

TO DISCLOSE OR NOT TO DISCLOSE: THAT IS THE QUESTION

EXPLORING ASSOCIATIONS BETWEEN VISIBILITY
MANAGEMENT, CONFIDANT SUPPORT AND MINORITY
STRESSORS.

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Abstract

The minority stress model developed by Meyer (1995) has frequently been used in research investigating the origins and negative consequences of minority stress, as well as ways of coping with this specific kind of stress. Visibility management has been approached as one of these coping mechanisms. The aim of this research was to evaluate whether the degree of openness impacts the experience of minority stressors in LGB persons, and what role support and biological sex play in this association.

Respondents completed an online survey about their openness (Visibility Management; VM), the availability of support (Confidant Support; CS), and their experience of minority stressors (Internalized Homonegativity; IHN, Stigma Consciousness; SC, and Experience of Everyday Discrimination; EED). Path analysis was run on a dataset of 2054 LGB persons in a relationship. 45.7% of the sample were males, 54.3% were females. The mean age was 34 years old.

VM decreases IHN and SC. VM also slightly decreases EED. The effect of VM on IHN, but not on SC, is mediated by a positive effect of VM on CS. Women only differ from men regarding the direct effect of VM on IHN: IHN decreases less for open females than for open males.

Results and their possible explanations are discussed. These results provide scientific arguments for facilitating openness and support in both healthcare and daily settings. Limitations concerning the statistical methods, cross-sectional design and generalizability of the results are discussed and recommendations for future research are suggested.

Samenvatting

Het “Minderheidsstress model” (Minority stress model), ontwikkeld door Meyer (2003), werd reeds veelvuldig gebruikt als conceptueel kader in onderzoek naar minderheden op grond van verschillende kenmerken (raciale, etnische, seksuele, gender, ...). Auteurs toonden herhaaldelijk de negatieve effecten van de verschillende componenten van minderheidsstress op mentale gezondheid aan (Balsam & Mohr, 2007; Gonsiorek, 1988; Herek et al., 2007; Lewis et al., 2003; Marciano & Antebi-Gruszka, 2020). Verschillende copingmechanismen om met deze specifieke soort stress om te gaan werden beschreven, waarvan het verbergen (Rostosky et al., 2007) dan wel openbaren (Van Gilder, 2017) het meest relevant zijn voor dit onderzoek. Op dit punt verschillen individuen die behoren tot een seksuele minderheid van andere minderheden, doordat deze seksuele minderheidsstatus niet per definitie zichtbaar is en dus verhuld kan worden. Het doel van dit onderzoek was te evalueren of openheid over seksuele oriëntatie de ervaring van minderheidsstress in lesbische, homoseksuele en biseksuele individuen vergroot, dan wel verkleint. Daarnaast werd nagegaan of de beschikbaarheid van steun hierin een rol speelt, alsook of mannen hierin verschillen van vrouwen.

In het kader van een groter onderzoek vulden meer dan 5000 respondenten een online vragenlijst naar onder andere openheid, minderheidsstress en de ervaring van steun in, waarvan er 2054 geschikt bleken voor deze masterproef omdat ze een niet-hetero seksuele oriëntatie hadden en in een relatie waren. 45.7% van de steekproef was mannelijk, 54.3% was vrouwelijk, en de gemiddelde leeftijd was 34. Er werd een padanalyse uitgevoerd met Rstudio versie 4.1.1, en descriptieve, univariate en correlatieve analyses werden uitgevoerd in SPSS Statistics 27.

Zoals verwacht leidde openheid tot een vermindering in de minderheidsstressoren geïnternaliseerde homonegativiteit en stigma-bewustzijn. In tegenstelling tot de hypothesen leidde openheid eveneens tot een vermindering in de ervaring van discriminatie. Het effect van openheid op geïnternaliseerde homonegativiteit, maar niet op stigma-bewustzijn, werd bovendien gemedieerd door de aanwezigheid van steunbronnen. Verder verschillen vrouwen enkel van mannen in het effect van openheid op geïnternaliseerde homonegativiteit, maar in de omgekeerde richting dan verwacht: geïnternaliseerde homonegativiteit daalt minder bij open vrouwen dan bij open mannen.

Deze resultaten bieden wetenschappelijke argumentatie voor het faciliteren van openheid en steunbronnen, zowel in de gezondheidssector als in de bredere samenleving. Toekomstig onderzoek kan zich focussen op mogelijke causale relaties tussen deze variabelen aan de hand van longitudinaal onderzoek, alsook op het blootleggen van verklarende factoren in de gevonden verbanden.

Prologue

Writing this thesis would not have been possible without the endlessly appreciated help of my supervisor Chao Song. However detailed (or silly?) my questions were, he always managed to help me in a way that stimulated my own thinking, reading about the subject and, more often than I liked, statistical trial and error.

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Further, I would like to thank my family and friends for asking about my thesis and giving me the chance to unload and create order amidst the inevitable mental chaos when writing a thesis. A special thanks goes out to my friend Justien, my colleague and friend Brian, and my mom for proofreading this document. I also want to thank my friend Charlotte for always trying to help me with the statistical part and for giving her honest feedback when I needed it.

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I'm writing these last words of a work so close to my being on the day of the Belgian Pride Parade. Ironically, this reminds me of how important it still is to not only study, but also cherish this part of being human. May we all find the comfortable time, place, support and *space* to wave our flag, love our loved ones and love ourselves.

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Introduction

Minority Stress

In 1995, the influential article *Minority Stress and Mental Health in Gay Men* by Ilan H. Meyer was published (Meyer, 1995). In this article, Meyer describes the term *minority stress*, which will be used by many more authors in later publications. Meyer defined minority stress as “psychosocial stress derived from minority status”, herein referring to the even earlier definition by Brooks in 1981: “... culturally sanctioned, categorically ascribed inferior status, social prejudice and discrimination, the impact of these environmental forces on psychological well-being, and consequent readjustment or adaptation” (Brooks, 1981, p. 107). Indeed, people belonging to a – ethnic, sexual, gender, etc. – minority group experience unique stressors related to their minority status, which are not experienced by people who don’t belong to these minority groups. As such, people of colour might undergo discrimination by white people, women by men and gay and bisexual people by straight people.

In his 1995 article, Meyer tries to advance research on minority stress by describing the concept of minority stress in more concrete terms, as opposed to the general conceptualizations previous authors used. In doing so, Meyer (1995) proposes minority stress to be an overarching term to describe the processes of *internalized homophobia*, *perceived stigma* and *prejudice events*. In his paper, he focuses on the minority stress processes experienced by the gay minority group, but he argues that the approach he proposes can be applied to other minorities too.

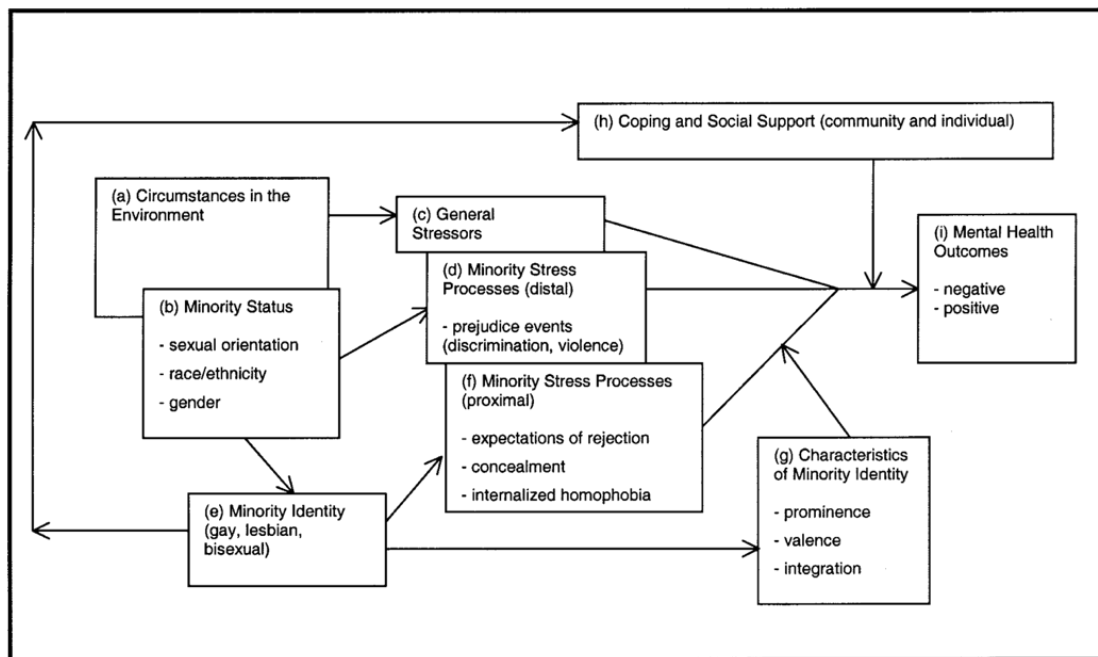
Eight years later, Meyer (2003) again advances the research domain of minority stress by positing a comprehensive minority stress model applied to lesbians, gays and bisexuals (LGBs) specifically, but useful for research on other minority groups as well. As this research paper builds on this model, it is described in detail under the first subtitle. For a more detailed discussion of each component, the reader is referred to the second subtitle in this section.

Minority stress model. In his 2003 article, Meyer proposes a comprehensive model of minority stress (Meyer, 2003) in which minority stressors, general stressors, the impact of both kinds of stressors on mental health and the processes through which this impact operates are depicted (Figure 1). The cycle in the model starts with circumstances in the environment, such as being part of a minority (Meyer, 2003). The circumstances in the environment can also be broader than that, however, for example factors related to one’s socioeconomic status (SES). These environmental circumstances can lead to general stressors, for example losing a close friend. Furthermore, Meyer differentiates between distal and proximal minority stressors. The minority status to which one belongs can result in distal minority stressors, of which an example is discrimination at work. On the other hand, one’s minority status often leads to a minority

identity, e.g. identifying as a gay person. In turn, this minority identity can cause the person to experience proximal minority stressors such as its concealment. These proximal minority stressors are more closely related to the self as they involve self-perceptions and appraisals (Meyer, 2003), whereas distal minority stressors can be originated more outside of the individual. However, the two overlap, as the one can influence the other. Meyer (2003) further postulates that these general and minority stressors will impact one's mental health outcomes. Two factors moderating this impact are proposed, both finding their origins in the minority identity: the characteristics of the minority identity (e.g. integration in one's overall identity; Thoits, 2013) and coping and social support (e.g. the availability of social support and identification with one's minority group; Branscombe et al., 1999; Crocker & Major, 1989; Eisenberg & Resnick, 2006; Rosario et al., 2004).

Figure 1

The Minority Stress Model (Meyer, 2003)



Components of minority stress. The different minority stress processes as described by Meyer (2003) have been adopted and expanded on by different later authors (e.g. Dewaele et al., 2014; Lingardi, 2012). In this thesis, the different components of minority stress will be referred to as *internalized homonegativity* (comparable to Meyer's internalized homophobia), *stigma consciousness* (comparable to Meyer's expectations of rejection) and *everyday discrimination* (comparable to Meyer's prejudice events). Concealment, described as a minority stress process by Meyer (2003), will however be regarded as a coping strategy for this thesis. It will be referred

to as *visibility management* (managing the degree of visibility of one's LGB identity) and it will be posited that this can be used as a strategy to, for example, avoid experiences of discrimination.

Internalized homonegativity. Described by Meyer (2003) as the most proximal, internal minority stressor, internalized homonegativity (comparable to internalized homophobia, internalized heterosexism, internalized sexual stigma) represents the internalized negative attitudes or stereotypes about same-sex sexuality LGB individuals can have towards themselves (Sophie, 1987). An LGB person might, for example, wish (s)he was straight. Since its introduction by Weinberg in 1972 (Weinberg, 2010), a lot of literature has been published on this phenomenon, including the development of scales and research on correlated constructs. To name a few, Lingardi (2012) developed the Measure of Internalized Sexual Stigma for Lesbians and Gay Men (MISS-LG) and the Internalized Homophobia Scale was designed by Ross and Rosser (1996). Furthermore, many authors have established the negative effects of internalized homonegativity. Internalized sexual stigma has been called an index of mental health and wellbeing (Balsam & Mohr, 2007; Herek et al., 2007) and Gonsiorek (1988) described internalized homonegativity as one of the most important determinants of sexual minorities' mental health. Indeed, internalized homonegativity has been associated with negative outcomes ranging as broad as social anxiety (D'Augelli & Grossman, 2001), less sexual identity development and more difficulties coming out (Szymanski et al., 2008; Mayfield, 2001), loneliness and lower self-esteem (Szymanski & Chung, 2001), relationship problems (Frost & Meyer, 2009) and unprotected sex (Rosario et al., 2001). Williamson (2000) even found that internalized homonegativity played a role in illness and illness prevention in lesbian women and gay men.

Stigma consciousness. The construct *stigma consciousness* was first described and defined by Pinel (1999) as an individual difference in the extent to which individuals expect to be stereotyped by others. In the same article, Pinel (1999) immediately presents his development and evaluation of the Stigma Consciousness Questionnaire (SCQ), which will also be used for this research. Just like internalized homonegativity, the construct of stigma consciousness in LGB individuals has been related to various negative outcomes. Both Lewis et al. (2003) and Vanden Berghe et al. (2010), for example, have found stigma consciousness to be an independent predictor of depressive symptoms. Furthermore, scores on the SCQ were negatively correlated with subjective happiness (Strizzi et al., 2014) and stigma consciousness was related to nonadherence to cancer screenings (Milner & McNally, 2020). More generally, Balsam & Mohr (2007) found that stigma sensitivity, comparable to stigma consciousness, predicted the well-being of LGB individuals. Outside of the sexual minority context, stigma consciousness was also

shown to correlate negatively with life and job satisfaction, (psychological) distress and overall health in contexts varying from racial minorities, over religious minorities, to (senior) women and the unemployed (Brewster et al., 2020; James, 2020; Krug et al., 2019; McCleary-Gaddy & James, 2020; Wells et al., 2021). In short, stigma consciousness, just like internalized homonegativity, can yield negative outcomes and thus it is worthwhile to conduct further research to these minority stressors.

Everyday discrimination. The last and most evident minority stressor investigated in this thesis is the experience of everyday discrimination and discriminatory events. For example, LGB individuals might experience that their sexual orientation prevents them from getting a job promotion or get bullied and harassed because of their sexual orientation. Various authors have described the high prevalence of these everyday stressors in the lives of minority individuals (D'Augelli & Grossman, 2001; Harper & Schneider, 2003; Kessler et al., 1999; Mays & Cochran, 2001; Pilkington & D'Augelli, 1995; Rivers & D'Augelli, 2001), as well as its detrimental effects on the physical and mental health of LGBs (D'Augelli, 1993; Frost et al., 2013; Garnets et al., 1990; Kessler et al., 1999; Marciano & Antebi-Gruszka, 2020; Mays & Cochran, 2001). Thus, in line with the other minority stressors described above, it seems to be of special relevance to further investigate the experience of everyday discriminatory events and how people (can effectively) cope with or prevent these stressors.

Minority stress in LGBs. Lesbian, gay and bisexual individuals differ from other minority groups in the invisibility of their sexual orientation, which gives them the ability to hide their minority status (Chung, 2001; Lasser et al., 2010). Indeed, these individuals can (and must) *choose* whether they disclose their sexual orientation, i.e. their minority status (Chung, 2001). Although this is a “privilege” that other minorities (e.g. racial minorities) don't have, it can nevertheless result in additional stress about whether, to whom and how to either conceal their minority status or come out (Hequembourg & Brallier, 2009). In this way, Meyer's conception of concealment as a proximal minority stressor makes sense. However, for this research, this process will be regarded as a strategy to try to diminish the experience of the described minority stressors (Chung, 2001; Johnson et al., 2015).

Coping strategies. The academic literature on LGB minority stress not only describes the different minority stress processes, but also describes the various strategies used to overcome, avoid or cope with these minority stressors. These strategies include concealing one's relationship to deal with the (anticipated) rejection by others (Rostosky et al., 2007), creating support systems (Rostosky et al., 2007), trying to pass as a heterosexual (Dewaele et al., 2014), using drugs and alcohol to deal with the depressive feelings resulting from minority stress

(Hequembourg & Brallier, 2009), adjustments in one's work-related choices to deal with (potential) discrimination (Chung, 2001), and so on. As opposed to Rostosky et al. (2007), who found that individuals coped by concealing their relationship, Van Gilder (2017) described openness as an appropriate strategy to overcome the impact of minority stress. Sandfort et al. (2015), too, described openness about one's sexual orientation as a resilience factor. Finally, Toomey et al. (2017) identified LGB-specific strategies, alternative-seeking strategies and cognitive strategies. For the current research, the focus will be on concealment (or, conversely, openness) as a strategy to cope with, avoid or diminish these stressors, which will be referred to as visibility management.

