Stigma and stress
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Chapter 1
General Introduction

1.1. Background

Sexual diversity has been a topic of academic concern for many decades. One of the most intensively studied topics in relation to sexual minority orientations is mental health. The angle from which this topic has been studied, however, has changed substantially over time, as such reflecting shifts in public opinion regarding sexual minority orientations. During the 19th and for large parts of the 20th century, research portrayed sexual minority orientations as a psychological deficit or mental illness (Hammack, Mayers, & Windell, 2013). Perhaps the most poignant example of this stance is the fact that the American Psychological Association listed homosexuality as a mental disorder until 1973 (Bayer & Spitzer, 1982). In line with this so-called “sickness script”, research interpreted a higher prevalence of mental disorders in sexual minority individuals as a confirmation of the idea that a sexual minority orientation is, in fact, a mental disorder (Meyer, 2003).

Increasing awareness of the marginalized position of sexual minority individuals in society and the upsurge of gay rights movements in many Western countries in the last quarter of the 20th century caused a substantial shift in the focus of research on sexual minority individuals. Within this new paradigm, it was societal prejudice with regard to sexual minority orientations that was thought to be causing compromised mental health in sexual minority individuals. In 2003, Meyer published a synthesis of ideas regarding the interplay between stigma and prejudice and the mental health of sexual minority individuals, summarizing them under the umbrella of the minority stress framework.

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1 Over the years, a plethora of terms has been used for categorizing people that exhibit same-sex desires or behavior. Part of this inconsistency in terminology has to do with the multidimensional nature of sexual orientation. That is, sexual orientation consists of sexual identity, sexual/romantic desire, and sexual behavior, dimensions that tend to only partly overlap within individuals (Pathela et al., 2006; Savin-Williams, 2006). Throughout this dissertation, I use the term sexual minority to refer to individuals who report at least some form of same-sex desire, identity, or behavior. More strictly delineated terms are used when referring to specific dimensions of sexual orientation. The terms lesbian, gay, and bisexual, for instance, are reserved for people who identify as such, whereas the term same-sex attracted is used to refer to individuals who feel romantically or sexually attracted to others of the same sex.
The following claims comprise the core of the minority stress framework. First, minority stress is thought to consist of stressors specific to sexual minority individuals. Second, minority stress originates from social processes, institutions, and structures beyond the individual, rather than individual events or characteristics. Third, minority stress is chronic, as it stems from stable underlying social and cultural structures.

Minority stress can occur in three general forms. First, there are stigmatizing and prejudicial events and conditions. Think for instance of employment discrimination or being bullied because of your sexual orientation. Second, these stressful events can lead to expectations of such events, which can themselves be stressful. Third, possessing a stigmatized position in society can lead to the internalization of negative societal attitudes. In sexual minority individuals, such a process is usually referred to as internalized homophobia.

The introduction of the minority stress framework led to a large body of research that used it as a basis for studying how stigma and prejudice mediate the link between a sexual minority orientation and impaired mental health. In this dissertation, I also take the minority stress framework as a starting point and conduct five studies aimed at improving the understanding of prejudice towards sexual minority orientations and mental health disparities between sexual minority and heterosexual individuals.

The first part of this dissertation is devoted to studies on sexual prejudice. Studies that use sexual prejudice as their outcome have uncovered a number of personal characteristics that correlate with it in a consistent manner, including gender, ethnic background, religiosity, and educational attainment. On average, men have been found to be more sexually prejudiced than women, people with a non-Western ethnic background tend to be more sexually prejudiced than people with a Western background, and religious people tend to be more sexually prejudiced than nonreligious people. Furthermore, higher educated individuals tend to be more accepting of homosexuality than lower educated people (Costa, Bandeira, & Nardi, 2013; Herek, 1988; van den Akker, van der Ploeg, & Scheepers, 2013).

Whilst there is plenty of evidence for the existence of these associations, less is known about the mechanisms underlying them. Therefore, the first two studies of this dissertation aim to enhance our knowledge of the origins of sexual prejudice through studying mechanisms that make some people more sexually prejudiced than others. In chapter 2, I attempt to dissect the effect of educational attainment on the acceptance of homosexuality by considering potential confounders in a stepwise manner, hereby illustrating the extent to which the positive association between educational attainment and acceptance of homosexuality is spurious. Chapter 3 zooms in on one process within educational institutions that supposedly affects adolescents’ attitude towards homosexuality: interactions with peers in school.

