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# School-age bullying, workplace bullying and job satisfaction: Experiences of LGB people in Britain

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## Abstract

Using a data set that contains information on retrospective school-age bullying, as well as on workplace bullying in the respondents' present job, the outcomes of this study suggest that bullying, when it is experienced by sexual orientation minorities tends to persist over time. According to the estimations, it seems that school-age bullying of LGB people is associated with victims' lower educational level and occupational sorting into non-white-collar jobs, especially for gay/bisexual men. In addition, the outputs suggest that for both gay/bisexual men and lesbian/bisexual women, school-age bullying is positively associated with workplace bullying and negatively associated with job satisfaction. Additional results suggest a negative association between workplace bullying and job satisfaction. However, the outcomes show a positive association between the existence of an LGBT group in the workplace and job satisfaction.

**Keywords:** School-age bullying, workplace bullying, job satisfaction, sexual orientation

**JEL classifications:** J16, J28, J70

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The project could have not happened without assistance and comments kindly provided by several UK LGBT unions. I appreciate the study's participants, Anglia Ruskin University and University of Cambridge students for their able and cheerful assistance with data collection.

## **1. Introduction**

The current study examines the long-term associations between school-age bullying and workplace bullying experienced by sexual orientation minorities, as well as the association between workplace bullying and job satisfaction experienced by sexual orientation minorities in Britain. Utilizing 400 observations for gay, lesbian and bisexual employees in 2016, and employing retrospective questions regarding school-age bullying (Hamburger et al., 2011; Varhama and Björkqvist, 2005; Schafer et al., 2004) and questions regarding workplace bullying in respondents' present job (Nielsen and Einarsen, 2012; Einarsen et al., 2009), this study examines new relations.

Unfortunately, although anti-discrimination laws exist in the European Union (EU) to support sexual orientation minorities, bullying and biased treatments are regularly observed due to heterosexism (Drydakis, 2014a). Indeed, a current British study (McDermott and Luyt, 2016) suggests that many gay, lesbian and bisexual people face significant levels of prejudice, which have far-reaching consequences for their overall health and well-being. Worryingly, the study suggests that for one-third of sexual orientation minority individuals, ensuring their physical safety both at home and elsewhere is a constant or significant challenge. The aforementioned study also suggests that more than 40% of sexual orientation minority individuals experience some form of prejudice on a regular basis. Moreover, this situation is not limited to the EU. In a recent collection of international papers (Köllen, 2016), it was demonstrated that sexual orientation minorities are also subject to verbal, physical and social victimization (this being the definition of bullying, according to Nielsen and Einarsen, 2012; Nakamoto and Schwartz, 2009) in the United States, Australia and Asia. Various studies have suggested that sexual orientation minorities face several forms of school-age and workplace bullying that affect their mental health and functioning in the labour market (Köllen, 2016; Drydakis, 2014a; Kosciw et al., 2008).

In the literature, most studies have examined sexual orientation minorities' experiences either in school or in employment (Köllen, 2016; Drydakis, 2009; Drydakis, 2011; Drydakis, 2012; Drydakis, 2014a; Drydakis, 2015a; Russell et al., 2011; Kosciw et al., 2008). The present study contributes in the literature in several ways, as follows. This is the first study which simultaneously examines school-age and workplace bullying and their associations with job satisfaction. The dynamic nature of this study provides the opportunity to examine how bullying experiences in past and present periods experienced by sexual orientation minorities are associated with workplace evaluations, such as job satisfaction. In addition, the present study specifically addresses school-age and workplace bullying aimed at

sexual orientation minorities. The vast majority of the literature offers general bullying questions without enabling researchers to evaluate sexual orientation minorities. Moreover, studies on sexual orientation minority individuals' job satisfaction are scarce. Factors that are associated with sexual orientation minorities' job satisfaction are of importance, given the increased number of employees who are self-identified as gay, lesbian and bisexual (Drydakis, 2014a). Furthermore, this study examines how the existence of sexual orientation minority groups in the workplace moderates workplace bullying and job satisfaction. Of further importance to this study are the examinations of the associations between school-age bullying and employees' level of education and occupational sorting. Little prior research has examined these crucial associations from a minority sexual orientation perspective.

If school-age bullying is found to be positively associated with workplace bullying and negatively associated with job satisfaction, these patterns would suggest that bullying, when it is experienced by sexual orientation minorities tends to persist over time. In this study, by formulating seven hypotheses and testing them empirically, we will introduce several relations and potential implications into the workplace sexual orientation literature.

In what follows, in Section 2 we present the theoretical framework and the relevant hypotheses. In Section 3, we present the data-gathering procedures, coding of variable and descriptive statistics. In Section 4, the empirical approach is presented. In Section 5, the estimations are offered. In Sections 6 and 7, a discussion and limitations are offered, followed by conclusions.

## **2. Theoretical framework**

In the literature, studies show that bullied students face academic and social difficulties (e.g. Wolke and Lereya, 2015). Nakamoto and Schwartz (2009), who utilized 33 scholarly studies, evaluated that bullied students achieve lower academic performance and grades. Similarly, Takizawa et al., (2014) evaluated that bullied children have lower educational qualifications, while Le et al., (2005) showed that bullying is linked to school dropout rates. Also, Drydakis (2014b) estimated that school-age bullying is associated with lower human capital, including a lower probability of holding a higher-education degree. Review studies suggest that bullied students face depression, stress, lower social and global self-esteem, and anxiety (Wolke and Lereya, 2015). Such stressors could affect a student's performance and efficiency (Takizawa et al., 2014; Drydakis, 2014b; Juvonen et al., 2011). In relation to sexual orientation, studies from the UK and US suggest that between 44% and 96% of lesbian, gay, bisexual and transgender (LGBT) school students are verbally and physically

harassed (Guasp et al., 2012; Kosciw et al., 2008), while a higher incidence of adverse mental health problems and lower academic achievements due to LGBT-related bullying are reported (Burton et al., 2013; Russell et al., 2011; Kosciw et al., 2008; Birkett et al., 2009; Advocates for Children, Inc., 2005). A recent UK study (Guasp et al., 2012) indicated that 32% of gay students who experience bullying change their plans for future education as a result. In the current study, we hypothesise that a pattern of bullying experiences in school would negatively affect LGBT students' human capital. On the basis of these patterns, we formulate the following as the first hypothesis related to school-age bullying and higher education:

**Hypothesis 1.** There is a negative association between school-age bullying experienced by sexual orientation minorities and higher education.

According to Hypothesis 1, if victims of bullying invest less in their own human capital, one would expect that their employment outcomes will be lower and inferior to those of individuals who did not experience childhood bullying (Drydakis, 2014b). Studies from Takizawa et al. (2014), Drydakis (2014b), Brown and Taylor (2008), and Waddell (2006) provide evidences that school-age bullying negatively influences employment and wages. Drydakis (2014b) evaluates that an individual's overall compensation depends on the type and amount of skills possessed, and on the return that each subcomponent of the skill vector earns in a given occupation. If LGBT victims of bullying face lower probabilities of holding a higher-education degree than those who were not bullied, then they might face lower chances of being white-collar employees; such occupations more regularly require a higher-education degree and advanced human capital, in comparison with blue- and pink-collar occupations. We suggest that school-age bullying may be regarded as part of an individual's set of productive traits that affect occupational sorting (Drydakis, 2014b). On the basis of these patterns, we formulate the following as the second hypothesis related to school-age bullying and white-collar employment:

**Hypothesis 2.** There is a negative association between school-age bullying experienced by sexual orientation minorities and white-collar employment.

