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Street harassment and its negative psychological outcomes in an Italian university population

*Roberta Rosa Valtorta, Chiara Sparascio, Roberto Cornelli
and Chiara Volpato*

The goal of this research was to document the frequency of street harassment and examine the associations among street harassment experiences, negative psychological outcomes, and changes in behavioural habits. A sample of students and workers at an Italian university was surveyed (N = 2,764). Findings indicated that exposure to street harassment had negative psychological effects regardless of whether people labelled their experiences as harassment or not. Furthermore, analyses demonstrated that negative outcomes deriving from street harassment mediated the relationship between harassing behaviours experienced by respondents and the probability that they changed their daily routine. Crucially, all the tested models remained significant by controlling for participants' gender, age, and role. Research and practical implications were discussed.

Gender-based violence represents a widespread phenomenon, with a broad range of negative physical and psychological consequences for the victims (Baldry et al., 2015; Campbell, 2002; Kilpatrick, 2004). One of the most pervasive forms of this type of violence is street (or stranger) harassment, namely the experience of unwanted sexual attention from strangers in public settings (Wesselmann & Kelly, 2010). Definitions of street harassment are somewhat variable within the literature (see Kissling, 1991; Lenton et al., 1999; Macmillan et al., 2000). For example, Bowman (1993, p. 519) described

street harassment as «a type of sexual harassment that profoundly affects women's lives». Similarly, Darnell and Cook (2009) argued that street harassment shares much in common with sexual harassment, in that the targets are forced to endure the often degrading, objectifying, and threatening behaviour. Gardner (1995) defined the phenomenon as «public harassment», whereas Vera-Gray (2016a, 2016b) encapsulated street harassment as a «men's stranger intrusion on women in public». However street harassment is defined, it is clear that experiences of street harassment are extremely common and most typically involve whistles, unwanted

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praise, persistent stares, requests for someone's name or telephone number after they say «no», comments and questions of sexual connotation, flashing and honking, groping, showing off the genitals, masturbation in public, sexual assaults, and rape (Kearl, 2010).

Several studies have shown that street harassment is a global phenomenon. Research from Australia suggests that almost 90% ($N = 1,426$) of women have experienced physical or verbal harassment in public at least once in their lives (Bennett & Johnson, 2015), similar figures to a study in Afghanistan the same year, in which a prevalence result for women of 93% ($N = 321$) was detected (WCLRF, 2015). Through a qualitative investigation conducted among Indian women ($N = 20$), Dhillon and Bakaya (2014) found that harassment within public places appears to occur in multiple forms with high frequency, most often in broad daylight and in crowded spaces. More specifically, frequencies mentioned by the respondents ranged from being harassed on 50% of visits to public places to being harassed on all such occasions. Furthermore, harassment took place in various forms, such as men staring, passing lewd comments, and rubbing against women's bodies. Canadian and Egyptian research has found incidence figures of approximately 85% of women experiencing street harassment in the last year (Lenton et al., 1999; Shoukry et al., 2008). By conducting interviews with 42,000 women across the 28 Member States of the European Union, the European Union Agency for Fundamental Rights (2014) found that every second woman (55%) has experienced sexual harassment at least once since the age of 15, and one out five women (21%) in the 12 months before the survey. Of relevance to the present study, public environments, such as the workplace or a school (20%) and out in the street, a car park or other public areas (20%), served as settings of physical violence. Crucially, four out of 10 women (40%) now avoid public places where there are no other people around, and a similar percentage (37%) deliberately avoid taking certain streets or going to certain areas for fear of being physically or sexually assaulted.

Women ($N = 228$) in Fairchild and Rudman's (2008) US-based research reported experiencing stranger harassment on a monthly (41%) basis, while a large minority reported experiencing harassment once every few days (31%). A similar pattern of results was found in a survey implemented by the US group «Right To Be» and Cornell University (2014) on a sample of 16,607 women under the age of 40 in 22 countries. Over 50% of the respondents reported they have been groped, while 71% stated that they have been followed at least once in their lives. Crucially, over 84% of the participants declared being harassed for the first time when they were under seventeen. As for Italy (i.e., the context of the present research), more than 50% of 1,459 respondents indicated they have been groped in the last year, and 69% mentioned being followed by a man or a group of men (Right To Be, 2014).