In the second part of this dissertation, I shift the focus from explaining stigma and prejudice towards people with a sexual minority orientation, to explaining the mental health of sexual minority individuals, using the minority stress framework for deriving expectations. A large amount of research documents that sexual minority individuals
have worse mental health than heterosexual individuals. Sexual minority individuals have been found to report comparatively higher levels of depressive symptoms and anxiety (Lucassen, Stasiak, Samra, Frampton, & Merry, 2017; Plöderl & Tremblay, 2015; Russell & Fish, 2016), suicidality (Marshal et al., 2011; Yıldız, 2018), and non-suicidal self-mutilation (Batejan, Jarvi, & Swenson, 2014). Studies aiming to explain these health disparities have documented how stigma and prejudice can function as intermediate factors in this link. Stigma is best thought of as a multilevel construct, meaning that stigma at the institutional, interpersonal, and (intra-)individual level can impair the mental health of sexual minority individuals (Hatzenbuehler & Pachankis, 2016). Evidence for the existence of stigma on all these levels and their effect on mental health disparities between heterosexual and sexual minority individuals has accumulated over the years.

At the institutional level, studies have shown that mental health disparities by sexual orientation are smaller in areas where formal policies are in place to protect discrimination of sexual minority individuals. Moreover, informal indicators that signal the acceptance of sexual minority individuals, such as the proportion of same-sex couples or registered Democrats living in certain regions of the US, have also been shown to mitigate mental health differences between heterosexual and sexual minority individuals (Hatzenbuehler, 2011; Hatzenbuehler, Keyes, & Hasin, 2009). Similarly, one study showed that the mental health of sexual minority, but not heterosexual residents, deteriorated in US states that installed constitutional amendments defining marriage as occurring only between a man and a woman, alluding to the detrimental effect of institutionalized stigma on the mental health of sexual minority individuals (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010).

Moving to the interpersonal level, evidence for the existence of minority stress amongst others comes from research showing how the comparatively lower quality of personal relationships mediates the association between a sexual minority orientation and mental health. Studies focusing on adolescents and young adults have shown, for instance, that sexual minority youth report poorer quality peer relationships and less parental support than heterosexual individuals, and that these interpersonal experiences partly mediate the association between sexual orientation and mental health (Collier, van Beusekom, Bos, & Sandfort, 2013; Needham & Austin, 2010; Robinson, Espelage, & Rivers, 2013).

In addition to the negative consequences that experiencing minority stress at the institutional and interpersonal level can have, it is thought to set in motion psychological processes in sexual minority individuals, which may have deleterious consequences for mental health (Meyer, 2003). Most importantly, being confronted with negative appraisals of one’s sexual minority orientation might induce internalized homophobia, which is a negative evaluation of one’s sexual minority orientation. A meta-analysis reported that feelings of internalized homophobia were associated with lower levels of mental health in sexual minority individuals (Newcomb & Mustanski, 2010). Next to developing internalized homophobia, sexual minority individuals often
opt to conceal their sexual identity in certain social contexts. Although this may be a viable strategy for warding off victimization (Pachankis, Cochran, & Mays, 2015), the long-term consequences of identity concealment for mental health and self-appraisal appear to be negative (for an overview, see Hatzenbuehler & Pachankis, 2016).

In short, these studies provide empirical evidence for the validity of the minority stress framework as a basis for understanding mental health disparities by sexual orientation. However, several questions remain unanswered. A recent review article outlined several guidelines for shaping research on the mental health of sexual minority individuals (Mustanski, 2015) of which I tackle three in the second part of this dissertation. The first is the recommendation to investigate the development of mental health disparities between sexual minority and heterosexual individuals over time. The second is the suggestion to focus on mental health differences within the population of sexual minority individuals, in addition to mental health differences between heterosexual and sexual minority individuals. Doing so can foster a more fine-grained understanding of minority stress processes. The third is a call for continued research on how minority stress processes may explain the association between a sexual minority orientation and mental health.

Chapter 4 targets all three recommendations. In that paper, I analyze the development of depressive symptom disparities between heterosexual and sexual minority individuals from late childhood to young adulthood, paying attention to subgroup differences between the sexual minority respondents studied. Furthermore, I try to corroborate the empirical validity of two factors that have been identified as mediators of the association between a sexual minority orientation and mental health in adolescence: bullying victimization and parental rejection. In chapter 5, I zoom in on subgroup differences between bisexual and other sexual minority individuals and the role of sexual identity dimensions in explaining these disparities. In doing so, I focus on the second of three recommendations outlined above. Finally, in chapter 6, I study whether a marginalized position within the peer context explains depressive symptom disparities between heterosexual and non-heterosexual adolescents using a sociometric approach, thereby following recommendation three.