It has been shown that biased treatments and bullying follow minority individuals in their early and adult life (Drydakis, 2014a; 2014b; Burton et al., 2013; Russell et al., 2011; Kosciw et al., 2008; Badgett, 2007). School-age and workplace bullying share common underlying principles and adverse consequences: minority population groups attract societal discrimination and harassment, and face adverse mental health problems due to societal biases (Drydakis, 2014b; Nielsen and Einarsen, 2012; Burton et al., 2013; Equality Challenge Unit, 2009; Badgett, 2007; Jex, 2002). LGBT adults most commonly reveal problems relating to a

sense of openly heterosexist verbal and physical abuse, problems with their families, universities, neighbourhoods, colleagues and social services (McDermott and Luyt, 2016; Equality Challenge Unit, 2009; Badgett, 2007). Similarly, all relevant studies suggest that LGBT employees face bullying and harassment in the workplace (Hoel et al., 2014; Drydakis, 2014a; Ellison and Gustone, 2009; Hunt and Jensen, 2007). Sexual orientation minorities regularly report reluctance to disclose their sexual orientation in the workplace for fear of discrimination and bullying (Drydakis, 2014a; Ozeren, 2014). A present UK study highlights that LGB employees are either occasionally or regularly bullied (Hoel et al., 2014). In addition, some studies suggest that post school-age bullying victims might exhibit characteristics of vulnerability, such as sub-assertive behaviours, which make them attractive targets for unfavourable treatments and evaluations from colleagues and employers in the workplace (Drydakis, 2014b; Newman et al., 2005; Meyers and Meyers, 2003). According to these patterns, it seems that bullying might chronically affect the lives of sexual orientation minorities, and one could suggest that school-age bullying is transformed into workplace bullying. The empirical evidences suggest that an association between school-age bullying and workplace bullying might be expected; thus, LGBT people who have attracted school-age bullying might attract workplace bullying. In other words, LGBT bullying might persist over time. On the basis of these patterns, we formulate the following as the third hypothesis related to school-age bullying and workplace bullying:

**Hypothesis 3.** There is a positive association between school-age bullying and workplace bullying experienced by sexual orientation minorities.

Importantly, organizational support from organizations, such as the existence of written equality policies, and minority groups and networks, are perceived forms of policies, procedures and programmes that aim to raise awareness of the importance of sexual orientation equality and diversity (King and Cortina, 2010; Riggle et al., 2009; King et al., 2008; Huffman et al., 2008). Studies suggest that there is a positive association between various forms of organizational support and employees' well-being, and organizational commitment (King and Cortina, 2010; Panaccio and Vandenberghe, 2009; Riggle et al., 2009; Cho et al., 2009; Quine, 2001). In addition, a negative association is also suggested between organizational support and intention to leave the organization (Riggle et al., 2009; Cho et al., 2009). Firms are keen to create better work environments in order to attract and retain top talent, and to reduce costly staff turnover and time-consuming investigations of bullying complaints (Riggle et al., 2009; Cho et al., 2009; Huffman et al., 2008). Support is very important for LGBT employees, due to the unique stressors they experience (Huffman et al.,

2008). It is expected that the existence of an LGBT group in the workplace could improve the visibility and experiences of its members by establishing anti-discrimination and anti-bullying policies and procedures (Drydakis, 2014a; Huffman et al., 2008). On the basis of these patterns, we formulate the following as the fourth hypothesis related to the existence of an LGBT group in the workplace and workplace bullying:

**Hypothesis 4.** There is a negative association between the existence of an LGBT group in the workplace and workplace bullying experienced by sexual orientation minorities.

In addition, studies suggest that school-age bullying is related to low confidence around others and lower-quality social relationships in adult life (Wolke and Lereya, 2015; Orth et al., 2009; Ledley et al., 2006). Victims of school-age bullying are found to have more trouble making or keeping friends, and to be less likely to live with a partner and have social support (Wolke and Lereya, 2015). Studies suggest that experience of school-age bullying corresponds to difficulties in forming trusting relationships as an adult, as well as greater risk of depression and post-traumatic stress (Wolke and Lereya, 2015; Dempsey and Storch, 2008; Ledley et al., 2006). Also, adults who had been bullied as children reported poorer mental health and physical health compared with those who had not been bullied (Allison et al., 2009). In addition, review studies on the long-term effects of school-age bullying suggest that victims of bullying earn lower incomes, and show poor performance in managing finances as adults (Wolke and Lereya, 2015; Takizawa et al., 2014). According to the work of Smokowski and Kopasz (2005), being a victim of school-age bullying leads to an update of social expectations that is likely to produce an insecure internal working model of self-esteem, which then generates adverse social effects in adult life. Thus, these adverse well-being indicators could be associated with job dissatisfaction. Indeed, poor mental health is associated with job dissatisfaction (Avey et al., 2011; Culbertson et al., 2010; Lyubomirsky et al., 2005; Jex, 2002). Also, life dissatisfaction is associated with job dissatisfaction (Qu and Zhao, 2012; Bowling et al., 2010; Hsieh, 2010). In this study, we suggest that school-age bullying can be envisioned as an adverse well-being indicator (Drydakis, 2014b) that can be associated with job dissatisfaction. Because school-age bullying is linked to lower mental health and life satisfaction later in life, it seems likely that having been a victim of school-age bullying also has workplace implications later in life, due to the associations between mental health/life satisfaction and job satisfaction. The directions of the paths are expected to be straightforward: past bullying (school-age bullying) could affect current workplace evaluations (job satisfaction). On the basis of the aforementioned patterns, we formulate the following as the fifth hypothesis related to school-age bullying and job satisfaction:

**Hypothesis 5.** There is a negative association between school-age bullying and job satisfaction experienced by sexual orientation minorities.

Workplace bullying is a major occupational stressor (Carroll and Lauzier, 2014; Nielsen and Einarsen, 2012; Hauge et al., 2010; Barling et al., 2001). Meta-analyses and studies using longitudinal data suggest that workplace bullying is positively associated with job dissatisfaction, decreased loyalty to the organization, physical withdrawal from work, and intent to leave the organization (Nielsen and Einarsen, 2012; Rodriguez-Munoz et al., 2009; Bowling and Beehr, 2006; Jex, 2002). Job satisfaction captures employees' self-evaluations in relation to their opportunities, relationships with co-workers and supervisors, job rewards, and progression (Drydakis, 2015b; Spector, 1997; Wanous and Lawler, 1972). Given the characteristics of workplace bullying (Nielsen and Einarsen, 2012; Hauge et al., 2010; Agervold, 2007) it is reasonable to suggest that workplace bullying could negatively affect several job satisfaction aspects. For instance, psychological mistreatment, humiliation in front of others, and ostracism by co-workers and supervisors could negatively affect victims' job satisfaction facets in relation to self-respect, opportunities for advancement, ability to receive pay increases, and co-workers' perception of them. Studies have found that gay men and lesbians are more than twice as likely as other employees to report bullying or harassment, and nearly twice as likely to report experiencing unfair treatment in relation to wages, benefits, task allocations, promotions and recognitions (Hoel et al., 2014; Drydakis, 2014a; Badgett et al., 2007; Employment Market Analysis and Research, 2009). In addition, such individuals experience the stress of having to come to terms with their own sexuality while simultaneously negotiating their workplace's heterosexism and harassments, and dealing with the consequences of past bullying (in schools, previous jobs and in society in general). The resultant vulnerability (Zapf and Einarsen, 2011; Aquino and Lamertz, 2004) may place many sexual orientation minority individuals at risk of adverse mental health symptoms, which might affect job function and job satisfaction. The negative mood associated with workplace bullying is suggested as predicting several organizational and personal variables, such as perceived fairness, affective commitment and cognitive difficulties, which might influence job satisfaction (Carroll and Lauzier, 2014; Hauge et al., 2010; Barling et al., 2001). It is also suggested that workplace bullying is the cause rather than the consequence of job dissatisfaction (Rodriguez-Munoz et al., 2009). On the basis of the patterns presented, we formulate the following as the sixth hypothesis related to workplace bullying and job satisfaction:



**Hypothesis 6.** There is a negative association between workplace bullying and job satisfaction experienced by sexual orientation minorities.