Visibility management. As previously mentioned, LGBs differ from other minority groups in their ability to hide their minority status, as the latter is not visible on the outside in the case of sexual minorities (Chung, 2001; Lasser et al., 2010). This is especially true for bisexual individuals, when they are for example in a relationship with a person of the opposite sex. However, gay men and lesbian women, too, might try to conceal their sexual orientation or relationship. Analogous to *identity management*, defined by Chung (2001, p. 38) as "controlling disclosure of information about one's sexual orientation", *visibility management* has been defined by Lasser et al. (2010) as regulating the extent to which one discloses otherwise invisible characteristics (such as sexual orientation). It has been conceived as entailing different strategies with different grades of openness (e.g. Anderson et al., 2001; Chung, 2001). For example, LGBs can fully engage in an opposite-sex relationship (*acting*), versus for example disclosing information about their same-sex orientation or relationship without explicitly calling themselves LGB (*implicitly out*). Another well-known strategy for visibility management is *passing*, which refers to pretending to be straight by making up certain information (Anderson et al., 2001; Chung, 2001). Others have conceptualized visibility management as a continuous variable and have developed scales to measure it as such (Anderson et al., 2001; Lance et al., 2010; Lasser et al., 2010; used for this thesis). In a time where a lot of people have different opinions on whether or not and how to come out (try scrolling on any social media on national coming out day), the question of the effect on the experience of minority stress of this coming out act seems relevant.

Literature review

After having described the minority stress model and the different concepts that will be used for this research in general, an overview of the existing literature on their mutual relations is given. Indeed, several authors have shown that minority stressors lead to the use of various

coping strategies (e.g. visibility management) described in previous paragraphs, but the reverse also holds true.

The impact of visibility management on minority stressors. The discussion of the literature on the effect of visibility management on minority stress will be subdivided according to the three different discussed minority stressors. Many authors have established the costs of concealing one's sexual orientation or relationship (Alt, 2015; Dewaele et al., 2014; Ragins, 2008; Rostosky et al., 2007; Van Gilder, 2017), as well as the advantages of being open about this subject (Frost et al., 2013; Legate et al., 2011; Ragins, 2004; Van Gilder, 2017). Regarding the latter, Kuyper & Fokkema (2011) reported that in women, openness was associated with better mental health. Furthermore, disclosure of sexual orientation seems to be related to a more positive LGB identity (Frable et al., 1997; Rosario et al., 2001). However, some have also provided evidence on the possible advantages of concealment and disadvantages of disclosure (D'Augelli et al., 1998; Frost et al., 2013; Hequembourg & Brallier, 2009; Rosario et al., 2001; Salvati et al., 2017).

Internalized homonegativity. A big part of the literature has focused on the effect of concealment and disclosure on internalized homonegativity. For instance, Rostosky et al. (2007) argued that by coming out, LGB individuals might be able to diminish their internalized homophobia. Corrigan & Matthews (2003), too, state that revealing one's sexuality to others signals self-acceptance, which can be seen in a way as the opposite of internalized homonegativity. Russell & Richards (2003) further argued that internalized homophobia might be related to being closed about one's sexual orientation, and Cox et al. (2010) and Dewaele et al. (2014) showed that a lower degree of outness was associated with higher internalized homonegativity and vice versa. Furthermore, Puckett et al. (2017) found in their longitudinal investigation that in men, lower outness predicted higher internalized heterosexism. Dewaele et al. (2014) also established an interaction effect: women with closed strategies reported lower internalized homonegativity than closed men, but higher general distress. Sattler et al. (2016) and Salvati et al. (2017; Italian context), too, report that coming out correlates with internalized homonegativity. Just like Dewaele et al. (2014), Salvati et al. (2017) established a moderating effect of gender: they found more internalized homonegativity in gay men who had not come out. They also argued that disclosure might serve as a mechanism to reduce internalized homonegativity.

Stigma consciousness. The academic literature is less extensive when it comes to the relationship between visibility management and stigma consciousness. Lewis et al. (2003) showed that more openness about one's sexual orientation was associated with less stigma

consciousness (“expectations of being rejected”). Furthermore, in the research of Sattler et al. (2016), disclosure correlated negatively with rejection sensitivity (stigma consciousness). Finally, Bockting et al. (2013) found that passing (closed strategies) was related to a higher score on the SCQ.

Everyday discrimination. Regarding the experience of discrimination, Dewaele et al. (2014) found that being closed about one’s sexual orientation can serve to protect from discrimination. Accordingly, Ragins & Cornwell (2001) were one of many authors to establish negative consequences (such as discrimination) of being out, just like Bockting et al. (2013), D’Augelli & Grossman (2001), Mackay (2012) and Sattler et al. (2016) reported a link of being open with victimization. Furthermore, Selvidge (2001) found that outness was significantly positively related to the experience of gay-related discrimination in women.

The role of confidant support. The available literature on minority stress seems to suggest a role for social support, referred to as confidant support in this thesis. Receiving support might be important in protecting individuals from negative outcomes (Rothman et al., 2012) as it buffers the impact of (minority) stress (Berger & Mallon, 1993; Bockting et al., 2013; Doan Van et al., 2018; Sattler et al., 2016). More specifically, Sattler et al. (2016) found that social support moderated the relationship between stigma consciousness and mental health. A relationship of social support with greater well-being was established by Tuomi (2014), and Roberts and Christens (2020) found that connectedness with the LGBT community mediated the effect of outness on well-being. Greenblatt (2018) found that social support reduced negative feelings about trans identity and increased pride about this identity (which might be related to internalized homonegativity). Conversely, reduced social support was shown to have negative effects, such as an increase in internalized homonegativity (Chow & Cheng, 2010; Cox et al., 2010) and depression (Nott et al., 1995). Several authors reported that openness is an important way to receive social support, as well as that concealment reduces the availability of social support (Cox et al., 2010; Dewaele et al., 2014; Fish & Weis, 2019; Mohr & Fassinger, 2003). Baiocco et al. (2016) also reported the importance of social support for the extent to which a coming-out experience might be growthful, and Tuomi (2014) argued that disclosure had a positive, but sometimes negative, effect on individuals’ sense of support and belonging. Sattler et al. (2016) found that minority stressors (except for victimization) were negatively related with social support. Finally, even stronger evidence is provided by Puckett et al. (2017) in their longitudinal research, who found that lower support predicted higher internalized heterosexism in men. All these findings thus suggest a role for social (confidant) support that should not be overlooked,

as well as its correlations with both visibility management and minority stressors. Hence, this construct will be included in the current research.

The role of sex. A general indication of the role of sex in the effect of openness about one's sexual orientation was provided by Kuyper & Fokkema (2011). They reported that in women, but not in men, openness was associated with better mental health. This might be because open women tend to seek more social support than open men. Not much literature was found to directly support this hypothesis, which is exactly why it might be interesting to include this as a hypothesis in this research paper. Cox et al. (2010) and Dewaele et al. (2014) both established an interaction effect regarding the effect of openness on internalized homonegativity: closed women reported lower internalized homonegativity than closed men, but higher general distress. This result concerning internalized homonegativity was also reported by Salvati et al. (2017), who found more internalized homonegativity in gay men who had not come out, than in gay women who had not come out. Concerning stigma consciousness, Bockting et al. (2013) found a moderation by sex of the effect of openness on stigma consciousness. Closed strategies were associated with higher stigma consciousness for transgender women, but not for transgender men. It could be interesting to investigate whether this also applies for LGB individuals. Dewaele et al. (2014) did not find any differences between men and women concerning outness (nor did Balsam & Mohr, 2007; D'Augelli et al., 1998; Grov et al., 2006; Hequembourg & Brallier, 2009; or Wells & Kline, 1987) or everyday discrimination. Conversely, Calabrese et al. (2014) found that black sexual minority women experienced more discrimination bases than black sexual minority men. Selvidge (2001) did find a significant positive correlation between outness and experiences with gay-related discrimination in women, but this study only investigated women so cannot confirm a moderation effect by sex. Bockting et al. (2013), however, found that in transgender persons, the relationship between outness and discrimination was greater in men than in women. Finally, Van Gilder (2017) showed that women in their study were more likely to disclose to other women, and more likely to engage in underground networks in the military. These findings suggest a role of sex in both openness and the experience of support, or even a moderating role in the effect of openness on the experience of support. However, there's a significant gap in the literature, especially regarding the impact of sex on the effect of openness on receiving support.

Hypotheses

To clarify the – at times somewhat contradictory – literature described above, this master thesis aims to investigate the relationships between visibility management, the three described

minority stressors and confidant support. In addition to clarifying some contradictory results, the purpose of this research is to evaluate whether the coping strategy of visibility management actually has value. In other words, does visibility management (openness) lead to a reduction of these minority stressors, should the reported effect of disclosure and concealment on (mental) health be explained in other terms, or is there no effect at all and should LGB individuals better not bother worrying about whether to disclose or not? If there is an effect of visibility management on minority stress, can this be (partially) explained by the availability of confidant support? Finally, are women (dis)advantaged, in other words, are some of the investigated effects stronger or weaker for women than for men?

The effects proposed in this thesis are depicted in Figure 2. Three direct effects between visibility management and the three minority stress components are hypothesized, as well as a mediation of the effects of visibility management on two of the components by confidant support. There is no proposed mediation effect of confidant support in the effect of visibility management on everyday discrimination, as discrimination is something that lies out of the minority person. This is also in line with the findings of Sattler et al. (2016), who found that only victimization was not correlated with social support. Social support may certainly function as a way to cope with and buffer the negative *effects* of discrimination on wellbeing (Bockting et al., 2013; Doan Van et al., 2018), but this is out of the scope of this research. Furthermore, based on earlier literature described above, a moderation by sex of some of these effects is proposed.

Direct effects. Based on, and to replicate or clarify earlier literature, direct effects of visibility management on each of the three minority stress components are hypothesized. This results in the first three hypotheses for this thesis:

H1a: Visibility management has a negative direct effect on internalized homonegativity. Being more open about one's sexual minority identity lessens the experience of internalized homonegativity.

H1b: Visibility management has a negative direct effect on stigma consciousness. Being more open about one's sexual minority identity results in lower stigma consciousness.

H1c: Visibility management has a positive direct effect on everyday discrimination. Being more open about one's sexual minority identity results in more experiences of everyday discrimination. One cannot be discriminated against because of one's minority identity, if the discriminator doesn't know about it.

Mediation of confidant support. Next to investigating the mentioned direct effects, this thesis aims to clarify or replicate the mediating role of confidant support in the relationship between visibility management and internalized homonegativity and stigma consciousness,

respectively. This brings us to two more hypotheses, based on the literature (e.g. Puckett et al., 2017; Sattler et al., 2016) described above:

H2a: Visibility management leads to an increase in confidant support, which in turn leads to a decrease in internalized homonegativity.

H2b: Visibility management leads to an increase in confidant support, which in turn leads to a decrease in stigma consciousness.

Moderation of sex. Finally, a moderating effect of sex on some of the proposed effects is hypothesized. More specifically, it is proposed that being female is an advantage as open females would for example receive more confidant support than open males, which in turn would decrease the experience of internalized homonegativity and stigma consciousness. This could possibly explain Kuyper & Fokkema's (2011) finding that openness is only associated with better mental health in women. This hypothesis is also in line with previous findings suggesting women are more involved in the LGB community and thus would receive more support from this community (Van Gilder, 2017). Being female is, in line with the described research above (Dewaele, 2014; Salvati et al., 2017), also hypothesized to reduce the direct negative effect of visibility management on internalized homonegativity. Regarding a moderation of the direct effect involving stigma consciousness, just as for the direct effects described above, not much literature could be found. However, it seems fairly logical that women would be more aware of their stigmas at all times, as they are already more affected by the daily consequences of being a woman. Choosing to be open about yet another minority status could make them even more conscious of their stigmas than before, more than men experience this. Finally, both Calabrese et al. (2014) and Selvidge (2001) point in the direction of (open) sexual minority women experiencing more discrimination than sexual minority men, contrary to (at least my) intuitive thinking. To clarify this, sex is proposed to moderate the effect of openness on the experience of discrimination in such a way that being a woman is a disadvantage. For a moderating role of sex on the effect of support on the minority stressors internalized homonegativity and stigma consciousness, no literature could be found to base a hypothesis on.

H3a: Sex moderates the effect of visibility management on confidant support: open females receive more support than open males.

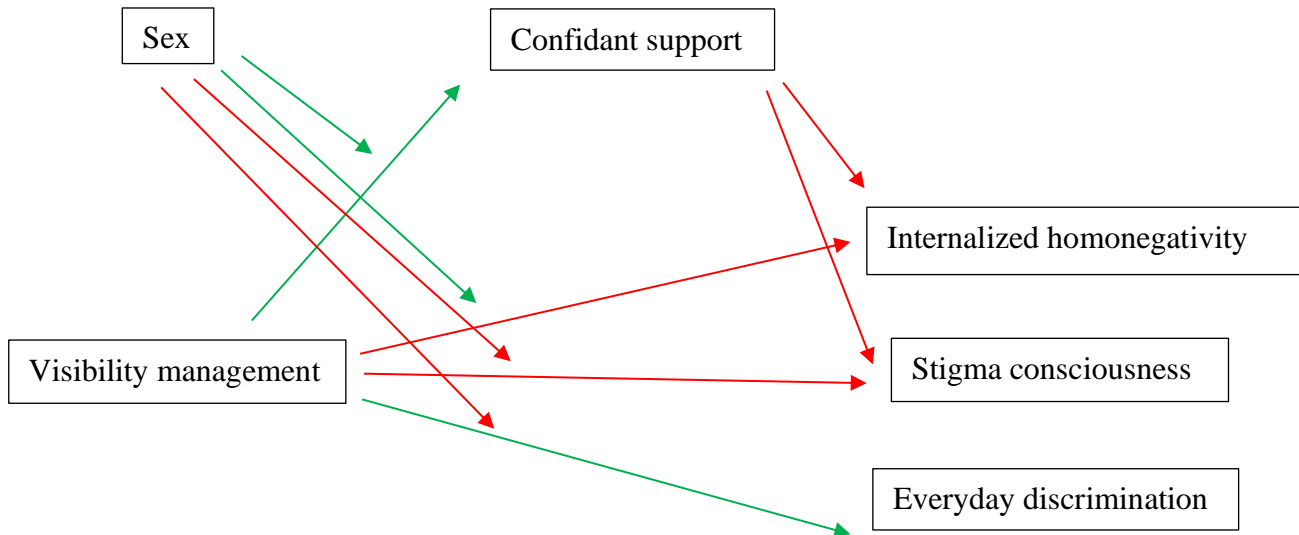
H3b: Sex moderates the effect of visibility management on internalized homonegativity: open females experience less internalized homonegativity than open males.

H3c: Sex moderates the effect of visibility management on stigma consciousness: open females experience more stigma consciousness than open males.

H3d: Sex moderates the effect of visibility management on the experience of everyday discrimination: open females experience less everyday discrimination than open males.

Figure 2

Model of Hypothesized Effects



Note. A green line indicates a positive effect, a red line indicates a negative effect. A green moderating line indicates a stronger effect for women, a red moderating line indicates a weaker effect for women.

Method

This thesis is written in the context of a broader study on minority stress in lesbian women, gay men and bisexual individuals by Symons et al. (2019). As such, the participant pool and data of this broader study are used and variables and measurements overlap. For more details on the broader study by Symons et al. (2019), the reader is referred to the technical report (“Every Relationship Counts”), which can be found in the reference list.

Sample

Recruitment. Participants for the study mentioned above were recruited and filled out an internet survey that used self-report measures between November 2017 and June 2018. For the recruitment of their participants, the authors used a targeted sampling method. Based on previous studies that have shown the worth of this method for efficiently obtaining large samples without compromising their quality and validity (Dewaele et al., 2014; Dewaele et al., 2014), Symons et al. (2019) used different kinds of recruitment channels and methods. For example, participants were recruited at specific locations such as LGB discotheques, but also through advertisements in the written press and associations and organizations, of which some specifically targeted the LGB population (Symons et al., 2019). For this master thesis, only participants of the original study by Symons et al. (2019) who didn’t identify as heterosexual and were in a relationship were included. Details on whether participants voluntarily took part in the study or received reimbursement for their partaking are not discussed in Symons et al. (2019), nor are the approval of an ethical committee and the informed consent procedure. Song et al. (2020), however, state that Ghent University approved the survey protocol.

