07*	-.12	-.10

Note. * $p < .05$, ** $p < .01$

To assess whether the association between status identity and experienced stigma was mediated by sexual disclosure, Baron and Kenny's (1986) procedure of using a series of regression analyses was followed, while controlling for potential social demographic and behavioral confounders, in particular highest level of completed education, sexual orientation, and number of sexual partners in the last year. Firstly, experienced stigma, the dependent variable, was regressed on status identity, the independent variable, while controlling for potential confounders. This analysis showed that status identity was significantly associated with experienced stigma ($\beta = .25, t = 3.55, p < .001$); men for whom their HIV-status was a more important aspect of their identity reported more HIV-related stigma. Secondly, experienced stigma was regressed on sexual disclosure, the potential mediator variable, again controlling for potential confounders. This showed that sexual disclosure was significantly associated with experienced stigma ($\beta = .17, t = 2.30, p < .05$); participants who disclosed their HIV-status more often experienced more HIV-related stigma. Thirdly, sexual disclosure was regressed on status identity, controlling for potential confounders. This analysis revealed a marginally significant association between sexual disclosure and status identity ($\beta = .13, t = 1.87, p < .10$); participants who more often disclosed their HIV-status to their sexual partners reported that their HIV-status was more important for their identity. Lastly, experienced stigma was regressed simultaneously on status identity and sexual disclosure, again controlling for potential confounders. In this analysis the association between status identity and experienced stigma remained highly significant ($\beta = .23, t = 3.29, p < .001$), suggesting no mediation occurred via sexual disclosure. The effect of sexual disclosure was no longer significant ($\beta = .14, t = 1.90, ns$), suggesting that status identity could mediate the association between sexual disclosure and experienced stigma. However, a Sobel test, conducted using freely available online software

(Preacher & Hayes, 2004; <http://www.afhayes.com>), showed that the indirect path from sexual disclosure to experienced stigma via status identity was not significant, $z = 1.50$, *ns*, suggesting that sexual disclosure does not contribute to explaining additional variance in experienced stigma, over and above status identity.

Discussion

The aim of the present study was to explore factors that may be associated with the experience of stigma in HIV-positive MSM. Positive associations between status identity and experienced stigma, as well as between sexual disclosure and experienced stigma, were expected. Indeed, the results show that these associations are significant, while controlling for potential confounders, specifically education, sexual orientation, and number of sexual partners in the last year. This suggests that when an HIV-positive MSM sees HIV as an important part of his identity, stigma will be experienced more strongly. Stigma will also be experienced more strongly when an HIV-positive MSM discloses more to sexual partners. However, the expected mediation of the association between experienced stigma and status identity via sexual disclosure was not found, indicating that the relationship between the importance of one's HIV-positive status to one's identity with the experience of stigma does not operate via the act of disclosing one's status to casual and/or regular sexual partners. The relationship between sexual disclosure and experienced stigma was also not mediated by status identity. However, when experienced stigma was regressed simultaneously on status identity and sexual disclosure, sexual disclosure became non-significant, suggesting that status identity is of more importance to the experience of stigma than sexual disclosure.

When interpreting the findings of the present study, several limitations should be considered. Firstly, conclusions about the directions of the reported associations cannot be drawn, as collected data is cross-sectional. Secondly, the data represent experiences

of HIV-positive MSM at one point in time only, as the study was not longitudinal. Hence, no conclusions can be drawn about the development of the experience of stigma over time and about possible dynamics in the associations with status identity and sexual disclosure.

Thirdly, data on the time since respondents were diagnosed with HIV were not collected.

However, time since diagnosis may be of influence on the experience of stigma, status identity or sexual disclosure, or all of these. Fourthly, the survey used a convenience sample, which could have resulted in a selection bias. Lastly, because this was an internet-based survey, participants needed to have a computer and internet access, which potentially compounds selection bias and may result in a sample skewed toward a younger age and higher socio-economic and educational status (Pettit, 1999). However, research among gay men has found that internet-based surveys reach a more diverse sample of MSM compared to offline surveys (Elford, Bolding, Davis, Sherr, & Hart, 2004). This may also be the case in the present study, as age ranged from 19 to 67 and, compared to other studies of MSM, a relatively high percentage (57.5%) of the respondents had not completed an undergraduate or postgraduate university degree. Also, the study reached participants from different regions in Australia.