As we have evaluated in formulating Hypothesis 4, it is crucial for firms to develop better work environments in order to enhance employees' job satisfaction, commitment and productivity, and to reduce complaints and turnover (Riggle et al., 2009; Panaccio and Vandenberghe, 2009; Cho et al., 2009). Studies have identified that policies that respect and celebrate diversity result in higher levels of well-being and organizational commitment in employees (Riggle et al., 2009; Cho et al., 2009; Quine, 2001). An LGBT-supportive organizational climate is a critical determinant of the experience of LGBT employees in the workplace (King et al., 2008; Huffman et al., 2008). Policies and procedures such as the existence of minority employee groups, which could create a culture of respect and diversity regarding sexual orientation minorities, might be able to reduce workplace bullying; this would result in diversity, equality of opportunities and increased job satisfaction (King et al., 2008; Huffman et al., 2008; Quine, 2001). Studies suggest that protective environments could reduce unfair and disturbing experiences of LGBT employees, resulting in lower adverse mental health issues, higher self-esteem and higher levels of job satisfaction (Drydakis, 2014a; Avey et al., 2011; Culbertson et al., 2010; Riggle et al., 2009; Lyubomirsky et al., 2005). In addition, openness about one's sexual orientation in the workplace has been found to positively affect job satisfaction (Drydakis, 2015b; Huffman et al., 2008). We suggest that firms that have LGBT groups might foster openness (Drydakis, 2014a). On the basis of the patterns presented, we formulate the following as the seventh hypothesis, related to the existence of an LGBT group in the workplace and job satisfaction:

**Hypothesis 7.** There is a positive association between the existence of an LGBT group in the workplace and job satisfaction experienced by sexual orientation minorities.

To summarize, the seven aforementioned hypotheses aim to increase our knowledge of how exposure to school-age bullying experienced by sexual orientation minorities is associated with human capital levels, occupational sorting, and workplace evaluations and experiences. In addition, the study's hypotheses aim to evaluate whether workplace bullying experienced by sexual orientation minorities is negatively associated with job satisfaction, and whether the existence of an LGBT group in the workplace could be associated with both workplace bullying and job satisfaction.

### **3. Data**

#### *3.1 Data gathering and variables coding*

LGBT History Month is celebrated in February in the UK; it is a month-long annual celebration of LGBT history, and its aim is to promote equality and diversity for the benefit of the public. During this month there is a timetable of social events such as lectures, round-table talks, film screenings, workshops, and artistic and cultural exhibitions focusing on LGBT-oriented issues. These events provide a unique opportunity for researchers to undertake face-to-face collaborations with a large number of sexual orientation minority individuals, provide questionnaires, conduct interviews, and collect valuable data. The present research was conducted by Anglia Ruskin University during February 2016. The research team observed three events in Cambridge, three events in London and three events in Oxford. A questionnaire was designed and distributed to the participants during the events. The organizers of the events had knowledge of our research project, and were happy to give us permission and time to conduct our data gathering. In addition, the organizers devoted some minutes speaking to the public regarding our project. The organizers informed the public that a questionnaire would be distributed, and introduced the aim of the project (Appendix I).

The questionnaire highlighted that the research was being carried out in order to measure school-age bullying due to minority sexual orientation by using a retrospective question, and to measure workplace bullying due to minority sexual orientation, as well as job outcomes. The participant information mentioned the title of the project, 'School-age bullying, workplace bullying due to a minority sexual orientation and job outcomes'. The participant information highlighted 'the questions to be completed if you identify as gay/lesbian, bisexual or other sexual orientation minority'. In addition, the participation information highlighted 'the questions to be completed if you are employed and at least 18 years old'. The participation information welcomed individuals to approach the representatives of the research team if they had any queries about the research.

To capture sexual orientation, we included a direct question about an individual's sexual orientation (Drydakis, 2015b; Carpenter, 2005). Individuals were asked: 'The next question is about sexual orientation: Do you consider yourself to be: (a) gay/lesbian? (b) bisexual? (c) other sexual orientation minority?' Carpenter (2005) argues that direct self-reports of sexual orientation offer a measure of sexuality that, in the context of labour-market analyses, is preferable to behavioural measures. This is because self-reported sexual orientation is more representative of workplace disclosure than is data for same-sex sexual behaviour, primarily because the latter is likely to be less observable to employers (Carpenter,

2005). In the current study, given the fact that none of the participants identified as ‘other sexual orientation minority’, sexual orientation was coded using a dummy variable (1 = gay/lesbian, 0 = bisexual).

Regarding the most important variable in this study, school-age bullying (SAB), we followed the retrospective question used by Drydakis (2014b), Russell et al. (2011), Hamburger et al. (2011), Varhama and Björkqvist (2005), Schafer et al. (2004) and Rivers (2001), which addresses the experience of victimisation at school age. School-age bullying is recognised as aggressive behaviour characterised by repetition and the inability of the victim to defend him or herself (Olweus, 1993). Individuals were asked, ‘The following question is about school-age bullying due to sexual orientation: Please think back to your school days, up to eighteen years old. You may have been bullied by others, due to your minority sexual orientation (i.e. for being gay, lesbian, bisexual or other sexual orientation minority), in some way, such as verbally (e.g. name calling), physically (e.g. hitting) and socially (e.g. spreading rumours, social rejection, extortion, and isolation). Please, choose which best describes your own experience at school: (a) never bullied, (b) rarely bullied, (c) sometimes bullied, (d) frequently bullied, (e) constantly bullied’. Then, the format of a typical ordered-level Likert (1932) scale was utilized to code the answers (0 = never bullied, 4 = constantly bullied). Studies suggest that the frequency of school-age bullying is a contributing factor to the development of long-term social problems during adulthood (Hamburger et al., 2011; Jantzer et al., 2006; Newman et al., 2005).

In order to capture workplace bullying due to sexual orientation, a straightforward question was included in the questionnaire. In the literature, the vast majority of the studies define workplace bullying as a prolonged, repeated exposure to negative and unreasonable behaviour from other employees, which often involves a power imbalance in which victims are unable to retaliate and/or defend themselves (Nielsen and Einarsen, 2012; Einarsen et al., 2009). Individuals were asked: ‘The following question is about workplace bullying due to sexual orientation: You may have been bullied in your present job by others, due to your minority sexual orientation (i.e. for being gay, lesbian, bisexual or other sexual orientation minority), in some way, such as unfair treatment, ridiculing, shouting and verbal abuse, ostracism, denying training or promotion opportunities, and spreading malicious rumours. Please, choose which best describes your own experience at workplace: (a) never bullied, (b) rarely bullied, (c) sometimes bullied, (d) frequently bullied, (e) constantly bullied’. As in the case of school-age bullying, the format of a typical ordered-level Likert (1932) scale was used to code individuals’ answers (0 = never bullied, 4 = constantly bullied).

In addition, one measure of job satisfaction (Locke, 1976) was included in the questionnaire, namely total job satisfaction (Drydakis, 2015b). The job satisfaction question reads, ‘The next question is about total job satisfaction (i.e. a proxy of satisfaction with job rewards including salary, promotion prospects, and relations with colleagues including managers). Please, choose which best describes how satisfied or dissatisfied you are with your own present job: (a) totally dissatisfied, (b) dissatisfied, (c) neither dissatisfied nor satisfied, (d) satisfied, (e) totally satisfied’. To classify the answers, we followed the format of a typical five-level Likert (Likert, 1932) scale (1 = totally dissatisfied, 5 = totally satisfied). As we have evaluated, job satisfaction presents a set of factors that cause a feeling of satisfaction (Spector, 1997; Wanous and Lawler, 1972). In the literature, a substantial degree of agreement exists among researchers regarding the characteristics of job satisfaction, which include pay, relations with co-workers and supervisors, and promotion prospects (Spector, 1997; Wanous and Lawler, 1972).

Finally, in this study, in order to deal with various heterogeneities we included questions designed to control for participants’ sex (1 = man, 0 = woman); age (a continuous variable); higher education (1 = higher education degree, 0 = otherwise); years of actual working experience (a continuous variable); white-collar employment (1 = white-collar employment, 0 = otherwise; i.e. blue-collar and pink-collar employment); the existence of an LGBT group in the workplace (1 = existence of an LGBT group in the workplace; 0 = otherwise); cities effects (2 dummy variables, where London was the reference category); and time effects (eight dummy variables, where Event 1 was the reference category).

### *3.2 Descriptive statistics*

In 2016, the Office for National Statistics (2017), estimates that in London 2.7% of people were identified as LGB, followed by South East England (Oxford) 2.1%, and the East of England 1.2% (Cambridge). In addition, those in white-collar jobs were more likely to identify as LGB (2.3%) compared with those in pink-collar (1.6%), or blue-collar jobs (1.8%). Information, on education levels is not available.