Despite the relevance of these findings, only a few studies have investigated street harassment. Some research has indeed focused on the broader phenomenon

of gender-based harassment by neglecting this specific type of violence (Fairchild & Rudman, 2008; Romito & Feresin, 2019). As stated by Kearl (2010, p. xi), «street harassment has existed since the advent of streets, but for centuries it has been an overlooked problem». Similarly, Vera-Gray (2016b) asserted that street harassment is the most understudied yet commonly experienced form of violence, especially against women. Indeed, due to the lack of legal sanctions, street harassment is something that has occurred and has become normalised over the centuries. In this regard, reasons for the sparse academic treatment of street harassment across disciplines include trivialisation (Tuerkheimer, 1997; West, 1987) and normalisation (Bowman, 1993; Larkin, 1997) of the phenomenon, too often dismissed as a «normal» expression of freedom of speech, considered banal and relatively harmless. In this regard, Adhikari and Husain (2021) stated that women who face street harassment usually tend to accept and rationalize that experience and get on with it without really stopping to protest or ask why. Terminological difficulties also explain the relative silence around the topic. Indeed, the lack of agreement on what constitutes the phenomenon and how to name it have often complicated its recognition and the comparison among studies (Vera-Gray, 2016b).

Starting from these considerations, the present research aimed to document the frequency of street harassment and examine the detrimental outcomes for those individuals who have suffered physical or verbal harassment in public contexts. Crucially, we examined these experiences in an Italian university population, namely an ideal sample for understanding street harassment and enriching the previous literature on this topic. Indeed, most of the studies investigating harassment have been conducted in university communities. For example, Richman and colleagues (1999) surveyed employees in four university occupational groups (i.e., faculty, student, clerical, and service workers) and found that harassment was significantly linked to mental health outcomes for men and women. Crucially, Santinello and Vieno (2004) investigated the prevalence of harassment in a sample of 640 female students at the University of Padua and found that one girl out of three has suffered a pressure to be «nice» in exchange for advantages or a better grade. Further information in this field was provided by the EU research project «Gender-based violence, stalking and fear of crime» (Balloni et al., 2012), which made it possible to collect, analyse, and compare quantitative and qualitative data on the experience of sexual harassment among university students in Italy, Germany, Poland, Spain, and United Kingdom. In Italy, data were collected in the Universities of Bologna, Udine, Urbino, Perugia, and Federico II of Naples. Overall, results showed that 78% of respondents from the University of Bologna and 69% from other universities reported having suffered sexual harassment at least once in a lifetime. These results are particularly relevant. However, none of the above mentioned research has focused on street harassment. Thus, through the present study, we aimed to complete this detrimental picture by documenting street harassment experiences in an Italian university population.

1. The phenomenon of street harassment

Although street harassment affects both men and women, women are disproportionately victims and men are overwhelmingly perpetrators of street harassment (Stop Street Harassment, 2014). For this reason, some scholars have analysed this phenomenon from a feminist theory perspective. More specifically, many authors claim that street harassment of women by men is a form of male domination, female oppression, and a display of patriarchal power that perpetuates rape culture and has detrimental effects on women (Davis, 1993; Thompson, 1994). In line with these considerations, DelGreco and Christensen (2020) stated that one explanation for street harassment is that men are threatened by a perceived lack of power and status due to the feminist movement. Therefore, some men street harass women as a form of retaliation and to let women know that the public sphere is a male space (DelGreco & Christensen, 2020; di Leonardo, 1981). In this sense, street harassment excludes women by reinforcing notions of the public sphere being a male space where women are not welcome and by demonstrating male privilege. As argued by Davis (1993, p. 142), street harassment episodes «genderize the street by distributing power in such a way that perpetuates male supremacy and female subordination».