Characteristics. A total number of 5813 individuals took part in the study by Symons et al. (2019). Of these, 2054 individuals didn’t identify as heterosexual and were in a relationship. Only these participants were included in the dataset for this master thesis. In what follows, the socio-demographic and other descriptive characteristics of this LGB subgroup specifically relevant for this study – gender identity, sexual orientation and relationship characteristics – are discussed. For further details on the original dataset for the broader study, the reader is referred to the technical report by Symons et al. (2019).

Socio-demographics. First, socio-demographic variables such as gender, the way participants found out about the online survey, minority status, age, education level and household variables are discussed.

Sex. Sex was measured as “sex as registered at birth”. The sample for this thesis exists of 938 (45.7%) males and 1116 (54.3%) females.

Access to the survey. On how participants gained access to the survey, only information from the original study is available. Social media was the most reported means through which participants gained access to the online survey, with 67.5% of the participants indicating this channel. Next, 10.1% of the participants accessed the survey through another electronic channel. A minority of the participants reached the survey through other channels such as the press (7.7%), school, education or work (4.6%), a promo team that had spoken about it (1.7%), an advertising poster (1.7%), an association (0.4%) or the participant's social network (0.4%). A final 5.8% study participants found out about the survey in yet another way (Symons et al, 2019).

Minority status. Of the 2054 participants included in this thesis, 1.8% claimed to belong to a religious minority group, 2.1% to an ethnic minority group and 4.7% indicated to be disabled. Specifics on the sexual and gender minority status are given in the next paragraphs.

Age. Age at the time of completion of the survey, as measured based on birth year alone, ranged from 19 to 79 years. The average age of the participants was 34 years old ($M = 34.30$, $SD = 11.11$).

Education level. Of the 2054 respondents, 443 (21.6%) were enrolled in some form of fulltime education at the time of the survey, whereas 1611 were no longer in fulltime education. Of the first group, 85.2% were studying to obtain a bachelor's or master's degree, 8.9% were still in high school and 6.1% were getting "another type of education". Of those no longer in fulltime education, the majority (69.3%) had gained a higher education degree. Thus, overall, the respondents were predominantly highly educated.

Living situation. 90.6% of the respondents lived together, of which 63.4% with their partner(s), 19.3% with their parents and 18.9% with their child(ren).

Financial security. Financial security was measured using a scale from 1 to 6 indicating how easy or hard it is for the respondents' households to make ends meet. Here, a score of 1 stands for "very easy", 2 for "easy", 3 for "pretty easy", 4 for "with a little effort", 5 for "with effort" and a score of 6 stands for "with a lot of effort". 70.8% of the participants indicated a maximum score of 3, thus the majority makes ends meet rather easily ($M = 2.82$, $SD = 1.23$).

Gender identity. Given the topic Symons et al. (2019) discussed, additional participant characteristics such as gender identity, sexual orientation and relationship status and characteristics were specifically relevant to their study. As this study specifically targets sexual orientation, the minority stress that comes with it and the moderating effect of sex, only sexual orientation and relationship status will be discussed in detail. For the specifics of the dataset regarding gender identity, the reader is referred to the technical report by Symons et al. (2019). However, for this study the gender *minority status* of the participants could be of importance. To

measure this, participants indicated whether they felt they belonged to a minority group regarding gender and sexuality. This resulted in 79.1% of the participants claiming to belong to a sexual minority group. This might seem like a surprisingly large number, but the reader has to keep in mind this is already a selection of LGB respondents. 77 respondents (3.7%) indicated to belong to the transgender minority group.

Sexual orientation. Specifically relevant to this study is the sexual orientation of the participants. Sexual orientation was broken down into sexual attraction on the one hand, which indicates to which sex the participants feel attracted to, and sexual identity on the other hand. The latter indicates how the respondents would label themselves in terms of sexual identity. In Table 1, the results for sexual attraction are displayed. The results for self-indicated sexual identity are displayed in Table 2. Given the inclusion criteria for this master thesis, it cannot come as a surprise that none of the participants indicated to identify as heterosexual. When respondents identified as “more heterosexual than homosexual” (14.1%) or as “something else” (7.6%), they were asked whether they could answer questions concerning LGBs. These respondents were instructed that they could replace the term “LGB” in the question with something else, e.g. “queer”. All of these 446 participants indicated that they could answer these questions.

Table 1

Sexual Attraction to Opposite and Same Sex in Female and Male Respondents

	Female Respondents		Male Respondents		Total	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Only to opposite sex	0.8%	9	1.5%	14	1.1%	23
Mainly to opposite sex	24.7%	276	10.4%	98	18.2%	374
As much to opposite as to same sex	18.3%	204	5.9%	55	12.6%	259
Mainly to same sex	25.4%	284	13.2%	124	19.9%	408
Only to same sex	28.3%	316	68.6%	643	46.7%	959
Neither	0.6%	7	0.2%	2	0.4%	9
Something else	1.8%	20	0.2%	2	1.1%	22
Total	100%	1116	100%	938	100%	2054

Table 2*Sexual Identity in Female and Male Respondents*

	Female Respondents		Male Respondents		Total	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
More heterosexual than homosexual	20.2%	225	6.8%	64	14.1%	289
Bisexual	20.9%	233	9.0%	84	15.4%	317
More homosexual than heterosexual	12.5%	139	6.8%	64	9.9%	203
Homosexual or lesbian	36.0%	402	73.1%	686	53.0%	1088
Something else	10.5%	117	4.3%	40	7.6%	157
Total	100%	1116	100%	938	100%	2054

Relationship status and characteristics. For this participant descriptive, the definition by Koniak-Griffin et al. (2008) for “being in a relationship” was used in the study by Symons et al. (2019): ‘Do you currently have a partner? With partner we refer to a person with whom you have shared romantic feelings for at least three months and with whom you have sex. With sex we refer to all sorts of making love where there is genital contact. There does not have to be penetration.’ All 2054 participants were in a relationship at the time of the survey, of which 77 (3.7%) less than 3 months.

Relationship characteristics. The lengths of the relationships of the participants vary between 1 month and 57 years ($M_{months} = 78.07$, $SD = 90.50$).

Study variables

This section describes a selection of the variables used by Symons et al. (2019) relevant for this master thesis, as this thesis is part of that bigger study. As mentioned in the technical report by Symons et al. (2019), validated and reliable questionnaires were used. Before computing the reliabilities of the scales, outliers on item level were detected and transformed to the z-value threshold of 3.29. This method was used to make sure the richness of the data didn’t get lost (e.g. when the maximum score of a scale was an outlier), at the same time guaranteeing valid analysis results. The reliabilities reported underneath are the ones after outliers were recoded, but a comparison with the reliabilities before recoding are given in Attachment 1.

Measurements. Symons et al. (2019) distinguish between general stressors, minority stressors, coping, visibility management and relationship functioning. Given that in this study,

the effect of visibility management on the experienced minority stressors as well as the mediating role of confidant support and the moderating role of sex are studied, only the middle three groups of variables will be described. For further details on the other study variables, the reader is referred to the technical report by Symons et al. (2019).

Minority stressors. The three minority stressors in LGB individuals under investigation are internalized homonegativity, stigma consciousness and the experience of everyday discrimination.

Internalized homonegativity (IHN). This first minority stressor was operationalized by a subscale of the Internalized Homonegativity Inventory (IHNI; Mayfield, 2001), which consists of nine items and measures the extent to which LGB individuals have developed (internalized) negative attitudes towards homosexuality. The scale was adapted by Symons et al. (2019) to move away from the exclusive focus on gay men. Items are for example “I feel ashamed of my homosexuality” and “When people around me talk about homosexuality, I get nervous”. Respondents rated these items on a five-point scale, that ranged from “*agree completely*” to “*completely disagree*”. To establish a clear interpretation of the subscale, negatively formulated items were scored reversely so that a higher score indicates more internalized homonegativity. The internal consistency of the scale for the used sample was high ($\alpha = .728$).

Stigma consciousness (SC). Next, stigma consciousness was measured by the Stigma Consciousness Questionnaire (SCQ; Pinel, 1999). The SCQ, consisting of ten items that are rated on a seven-point scale, assesses the extent to which the respondent expects to be judged based on a stereotype. This scale, too, was somewhat adjusted to include both genders and bisexuality as well as homosexuality. Items are for example “When I talk to heterosexuals, I feel that they interpret all my behaviours in terms of my LGBT-ness” and “Most heterosexuals do not condemn gay people on the basis of their sexual preference”. Scores ranged from 1 (“*agree completely*”) to 7 (“*totally disagree*”), and again some items were reversely scored so that a higher score indicates more stigma consciousness. The internal consistency for this scale was high as well ($\alpha = .756$).

Experience of everyday discrimination (EED). Finally, the experience of everyday discrimination was measured by the Experiences of Everyday Discrimination Questionnaire (EEDQ) as developed by Williams et al. (1997). This scale measures how often respondents experience incidents of everyday discrimination, for example being insulted. Participants indicated a score from 1 to 7 for each of the eleven items, whereby 1 stands for “*never*”, 2 for “*an exceptional time*”, 3 for “*about once a month*”, 4 for “*several times a month*”, 5 for “*about*

once a week”, 6 for “several times a week” and 7 for “daily”. The internal consistency coefficient was again high – remarkably higher than for the other two minority stressors ($\alpha = .891$).

Coping. For the interest of this thesis, only the coping variable *Confidant Support (CS)* is relevant. This variable assesses the amount of support the participants receive from other people: “Confidant support refers to the availability of persons to whom one can turn to talk about personal problems” (Vanden Berghe et al., 2010, p. 155). This was measured by the Confidant Support Scale (Vanden Berghe et al., 2010) which consists of four items that are rated on a five-point scale from “*certainly not*” (score 1) to “*certainly*” (score 5). Items were for example “Is there someone you could talk to if you were excited, worried, nervous or depressed?”. The internal consistency for this scale was high ($\alpha = .941$).

Visibility management (VM). Participants’ LGB visibility management was measured by the Visibility Management Scale (VMS; Lasser et al., 2010). The participants indicated a score on a six-point scale ranging from “*disagree completely*” (score 1) to “*agree completely*” (score 6) for 15 items. These items measure the participants’ openness about being in a same-sex relationship. An example of these items is “I want my acquaintances to know that I have a relationship”. Again, negatively phrased items were reversely scored to ensure that a higher score indicates more openness. The internal consistency of the scale was high ($\alpha = .844$).

Missing data, outlier detection and distributions. In what follows, all used variables are explored in terms of missing data, outliers are detected, distributions are analysed and univariate results are presented.

Missing data. Before beginning any analyses (including descriptive analyses), the data was explored for missing values. Of the 2054 participants included in this research, 2048 (99.71%) had no missing data for the variables of interest (“Sex at birth”, “Internalized homonegativity”, “Stigma consciousness”, “Experience of everyday discrimination”, “Confidant support” and “Visibility management”). None of these six variables had more than 0.5% missing values, so the method of mean imputation was used to account for these missing values (Little & Rubin, 2002). However, for all of the following analyses, the sum scores of the dependent and independent variables were used (e.g. “IHN_sum”), instead of the above-described mean scores. This was done after having analysed the items separately for missing data and again having used mean imputation to account for these missing values. The IHNI as well as the SCQ items all had three missing values (0.15%), the EEDQ and VMS items each had five missing values (0.24%) and the CS items had none. This brings us to a total of 187 (0.23%) missing values in the 80,106 items (39 items in 2054 participants) measured. In what follows, these sum variables won’t

explicitly be called the sum variables, but will just be named after their content (e.g. “Internalized Homonegativity” or “IHN”).

Detection and recoding of outliers. To make sure the distributions of the included variables were appropriate for path analysis, univariate outliers were detected and recoded to the highest and lowest non-extreme value possible and multivariate outliers were deleted. However, none of the values that were counted as outliers were unrealistic ones, but rather so extreme in comparison to the otherwise skewed distribution that they were counted as outliers. To avoid too many unnecessary loss of data, all further analyses were done twice and then compared, once with the original variables and once with the variables adjusted for outliers. This section contains the results for the adjusted variables, and the comparison is discussed in Attachment 1.

Univariate outliers. All item scores were checked for outliers using the z-value procedure. All scores with a z-value above an absolute value of 3.29 were counted as outliers and recoded to the score that represents this threshold z-value of 3.29. The second item of the IHNI was adjusted for 39 outliers, the seventh item for 52 outliers and the ninth for 37 outliers. None of the items of the SCQ were recoded, as they didn’t have any outliers. The first item of the EEDQ was adjusted for 41 outliers, the second for 50, the third for 52, the fourth for 35, the fifth for 33, the sixth for 50, the seventh for 38, the eighth for 53, the ninth for 27, the tenth for 19 and the eleventh for 12 outliers. For Confidant Support, the first item had to be recoded for 58 outliers, the second for 42, the third for 75 and the fourth for 64. Of the VMS, the first item was adjusted for 43 outliers, the second for 18, the fourth for 32, the eighth for 34, the tenth for 33, the eleventh for 28, the twelfth for 22 and the fourteenth for 28.

Next, all sum scores were checked for outliers using the same procedure. IHN had four outliers, SC zero, EED 35, CS 40 and VM 9. All outliers in these sum scores were also recoded to the nearest non-extreme value. These new, adjusted sum scores were compared to the sum scores based on the adjusted item scores. It was decided that analyses without outliers, for comparison to the analyses with the original variables (with outliers), were to be done based on the adjusted sum scores rather than on the sum scores based on the adjusted item scores. To be clear, the results described below are all based on the data after adjustment for outliers and the comparison with the data before adjustment is described in Attachment 1.

Multivariate outliers. Multivariate outliers were detected using the Mahalanobis distance; Mahalanobis distance was computed for all five (in)dependent variables and compared to the chi-square distribution with five degrees of freedom. The p-value of the right-tail of this chi-square distribution was computed, and values under .001 were counted as multivariate outliers (Moran, 2021). This way, 40 multivariate outliers were detected in the variables adjusted for

univariate outliers. The path analysis was done with and without the respondents who showed these multivariate outliers, and the comparison is discussed in Attachment 1.

Distributions of the variables. After the dataset was corrected for missing values and outliers were recoded, skewness and kurtosis were computed and both a Kolmogorov-Smirnov and a Shapiro-Wilk Test were run for all measures described. Again, a comparison of the results with and without the outliers can be found in Attachment 1. Skewness showed that the data for IHN (.428, $SE = .054$), SC (.342, $SE = .054$) and VM (-.600, $SE = .054$) were (fairly) symmetrical, whereas EED (2.274, $SE = .054$) and CS (-1.975, $SE = .054$) were heavily (respectively right and left) skewed. Most of the variables showed a kurtosis result close to 0, which indicates they resemble a normal distribution (IHN: .005, $SE = .108$; SC: -.150, $SE = .108$; VM: .275, $SE = .108$). This was even more the case after outliers were recoded, which shows that adjusting for outliers had a positive impact. However, both EED and CS show a kurtosis of far above 0 (respectively 5.371 and 3.204, both $SE = .108$), so these should not be normally distributed based on the kurtosis values. After outlier recoding, these values were clearly diminished but still far above 0. As opposed to the skewness and kurtosis values, neither the Kolmogorov-Smirnov nor the Shapiro-Wilk Test indicate a normal distribution for any of the variables (all values $<.001$, and even 0.000 for the Kolmogorov-Smirnov test of EED and CS). Recoding outliers didn't change this. However, given the large sample, these results should impose no problems for further statistical tests. Even more, precisely because of the large sample, these results might detect even the slightest deviation of a normal distribution. As this isn't very informative, a visual inspection of the distributions is warranted. Figures 3 to 7 show the histograms and Q-Q plots for each of the variables after outlier adjustment.