**Table 1**, Panel I, presents the descriptive statistics for gay/bisexual men. Panel II presents the descriptive statistics for lesbian/bisexual women. Based on the sexual orientation and employment criteria in the participation information, the valid and utilized sample consists of 232 observations from gay/bisexual men and 168 observations from lesbian/bisexual women. In Panel I, it is observed that 87.5% are gay men and the rest are bisexual men; the mean age is 38.1 years; 60.3% hold a higher-education degree; and 70.6%

are white-collar employees. Similarly, in Panel II, the statistics show that 80.3% are lesbians and the rest are bisexual women; the mean age is 35.2 years; 54.1% hold a higher-education degree; and 59.5% are white-collar employees.

In Table 1, we also present the mean values for the school-age bullying (SAB), workplace bullying (WPB), and job satisfaction (JS) indicators for both sexes. For gay/bisexual men, the mean value for school-age bullying lies between ‘sometimes’ and ‘frequently bullied’, or 2.31; for workplace bullying, it lies between ‘rarely’ and ‘sometimes bullied’, or 1.87; and for job satisfaction, it lies between ‘dissatisfied’ and ‘neither satisfied nor dissatisfied’, or 2.54. In addition, for lesbian/bisexual women, the mean value for school-age bullying lies between ‘rarely’ and ‘sometimes bullied’, or 1.86; for workplace bullying it lies between ‘rarely’ and ‘sometimes bullied’, or 1.24; and for job satisfaction, it lies between ‘dissatisfied’ and ‘neither satisfied nor dissatisfied’, or 2.84. The statistics suggest that for both gay/bisexual men and lesbian/bisexual women, school-age bullying levels were higher than for workplace bullying. In addition, in all cases, gay/bisexual men experienced higher bullying levels than lesbian/bisexual women. Furthermore, lesbian/bisexual women reported higher job satisfaction than gay/bisexual men.

#### [Table 1]

In **Table 2**, we present the proportions of the key variables: school-age bullying, workplace bullying, and the job satisfaction indicator. In Panel I, for gay/bisexual men, the most frequent response for school-age bullying is ‘frequently bullied’ at 37.9%; for workplace bullying it is ‘sometimes bullied’ at 35.3%; and for job satisfaction it is ‘dissatisfied’ at 56.0%. In Panel II, for lesbian/bisexual women the most frequent response for school-age bullying is ‘frequently bullied’ at 36.9%; for workplace bullying it is ‘rarely bullied’ at 29.7%, and for job satisfaction it is ‘dissatisfied’ at 47.6%. The descriptive statistics suggest that bullying might be a chronic problem for LGB people, which continues from school to the workplace. The presented patterns are in line with other national and international studies (Köllen, 2016; Hoel et al., 2014; Drydakis, 2014b; 2015; Guasp et al., 2012; Russell et al., 2011; Kosciw et al., 2008). In Appendix II, we present the cross-tabulations of school-age bullying and workplace bullying. Gay/bisexual men who had experienced frequent school-age bullying face 35.2% chances to experience frequent workplace bullying. Lesbian/bisexual women who had experienced frequent school-age bullying, face 29% chances to experience frequent workplace bullying.

#### [Table 2]

In **Tables 3** and **4**, we also investigate the correlation matrixes which are used to determine whether bullying and job satisfaction indicators are correlated with each of the variables used in this study. For instance, in **Table 3**, it is observed that for gay/bisexual men there is a negative correlation between school-age bullying and higher education ( $r = -0.217$ ,  $p < 0.01$ ), white-collar employment ( $r = -0.252$ ,  $p < 0.01$ ), and job satisfaction ( $r = -0.744$ ,  $p < 0.01$ ). Also, there is a positive correlation between school-age bullying and workplace bullying ( $r = 0.863$ ,  $p < 0.01$ ). In addition, there is a negative correlation between workplace bullying and the existence of an LGBT group in the workplace ( $r = -0.564$ ,  $p < 0.01$ ). Furthermore, there is a negative correlation between workplace bullying and job satisfaction ( $r = -0.746$ ,  $p < 0.01$ ). Finally, there is a positive correlation between the existence of an LGBT group in the workplace and job satisfaction ( $r = 0.723$ ,  $p < 0.01$ ). In **Table 4**, the same qualitative patterns as in **Table 3** are estimated for lesbian/bisexual women, and the outcomes are similarly interpreted. The aforementioned patterns are in line with the theoretical arguments presented in the previous section; however, a multivariate analysis is needed in order to verify whether our study's hypotheses remain supported when key heterogeneities are taken into account.

[Table 3] - [Table 4]

#### 4. Empirical framework

We followed the empirical approach employed by most current empirical studies on school-age bullying and education/employment outcomes (Drydakis, 2014b; Brown, and Taylor, 2008). To evaluate the associations between school-age bullying experienced by sexual orientation minorities and higher education (**Hypothesis 1**), we estimated a probit model and we report marginal effects. We present the relationship in the following equation:

$$HE_i = SAB_i b_1 + x_i b_2 + u_i \quad \text{Equation 1}$$

where  $HE$  is higher education;  $SAB$  is school-age bullying experienced by sexual orientation minorities;  $x$  is a vector of individual characteristics, controlling for relevance to the relationship under examination of heterogeneities such as being gay or bisexual, cities and events controls;  $i$  refers to individuals; and  $u$  is the error component that varies among individuals. A negative  $b_1$  suggests a negative association between higher education and school-age bullying.

Similarly, to test the association between school-age bullying experienced by sexual orientation minorities and white-collar employment (**Hypothesis 2**) we estimated a probit model and we report marginal effects, which is given by the following equation:

$$WCE_i = SAB_i b_1 + x_i b_2 + u_i \quad \text{Equation 2}$$

where WCE is white-collar jobs, and  $x$  controls for information such as being gay or bisexual, higher education, cities, and events heterogeneity. A negative  $b_1$  suggests a negative association between school-age bullying and white-collar employment.

To estimate the associations between (i) school-age bullying and workplace bullying experienced by sexual orientation minorities (**Hypothesis 3**) and (ii) the existence of an LGBT group in the workplace and workplace bullying experienced by sexual orientation minorities (**Hypothesis 4**), we estimated an ordered-probit model (Drydakis, 2014b):

$$WPB_i = SAB_i b_1 + LGBTgroup_i b_2 + x_i b_3 + u_i \quad \text{Equation 3}$$

where WPB is workplace bullying experienced by sexual orientation minorities  $n$ , LGBT group is the existence of an LGBT group in the workplace, and  $x$  controls for being gay or bisexual, age, higher education, white collar-employment, working experience, cities, and events heterogeneity. A positive  $b_1$  suggests a positive association between school-age bullying and workplace bullying. A negative  $b_2$  suggests a negative association between the existence of an LGBT group in the workplace and workplace bullying.

In addition, to estimate the associations between (i) school-age bullying experienced by sexual orientation minorities and job satisfaction (**Hypothesis 5**), (ii) workplace bullying experienced by sexual orientation minorities and job satisfaction (**Hypothesis 6**), and (iii) existence of an LGBT group in the workplace and job satisfaction (**Hypothesis 7**), we estimated an ordered-probit model (Drydakis, 2014b):

$$JS_i = SAB_i b_1 + WPB_i b_2 + LGBTgroup_i b_3 + x_i b_4 + u_i \quad \text{Equation 4}$$

where JS is job satisfaction, and  $x$  controls for being gay or bisexual, age, higher education, white-collar employment, working experience, cities, and events heterogeneity. A negative  $b_1$  suggests a negative association between school-age bullying and job satisfaction. A negative  $b_2$  suggests a negative association between workplace bullying and job satisfaction. A positive  $b_3$  suggests a positive association between the existence of an LGBT group in the workplace and job satisfaction.

Equations 1 to 4 were estimated separately for gay/bisexual men and for lesbian/bisexual women, in order to gain a clear picture of the associations. After the hypotheses testing, we pooled the whole sample. The aim of the new specifications was to evaluate specifically whether different patterns hold among the two groups. The new dummy variable ‘men’ equals 1 when we refer to men. For instance, a positive ‘men’ coefficient would suggest that gay/bisexual men experienced higher levels of workplace (or school-age) bullying than lesbian/bisexual women.