The association between status identity and experienced stigma can be understood from the perspective of social identity theory (Brewer, 2007). This theory suggests that identifying with being HIV-positive means that being HIV-positive has been incorporated into the sense of self and the self is experienced as an integral part of the social group of HIV-positive people. In other words, being HIV-positive has become a part of the PLHIV's self- and social identity. This, according to Brewer (2007), means that the PLHIV's self-worth is derived from, and projected onto, positive evaluations of the HIV-positive social group. Negative evaluations of PLHIV can thus be damaging to the self-worth of a PLHIV for whom HIV is an important part of their identity. As a consequence, stigma could be experienced more

strongly than when HIV is not an important part of one's identity. Furthermore, according to Brewer (2007), important social identities can influence perceptions of social justice and justice motives. This suggests that a PLHIV with high status identity may experience injustice toward PLHIV, for example symbolic or enacted stigma, more strongly than when being HIV-positive is not seen as an important aspect of one's identity. The results of the present study do indeed confirm this. However, the results do not provide an explanation as to whether having incorporated being HIV-positive into the identity means that the individual has accepted being HIV positive, or if it actually means that being HIV-positive is not fully accepted and is thus important to one's identity. This would need to be researched further.

The study's finding that experienced stigma is positively associated with sexual disclosure illustrates that HIV-positive MSM who were more likely to disclose their HIV-status to sexual partners were also more likely to experience stigma. This is in contrast to findings from several previous studies. For example, in their meta-analysis of the relationship between perceived stigma, disclosure, and social support among PLHIV, Smith, Rossetto, and Peterson (2008) found a significant negative correlation between perceived HIV-stigma and disclosure, suggesting that PLHIV who were more likely to disclose perceived less stigma. However, this negative correlation between stigma and disclosure was small ($r = -.189$), which could reflect that most respondents in the included studies reported that they had been living with HIV for many years. Furthermore, in the studies included in Smith et al.'s (2008) meta-analysis, the focus was not necessarily on disclosure to sexual partners, as was the case in the present study, but rather to people in a PLHIV's social network more broadly. However, when interpreting the results of the present study, it should still not be overlooked that the present study concerns a single study as opposed to a meta-analysis, and that the positive correlation found in the present study between sexual disclosure and stigma is small.

The present study adds to the current knowledge of the experience of HIV-related stigma in MSM and factors that may be associated with it. However, because the found effects are small and non-causal, they call for future research to explore the relationships to a further extent. What the causal relationship between status identity and experienced stigma is could be researched by, for example, a longitudinal study or an experiment where the effect of salience of HIV in the identity on PLHIV's experience of stigma could be tested. Another important issue to explore further is the relationship between sexual disclosure and experienced stigma. Findings concerning these relationships could, as well as adding to the current knowledge on HIV-stigma, be of importance to PLHIV and clinicians, counselors, and peer educators alike, in knowing how to cope with the experience of HIV-related stigma. Knowing whether or not PLHIV should strive to incorporate their HIV-status into their identity could make a difference to how PLHIV may try to cope with the experience of stigma. Also, knowing whether it is beneficial to disclose their HIV-status to sexual partners in terms of stigma could help PLHIV in deciding whether or not to disclose.

HIV-related stigma has been an important topic for researchers in the field of social-psychology. One reason for this is the severe negative psychological and physical consequences that experiencing stigma can have for PLHIV (Logie & Gadalla, 2009). It was therefore the aim of the present study to explore some of the mechanisms underlying the experience of stigma in HIV-positive MSM by determining factors that are associated with it. A positive association between status identity and experienced stigma was found among Australian HIV-positive MSM, as well as, albeit to a lesser degree, a positive association between the experience of stigma and the extent of disclosure to casual and regular sexual partners. Because of the somewhat small effects found in the study and because causal relationships could not be determined in the present study, a few suggestions for future research have been given.