Figure 3

Histogram and Normal Q-Q Plot for Internalized Homonegativity

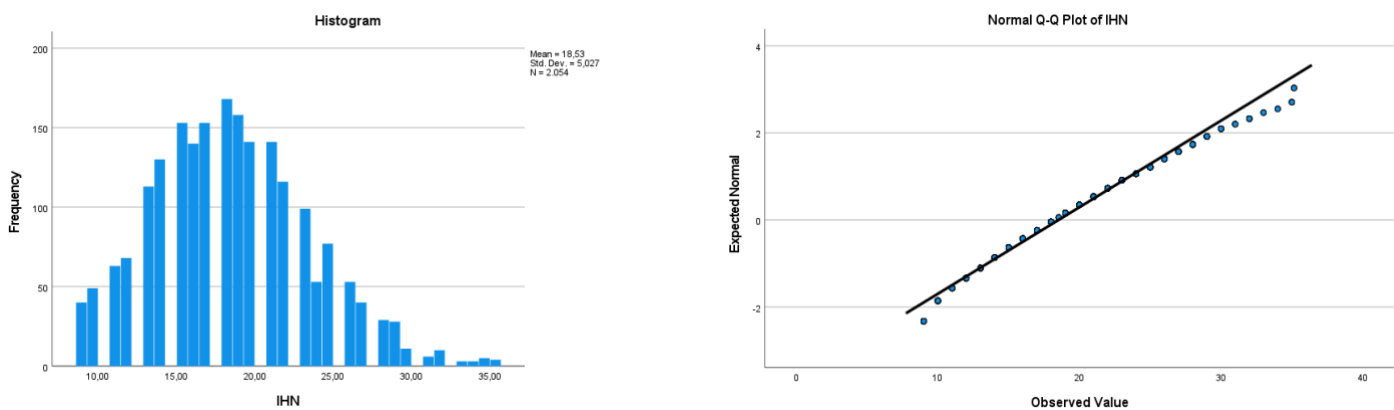


Figure 4

Histogram and Normal Q-Q Plot for Stigma Consciousness

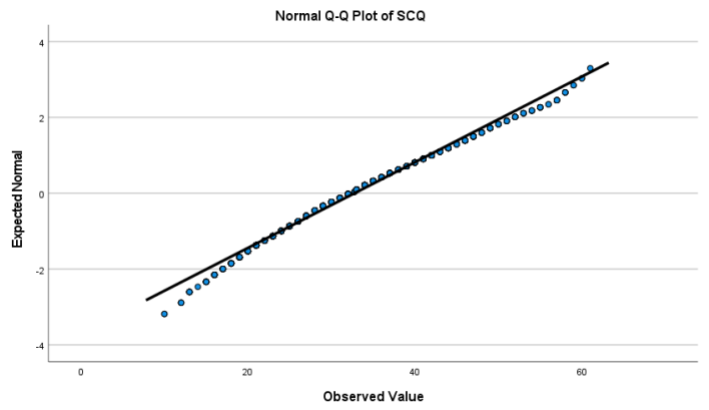
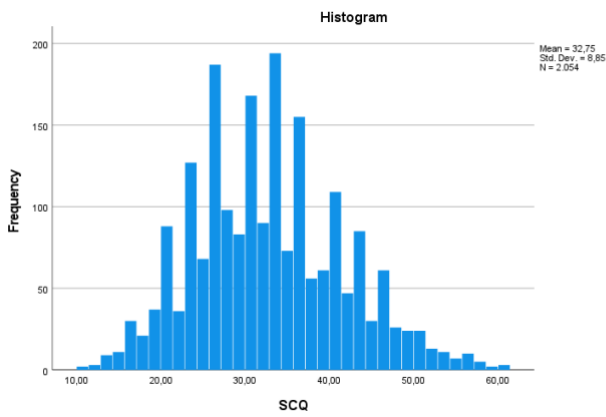


Figure 5

Histogram and Normal Q-Q Plot for Experience of Everyday Discrimination

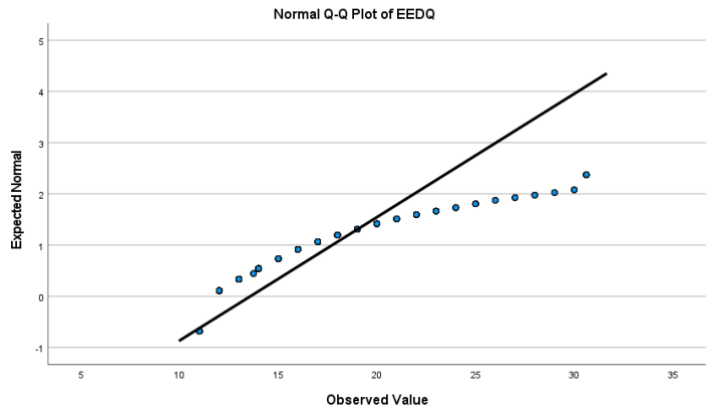
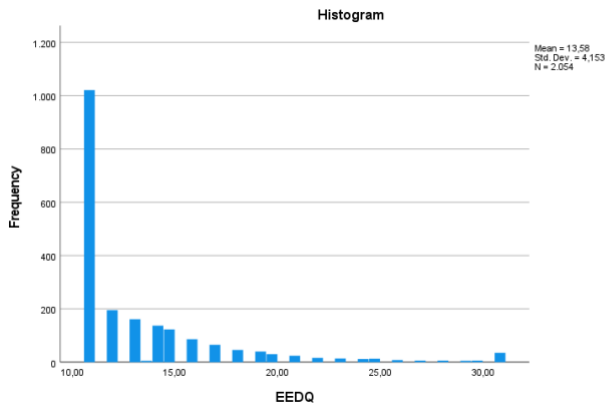


Figure 6

Histogram and Normal Q-Q Plot for Confidant Support

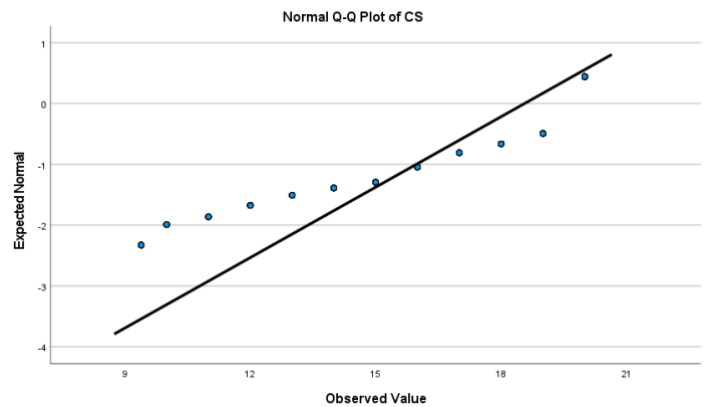
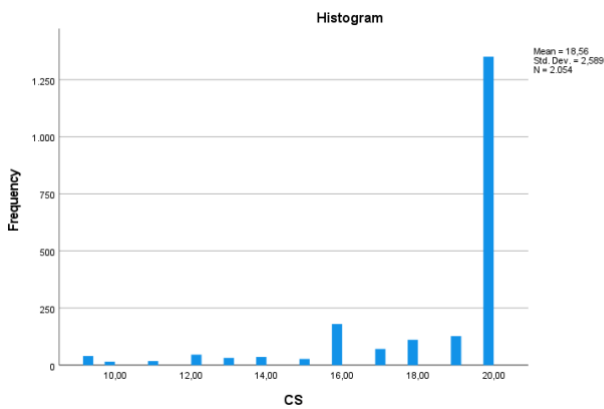
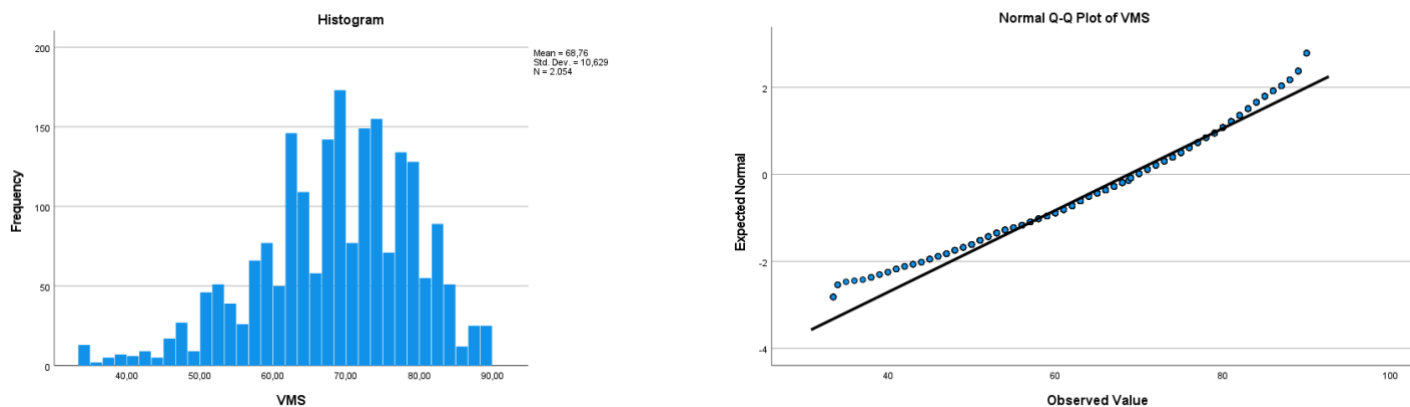


Figure 7

Histogram and Normal Q-Q Plot for Visibility Management



In contrast to the numerical results described above, the visual inspection of the data suggests that IHN, SC and VM approach a normal distribution. IHN and SC seem to be – moderately and mildly, respectively – skewed to the left. VM seems to be moderately skewed to the right. EED and CS, on the other hand, are not normally distributed and are both heavily skewed to the left and to the right, respectively. Given the large sample size, this non-normality will not have a remarkable impact on the obtained results.

Procedure and statistical analyses

Data cleaning and descriptive analyses. The used data was, as already mentioned, gathered for a broader study (Symons et al., 2019) before this thesis was created. Over 5000 individuals were asked to fill out an online survey. A selection of the data was used for this research, being those LGB individuals that were in a relationship. This resulted in a subsample of 2054 individuals. All analyses were done using SPSS Statistics 27, except for the linear regression of the interactions and the path analysis itself, which were done in RStudio version 4.1.1. Missing data were accounted for using the method of mean imputation. In the (in)dependent variables, univariate outliers were detected using z-values and recoded to a threshold value (z-score of 3.29) and multivariate outliers were detected using the Mahalanobis distance. The path analysis was done with and without outliers, and a comparison is available in Attachment 1. Next, frequencies, cross tables and descriptive analyses were computed in SPSS to describe the dataset and its demographic variables. For the independent and dependent variables, Cronbach's alpha was computed after the appropriate items were reverse scored. The normality of the distributions of these variables was checked using the Kolmogorov-Smirnov and Shapiro-Wilk test, histograms and normal Q-Q plots. Next, correlations between all

variables of interest were computed in SPSS, using a correlation matrix. Univariate descriptive analyses for these variables were also computed and displayed in the same table. The differences between male and female respondents for these descriptive analyses were described and tested using an independent samples t-test. As for the preliminary linear regressions, every variable of interest was investigated in terms of its impact on every other variable of interest. To do this, univariate linear regressions of each variable on each other variable were computed in SPSS.

Model testing. The proposed model was tested using path analysis with the package “lavaan” in RStudio version 4.1.1. However, linear regressions were done first to test the significance of the moderation effects of sex using the “lm” function in RStudio. For the path analysis of the model, the “sem” function was used. Bootstrapping was used to avoid wrong conclusions regarding the mediation effect, as this doesn’t assume a normal distribution of the product of the two variables for this indirect path (Loeys et al., 2015). In other words, the percentile-based bootstrap interval was interpreted to make conclusions about the effects, especially for the mediation effect. This interval is reported in the table, indicated by “95% CI”. The complete model with moderated mediation as proposed in Figure 2 was tested, using the package “lavaan” and the function “sem” in R (Loeys, personal communication, 2018).

The fit of the model was evaluated based on different measures. First, the χ^2 goodness-of-fit statistic and its p-value are reported. This statistic describes the distance or discrepancy between the sample covariance matrix and the fitted covariance matrix (Hu & Bentler, 1999). Ideally, this statistic is not significant, but this measure tends to reject plausible models in larger samples (Cangur & Ercan, 2015). Fit indices are more reliable in large samples, such as the Standardized Root Mean Square Residual (SRMR) Index. This is an absolute fit index based on the average of standardized residuals between the observed covariance on the one hand, and the covariance matrix implied by the model on the other hand (Chen, 2007). The value of the SRMR index is ideally lower than .05 (Cangur & Ercan, 2015) and the index is relatively independent from the sample size (Chen, 2007). A second absolute fit index is the Root Mean Square Error of Approximation (RMSEA) Index. This index measures the discrepancy between the observed and implied covariance matrices per degree of freedom (Chen, 2007). This index is ideally below .08 to indicate a good fit, but below .05 is even better (Cangur & Ercan, 2015). Hu & Bentler (1999) state that an RMSEA fit lower than .06 is a sufficient criterion. Finally, the Comparative Fit Index (CFI) was used to evaluate the fit of the model. This is an incremental fit index that evaluates to what extent the tested model is superior to an alternative model based on the manifest covariance matrix (Chen, 2007). This index results in values between 0 and 1; the higher the

value, the better. Generally, .95 is used as the threshold for an acceptable fit (Cangur & Ercan, 2015).

As said before, these final analyses reported in the “Results” section were done using the data without outliers. Univariate outliers were recoded to a threshold value and respondents who showed multivariate outliers were deleted from the dataset. Finally, these analyses were run on a dataset of 2014 observations. A comparison with the data that still included outliers is reported in Attachment 1.

Results

Correlations and univariate results

Below, correlations between the variables of interest are discussed, as well as the descriptive variable statistics and a comparison between the sexes for all five variables.

Correlations and descriptive variable statistics. A correlation matrix of the variables of interest was computed to do a preliminary check of which variables tend to correlate with each other. Even though some of the variables are not normally distributed, Pearson's correlation was used because for purely describing the sample, no assumptions are necessary (Chen & Popovich, 2002). The matrix of the correlations between all variables without univariate and multivariate outliers is shown in Table 3, and a comparison with the correlation matrices including the outliers is discussed in Attachment 1. Outliers were detected and recoded (univariate) or deleted (multivariate) before computing the correlation matrix, as outliers can severely distort the results. However, given the large dataset, this shouldn't be the case. Descriptive statistics of the variables are also included in Table 3.

Table 3

Descriptive Statistics and Correlations

Variables	<i>n</i>	M	SD	1	2	3	4
1. Internalized homonegativity	2014	18.49	8.72	—			
2. Stigma consciousness	2008	32.59	4.92	.214*	—		
3. Experience of everyday discrimination	2014	13.33	3.64	.033	.444*	—	
4. Confidant support	2014	18.63	2.49	-.160*	-.102*	-.108*	—
5. Visibility management	2014	68.83	10.46	-.469*	-.255*	-.092*	.190*

Note. *n* = sample size. M = mean. SD = Standard Deviation.

**p* < .001.

Table 3 shows that the minority stressors slightly but significantly correlate with each other in the positive direction, except for EED and IHN. Further, these correlations show that each of the minority stressors correlates significantly negatively with CS, as well as with VM (thus,

openness). Finally, VM and CS correlate positively. The highest correlation, between VM and IHN, is still a low correlation.

Independent samples t-test. The relationship of sex with the other variables was tested using independent samples t-tests, which evaluate the significance of the difference between female and male respondents for these variables. The results for the variables without outliers are displayed in Table 4, and the comparison with the variables before outlier adjustment is again reported in Attachment 1.

Table 4

Independent Samples T-Tests

Variables	Females		Males		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Internalized homonegativity	18.55	4.68	18.42	5.20	1857	-.622	.534
Stigma consciousness	31.46	8.53	33.96	8.75	2006	6.473	< .001
Experience of everyday discrimination	13.03	3.48	13.69	3.80	1873	4.017	< .001
Confidant support	18.76	2.37	18.47	2.61	1869	-2.600	.009
Visibility management	69.08	10.35	68.53	10.58	2012	-1.161	.246

Note. M = mean. SD = Standard Deviation. *df* = degrees of freedom.

Table 4 shows that for SC and EED, women differ significantly from men. In both cases, men score higher than women. Furthermore, there is a marginally significant difference between women and men in CS, such that women receive more support than men.

Univariate linear regressions

To have a preliminary look at the data before running path analysis, univariate analyses were done in SPSS. The effect of each variable on the other was investigated by running univariate linear regressions, of which the results are shown in Table 5. The standardized coefficient, which allows a comparison of the effects across different scales, as well as the estimates, which indicate the specific size of the coefficient and allow predictions, are displayed. Obviously, analysing a model where Sex is the dependent variable doesn't make sense, so this was not included. The analysis was done before and after outliers were adjusted. The results shown in Table 5 are the

ones after univariate and multivariate outliers were adjusted for, a comparison with the results before outlier adjustment is again reported in Attachment 1.