## 5. Results

### 5.1 Gay/bisexual men

In Table 5, we present estimations for gay/bisexual men. In Model I, we offer the higher education estimations. We observe a negative association between school-age bullying experienced by sexual orientation minorities and higher education ( $b = -0.096$ ,  $p < 0.01$ ). School-age bullying is associated with a 9.6 per cent decrease in higher education. Thus, we accept **Hypothesis 1**.

In Model II we present the white-collar employment estimations. The estimations suggest a negative association between school-age bullying and white-collar employment ( $b = -0.058$ ,  $p < 0.05$ ). School-age bullying is associated with a 5.8 per cent decrease in white-collar employment. On the basis of these outcomes, we accept **Hypothesis 2**.

Also, in Model III, we offer the workplace bullying experienced by sexual orientation minorities estimations. We observe a positive association between school-age bullying and workplace bullying ( $b = 1.592$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that school-age bullying is associated with a 13.8 per cent ( $z=8.52$ ) increase in frequent workplace bullying. Thus, we accept **Hypothesis 3**.

In the same model, we also observe a negative association between the existence of an LGBT group in the workplace and workplace bullying ( $b = -1.113$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that the existence of an LGBT group in the workplace is associated with a 9.6 per cent ( $z=3.81$ ) decrease in frequent workplace bullying. Thus, we accept **Hypothesis 4**.

Furthermore, in Model IV, we present the job satisfaction estimations. The outcomes suggest a negative association between school-age bullying and job satisfaction ( $b = -0.571$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that school-age bullying is associated with a 1.9 per cent ( $z=2.61$ ) increase in job dissatisfaction. Thus, we accept **Hypothesis 5**.

Also, it is observed that there is a negative association between workplace bullying and job satisfaction ( $b = -0.421$ ,  $p < 0.05$ ). Ordered-probit marginal effects suggest that workplace bullying is associated with a 1.4 per cent ( $z=1.90$ ) increase in job dissatisfaction. Thus, we accept **Hypothesis 6**.

Finally, we can observe a positive association between the existence of an LGBT group in the workplace and job satisfaction ( $b = 1.701$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that the existence of an LGBT group in the workplace is associated with a 5.7 per cent ( $z=4.59$ ) decrease in job dissatisfaction. On the basis of the estimations, we accept **Hypothesis 7**.



## 5.2 Lesbian/bisexual women

In Table 6, we present estimations for lesbian/bisexual women. In Model I, the higher education estimations are offered. As we can see, there is a negative association between school-age bullying experienced by sexual orientation minorities and higher education ( $b = -0.290$ ,  $p < 0.01$ ). School-age bullying is associated with a 29 per cent decrease in higher education. Based on these patterns, we accept **Hypothesis 1**.

In addition, in Model II we offer the white-collar employment estimations. We can observe a statistically insignificant association between school-age bullying and white-collar employment ( $b = -0.008$ ,  $p < 0.25$ ). Thus, we reject **Hypothesis 2**.

In Model III, we present the workplace bullying experienced by sexual orientation minorities. It is observed a positive association between school-age bullying experienced by sexual orientation minorities and workplace bullying ( $b = 1.069$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that school-age bullying is associated with a 14.2 per cent ( $z=5.9$ ) increase in frequent workplace bullying. As a result, we can accept **Hypothesis 3**.

In addition, in Model III, we can see a statistically insignificant association between the existence of an LGBT group in the workplace and workplace bullying ( $b = -0.330$ ,  $p < 0.25$ ). Thus, we reject **Hypothesis 4**.

In addition, in Model IV, we offer the job satisfaction estimations. The patterns suggest a negative association between school-age bullying and job satisfaction ( $b = -0.575$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that school-age bullying is associated with a 4.3 per cent ( $z=3.55$ ) increase in job dissatisfaction. On the basis of these results, we accept **Hypothesis 5**.

Also, in the same model, we observe a negative association between workplace bullying and job satisfaction ( $b = -0.405$ ,  $p < 0.05$ ). Ordered-probit marginal effects suggest that workplace bullying is associated with a 3 per cent ( $z=2.13$ ) increase in job dissatisfaction. Thus, we accept **Hypothesis 6**.

Furthermore, there is a positive association between the existence of an LGBT group in the workplace and job satisfaction ( $b = 2.200$ ,  $p < 0.01$ ). Ordered-probit marginal effects suggest that the existence of an LGBT group in the workplace is associated with a 1.6 per cent ( $z=6.04$ ) decrease in job dissatisfaction. Thus, we accept **Hypothesis 7**.

### *5.3 Total sample: Gay/bisexual men and lesbian/bisexual women*

In Table 7, we pool data for gay/bisexual men and for lesbian/bisexual women. Based on the new estimations, in Models I to IV, we can accept all the study's hypotheses. With regard to our study's focus, it is observed in Model III that gay/bisexual men face higher levels of workplace bullying than do lesbian/bisexual women ( $b = 0.505, p < 0.01$ ). Ordered-probit marginal effects suggest that gay/bisexual men face 3.2 per cent ( $z=1.78$ ) higher levels of frequent workplace bullying than do lesbian/bisexual women. Finally, in Model V, it is observed that gay/bisexual men face higher levels of school-age bullying than do lesbian/bisexual women ( $b = 0.494, p < 0.01$ ). Ordered-probit marginal effects suggest that gay/bisexual men face 10.78 per cent ( $z=4.18$ ) higher levels of frequent school-age bullying than do lesbian/bisexual women.

## **6. Discussion**

In the present study, we aimed to examine whether school-age bullying is associated with workplace bullying and job satisfaction when it is experienced by sexual orientation minorities. The existing literature has yet to evaluate these associations simultaneously by utilizing a single data set. Although almost all studies evaluate that sexual orientation minorities are victims of school-age and workplace bullying, and experience lower job satisfaction than non-sexual minorities (Drydakis, 2014a; Badgett et al., 2007), a study that provides empirical testing of information on school-age and workplace experiences has been lacking. In the great majority of the literature, authors have examined LGBT individuals' evaluations either as children or as adults. In the present study, a new data-gathering operation was conducted in order to empirically test whether there is a link between past and current bullying for the same group of sexual orientation minority individuals. The key characteristic of this study was the school-age bullying question, which enabled us to capture past bullying and to associate it with current lived experiences in the workplace, such as bullying at work and job satisfaction. Collecting relevant data in the cities of Cambridge, London and Oxford during the UK LGBT History Month in February 2016, several patterns were examined.

The descriptive statistics of this study have suggested that bullying might be a chronic problem for LGB people, which continues from school to the workplace. The estimations have shown that school-age bullying experienced by both gay/bisexual men and lesbian/bisexual women is (a) positively associated with workplace bullying, and (b) negatively associated with job satisfaction. As we have shown, studies suggest that minority demographic characteristics, such as sexual orientation, could affect peoples' experiences in

various chronological periods of their lives (Drydakís, 2014a; Badgett, 2007). Due to heterosexism, sexual orientation minorities seem to be subject to biased treatments and bullying in both school and employment (Drydakís, 2014a). In addition, studies have shown that victims of school-age bullying might be characterised by sub-assertive behavioural characteristics that make them targets for unfavourable treatments and evaluations in the workplace (Drydakís, 2014b; Newman et al., 2005; Meyers and Meyers, 2003). Also, studies suggest that victims of school-age bullying might face difficulties in forming trusting relationships as adults, and are at greater risk of having poor mental health, low self-esteem, and higher levels of depression (Wolke and Lereya, 2015; Allison et al., 2009; Dempsey and Storch, 2008; Smokowski and Kopasz, 2005). In the literature, low self-esteem and high incidence of mental health problems are found to be negatively associated with job satisfaction (Qu and Zhao, 2012; Avey et al., 2011; Culbertson et al., 2010; Lyubomirsky et al., 2005).