1.2. Explaining sexual prejudice

Sub-question 1.1: Does education make people more accepting of homosexuality? In chapter 2, I seek to better understand the association between educational attainment and acceptance of homosexuality. Research has frequently shown that higher educated people think more positively about homosexuality than lower educated people (Costa et al., 2013). How can this empirical association be explained? On the one hand, it has been argued that education has a causal effect on the acceptance of homosexuality (Campbell & Horowitz, 2016). Examples of such educational effects include the claims that higher education enhances acceptance of
homosexuality through the stimulation of greater cognitive sophistication and complex reasoning in education, enabling individuals to better evaluate novel ideas (Ohlander, Batalova, & Treas, 2005), or through interaction with progressive fellow students at (higher) education institutions (Campbell & Horowitz, 2016).

Spurious effects models, on the other hand, state that the association between education and the acceptance of homosexuality is confounded by family background or individual level factors (Campbell & Horowitz, 2016). Parents are generally thought to be of substantial importance for the development of the attitudes of their children (e.g., Jennings, 1984; Min, Silverstein, & Lendon, 2012), and, at the same time, play an important role in their educational outcomes (Blau & Duncan, 1967; Erikson & Jonsson, 1996; Kallio, Kauppinen, & Erola, 2016). In addition, individual characteristics such as aspirations or cognitive ability could influence both educational outcomes (Heckman, Stixrud, & Urzua, 2006; Homel & Ryan, 2014) and acceptance of homosexuality (Ohlander et al., 2005).

To examine the association between education and acceptance of homosexuality, I estimate a series of multilevel regression models to dissect the extent to which family and individual level factors confound the association between educational attainment and acceptance of homosexuality. The analyses are conducted on a large sibling sample from the British Household Panel Survey (BHPS), a representative longitudinal survey of private households.

Sub-question 1.2: What is the role of peers in the development of homophobic prejudice within the high school context? The design of chapter 2 allows me to decompose the association between education and acceptance of homosexuality in a stepwise and detailed manner. As such, it provides information with regard to the relative importance of education versus confounding mechanisms in bringing about the association between educational attainment and acceptance of homosexuality. It does, however, not provide evidence for any of the specific mechanisms that may be at play. Therefore, in chapter 3, I investigate one proposed mechanism within educational effects models, namely that acceptance (or rejection) of homosexuality, more specifically homophobic attitudes, are affected by interactions with fellow students.

Three consecutive research questions with regard to this alleged mechanism are tested. I begin by studying whether or not attitudes towards homosexuality are such a socially salient topic that it is subject to peer influence in adolescence. This is well feasible, given the prevalence of homophobic attitudes and behavior within the adolescent peer context (Collier, Bos, & Sandfort, 2013; Slaatten, Anderssen, & Hetland, 2014). Subsequently, I examine how peers influence homophobic attitudes. An implicit assumption in many studies on social influence is that influence is positive, eventually leading to assimilating attitudes. My expectation is that in positive peer relationships such as friendships, peer influence indeed looks like this. Within negative peer relationships, social influence may have opposite effects, with disliking inducing negative opinion shifts, leading to polarized opinions (Flache et al., 2017). The last
research question of chapter 3 asks whether selection mechanisms comprise an alternative explanation for peer (dis)similarity in homophobic attitudes. It is possible that the similarity in homophobic attitudes between friends that has been observed in earlier studies (Poteat, 2007; Poteat, Espelage, & Green, 2007) actually is a consequence of adolescents’ preference to establish social relationships with peers that are similar to them with regard to homophobic attitudes. In order to answer these questions, I examine longitudinal complete social networks and information on homophobic attitudes in a sample of approximately 2000 Dutch adolescents.

1.3. Sexual orientation and mental health

Sub-question 2.1: How do depressive symptom disparities between heterosexual, lesbian, and gay individuals develop from late childhood to early adulthood? A straightforward question, yet with a small empirical basis, is how mental health disparities between sexual minority and heterosexual individuals develop over the life course. This is not entirely surprising, as answering this question requires data on the mental health of respondents over a large span of time, as well as information on their sexual orientation. Countering this gap in the literature, I model the development of depressive symptoms of heterosexual, lesbian, gay, and bisexual youth from late childhood to early adulthood and examine whether this development differs by sexual identity group.

When focusing on these early life stages, a first question would be when mental health disparities between heterosexual and LGB individuals are likely to commence. Throughout this dissertation, I expect mental health disparities between sexual minority and heterosexual individuals to be a consequence of minority stress. A prerequisite for being susceptible to minority stress is being aware of one’s sexual minority orientation. It is known from retrospective research on the development of sexual minority orientations that a substantial proportion of sexual minority adults were already aware of their sexual orientation in childhood, which is in line with studies arguing that sexual orientation co-develops with biological maturation (Herdt & McClintock, 2000; Maguen, Floyd, Bakeman, & Armistead, 2002; Savin-Williams & Diamond, 2000). Thus, it is possible that mental health disparities have a similar time of onset.