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Appendix

Stigma Barometer Survey

Main section

Welcome to the Barometer Survey.

Thank you for participating. The survey will take about 10 minutes to complete.

The questions ask about personal views and experiences so please answer as honestly as possible.

Your participation in the study is completely anonymous.

This study has been approved by the Human Research Ethics Committee of the University of New South Wales (approval number 09345).

I understand what this survey is about and agree to participate

- Yes, I understand and agree to participate → Continue with question
- I need more information → Continue with question *extrainfo*
- No, I don't want to participate → **End questionnaire**

Risks and benefits

We do not anticipate any risks associated with your participation in this study. Similarly, we cannot and do not guarantee or promise that you will receive any direct benefits as a result of your participation.

Counselling and support services

Local organisations in each state and territory provide counselling and support services related to HIV as well as other services such as information about safe sex, HIV treatments, and sexually transmissible infections. A full list is provided at <http://www.afao.org.au/Barometer/referrals.htm>

Confidentiality and disclosure of information

We will not be seeking any information that can be identified with you, so your participation is anonymous and confidential.

Payment for participants

There will be no payment provided to participants in this study.

Complaints

Complaints may be directed to the Ethics Secretariat, The University of New South Wales, Sydney 2052 (ph: 9385 4234, fax 9385 6648, ethics.sec@unsw.edu.au). Any complaint you make will be investigated promptly and you will be informed of the outcome.

Feedback to participants

A plain language summary of results will be available on the websites of the National Centre in HIV Social Research and the Australian Federation of AIDS Organisations (AFAO) at the completion of the project. The findings will also be provided to community newspapers, magazines and websites for publication.

Your consent and participation

Your decision whether or not to participate will not affect your future relations with the University of New South Wales. Also, you are free to discontinue the survey at any time.

Withdrawal from the study

You will not be able to withdraw from the study *after* submitting your responses to the online questionnaire. As this study is anonymous it will not be possible to identify which responses were provided by which participant.

I understand and agree to participate

- No → ***End questionnaire***
- Yes → Continue with question

What is your gender?

- Male
- Female
- Transgender

What is your age?

Do you currently live in Australia?

- No
- Yes

In which Australian state or territory do you currently live?

- Australian Capital Territory
- New South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania
- Victoria
- Western Australia

Which of the following best describes where you live?

- Capital city
- Major regional centre or city
- Smaller city or town
- Rural or remote area

Which of the following best describes your current circumstances?

- Employed full-time
- Employed part-time
- Self-employed
- Unemployed
- Student
- Pensioner / on benefits
- Self-funded retiree
- Other, please specify

What is the highest level of education you have completed?

- I am still at high school
- Left school before year 10
- Up to 3 years of high school / year 10
- Year 12 / VCE / HSC
- Tertiary diploma / trade certificate / TAFE
- University undergraduate degree
- University postgraduate degree
- Other, please specify

What is your country of birth?

- Australia
- Other, please specify

Are you of Aboriginal or Torres Strait Islander origin?

- No
- Yes

Do you think of yourself as? (please choose one)

- Gay/homosexual Continue with question
- Bisexual Continue with question
- Heterosexual/straight Continue with question
- Lesbian Continue with question
- Queer Continue with question
- Other, please specify

Have you had sex with a male partner in the last year?

No → Continue with question

Yes → Continue with question

In total, how many male sexual partners, whether casual or regular, have you had in the last year? If you don't know the exact number, please give your best estimate.

Were any of the male partners you had sex with in the last year HIV positive?

- No
- Yes
- I don't know

Were any of the male partners you had sex with in the last year HIV negative?

- No
- Yes
- I don't know

Were any of the male partners you had sex with in the last year untested for HIV?

- No
- Yes
- I don't know

Were you in a regular sexual relationship with one or more men in the past year?

- No → Continue with question
- Yes, with one man → Continue with question
- Yes, with more than one man but not at the same time → Continue with question
- Yes, with more than one man at the same time → Continue with question

Is this relationship ongoing?