In addition, the outcomes of this study have suggested that for both gay/bisexual men and lesbian/bisexual women, there is a negative association between workplace bullying and job satisfaction. If sexual orientation minority employees are subject to unfair treatment, ridiculing, shouting and verbal abuse, ostracism, the denial of training or promotion opportunities, and the spreading of malicious rumours, then these conditions can affect their job satisfaction (Drydakís, 2015b; Carroll and Lauzier, 2014; Rodríguez-Munoz et al., 2009; Hauge et al., 2010). However, the outcomes of this study have suggested that for both gay/bisexual men and lesbian/bisexual women, there is a positive association between the existence of an LGBT group in the workplace and job satisfaction. In the literature, studies have found that policies that support diversity, such as the existence of LGBT groups in employment, could result in employees' higher well-being and workplace evaluations, through the reduction of unfair and disturbing experiences (Riggle et al., 2009; Cho et al., 2009; King et al., 2008; Huffman et al., 2008). Indeed, further results of our study have suggested that, especially for gay/bisexual men, there is a negative association between the existence of an LGBT group in the workplace and bullying in the workplace. The literature suggests that the existence of LGBT groups in workplaces could improve the visibility and experiences of its members by fostering equality and counteracting bullying and discrimination (Drydakís, 2014a; Huffman et al., 2008).

The outcomes of this study have suggested also that school-age bullying of LGB people is associated with victims' lower educational level and with occupational sorting, highlighting the long-term effects of bullying on individuals' lives. The outcomes have shown

that for both gay/bisexual men and lesbian/bisexual women, there exists a negative association between school-age bullying and higher education. In addition, for gay/bisexual men, a negative association was also found between school-age bullying and white-collar employment. Studies have shown that bullied students achieve lower academic performance and educational qualifications (Wolke and Lereya, 2015; Drydakis, 2014b; Le et al., 2005). Thus, it might be rational to suggest that if victims of school-age bullying face lower probabilities of holding a higher-education degree, they might face lower probabilities of being sorted into white-collar jobs (Drydakis, 2014b).

The estimations have also shown that gay/bisexual men face higher levels of both school-age and workplace bullying than do lesbian/bisexual women. We suggest that if the stigma attached to deviating from heteronormativity is higher for men than for women, then the assigned pattern might be an expected result. Some studies have compared stereotypical ideas of power and weakness, suggesting that the hierarchy of power to weakness places lesbians above gay men (Hooker, 1993).

The results of this research are in line with other current UK and international studies which suggest that sexual orientation minorities are at risk (McDermott and Luyt, 2016; Köllen, 2016). If school-age bullying is associated with lower levels of higher education and white-collar employment, and with higher levels of workplace bullying and lower job satisfaction, it might seem that individuals, firms and the society face long-lasting negative effects. In schools, anti-bullying campaigns and strategies might be of importance in order to minimize bullying incidents, support victims, and secure LGB children's sustainable future as citizens and employees. It is important that stressors that negatively impact on LGB children's education to be minimized. A smooth transition into adulthood and a successful employed life for sexual orientation minorities might be considered. Also, firms might consider adopting anti-bullying strategies for prevention, as well as to support victims. Employees' welfare and job satisfaction are essential conditions for firms' productivity. Firms might consider minimizing all those factors that work against sexual orientation minority individuals' workplace performance and sustainability. These policies might avoid potential vicious cycles, i.e. from workplace bullying to lower job satisfaction to further workplace bullying (Nielsen and Einarsen, 2012). Parallel to the above, if LGB people are characterised by the negative emotions that school-age bullying entails (Drydakis, 2014b), this might challenge workplace performance (Nielsen and Einarsen, 2012); whereas an inclusive workplace environment that enables LGB people to feel valued might positively affect key measures such as job satisfaction (Huffman et al., 2008). A strong indicator found in our study was that,

although the great majority of participants had been victims of both school-age and workplace bullying, the existence of an LGBT group was found to be associated with decreased workplace bullying and increased job satisfaction.

## **7. Limitations**

We should consider the characteristics and weaknesses of our study. Because our study investigated school-age and workplace bullying experienced by sexual orientation minorities, our subjects consisted of gay men, lesbians and bisexuals. Thus, our study did not compare sexual orientation minorities and majorities, as this was not the focus of this study. By definition we could not have incorporated straight people and asked them whether they had been victims of bullying due to their minority sexual orientation. In addition, the sample was not random. Unfortunately, census data do not incorporate questions regarding bullying due to sexual orientation, which would be necessary in order to obtain representative samples for utilization. Moreover, no one in our sample identified themselves as asexual, pansexual, or of another sexual orientation minority. It should also be considered that this study did not focus on gender identity (Drydakis et al., 2018; Drydakis, 2017). Studying the interaction between sexual orientation and gender identity might offer novel results; however, this study can provide no findings relevant to bullying due to a trans identity.

In our study, we were not able to access the degree of reliability and validity of retrospective research on school-age bullying, and we did not make claims of causality. We suggest that vicious cycles among the variables might be expected. For instance, workplace bullying incidents might have caused bias in retrospective reports of school-age bullying. If an employee is currently facing workplace bullying, she/he could dredge up old memories of school-age bullying, making the recollection of school-age bullying all that more vivid, than if an employee is not currently facing workplace bullying. Furthermore, if workplace bullying is associated with job dissatisfaction, and if the latter entails lower occupational commitment, which stimulates additional workplace bias and bullying, then a vicious cycle is expected; i.e. from bullying to job dissatisfaction, leading to potentially lower occupational commitment, and then potentially to further workplace bias and bullying (Nielsen and Einarsen, 2012). Studies utilizing longitudinal data could shed light on these considerations.

In addition, selection into workplaces with LGBT groups might have affected the job satisfaction level. If LGBT people seek employers with LGBT groups because they believe that these jobs have established inclusive workplace environments, they might feel more satisfied with their jobs not only because of the LGBT group, but also because of the bundles

of amenities, i.e. fair treatment, social events, counselling, that are correlated with the presence of that group. One needs relevant information in order to decompose the various direct and indirect effects of LGBT groups on job satisfaction. Also, the aim of the study was to evaluate employed people's work experiences. Unemployed and inactive people were not included in the sample. It would be a most interesting study one to examine whether school age bullying and past workplace bullying can affect people's inactivity and unemployment rates. Moreover, as in every data-gathering operation, regional differences could have affected the outcomes. Although we controlled for regional effects, it is expected that if we had focused on more rural areas we would have estimated different patterns. New studies that include additional regions would be important for providing more reliable generalizations. Equally, the number of observations collected could be increased, as our study's observations were relatively few.

Regarding possible age effects it should be noted that participants' mean age was 37 years. This feature suggests that our participants were school students during the approximate period of 1985–1997. Biased treatments and potential bullying due to sexual orientation in schools are expected to be higher in past generations than today; thus, this feature might have affected the incidence of school-age bullying. Also, in the current study we provided individuals with definitions regarding school-age and workplace bullying. Both definitions incorporated various forms of bullying, such as verbal abuse, unfair treatments, and physical abuse. If the questions did not provide definitions, and if participants believed that bullying was only related to physical abuse, then the responses might have been different. In other words, we want to highlight that different definitions might result in different raw statistics and coefficients. The same limitation applied in relation to the job satisfaction question and its components: salary, promotion prospects, and relations with colleagues.

Also, those sexual orientation minority individuals who are (were) not open about their sexuality in the workplace (school) are expected to have taken part in the study and answered 'no' with regard to incidence of workplace (school-age bullying) due to sexual orientation. Studies that incorporate questions regarding sexual orientation minorities' openness are important in terms of reducing internal biases. Unfortunately, studies of this type are scarce (Drydakis, 2015b), and the 'gay openness at work' methodological complication is a well-known feature in the literature. However, one might suggest that those who participate in events such as the LGBT History Month are less likely to hide their sexual orientation than those who did not participate. Thus, the aforementioned bias might be lower than that of other

comparable studies. These methodological issues are subject to ongoing debate, and new studies that provide additional controls could bring clearer outcomes.

## **8. Conclusions**

The present study, utilizing 400 observations gathered in Britain in 2016, showed that, school-age bullying experienced by sexual orientation minorities is associated with lower levels of higher education, and lower probabilities of working in white-collar jobs, the latter result being especially evident for gay/bisexual men. In addition, the outcomes suggested that for both sexes, school-age bullying experienced by sexual orientation minorities is associated with higher incidence of workplace bullying experienced by sexual orientation minorities, and lower job satisfaction experienced by sexual orientation minorities. The outcomes of this study suggested that bullying, when it is experienced by sexual orientation minorities tends to persist over time. Anti-bullying strategies, and affirmative actions in school and the workplace might be of consideration. Indeed, the study found that the existence of LGBT groups in the workplace is negatively associated with workplace bullying, especially for gay/bisexual men, and is positively associated with job satisfaction for both sexes.