Table 5

Univariate Linear Regression Results

Effect	Standardized coefficient	Estimate	SE	p
Internalized homonegativity ^b				
Stigma consciousness	.135	.076	.013	< .001
Experience of everyday discrimination	-.071	-.096	.030	.001
Confidant support	-.075	-.149	.040	< .001
Visibility management	-.427	-.201	.010	< .001
Sex	.042	.419	.195	.032
Stigma consciousness ^a				
Internalized homonegativity	.131	.231	.039	< .001
Experience of everyday discrimination	.416	.997	.046	< .001
Confidant support	-.001	-.005	.069	.939
Visibility management	-.153	-.127	.018	< .001
Sex	-.103	-1.810	.338	< .001
Experience of everyday discrimination ^c				
Internalized homonegativity	-.074	-.055	.017	.001
Stigma consciousness	.450	.188	.009	< .001
Confidant support	-.073	-.107	.030	< .001
Visibility management	.003	.001	.008	.906
Sex	-.020	-.149	.148	.314

Effect	Standardized coefficient	Estimate	SE	<i>p</i>
Confidant support ^c				
Internalized homonegativity	-.094	-.048	.013	< .001
Stigma consciousness	-.002	-.001	.007	.939
Experience of everyday discrimination	-.087	-.059	.017	< .001
Visibility management	.136	.032	.006	< .001
Sex	.048	.240	.110	.029
Visibility management ^b				
Internalized homonegativity	-.418	-.889	.043	< .001
Stigma consciousness	-.155	-.186	.027	< .001
Experience of everyday discrimination	.003	.007	.062	.906
Confidant support	.107	.451	.083	< .001
Sex	.004	.074	.411	.857

Note. Assumptions for linear regressions: correlations between independent variables <.7; correlations between independent and dependent variables >.3; collinearity tolerance >.01; VIF <10; normal P-P plots following the diagonal; scatterplots within rectangle between (-)3; standardized residuals between (-)3; Cook's distance <1. The assumption of the scatterplots was always somewhat unmet, but a proportionally small amount of outliers was accepted given the size of the dataset. Normal P-P plots that were somewhat bended were also accepted because of the same reason. VIF = variance inflation factor. SE = Standard Error.

^a all assumptions for linear regressions met, except for correlation >.3 between independent and dependent variables.

^b all assumptions for linear regressions met, except for correlation >.3 between independent and dependent variables and standardized residuals between (-)3. ^c all assumptions for linear regressions met, except for correlation >.3 between independent and dependent variables, standardized residuals between (-)3 and normal P-P plot.

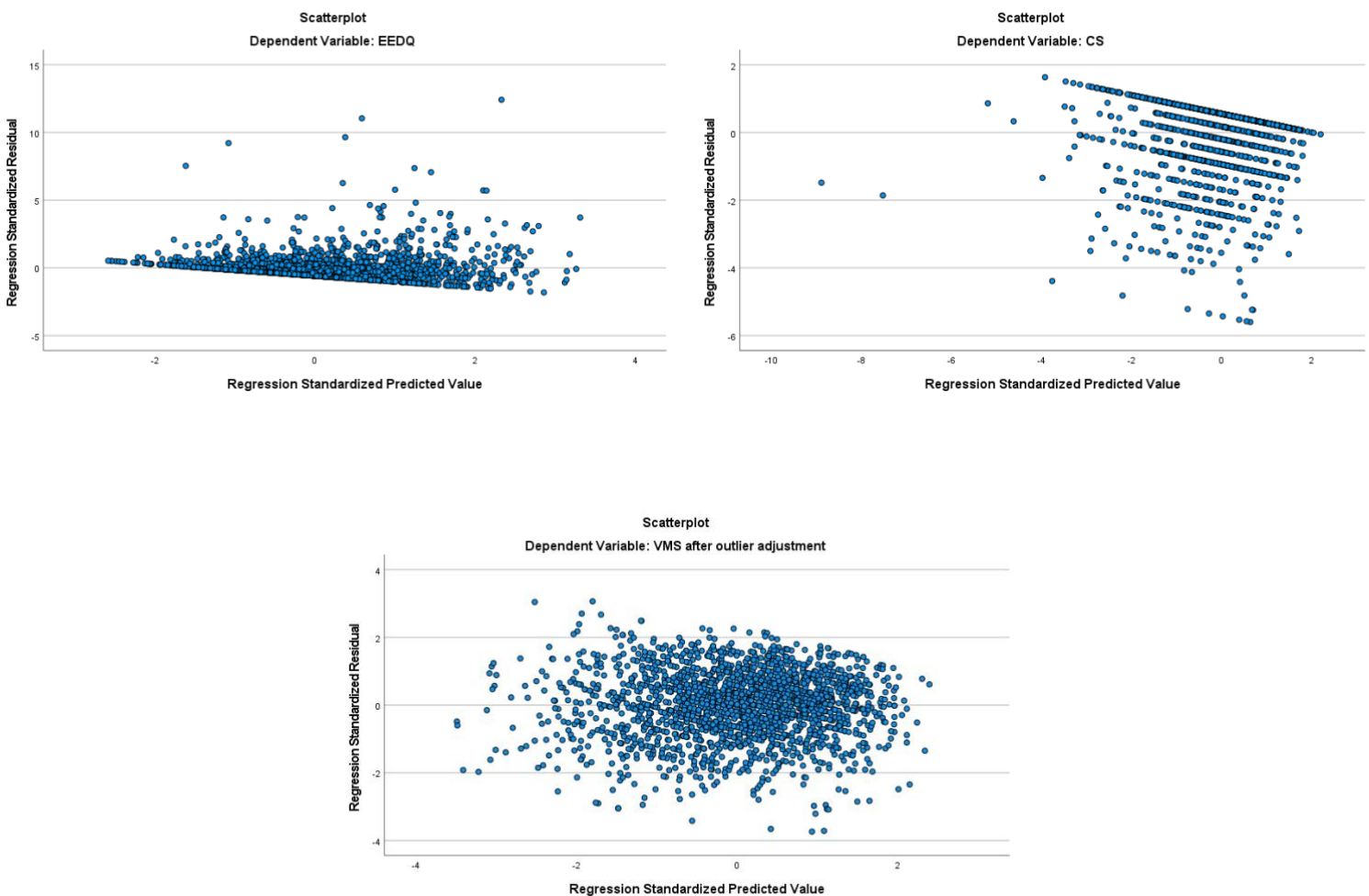
These univariate linear regressions show that there is a significant negative impact of VM on two of the minority stressors, namely IHN ($\beta = -.201, p < .001$) and SC ($\beta = -.127, p < .001$). Remarkably, from these linear regressions, VM does not seem to have an impact on EED ($\beta = .001, p = .906$). Furthermore, VM seems to have an impact on the amount of support one receives (CS; $\beta = .032, p < .001$). Also remarkable is the fact that all three minority stressors seem to impact each other significantly and positively. The only exception to this finding is the fact that

IHN and EED have a significant negative effect on one another. The variable CS seems to lessen both IHN ($\beta = -.149, p < .001$) and EED ($\beta = -.107, p < .001$), but not SC ($\beta = -.005, p = .939$). Finally, it stands out that sex only has a significant effect on SC ($\beta = -1.810, p < .001$) and marginally significant positive effects on IHN ($\beta = .419, p = .032$) and CS ($\beta = .240, p = .029$). The variable sex was coded as 1 = male; 2 = female, so these results suggest that women experience less stigma consciousness but more internalized homonegativity and confident support.

In the visual results, the scatterplots for the regressions where EED and CS are the dependent variables were remarkable (Figure 8). These are different from the other scatterplots, as there seems to be some kind of “border” to the scatterplot, instead of the values being scattered randomly. The scatterplots for these variables were alike before and after outlier adjustment. This finding seems to be related to the skewness of these two variables.

Figure 8

Scatterplots for EED and CS before Outlier Adjustment (upper), versus Scatterplot for VM (lower) after Outlier Adjustment



Testing the moderation effects

Testing the moderation effects on their own, using the “lm” function in RStudio, showed that only the moderation of sex on the effect of VM on IHN was significant ($\beta = .0682, p < .001$). The interaction effect of sex on the effect of VM on CS was not statistically significant ($\beta = -.003533, p = .735$), nor were the others (SC: $\beta = .04439, p = .2152$; EED: $\beta = .003537, p = .81901$).

Path analysis

Path analysis of the complete model displayed in Figure 2 was done using the “sem” function in RStudio, following the method of prof. dr. Loeys in his lecture slides (Loeys, personal communication, 2018). A comparison of the results to the data before outlier adjustment can again be found in Attachment 1. RStudio used a total number of 2000 observations in this path analysis. As explained in the methods section, the mediation effect was tested using the percentile-based bootstrap interval. The fit measures of this analysis showed that this full model fitted the data quite well: $\chi^2(1) = 16.653, p = 0.000$; CFI = 0.988; RMSEA = 0.088; SRMR = 0.018. The chi-square test does not suggest a good fit, but this can be explained by the tendency of this fit measure to reject the null hypothesis in large samples (Bollen et al., 2014). The RMSEA could also be better, ideally below .05.

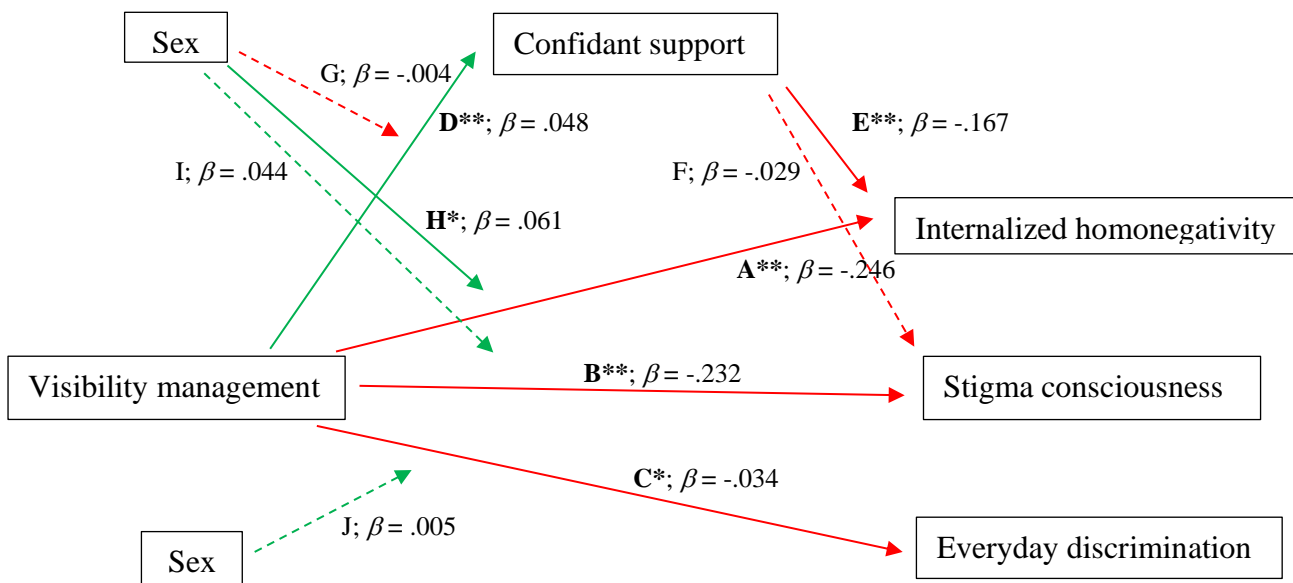
The regression results of the path analysis are comparable to the preliminary ones. The direct effect of VM on IHN remains significant with a p -value of 0.000 and a coefficient of $\beta = -.246$. The direct effects of VM on IHN and SC, respectively ($\beta = -.246, p < .001$; $\beta = -.232, p < .001$), seem to be the strongest ones. Furthermore, the results showed that the total mediation effect was significant when IHN was the dependent variable, both in males and females ($\beta_{\text{males}} = -.008, p_{\text{males}} = .002$; $\beta_{\text{females}} = -.008, p_{\text{females}} = .005$). Both mediation paths (D and E) are strongly significant with p -values = 0.000, $\beta = .048$ and $\beta = -.167$ respectively. However, the total mediation effect was not significant when SC was the dependent variable ($\beta = -.001, p = .685$). Remarkably, the b-path of the mediation model to IHN has a stronger effect than the a-path (respectively $\beta = -.167, p < .001$; $\beta = .048, p < .001$). The b-path to SC has an even weaker effect and is not significant ($\beta = -.029, p = .679$). The interaction effect of VM and sex predicting IHN was the only significant interaction effect ($\beta = .061, p = .001$), just like in the regressions described above. The moderated mediation hypothesis also had to be rejected as the Index of Moderated Mediation (IMM), a measure for the difference in the indirect effect between different levels of the moderator (Hayes, 2015), was not significant ($\beta = -.000, p = .759$). This finding is

in accordance with the fact that the moderation on the effect of VM on CS was not significant either ($\beta = -.003533$, $p = .735$ in the simple regression above; $\beta = -.004$, $p = .739$ in the path analysis). The rest of the effects all have estimates under $(-).100$.

In Table 6, all of the effects are shown. The letters assigned to the effects can be read in Figure 9. Significant effects were indicated in bold and with a solid line on the figure, whereas the insignificant paths were indicated by dashed lines.

Figure 9

Tested Path Model.



Note. Significant paths are printed in bold and estimates are indicated by β . A green line indicates a positive effect, a red line indicates a negative effect. A green moderating line indicates a stronger effect for women, a red moderating line indicates a weaker effect for women. Dashed lines indicate non-significant effects, full lines indicate significant effects.

* $p < .01$. ** $p < .001$.

Table 6*Path Analysis of the Complete Model*

Effect	β	SE	p	95% CI	
				LL	UL
<i>Direct effects</i>					
A: direct effect VM-IHN	-.246	.013	< .001	-.270	-.219
B: direct effect VM-SC	-.232	.026	< .001	-.287	-.181
C: direct effect VM-ED	-.034	.011	.002	-.056	-.012
<i>Indirect effects</i>					
D: mediation a-path VM-CS	.048	.009	< .001	.031	.066
E: mediation b-path CS-IHN	-.167	.041	< .001	-.249	-.087
F: mediation b-path CS-SC	-.029	.070	.679	-.172	.105
<i>Moderations</i>					
G: moderated mediation a-path: VM*Sex-CS	-.004	.011	.739	-.026	.019
H: interaction VM*sex in predicting IHN	.061	.019	.001	.022	.097
I: interaction VM*sex in predicting SC	.044	.037	.230	-.032	.114
J: interaction VM*sex in predicting ED	.005	.016	.740	-.028	.036

Note. LL = lower limit; UL = upper limit. SE = Standard Error. 95% CI = 95% Coinfidence Interval.

These results seem to confirm some of the hypotheses that were posited at the end of the introduction.

Direct effects. Hypothesis H1a states that being more open might lessen the experience of internalized homonegativity, which is reflected by the significant direct effect of VM on IHN (A: $\beta = -.246$, $p < .001$). Hypothesis H1b states that being more open might results in lower stigma consciousness, which is reflected by the significant direct effect of VM on SC (B: $\beta = -.232$, $p < .001$). Finally, hypothesis H1c states that being more open results in more experiences of everyday discrimination. This hypothesis has to be rejected, as the analyses show a slightly negative, but significant, effect of VM on EED (C: $\beta = -.034$, $p < .01$).

Mediation by confidant support. Of the two hypotheses concerning the mediating role of confidant support, only H2a was supported by the data. In the a-path, VM significantly and positively predicted CS (D: $\beta = .048, p < .001$). With IHN as the dependent variable, both the b-path (E: $\beta = -.167, p < .001$) and the total mediation effect ($-.008, p < .001$) were significant, but this was not the case when SC was the dependent variable (F: $\beta = .029, p = .679$ and $\beta = -.001, p = .675$, respectively). Thus, hypothesis H2b could not be supported by this dataset.

Moderation by sex. Hypothesis H3a represented the moderated mediation hypothesis and could not be supported, as neither the moderation effect of sex on the effect of VM on CS (G: $\beta = -.004, p = .739$), nor the IMM ($\beta = .000, p = .759$) were significant. This was also preceded by a non-significant interaction effect of VM and sex on CS in the preliminary simple linear regressions ($\beta = -.004, p = .735$). Of the other hypotheses concerning the moderation of sex, none could be retained either. H3b could only be retained in the opposite direction: the effect of openness on internalized homonegativity was indeed moderated by sex (H: $\beta = .061, p < .01$), but women were at a disadvantage here. An increase in VM by 1 unit was accompanied by a decrease in IHN by .246 for males ($p < .001$), but only by .185 for females ($p < .01$). Hypotheses H3c and H3d both weren't supported by the data, as these interaction effects for SC and EED were not significant (I: $\beta = .044, p = .230$ and J: $\beta = .005, p = .740$, respectively).

Discussion

A dataset of 2054 LGB respondents who were in a relationship was used to investigate whether being more open about one's sexual orientation impacts the experience of minority stress as defined by Meyer (1995, 2003). Respondents filled out an online survey in which (amongst others) their openness (Visibility Management), the availability of support (Confidant Support), and their experience of minority stressors (Internalized Homonegativity, Stigma Consciousness and Experience of Everyday Discrimination) were questioned.