- No → Continue with question
- Yes → Continue with question

What is your partner's HIV status?

- HIV positive → Continue with question
- HIV negative → Continue with question
- Untested for HIV → Continue with question
- I don't know → Continue with question

What was this partner's HIV status?

- HIV positive → Continue with question
- HIV negative → Continue with question
- Untested for HIV → Continue with question
- I don't know → Continue with question

How many regular male sexual partners have you had in total in the last year?

Were any of your regular male partners in the last year HIV positive?

- No
- Yes
- I don't know

Were any of your regular male partners in the last year HIV negative?

- No
- Yes
- I don't know

Were any of your regular male partners in the last year untested for HIV?

- No
- Yes
- I don't know

What is your HIV status?

- HIV positive → Continue with question
- HIV negative → Continue with question
- Untested / Don't know → Continue with question

SEROSTATUS IDENTITY, SEXUAL DISCLOSURE, AND EXPERIENCED STIGMA

How much do you agree with the following statements?

	Totally disagree	Disagree	Neutral	Agree	Totally agree
My HIV status is a key aspect of the person I currently am.	<input type="radio"/>				
My HIV status is a key aspect of the person I will be in the future.	<input type="radio"/>				
My HIV status is a key aspect of the person I want to be.	<input type="radio"/>				
My HIV status is a key aspect of the person I should be.	<input type="radio"/>				

To what extent have you told the following people about your HIV status?

Regular partner(s)

	1	2	3	4	5	
None	<input type="radio"/>	All				

Casual partners

	1	2	3	4	5	
None	<input type="radio"/>	All				

To what extent have you experienced the following in relation to you being HIV-positive? (1=not at all; and 5=very strongly)

"HIV-negative people that I know...

...blame me for becoming infected."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

...think I should be ashamed of being infected."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

SEROSTATUS IDENTITY, SEXUAL DISCLOSURE, AND EXPERIENCED STIGMA

...consider me worthless because of my infection."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

...think I got what I deserved."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

...find me dirty because of my infection."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

...think I don't care about infecting others."

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

To what extent have you experienced the following reactions from HIV-negative people that you know in relation to you being HIV positive?

Anger

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

Fear

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

Disgust

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

Irritation

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

SEROSTATUS IDENTITY, SEXUAL DISCLOSURE, AND EXPERIENCED STIGMA

Pity

	1	2	3	4	5	
Not at all	<input type="radio"/>	Very strongly				

What is your experience with HIV-negative people that you know in relation to you being HIV positive?

They keep a physical distance

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They are careful not to touch me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They are indifferent to me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They interact awkwardly with me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They avoid interacting with me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They are overly kind to me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They behave aggressively towards me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

SEROSTATUS IDENTITY, SEXUAL DISCLOSURE, AND EXPERIENCED STIGMA

They exclude me from social events

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They take excessive hygienic measures around me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They refuse to get romantically involved with me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

They refuse to have sex with me

	1	2	3	4	5	
Never	<input type="radio"/>	Always				

How did you find out about this survey? (Tick as many as applicable)

- A banner advertisement on gaydar
- An email from an HIV organisation
- An email from a gay/lesbian organisation
- An advertisement on an organisation website
- A facebook advertisement
- A print advertisement
- A friend told me about it
- An email from a friend
- Through a friend on facebook
- A facebook group
- A media article
- I can't remember
- Other, please specify

Would you like to be informed about the results of this survey, or to participate in future surveys? (Tick as many as applicable)

- Yes, I would like to be informed of the results of this survey
- Yes, I would like be contacted for future surveys
- No, I do not want to be informed of the results or to be contacted for future surveys → **End questionnaire**

Please provide your email address.

This email address will only be used for the purpose(s) you requested in the previous question.

End page

Thank you for taking the time to complete the survey.

If you would like to be kept informed about the results please send an email to barometer@afao.org.au

For information about organisations who provide counselling and support services in your state or territory go to www.afao.org.au/Barometer/referrals.htm.

The survey is now finished. You can close this window.