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**Table 1. Descriptive statistics**

	Panel I	Panel II
	Gay/bisexual men	Lesbians/bisexual women
Age (continuous)	38.17 (10.14)	35.23 (7.82)
Higher education (%)	60.34 (0.49)	54.16 (0.49)
Working experience (continuous)	16.43 (10.22)	13.93 (8.77)
White-collar employees (%)	70.68 (0.45)	59.52 (0.49)
Blue-collar employees (%)	6.89 (0.41)	4.76 (0.21)
Pink-collar employees (%)	21.98 (0.25)	35.71 (0.48)
Existence of lgbt group in the workplace (%)	21.12 (0.40)	25.59 (0.43)
Gay men or lesbians^ (%)	87.50 (0.33)	80.35 (0.39)
School-age bullying(continuous)	2.31 (1.19)	1.86 (1.16)
Workplace-bullying(continuous)	1.87 (1.14)	1.24 (1.03)
Job satisfaction (continuous)	2.54 (0.95)	2.84 (1.00)
City 1 (%)	34.91 (0.47)	33.33 (0.47)
City 2 (%)	38.79 (0.48)	36.30 (0.46)
City 3 (%)	26.29 (0.44)	30.35 (0.46)
Observations	232	168

*Notes: Standard deviations are in parentheses. (^) Bisexuals otherwise.*

**Table 2. Proportions; School-age bullying, workplace bullying, job satisfaction**

	Panel I	Panel II
	Gay/bisexual men	Lesbians/bisexual women
<b>School-age bullying:</b>		
-Never bullied (%)	9.91 (0.01)	16.07 (0.02)
-Rarely bullied (%)	16.37 (0.02)	24.40 (0.03)
-Sometimes bullied (%)	21.12 (0.02)	19.64 (0.03)
-Frequently bullied (%)	37.93 (0.03)	36.90 (0.03)
-Constantly bullied (%)	14.65 (0.02)	2.96 (0.13)
<b>Workplace bullying:</b>		
-Never bullied (%)	15.08 (0.02)	29.76 (0.03)
-Rarely bullied (%)	19.39 (0.02)	29.76 (0.03)
-Sometimes bullied (%)	35.34 (0.03)	27.38 (0.03)
-Frequently bullied (%)	22.84 (0.02)	12.50 (0.02)
-Constantly bullied (%)	7.32 (0.01)	0.59 (0.00)
<b>Job satisfaction:</b>		
-Totally dissatisfied (%)	6.03 (0.01)	1.19 (0.00)
-Dissatisfied (%)	56.03 (0.03)	47.61 (0.03)
-Neither dissatisfied nor satisfied (%)	20.25 (0.02)	25.00 (0.03)
-Satisfied (%)	12.93 (0.02)	17.85 (0.02)
-Totally satisfied (%)	4.74 (0.01)	8.33 (0.02)
Observations	232	168

*Notes: Standard deviations are in parentheses.*

**Table 3. Correlation matrix; Gay/bisexual men**

	School-age bullying	Workplace bullying	Job satisfaction	Age	Gay <sup>^</sup>	Higher education	White-collar employees	Working experience	Existence of lgbt group in the workplace
School-age bullying	1								
Workplace bullying	0.863 (0.000)*	1							
Job satisfaction	-0.744 (0.000)*	-0.746 (0.000)*	1						
Age	0.684 (0.000)*	0.716 (0.000)*	-0.678 (0.000)*	1					
Gay <sup>^</sup>	-0.032 (0.000)*	0.039 (0.545)	0.023 (0.717)	-0.001 (0.984)	1				
Higher education	-0.217 (0.000)*	-0.255 (0.000)*	0.110 (0.093)***	-0.202 (0.002)*	0.040 (0.544)	1			
White-collar employees	-0.252 (0.000)*	-0.250 (0.000)*	0.158 (0.016)**	-0.257 (0.001)*	-0.014 (0.828)	0.484 (0.000)*	1		
Working Experience	0.662 (0.000)*	0.709 (0.000)*	-0.646 (0.000)*	0.947 (0.000)	0.028 (0.661)	-0.307 (0.000)*	-0.307 (0.000)*	1	
Existence of lgbt group in the workplace	-0.522 (0.000)*	-0.564 (0.000)*	0.723 (0.000)*	-0.493 (0.000)*	0.099 (0.129)	0.074 (0.261)	0.078 (0.236)	-0.464 (0.000)*	1

Notes: N=232. (<sup>^</sup>) Bisexuals otherwise. Spearman correlation coefficient has been used to estimate correlations between two ordinal variables. Rank-Biserial correlation coefficient has been used to estimate correlations between ordinal and nominal variables. Phi correlation coefficient has been used to estimate correlations between two nominal variables. Biserial correlation coefficient has been used to estimate correlations between ordinal and quantitative variables. Point-Biserial correlation coefficient has been used to estimate correlations between nominal and quantitative variables. Pearson correlation coefficient has been used to estimate correlations between two quantitative variables. P-values are in parentheses. (\*) Significant at the 1 % level. (\*\*) Significant at the 5 % level. (\*\*\*) Significant at the 10 % level.



**Table 4. Correlation matrix; Lesbian/bisexual women**

	School-age bullying	Workplace bullying	Job satisfaction	Age	Lesbians <sup>^</sup>	Higher education	White-collar employees	Working experience	Existence of lgbt group in the workplace
School-age bullying	1								
Workplace bullying	0.750 (0.000)*	1							
Job satisfaction	-0.704 (0.000)*	-0.651 (0.000)*	1						
Age	0.497 (0.000)*	0.500 (0.000)*	-0.632 (0.000)*	1					
Lesbians <sup>^</sup>	-0.006 (0.931)	0.015 (0.844)	0.058 (0.455)	-0.059 (0.441)	1				
Higher education	-0.549 (0.000)*	-0.453 (0.000)*	0.618 (0.000)*	-0.474 (0.000)*	-0.033 (0.663)	1			
White-collar employees	-0.440 (0.000)*	-0.380 (0.000)*	0.512 (0.000)*	-0.365 (0.000)*	0.019 (0.807)	0.799 (0.000)*	1		
Working Experience	0.512 (0.000)*	0.519 (0.000)	-0.643 (0.000)*	0.938 (0.000)*	-0.053 (0.492)	-0.604 (0.000)*	-0.459 (0.000)*	1	
Existence of lgbt group in the workplace	-0.446 (0.000)*	-0.416 (0.000)*	0.754 (0.000)*	-0.425 (0.000)*	0.084 (0.279)	0.430 (0.000)*	0.400 (0.000)*	-0.435 (0.000)*	1

Notes: N=232. (^) Bisexuals otherwise. Spearman correlation coefficient has been used to estimate correlations between two ordinal variables. Rank-Biserial correlation coefficient has been used to estimate correlations between ordinal and nominal variables. Phi correlation coefficient has been used to estimate correlations between two nominal variables. Biserial correlation coefficient has been used to estimate correlations between ordinal and quantitative variables. Point-Biserial correlation coefficient has been used to estimate correlations between nominal and quantitative variables. Pearson correlation coefficient has been used to estimate correlations between two quantitative variables. P-values are in parentheses. (\*) Significant at the 1 % level.

**Table 5: Estimations; Gay/bisexual men**

	Model I <sup>^</sup> Higher education	Model II <sup>^</sup> White-collar employment	Model III <sup>^^</sup> Workplace bullying	Model IV <sup>^^</sup> Job satisfaction
School-age bullying	-0.096 (0.029)*	-0.058 (0.027)**	1.592 (0.159)*	-0.571 (0.160)*
Gay <sup>~</sup>	0.029 (0.100)	-0.065 (0.082)	0.608 (0.257)**	-0.026 (0.282)
Higher education	-	0.434 (0.060)*	-0.378 (0.208)***	-0.493 (0.239)**
Existence of lgbt group in the workplace	-	-	-1.113 (0.280)*	1.701 (0.285)*
Age	-	-	0.020 (0.027)	-0.030 (0.031)
White collar employees	-	-	0.235 (0.216)	0.118 (0.244)
Working experience	-	-	0.032 (0.027)	-0.028 (0.031)
Workplace bullying	-	-	-	-0.421 (0.189)**
Cities controls	yes	yes	yes	yes
Events controls	yes	yes	yes	yes
LR $\chi^2$	15.06	67.04	375.48	291.10
Prob > $\chi^2$	0.129	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.048	0.238	0.539	0.511
Log likelihood	-148.276	-106.820	-160.222	-138.999
Observations	232	232	232	232

Notes: (~)Bisexuals otherwise. (^) Probit model-marginal effects. (^^) Ordered probit model. Standard errors are in parentheses. (\*) Significant at the 1 % level. (\*\*) Significant at the 5 % level. (\*\*\*) Significant at the 10 % level.