Second, as a test of the development of disparities over time, I investigate whether pubertal development operates as a catalyst of differences in depressive symptoms between heterosexual individuals and lesbian girls, gay boys, and bisexual boys and girls, given that pubertal development is a strong predictor of sexual development (Baams, Dubas, Overbeek, & van Aken, 2015; Halpern, Udry, Campbell, & Suchindran, 1993; Smith, Udry, & Morris, 1985). As such, pubertal development should increase LGB adolescents’ awareness of their sexual orientation and, likewise, make them more susceptible to sexual orientation-related stigma and prejudice.
Furthermore, in order to test whether late childhood depressive symptom disparities can indeed be explained with mechanisms in line with the minority stress framework, I examine bullying victimization as well as parental rejection as potential mediators of the link between a sexual minority orientation and impaired mental health. For this chapter, I use data from the first five waves of the TRacking Adolescents’ Individual Lives Survey (TRAILS), a Dutch cohort panel study on the psychosocial development of youth from childhood to adulthood.

**Subquestion 2.2: What role do differences in sexual identity dimensions play in explaining mental health disparities between bisexual and other sexual minority individuals?** On average, bisexual individuals report somewhat higher levels of depressive symptoms than other sexual minority individuals (Plöderl & Tremblay, 2015; Ross, Salway, Tarasoff, Hawkins, et al., 2017). This led me to study potential mechanisms that could explain mental health differences between bisexual and other sexual minority individuals in chapter 5. Research on bisexual identity can be classified in four broad themes, one of them being sexual identity (Sarno & Wright, 2013). It has been found that bisexual individuals take a more ambivalent stance towards their sexual identity than lesbian and gay individuals, reporting higher levels of identity confusion (i.e., uncertainty about one’s sexual identity), and lower levels of identity centrality (i.e., the importance of sexual identity for one’s overall sense of self) (Balsam & Mohr, 2007; Dyar, Feinstein, & London, 2015). Using a community sample from New York, I examine two mechanisms through which sexual identity could explain mental health disparities between bisexual and other sexual minority individuals. First, I assess whether bisexual individuals differ from other sexual minority individuals in identity characteristics, and if so, whether differences in identity can explain observed mental health disparities. Second, I test the idea articulated within the minority stress framework that dimensions of sexual identity might moderate the impact of stress on mental health (Meyer, 2003, p. 678).

**Sub-question 2.3. Does a marginalized position within the adolescent peer context explain the association between a sexual minority orientation and depressive symptoms?** Studies tend to find that sexual minority adolescents report higher levels of school-based victimization than heterosexual adolescents (for a review, see Toomey & Russell, 2016). This suggests that sexual minority youth occupy a marginalized position within the peer context, which in turn could explain mental health disparities between groups. Two noteworthy limitations of existing research in this area are that most research to date 1) focuses on the quality of peer relationships and neglects the potential impact of the quantity and structure of peer relationships, and 2) tends to use self-report data only, potentially leading to shared method variance bias. Using a sociometric perspective for operationalizing integration in the peer context mitigates these concerns and is the method of choice in chapter 6. Studies applying a sociometric perspective to test a mediational role of the peer
context between a sexual minority orientation and mental health are scarce, as they require the combined measurement of sociometric information, mental health, and sexual orientation. Furthermore, sexual minority adolescents comprise only a small proportion of all adolescents, leading to small numbers of sexual minority respondents in studies that do measure sexual orientation. A multiple-sample study is conducted to tackle these problems, analyzing data from three samples; two from the Netherlands and one from Belgium.

1.4. Summary of the proposed research

This dissertation consists of five studies that together aim to further our knowledge on how stigma and prejudice impact the mental health of sexual minority individuals, both by investigating causes of sexual prejudice (chapters 2 and 3) and by investigating minority stress mechanisms that could influence the mental health of sexual minority individuals (chapters 4, 5, and 6). A schematic overview of the empirical chapters of this dissertation, including information about the data and analytic strategy, is provided in Table 1.1.
### Table 1.1. Overview of empirical chapters

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<td>1998-2008</td>
<td>Mixed effect and fixed effect multilevel regression models</td>
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<td>3</td>
<td>What is the role of peers in the development of homophobic attitudes within the high school context?</td>
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<td>4</td>
<td>How do depressive symptom disparities between heterosexual, lesbian, gay, and bisexual individuals develop from late childhood to early adulthood?</td>
<td>The TRacking Adolescents’ Individual Lives Survey (TRAILS)</td>
<td>n = 1738</td>
<td>2001-2012</td>
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<tr>
<td>5</td>
<td>What role do differences in sexual identity dimensions play in explaining mental health disparities between bisexual and other sexual minority individuals?</td>
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