Three categories of hypotheses were put forward. Hypotheses regarding direct effects involved a decrease in internalized homonegativity (H1a) and stigma consciousness (H1b), but an increase in everyday discrimination (H1c) with higher openness. Mediation hypotheses were formed about internalized homonegativity (H2a) and stigma consciousness (H2b), such that openness would lead to the experience of more confidant support which in turn would lead to a decrease in these minority stressors. Finally, it was hypothesized that open women would experience more confidant support (H3a) and stigma consciousness (H3c), but less internalized homonegativity (H3b) and everyday discrimination (H3d) than open men.

Descriptive and univariate analyses were done using SPSS Statistics 27 and the hypothesized model was tested with path analysis in RStudio version 4.1.1. A discussion of the results, their implications, as well as limitations of this research and recommendations for future research follows below.

Interpretations

These results are rather straightforward to interpret. Interpretations will be described following the same structure as the results section.

Direct effects. Regarding the direct effects, two of the three hypotheses were confirmed. Analysis of this dataset indeed suggests that the more open an LGB person is about their non-straight sexuality, the less minority stress this person experiences. This statement holds true, at least according to this data, for all three specified minority stressors: internalized homonegativity (H1a), stigma consciousness (H1b) and – opposite to what was hypothesized – discrimination (H1c) all seem to be lower when a person is more open. This effect of openness is the strongest for internalized homonegativity and weakest for experiences of discrimination.

The effect on the first two stressors – internalized homonegativity and stigma consciousness – are the most intuitively graspable effects. These findings are in line with those of e.g. Cox et al. (2010), Dewaele et al. (2014) and Puckett et al. (2017) for internalized homonegativity, and also seem to support the findings of Bockting et al. (2013), Lewis et al. (2003) and Sattler et al.

(2016) regarding stigma consciousness. It makes sense that being more open, being more honest with oneself and the outside world about an aspect of one's identity so intimate and fundamental, might make this aspect more integrated in one's overall identity in different contexts (Lindsey et al., 2019; Rosati et al., 2020). Because of this integration, openness could lift the weight off this aspect that is often charged with societal values and emotions and soften the constant mental emphasis on it once its status of "secret" or "big deal" has been taken off. Previous research also found that (changes in) identity integration may be related to self-esteem (Rosario et al., 2011), which might serve as an explanation for these effects (e.g. Nguyen & Angelique, 2017).

Unexpectedly, being more open results in less experiences of everyday discrimination (H1c). It made sense to presume that the more (visibly) open one is about one's non-straight sexuality, the more cues the outside world would have to engage in discrimination against this person. This is also what e.g. Dewaele et al. (2014) and Ragins & Cornwell (2001) found. The opposite seems to be true, although the effect is very small: an increase in openness with 1 unit decreases experiences of everyday discrimination with only .034 units. Questions about the interpretation of this finding remain: what makes that the above reasoning could not be confirmed? Which factors mediate this effect? Is there a place for mediation by confidant support in this effect, too? Should this finding rather be explained by other, resilience-like or self-esteem related factors that could be the result of being more open, as suggested by Kosciw et al. (2015)? Or is this a methodological issue and should the relationship between these two variables be interpreted the other way around: less experiences of discrimination set the scene for more openness about one's sexual orientation? Further, ideally longitudinal, research should make efforts to clarify this finding.

The correlation tables showed that there was a negative correlation between confidant support and the experience of discrimination. There was no hypothesis formed for this association, so this effect was not tested. However, future research could investigate this association: does the availability of confidant support diminish the experience and/or perception of discrimination? Wright & Wachs (2019) showed that social support might reduce the impact of discrimination on relational aggression, and Wike et al. (2021) stress the importance of social support as a buffer against the effects of victimization. Although the impact of discrimination cannot be equated with the experience or perception of discrimination, this subject deserves to be investigated in more depth. It makes sense that the more support one receives, the less one would perceive to be discriminated. Kwon (2013), for example, suggests that the availability of social support diminishes an LGB individual's susceptibility to prejudice.

Indirect effects. The effect of how open one is about their sexuality on how much minority stress this person experiences passes an additional effect of confidant support (H2a, H2b). This means that the effect of one's openness is partially realized via the extent to which this person feels that they can rely on sources of support – e.g. friends, family, community – to talk about their personal problems. This, however, only holds true for the effect of openness on internalized homonegativity (H2a). Thus, according to this data, the effect of one's openness on how constantly aware of their stigma they are does *not* pass the amount of support they experience (H2b). This corresponds to the lack of literature on this mediation effect for stigma consciousness and signals a need for future research to clarify other possible mechanisms through which openness affects stigma consciousness.

For internalized homonegativity, the largest part of the effect seems to lie in the effect of support on internalized homonegativity (although there was also an effect of openness on the amount of support one receives): the more one feels to have a (network of) person(s) to which they can talk about their personal problems, the less internalized homonegativity this LGB person experiences. This finding is in line with Greenblatt's (2018) results suggesting social support reduces negative feelings about one's trans identity, as well as with Chow & Cheng (2010) and Cox et al.'s (2010) findings that reduced social support increased internalized homonegativity. The found mediation effect further combines these previous findings with the results of e.g. Fish & Weis (2019) and Mohr & Fassinger (2003), who described openness as a way of receiving social support. The negative effect of confidant support on internalized homonegativity was almost four times stronger than the positive effect of openness on the experience of confidant support. However, the direct effect of openness on internalized homonegativity is even stronger, especially when compared to the total mediation effect. Thus, the effect of openness on internalized homonegativity can certainly not be completely explained by the mediation of confidant support. The question whether other factors, e.g. identity integration or self-esteem (Nguyen & Angelique, 2017), play an additional mediating role in this relationship remains to be answered by future research.

Moderation by sex. The last research question for this master thesis was whether women differed significantly from men in these results (H3a-d). The only significantly different finding for women versus men was the direct effect of one's openness on how much internalized homonegativity this person experiences (H3b). The effect seems to be less strong in women than in men. In other words, women benefit less from being open than men, when it comes to the resulting lower internalized homonegativity. This result contradicts the findings by Cox et al. (2010), Dewaele et al. (2014) and Salvati et al. (2017). As for the other dependent variables, this

dataset cannot extend Bockting et al.'s (2013) findings about stigma consciousness in transgender individuals to LGB individuals. Neither can it clarify the existing literature on a possible moderation on the effect of openness on the experience of discrimination (e.g. Calabrese et al., 2014; Selvidge, 2001) or confidant support (Van Gilder, 2017). Remarkably, contrary to the finding of sex moderating the effect of openness on internalized homonegativity in the path analysis, independent samples t-tests indicated that internalized homonegativity was the only minority stressor *not* differing between men and women. As such, this moderation cannot be explained by the fact that women's internalized homonegativity scores would be so high that there's more necessary to change this than "just" being open. Future research could investigate what creates this difference: is women's minority stress overall more constant and more resistant to change? No literature was found on this topic, so future research should investigate this in an ideally longitudinal design. Are there other factors mediating this moderation? The hypothesis that women would experience more confidant support, which might explain the difference in internalized homonegativity through its mediating role, was rejected in this thesis. However, future research could investigate this more thoroughly using more suitable methods and research designs.

Implications

Implications for (mental) healthcare professionals. These results, and ideally results of future research on this topic, should be considered by (mental) healthcare professionals when thinking, talking and advising about the coming out process and the support network of LGB patients. For example, one should consider the importance of the support network and its facilitating power in making this process as positive as possible. Although the results indicate that minority stress is lower when a person is more open about their sexuality, the story should always contain nuance and take the particularity of the person that sits in front of you into account. Apart from the network the patient has in their context outside of healthcare, these results also indicate the importance of being a source of confidant support as a healthcare professional. Creating an open, safe space for these persons, where they can be "out" and find support for their (LGB-related) worries, seems to be pivotal for minimizing minority stress (Bishop et al., 2021a, Bishop et al., 2021b). Some patients indeed feel that disclosure to healthcare professionals is beneficial for receiving holistic care and non-disclosure would diminish the access to full psychosocial and -sexual care (Fish et al., 2019). However, the results in Fish et al.'s paper (2019) also make clear that the patients should be able to decide for themselves whether to disclose or not. Providing a safe space where one can comfortably do this

seems important, as indicated by their respondents' search for signs of inclusivity and diversity in the healthcare setting. Finally, Fish et al. (2019) stress the importance of involving the LGB individual's support network, like their partner(s), in the healthcare and coming out process.

Implications for the LGB community. Furthermore, as these results indicate the importance of a supportive network among LGB persons, more financial and logistic support could be provided for the LGB community to be able to support and meet each other in safe spaces. The possibilities for this are endless: opening more queer bars, creating a wider range of LGB-oriented dating apps, organizing events like Pride Parade, installing safe spaces at schools and work environments, etc. For example, Christensen et al. (2021) found that coaching teachers to create more safe and inclusive environments for LGBTQ students had positive results (e.g. better mental health outcomes).

Implications for general public awareness. Finally, on the more general level of public awareness, work should be done to represent the queer community more and better in media like television and advertisements. (Media) representation and visual support symbols for this community, e.g. by hanging flags or painting rainbow crosswalks, could optimize the general mindset towards LGB persons (Hoffarth & Hodson, 2018). This could make coming out and seeking confidant support easier (Fish et al., 2019), resulting in less minority stress. Furthermore, these results and results of future similar research provide scientific arguments to base (societal or personal) messages and advice about coming out on, e.g. in the context of national coming out day on social media.

Limitations

The main strength of this research is the sample size of over 2000 individuals, which makes the statistical results more reliable. The high reliabilities of the used scales certainly add up to the trustworthiness of the results. The limitations of this research are divided into three categories.

Outlier detection method. One limitation of this research is the way outliers were detected and recoded. Univariate outliers were detected using z-values: raw scores with an absolute z-value of more than 3.29 were counted as outliers and recoded to this threshold value. Multivariate outliers were detected based on the Mahalanobis distance. As Leys et al. (2019) argue, these methods rely on the means and standard deviations of the variables and are therefore influenced by the outliers they are supposed to detect. Leys et al. (2019) suggest using more robust ways to detect outliers, such as the MAD method (Leys et al., 2013) for univariate outliers and the MCD

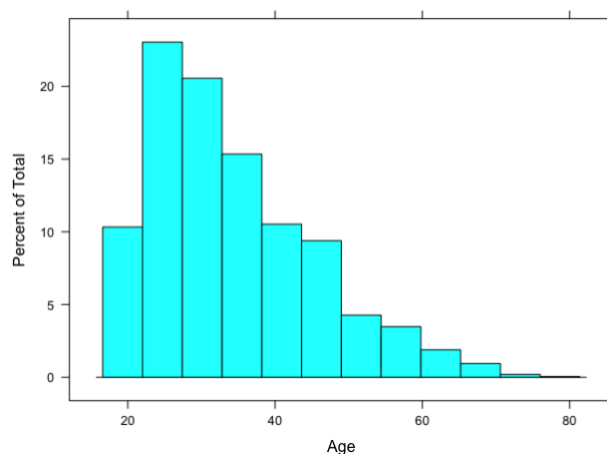
method (Leys et al., 2018) for multivariate outliers. However, due to insufficient familiarity with these methods, less ideal methods described above were used.

Cross-sectional design. A second limitation of this research is the cross-sectional design, which makes it impossible to make any scientifically sound conclusions regarding causality. The path diagrams representing the model could be somewhat misleading as they suggest a causal relationship of one variable that leads to another. However, these causality conclusions cannot be made based on this particular cross-sectional research design and a longitudinal approach is needed to do so. This research could however serve as a first incentive for other researchers to investigate this subject in a longitudinal design, if they have the appropriate context and opportunities. Puckett et al. (2017), for example, already longitudinally investigated the relationships between internalized heterosexism and, among others, victimization, outness and peer support.

Generalizability. Finally, one could pose the question of the generalizability of these results, on different levels. Obviously, there are many more levels on which the generalizability could be discussed, but the following three seem to be the most relevant. First, there is age. Figure 10 shows the relative frequencies of different age categories in the total sample. It is clear that older people are underrepresented in the – however large – sample, which mostly contains respondents between 20 and 40 years old. Thus, this sample might be large enough to be representative of the age categories that are most represented in the histogram underneath, but future research should focus on an older sample to obtain representative results for these underrepresented categories.

Figure 10

Histogram of Age Categories in the Total Sample



A second remark regarding generalizability addresses ethnicity. In this study, the only item regarding ethnicity was a question whether the respondent belonged to an ethnic minority group or not. This item alone, which tackles feelings of belonging to a minority group more than ethnicity, might not cover enough to make conclusions about generalizability regarding ethnicity. Indeed, people may feel like their ethnicity is not a minority group in their context. For example, in this Flemish study, Dutch people might not have felt like they classify as an ethnic minority because of the similarities in culture and the little distance between both countries. A suggestion for future research in this topic might be to include a question tackling country or culture (of descent) rather than ethnic minority status, to investigate whether different nationalities and cultures produce the same results.

Finally, the question should be posed whether these results are valid for *all* members of this LGB community. Specifically, the question of generalizability among bisexual people could not be addressed in this research and is more suitable to be addressed in a future paper because of length and coherence of hypotheses reasons. It should be investigated whether these results differ in bisexual people who are in a relationship with a person of the opposite sex, versus bisexual people who are in a same-sex relationship. Bisexual people in a relationship with a person of the opposite sex could experience less minority stress because of their minority status' even greater "invisibility", but on the other hand they could also experience even more minority stress exactly because of this invisibility. Indeed, this specific group could feel rejected by *both* sides: by society because of their not being straight, and by the queer community because they are not as visibly queer as the rest of the community (Mulick & Wright, 2002). Research has indeed shown that bisexual people who are in a relationship with a person of the opposite sex are likely to have to "prove" their sexuality, to not be recognized as a community member as easily or to have their sexuality questioned by others (Morgenroth et al., 2021). More broadly, the same question could be posed regarding lesbian and gay people who are in a relationship with the person of the opposite sex. These people are likely to experience even more minority stress and might yield different or more extreme results than lesbian and gay people in same-sex relationships.

Recommendations

Model comparisons. Because some of the paths in the model for this paper were not significant, it could be interesting for future researchers to investigate whether leaving out these paths, and possibly adding others, results in even better fitting models. Model comparisons were not done for this research paper, because no a priori hypotheses were made regarding this.

Longitudinal and qualitative research. As argued above, integrating this model into a longitudinal research design could be of uttermost value to really get the causal relationships between these variables clear. Once possibly causal relationships have been established, like Puckett's (2017) research already partly showed, ideally mental healthcare practice recommendations concerning openness and support can be grounded in this scientific research instead of in one's gut feelings. If not for these professional purposes, at least the general population could be made more aware of the importance of openness and confidant support with the necessary nuance, and not carelessly throw around advice regarding this coming-out process. For this necessary nuance (e.g. regarding who to come out to, under which conditions, for whom and when this could be most beneficial...), further research should also include other moderating and/or mediating factors like the bond with the persons to whom one comes out (e.g. family and friends vs co-workers). These potential factors could be explored by also investigating this topic with qualitative designs like focus groups, to find out bottom-up which factors contribute to the stress or support experiences.

Investigating other representative groups. As highlighted in the limitations paragraph, future research should also focus on whether these results are applicable to other groups as well, like LGB people in relationships with the opposite sex. It could also be investigated whether these results differ between different countries and/or cultures and which factors contribute to these possible differences (different traditional norms and values, differently organized LGB community, politics, education...). In current times and political contexts, replicating and broadening this research to include said factors for example in Poland or Russia could give some interesting insights. It might for example be that in the current Polish context, openness about one's non-straight sexuality proves to do more harm than good unless LGB people have access to confidant support. In this case, facilitating access to confidant support could be of even bigger importance than it already is in our Flemish context. Gorska et al. (2017) for example found that sexual stigma on an institutional level in Poland impedes collective action of the LGB community.

Clarifying unexplained findings. Finally, future research should focus on clarifying findings that could not be explained by the current research design. For example, it could be investigated whether there is a mediating or moderating factor that could explain the (unexpected) negative effect of openness on the experience of everyday discrimination, e.g. self-esteem. Previous research has indeed found that outness is related to higher self-esteem (Rentería et al., 2022). Future research could also investigate factors explaining the found effects of openness on the other minority stressors. Both identity integration and self-esteem could play a

role in this (Nguyen & Angelique, 2017; Rosario et al., 2011). Finally, the effect of confidant support on the experience of everyday discrimination was not tested in this thesis, but the variables did show a significant positive correlation. Research should investigate the existence of and possible explanations for this (hypothetical) effect, e.g. self-esteem (Bond & Miller, 2021; McDonald, 2018; Watson et al., 2016) or resilience (Knutson et al., 2021).

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Attachment 1: Additional analyses

Comparison of descriptive analyses with and without univariate outliers

Both the reliability analyses and the analyses of the distributions were done twice; once with the univariate outliers and once after these outliers were recoded to the threshold z-value of 3.29. Comparisons are made below.