**Table 6: Estimations; Lesbian/bisexual women**

	Model I <sup>^</sup> Higher education	Model II <sup>^^</sup> White-collar employment	Model III <sup>^^^</sup> Workplace bullying	Model IV <sup>#</sup> Job satisfaction
School-age bullying	-0.290 (0.041)*	-0.008 (0.052)	1.069 (0.128)*	-0.575 (0.166)*
Lesbians <sup>~</sup>	-0.064 (0.107)	-0.162 (0.140)	0.098 (0.230)	-0.089 (0.044)**
Higher education	-	0.805 (0.058)*	0.394 (0.372)	1.640 (0.548)*
Existence of lgbt group in the workplace	-	-	-0.330 (0.266)	2.200 (0.342)*
Age	-	-	0.001 (0.038)	-0.089 (0.044)**
White collar employees	-	-	-0.139 (0.304)	-0.303 (0.445)
Working experience	-	-	0.029 (0.037)	0.000 (0.043)
Workplace bullying	-	-	-	-0.405 (0.189)**
Cities controls	yes	yes	yes	yes
Events controls	yes	yes	yes	yes
LR $\chi^2$	61.24	129.40	152.10	254.30
Prob> $\chi^2$	0.000	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.264	0.570	0.331	0.597
Log likelihood	-85.244	-48.682	-153.523	-85.762
Observations	168	168	168	168

Notes: (~)Bisexuals otherwise. (^) Probit model – marginal effects. (^^) Ordered probit model.

Standard errors are in parentheses. (\*) Significant at the 1 % level. (\*\*) Significant at the 5 % level.

**Table 7: Estimations; Gay/bisexual men and lesbian/bisexual women**

	Model I <sup>^</sup> Higher education	Model II <sup>^</sup> White- collar employment	Model III <sup>^^</sup> Workplace bullying	Model IV <sup>^^</sup> Job satisfaction	Model V <sup>^^</sup> School-age bullying
Men	0.147 (0.058)**	0.127 (0.060)*	0.505 (0.140)*	-0.137 (0.157)	0.494 (0.119)*
Gay or Lesbians <sup>~</sup>	-0.014 (0.071)	-0.006 (0.071)	0.302 (0.167)***	-0.035 (0.190)	-0.040 (0.147)
School-age bullying	-0.168 (0.023)*	-0.070 (0.023)*	1.204 (0.089)*	-0.617 (0.107)*	-
Higher education	-	0.563 (0.044)*	-0.054 (0.165)	-0.005 (0.201)	-
Existence of lgbt group in the workplace	-	-	-0.567 (0.180)*	1.895 (0.202)*	-
Age	-	-	0.013 (0.021)	-0.046 (0.024)**	-
White collar employees	-	-	1.121 (0.162)	-0.192 (0.198)	-
Working experience	-	-	0.028 (0.020)	-0.016 (0.024)	-
Workplace bullying	-	-	-	-0.280 (0.118)**	-
Cities controls	yes	yes	yes	yes	yes
Events controls	yes	yes	yes	yes	yes
LR $\chi^2$	60.65	180.79	520.61	515.92	28.33
Prob > $\chi^2$	0.000	0.000	0.000	0.000	0.001
Pseudo R <sup>2</sup>	0.111	0.352	0.437	0.512	0.023
Log likelihood	-242.110	-166.020	-334.447	-245.752	-585.810
Observations	400	400	400	400	400

Notes: (<sup>~</sup>)Bisexuals otherwise. (<sup>^</sup>) Probit model – marginal effects. (<sup>^^</sup>) Ordered probit model. Standard errors are in parentheses. (\*) Significant at the 1 % level. (\*\*) Significant at the 5 % level.(\*\*\*) Significant at the 10 % level.

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**Appendix I. Questionnaire; Short version**

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Project: School-age bullying, workplace bullying due to a minority sexual orientation and job outcomes. Please, the questions to be completed if you identify as gay/lesbian, bisexual or other sexual orientation minority. Please, the questions to be completed if you are employed and at least 18 years old.

-Do you consider yourself to be: Gay/ lesbian  
Bisexual  
Other sexual orientation minority  
Heterosexual

-Please, choose which best describes your gender: Male/ Female/ Other

-How old are you? \_\_\_\_\_

-Are you employed? Yes/ No

-Please, choose which best describes your education level: No schooling  
Completed some schooling  
High school graduate  
Associate degree  
Bachelor's degree  
Master's degree  
Ph.D.

-Please think back to your school days, up to eighteen years old. You may have been bullied by others, due to your minority sexual orientation (i.e. for being gay, lesbian, bisexual or other sexual orientation minority), in some way, such as verbally (e.g. name calling), physically (e.g. hitting) and socially (e.g. spreading rumours, social rejection, extortion, and isolation). Please, choose which best describes your own experience at school:

Never bullied  
Rarely bullied  
Sometimes bullied  
Frequently bullied  
Constantly bullied

-What is your current job? \_\_\_\_\_

-What is your current job title? \_\_\_\_\_

-How many years of working experiences do you have? \_\_\_\_\_

-The next question is about total job satisfaction (i.e. a proxy of satisfaction with job rewards including salary, promotion prospects, and relations with colleagues including managers). Please, choose which best describes how satisfied or dissatisfied you are with your own present job:

Totally dissatisfied  
Dissatisfied  
Neither dissatisfied nor satisfied  
Satisfied  
Totally satisfied

-The following question is about workplace bullying due to sexual orientation: You may have been bullied in your present job by others, due to your minority sexual orientation (i.e. for being gay, lesbian, bisexual or other sexual orientation minority), in some way, such as unfair treatment, ridiculing, shouting and verbal abuse, ostracism, denying training or promotion opportunities, and spreading malicious rumours. Please, choose which best describes your own experience at workplace:

Never bullied  
Rarely bullied  
Sometimes bullied  
Frequently bullied  
Constantly bullied

-Does your job have a LGBT group? Yes/ No

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## Appendix II. Cross-tabulations of school-age bullying, and workplace bullying

**Table A. Cross-tabulations of school-age bullying and workplace bullying**

<b>Gay/bisexual men</b>					
Workplace Bullying \ School-age bullying	Never bullied	Rarely bullied	Sometimes bullied	Frequently bullied	Constantly bullied
Never bullied	19 (82.61)	4 (17.39)	0 (0)	0 (0)	0 (0)
Rarely bullied	16 (42.11)	22 (57.89)	0 (0)	0 (0)	0 (0)
Sometimes bullied	0 (0)	19 (38.78)	24 (48.98)	6 (12.24)	0 (0)
Frequently bullied	0 (0)	0 (0)	55 (62.50)	31 (35.23)	2 (2.27)
Constantly bullied	0 (0)	0 (0)	3 (8.82)	16 (47.06)	15 (44.12)
<b>Lesbian/bisexual women</b>					
Workplace Bullying \ School-age bullying	Never bullied	Rarely bullied	Sometimes bullied	Frequently bullied	Constantly bullied
Never bullied	26 (96.3)	1 (3.70)	0 (0)	0 (0)	0 (0)
Rarely bullied	22 (53.66)	19 (46.34)	0 (0)	0 (0)	0 (0)
Sometimes bullied	0 (0)	16 (48.48)	15 (45.45)	2 (6.06)	0 (0)
Frequently bullied	0 (0)	14 (22.58)	29 (46.77)	18 (29.03)	1 (1.61)
Constantly bullied	2 (40.0)	0 (0)	2 (40.00)	1 (20.00)	0 (0)

*Notes: Percentage figures are given in parentheses.*