Reliabilities. The reliabilities or internal consistencies are slightly different before versus after univariate outlier recoding. Cronbach's alpha for IHN went from .726 to .728 after adjustment for outliers. For the EEDQ and CS, there was a drop in Cronbach's alpha: from .910 to .891 for EEDQ and from .944 to .941 for CS. For the VMS, the internal consistency remained the same (.844), and for the SCQ, no outliers were detected.

Distributions. Below, both the numeric and visual inspection of the variable distributions are compared with and without univariate outliers.

Skewness, kurtosis and normality tests. The adjustment of univariate outlier values in the sum scores didn't have any impact on the Kolmogorov-Smirnov or the Shapiro-Wilk Tests. However, there was a change towards more normal values in skewness and kurtosis for all variables after outliers were recoded. All standard errors remained the same, namely .054 for skewness values and .108 for kurtosis values. An overview is given in Table 7. SC isn't included in the table because this variable didn't show any outliers.

Table 7

Skewness and Kurtosis Values before and after Outlier Adjustment

	Skewness		Kurtosis	
	Before	After	Before	After
IHN	.471	.428	.209	.005
EEDQ	4.291	2.274	29.820	5.371
CS	-2.340	-1.975	5.865	3.204
VMS	-.670	-.600	.619	.275

Histograms and Q-Q plots. Recoding outliers in IHN and VM didn't change much in the histograms or normal Q-Q plots of these variables. This also reflects the status quo in the results of the normality tests before and after outlier adjustment. The adjustment of outliers did have a slightly normalizing impact on the distribution of EED and CS, although these variables still don't approach a normal distribution. For SC, no outliers had to be recoded so there is no

comparison to be made. In Figures 11 to 14, the histograms and normal Q-Q plots before and after outlier adjustment of the sum scores are displayed.

Figure 11

Histogram and Normal Q-Q Plot for IHN before (upper) versus after (lower) Outlier Adjustment

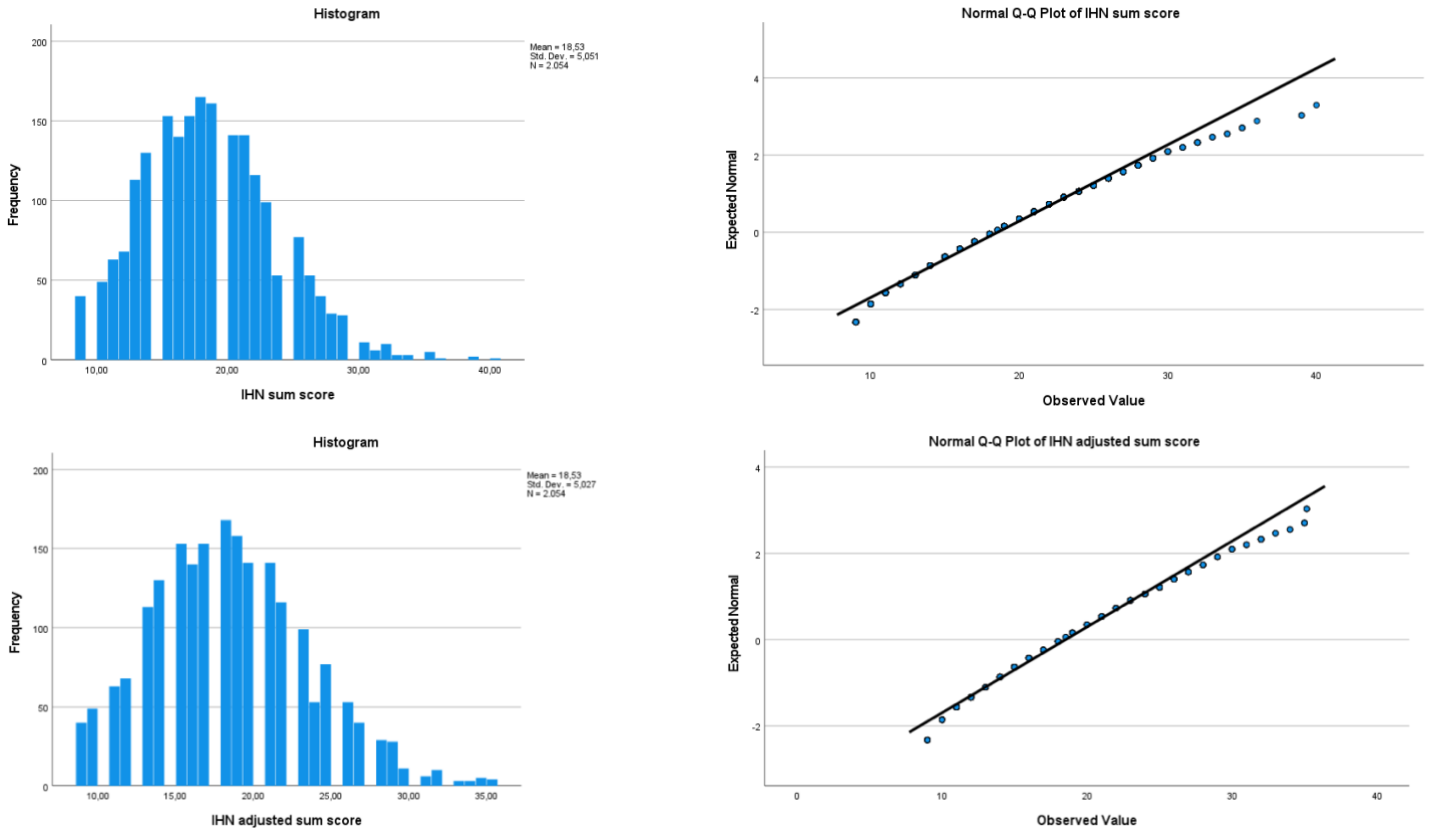
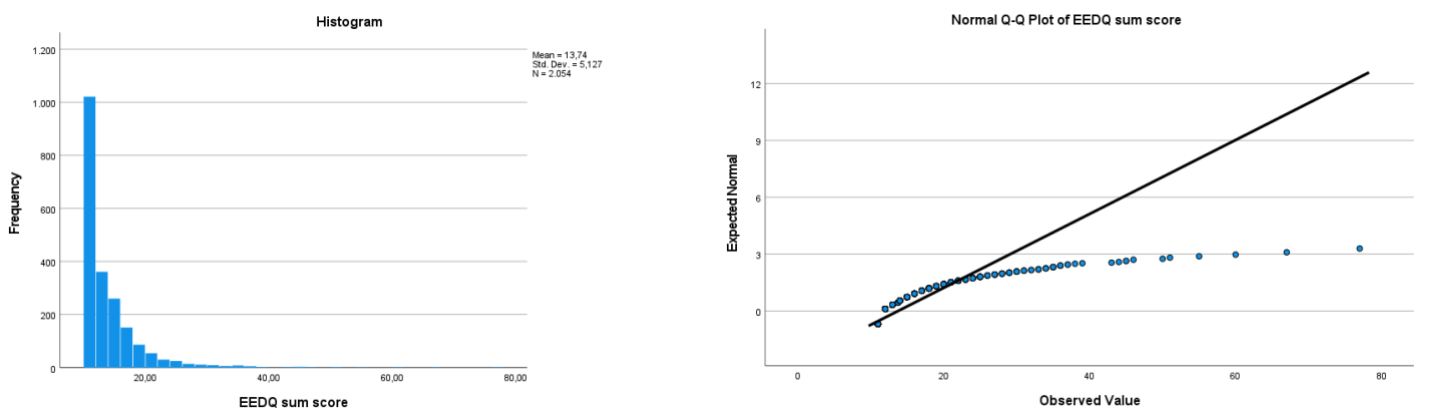


Figure 12

Histogram and Normal Q-Q Plot for EED before (upper) versus after (lower) Outlier Adjustment



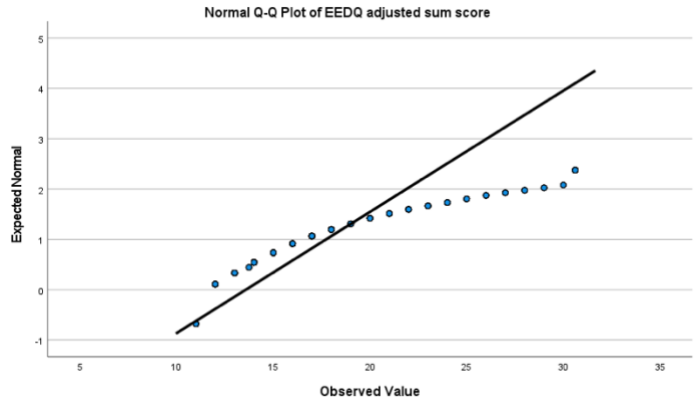
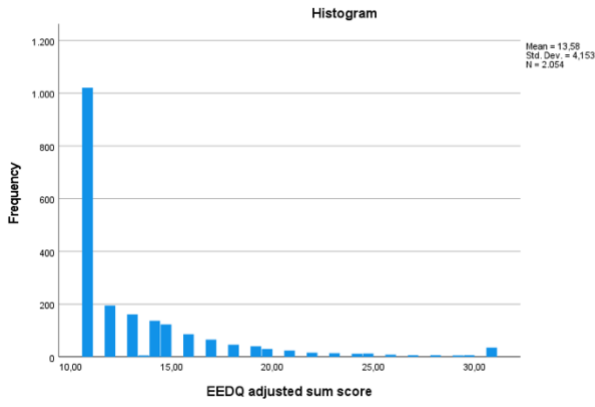


Figure 13

Histogram and Normal Q-Q Plot for Confidant Support before (upper) versus after (lower) Outlier Adjustment

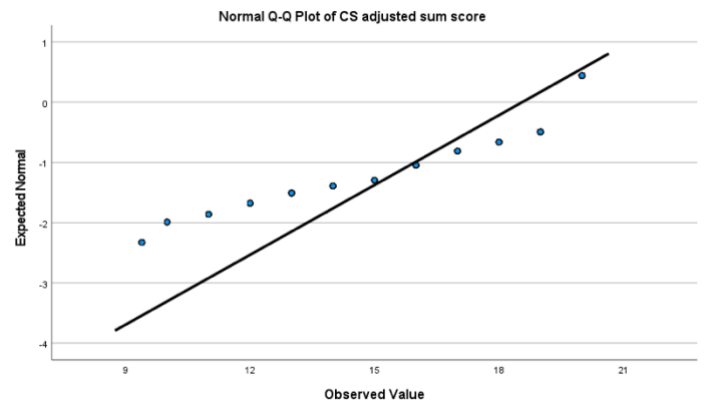
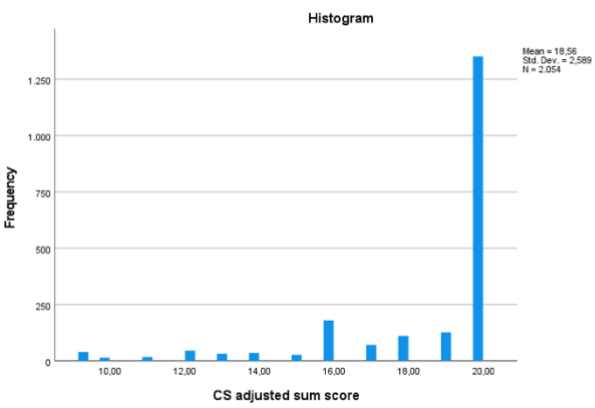
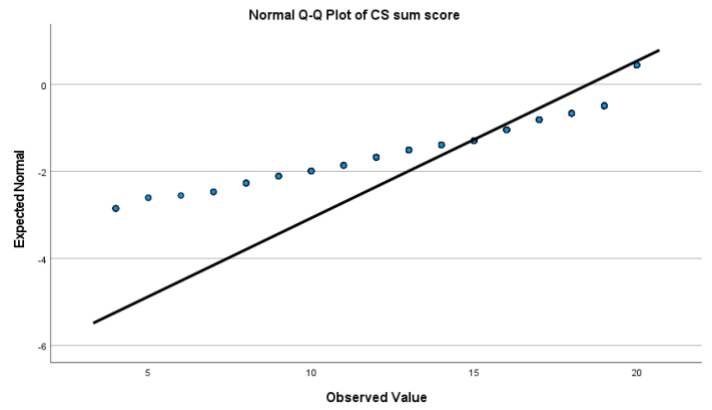
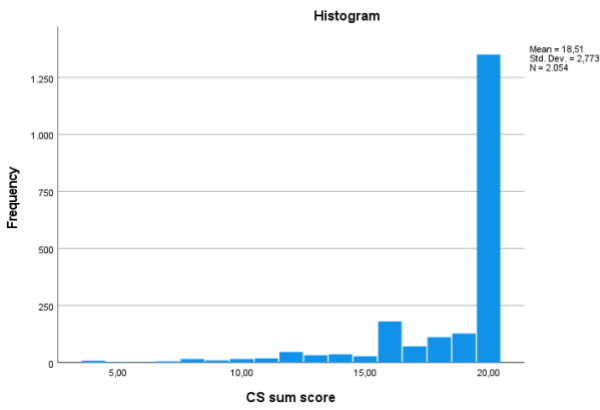
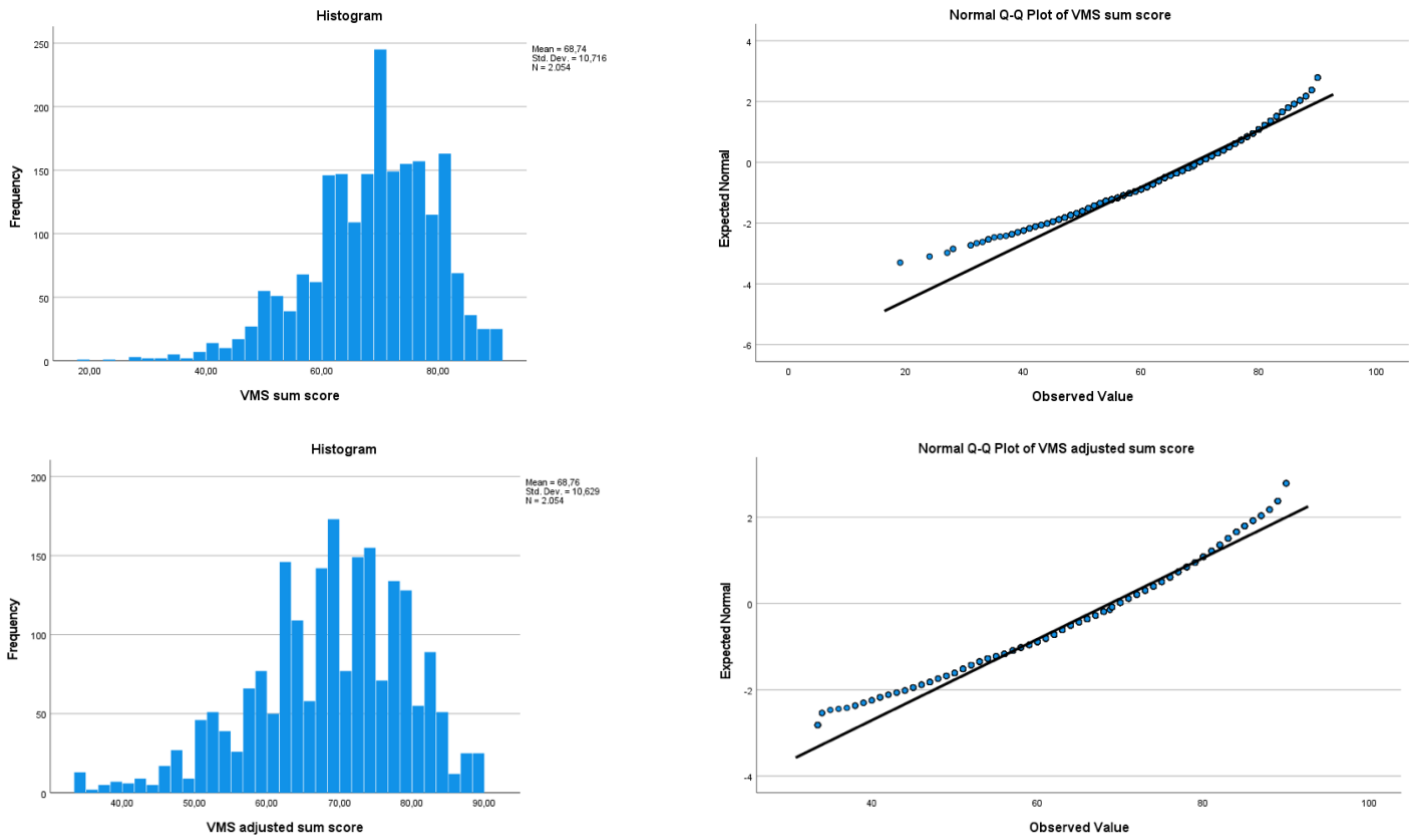


Figure 14

Histogram and Normal Q-Q Plot for Visibility management before (upper) versus after (lower) Outlier Adjustment



Correlations. Correlations between the five variables of interest were computed with and without uni- and multivariate outliers. The correlation matrix without these outliers was already discussed in the results section. Tables 8 and 9 show the correlation matrices before outlier adjustment on univariate and multivariate level, respectively. The significance of the correlations does not differ across the three correlation matrices: only IHN and EED do not correlate significantly. The correlations themselves did not change much either; the ones in bold are the ones that changed the most (green for heightened, red for lowered in absolute terms). What stands out is that SC and EED correlated fairly less (a difference of .71) before the data was adjusted for outliers. Conversely, the correlation between EED and CS was .47 (.38) more negative before the data was adjusted for (multivariate) outliers.

Table 8*Descriptive Statistics and Correlations before Adjustment for Univariate and Multivariate Outliers*

Variables	<i>n</i>	M	SD	1	2	3	4
1. Internalized homonegativity	2054	18.53	5.05	—			
2. Stigma consciousness	2054	32.75	8.85	.214*	—		
3. Experience of everyday discrimination	2054	13.74	5.13	.041	.373*	—	
4. Confidant support	2054	18.51	2.73	-.155*	-.105*	-.155*	—
5. Visibility management	2054	68.74	10.72	-.446*	-.255*	-.076*	.207*

Note. M = mean. SD = Standard Deviation.

* $p < .05$.

Table 9*Descriptive Statistics and Correlations after Adjustment for Univariate, before Adjustment for Multivariate Outliers*

Variables	<i>n</i>	M	SD	1	2	3	4
1. Internalized homonegativity	2054	18.53	5.03	—			
2. Stigma consciousness	2054	32.75	8.85	.214*	—		
3. Experience of everyday discrimination	2054	13.58	4.15	.034	.430*	—	
4. Confidant support	2054	18.56	2.59	-.164*	-.110*	-.146*	—
5. Visibility management	2054	68.76	10.63	-.450*	-.253*	-.086*	.210*

Note. M = mean. SD = Standard Deviation.

* $p < .05$.

Independent samples t-test for sex. In Tables 10 and 11, results for the independent samples t-test before outlier adjustment are displayed. When compared to Table 3 in the results section, one can see that the values of the means and standard deviations do not differ much. Only the values for EED have decreased somewhat after outlier adjustment. The significance of the t-tests

remains unchanged: women significantly differ from men for SC and EED, and marginally significantly for CS.

Table 10

Independent Samples T-Tests before Outlier Adjustment

Variables	Females		Males		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Internalized homonegativity	18.57	4.78	18.49	5.36	1897	-.328	.743
Stigma consciousness	31.54	8.64	34.18	8.88	2052	6.811	< .001
Experience of everyday discrimination	13.39	4.73	14.16	5.54	1854	3.343	< .001
Confidant support	18.70	2.55	18.29	3.00	1850	-3.266	.001
Visibility management	69.06	10.46	68.35	11.01	2052	-1.508	.132

Note. *M* = mean. *SD* = Standard Deviation. *df* = degrees of freedom.

Table 11

Independent Samples T-Tests after Univariate Outlier Adjustment, before Multivariate Outlier Adjustment

Variables	Females		Males		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Internalized homonegativity	18.56	4.75	18.49	5.34	1896	-.326	.744
Stigma consciousness	31.54	8.64	34.18	8.88	2052	6.811	< .001
Experience of everyday discrimination	13.26	3.98	13.95	4.32	1926	3.720	< .001
Confidant support	18.73	2.41	18.35	2.77	1871	-3.257	.001
Visibility management	69.08	10.39	68.38	10.90	2052	-1.482	.139

Note. *M* = mean. *SD* = Standard Deviation. *df* = degrees of freedom.

Univariate linear regressions. As mentioned before, the univariate linear regressions were also done before and after adjustment for outliers. In Tables 12 and 13, the results for the linear

regressions are shown before any outlier adjustment and before multivariate outlier adjustment but after univariate outlier adjustment, respectively. The biggest changes are printed in bold, for example the fact that the effect of sex on CS was statistically significant ($p < 0.01$) before (multivariate) outlier adjustment, but not after. This was the only change in the conclusions regarding significance of the effects. The estimated effects did not change much either, except for some slightly heightened and other slightly lowered effects. These were also printed in bold.

Table 12

Univariate Linear Regression Results before Outlier Adjustment

Effect	Standardized coefficient	Estimate	SE	p
Internalized homonegativity^b				
Stigma consciousness	.126	.072	.013	< .001
Experience of everyday discrimination	-.045	-.044	.021	.036
Confidant support	-.068	-.123	.037	< .001
Visibility management	-.405	-.191	.010	< .001
Sex	.041	.418	.201	.038
Stigma consciousness^b				
Internalized homonegativity	.126	.221	.038	< .001
Experience of everyday discrimination	.348	.601	.034	< .001
Confidant support	.013	.040	.065	.537
Visibility management	-.171	-.141	.018	< .001
Sex	-.119	-2.112	.349	< .001

Effect	Standardized coefficient	Estimate	SE	<i>p</i>
Experience of everyday discrimination ^c				
Internalized homonegativity	-.048	-.049	.023	.036
Stigma consciousness	.375	.217	.012	< .001
Confidant support	-.128	-.236	.039	< .001
Visibility management	.024	.012	.011	.295
Sex	-.010	-.103	.212	.628
Confidant support ^c				
Internalized homonegativity	-.080	-.044	.013	< .001
Stigma consciousness	.015	.005	.008	.537
Experience of everyday discrimination	-.141	-.076	.012	< .001
Visibility management	.162	.042	.006	< .001
Sex	.060	.333	.120	.006
Visibility management ^b				
Internalized homonegativity	-.392	-.831	.042	< .001
Stigma consciousness	-.165	-.200	.026	< .001
Experience of everyday discrimination	.022	.046	.044	.295
Confidant support	.132	.511	.076	< .001
Sex	.004	.078	.419	.853

Note. Assumptions for linear regressions: correlations between independent variables <.7; correlations between independent and dependent variables >.3; collinearity tolerance >.01; VIF <10; normal P-P plots following the diagonal; scatterplots within rectangle between (-)3; standardized residuals between (-)3; Cook's distance <1. The assumption of the scatterplots was always somewhat unmet, but a proportionally small amount of outliers was accepted given the size of the dataset. Normal P-P plots that were somewhat bended were also accepted because of the same reason. VIF = Variance Inflation Factor. SE = Standard Error.

^a all assumptions for linear regressions met, except for correlation >.3 between independent and dependent variables.

^b all assumptions for linear regressions met, except for correlation $>.3$ between independent and dependent variables and standardized residuals between $(-).3$. ^c all assumptions for linear regressions met, except for correlation $>.3$ between independent and dependent variables, standardized residuals between $(-).3$ and normal P-P plot.

Table 13

Univariate Linear Regression Results after Univariate Outlier Adjustment and before Multivariate Outlier Adjustment

Effect	Standardized coefficient	Estimate	SE	<i>p</i>
Internalized homonegativity ^b				
Stigma consciousness	.138	.078	.013	< .001
Experience of everyday discrimination	-.068	-.082	.026	.002
Confidant support	-.077	-.149	.039	< .001
Visibility management	-.406	-.192	.010	< .001
Sex	.041	.413	.199	.038
Stigma consciousness ^a				
Internalized homonegativity	.132	.232	.038	< .001
Experience of everyday discrimination	.404	.861	.041	< .001
Confidant support	.012	.042	.067	.532
Visibility management	-.159	-.132	.018	< .001
Sex	-.112	-1.990	.340	< .001

Effect	Standardized coefficient	Estimate	SE	<i>p</i>
Experience of everyday discrimination ^c				
Internalized homonegativity	-.070	-.058	.018	.002
Stigma consciousness	.435	.204	.010	< .001
Confidant support	-.113	-.181	.033	< .001
Visibility management	.017	.007	.009	.450
Sex	-.010	-.080	.167	.632
Confidant support ^c				
Internalized homonegativity	-.092	-.047	.012	< .001
Stigma consciousness	.015	.005	.007	.532
Experience of everyday discrimination	-.131	-.082	.015	< .001
Visibility management	.159	.039	.006	< .001
Sex	.060	.309	.112	.006
Visibility management ^b				
Internalized homonegativity	-.395	-.835	.042	< .001
Stigma consciousness	-.161	-.194	.026	< .001
Experience of everyday discrimination	.016	.042	.055	.450
Confidant support	.129	.531	.081	< .001
Sex	.004	.075	.416	.856

Note. Assumptions for linear regressions: correlations between independent variables <.7; correlations between independent and dependent variables >.3; collinearity tolerance >.01; VIF <10; normal P-P plots following the diagonal; scatterplots within rectangle between (-)3; standardized residuals between (-)3; Cook's distance <1. The assumption of the scatterplots was always somewhat unmet, but a proportionally small amount of outliers was accepted given the size of the dataset. Normal P-P plots that were somewhat bended were also accepted because of the same reason. VIF = Variance Inflation Factor. SE = Standard Error.

^a all assumptions for linear regressions met, except for correlation >.3 between independent and dependent variables.

^b all assumptions for linear regressions met, except for correlation $>.3$ between independent and dependent variables and standardized residuals between $(-).3$. ^c all assumptions for linear regressions met, except for correlation $>.3$ between independent and dependent variables, standardized residuals between $(-).3$ and normal P-P plot.

Comparison of path analysis with and without outliers

The path analysis was done twice to be able to detect the effect of outliers on the results. Comparisons depending on the presence of univariate and multivariate outliers are discussed below. The differences in results are also displayed in Tables 14 to 17.

Univariate outliers. To investigate the effect of the univariate outliers, the path analysis was done with and without the respondents who showed univariate outliers for the variables IHN, SC, EED, CS and VM. This is a discussion of the analyses with the data before any outlier adjustment.

Testing the moderation effects. The same conclusions regarding significance could be made when the interactions of sex with VM were tested as predictors for the four dependent variables, but this time before any outliers were dealt with. Again, the interaction effect in predicting IHN was the only significant one ($\beta = .05116, p < .001$). The interaction effect of sex on the effect of VM on CS was not statistically significant, albeit more significant than after outlier adjustment ($\beta = -.018438, p = .0987$). The same holds true for the interaction predicting ED ($\beta = .02710, p = .1978$), and the opposite for SC as dependent variable ($\beta = .01573, p = .653$).

Path analysis. The proposed model seems to have a better fit after than before outlier adjustment. This is shown by the fit indices reported in Table 14. The p -value of the chi-square statistic is not shown in the table, as it's the same in both analyses ($df = 1, p = 0.000$).

Table 14

Improvement in Fit after Outlier Adjustment

	Before any outlier adjustment	After complete outlier adjustment
$\chi^2(1)$	39.382	16.653
CFI	0.966	0.988
RMSEA	0.137	0.088
SRMR	0.027	0.018

Note. CFI = Comparative Fit Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Squared Residual.

Table 15 shows the regression results of the path analysis before outlier adjustment. The biggest changes, compared to the results after outlier adjustment, were printed in bold.

Remarkable is that the indirect effects all changed, some more than others. For example, the significance of the b-path of the mediation for IHN as dependent variable changed from .000 to .005, which is a different range of significance. The b-path for SC as dependent variable, too, was less significant with outliers still in the data, as well as the moderation for SC as dependent variable. The same holds true for the moderation in the case of IHN as dependent variable: the *p*-value rose to .020, which is also another range of significance ($< .05$ instead of $< .01$). Reversely, the *p*-values of both the moderation for EED as dependent variable and the moderated mediation in the a-path were lowered, although they didn't become significant. Coefficient changes were only minimal.

Table 15

Path Analysis of the Complete Model before Outlier Adjustment

Effect	Estimate	SE	<i>p</i>	95% CI	
				LL	UL
<i>Direct effects</i>					
A: direct effect VM-IHN	-.230	.016	.000	-.260	-.197
B: direct effect VM-SC	-.216	.025	.000	-.263	-.166
C: direct effect VM-ED	-.049	.023	.033	-.098	-.005
<i>Indirect effects</i>					
D: mediation a-path VM-CS	.063	.012	.000	.040	.085
E: mediation b-path CS-IHN	-.119	.042	.005	-.203	-.036
F: mediation b-path CS-SC	.013	.070	.853	-.124	.150
<i>Moderations</i>					
G: moderated mediation a-path: VM*Sex-CS	-.018	.014	.192	-.046	.007
H: interaction VM*sex in predicting IHN	.049	.021	.020	.007	.089
I: interaction VM*sex in predicting SC	.016	.035	.649	-.051	.088
J: interaction VM*sex in predicting ED	.027	.027	.317	-.025	.082

Note. LL = lower limit; UL = upper limit. SE = Standard Error. 95% CI = 95% Confidence Interval.

Multivariate outliers. To investigate the effect of the multivariate outliers, the path analysis was done with and without the respondents who showed multivariate outliers for the variables IHN, SC, EED, CS and VM. This is a discussion of the analyses with the data without the univariate, but with the multivariate outliers still in the data. The “Results” section represents the results for the data without any outliers.

Moderation effects. The same conclusions regarding significance could be made when the interactions of sex with VM were tested as predictors for the four dependent variables, this time after univariate outliers were recoded. Again, the interaction effect in predicting IHN was the only significant one ($\beta = .05570, p < .001$). The interaction effect of sex on the effect of VM on CS was not statistically significant, albeit more significant than after all outliers were adjusted for ($\beta = -.014363, p = .1717$). The same holds true for the interaction predicting EED ($\beta = .004383, p = .79845$), and the opposite for SC as dependent variable ($\beta = .01909, p = .588$). However, these results regarding the significance already tend to point more in the direction of the results after all outliers were dealt with. The greatest impact seems to lie in the adjustment of univariate outliers as far as these simple regressions are concerned.

Path analysis. The proposed model seems to have a better fit after than before outlier adjustment. This is shown by the fit indices reported in Table 16. The p -value of the chi-square statistic is not shown in the table, as it’s the same in both analyses ($df = 1, p = 0.000$). One can see the chi-square statistic, RMSEA and SRMR lowering through the various stages of outlier adjustment, whereas the CFI index rises.

Table 16

Improved Fit of the Proposed Model Compared over the Different Stages of Outlier Adjustment

	Before any outlier adjustment	After univariate outlier adjustment	After complete outlier adjustment
$\chi^2(1)$	39.382	33.197	16.653
CFI	0.966	0.974	0.988
RMSEA	0.137	0.125	0.088
SRMR	0.027	0.025	0.018

Note. CFI = Comparative Fit Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Squared Residual.

Table 17 shows the regression results of the path analysis before multivariate outlier adjustment. Again, the biggest changes were printed in bold. Here too, most of the indirect effects

changed, some more than others. For example, the significance of the b-path of the mediation for IHN as dependent variable (now only slightly) changed from .000 to .001, which is a different range of significance. The b-path for SC as dependent variable also again became less significant, as well as the moderation for SC as dependent variable. The same holds true for the moderation in the case of IHN as dependent variable. However, this p -value only slightly rose to .008. Reversely, the p -value of the moderated mediation in the a-path were lowered, although it did not become significant. Opposite to the changes discussed in the previous section, the moderation with EED as dependent variable became less significant. Coefficient changes were only minimal, just as in the previous section.

Table 17

Path Analysis of the Complete Model after Univariate Outlier Adjustment, before Multivariate Outlier Adjustment

Effect	Estimate	SE	p	95% CI	
				LL	UL
<i>Direct effects</i>					
A: direct effect VM-IHN	-.234	.015	.000	-.263	-.202
B: direct effect VM-SC	-.218	.025	.000	-.267	-.167
C: direct effect VM-ED	-.035	.014	.011	-.062	-.007
<i>Indirect effects</i>					
D: mediation a-path VM-CS	.058	.010	.000	.038	.078
E: mediation b-path CS-IHN	-.145	.043	.001	-.225	-.062
F: mediation b-path CS-SC	.009	.069	.898	-.130	.153
<i>Moderations</i>					
G: moderated mediation a-path: VM*Sex-CS	-.014	.013	.261	-.039	.010
H: interaction VM*sex in predicting IHN	.054	.020	.008	.013	.092
I: interaction VM*sex in predicting SC	.019	.035	.587	-.049	.090
J: interaction VM*sex in predicting ED	.004	.018	.809	-.034	.039

Note. LL = lower limit; UL = upper limit. SE = Standard Error. 95% CI = 95% Confidence Interval.