Another feminist perspective is that of masculine bonding. Some men frame their harassment as human nature, harmless demonstrations of sexual attraction, and sometimes a way to bond with other men. Quinn (2002, p. 386) noted that men often view street harassment as «harmless fun or normal gendered interactions». Benard and Schlaffer (1984) found that the majority of men in their study believed that street harassment was fun, harmless, and a cure for boredom, and it gave them a «feeling of youthful camaraderie» (p. 71) when they engaged in street harassment with other men. Likewise, Wesselmann and Kelly (2010) and Quinn (2002) found that social bonding among men was a primary factor in street harassment.

Other scholars have gone so far as to describe street harassment as a human rights issue because it is «a form of sexual discrimination that typically occurs in relationships of unequal power» (Lenton et al., 1999, p. 517). Indeed, street harassment dehumanizes and silences women by reducing them to their body parts and mere sexual objects. In line with this perspective, several authors (e.g., Davis, 1993; Kissling, 1991; Vera-Gray & Fileborn, 2018) have examined street harassment as a tool of oppression, serving as a vehicle for sexism and dehumanization. The denial of humanity results in perpetrators believing that women's bodies are objects for others. According to this perspective, Davidson and colleagues (2016) defined street harassment as a prototypic sexual objectification experience in which women are treated as though their bodies represent the totality of their personhood and exist solely for the use and pleasure of other people (see also Bartky, 1990).

Regardless of explanations or motives for the behaviour, it is plausible that street harassment, similarly to the other forms of gender-based violence, has detri-

mental health effects for those who live these experiences. Indeed, although there is a limited number of studies that have analyzed the mental health outcomes of street harassment, many investigations have demonstrated that sexual harassment and sexual assault have adverse physical or psychological consequences, such as increased anxiety and depression (e.g., Kilpatrick et al., 2007; Willness et al., 2007). Starting from these considerations and as reported below, we aimed at expanding the literature in this area by examining street harassment and its association with negative psychological outcomes.

2. Street harassment and negative psychological outcomes

Recent literature has shown that people who have experienced street harassment have lower self-esteem and higher levels of anxiety, insecurity, and depression than those who have not suffered such episodes (Davidson et al., 2016; DelGreco & Christensen, 2020; Macmillan et al., 2000). In particular, Davidson and colleagues (2016) showed that street harassment was associated with a decrease in security perceptions in crowded and isolated public spaces and a raise in general anxiety levels. Moreover, security perceptions in isolated public areas mediated the relationship between street harassment and anxiety. Through a correlational study conducted among female undergraduate students in the US, DelGreco and Christensen (2020) found positive relationships between street harassment and anxiety and depression. Crucially, they found that these negative psychological outcomes explained the effect of street harassment experiences on a worsening of sleep quality.

By focusing on self-objectification, namely the process through which women tend to regard themselves as mere sex objects (see Fredrickson & Roberts, 1997), Fairchild and Rudman (2008) analysed the associations among street harassment, self-objectified perceptions, and movement restrictions in a sample of young adult women. Results showed that harassment experiences were positively related to self-objectification in those women who coped with them using common strategies (e.g., passive, self-blame, or benign), but not for women who used an uncommon, active coping strategy (e.g., confronting the harasser). Further, street harassment experiences and self-objectification positively correlated with fear of and perceived risk of rape that, in turn, were associated with changes in behavioural habits (i.e., more restrictions on freedom of movement).

Of particular relevance to the present research, some scholars have shown that all these negative psychological outcomes occur whether the victim label their experiences as harassment or not. For example, Magley and colleagues (1999) found that whether or not women consider their experience to constitute street harassment, they experience similar negative psychological, work, and health consequences. It is thus the harassment and not its label or appraisal as stressful that leads to detri-

mental outcomes for well-being. Indeed, as reported by the authors, not all women label their experiences as harassment, which suggests that the labelling process may be so far removed from the psychological experience of being harassed that there may be little reason to expect it to moderate the experience and its outcomes. In this regard, there is a relatively large literature (e.g., Fitzgerald & Hesson-McInnis, 1989; Frazier et al., 1995; Magley et al., 1999; Terpstra & Baker, 1987) documenting that when asked what constitutes harassment, individuals are likely to endorse sexually coercive behaviours, but give not clear responses to unwanted sexual attention. Therefore, one possible reason women might not label their experiences as harassment is because the particular situation they experienced does not conform to their personal definition of harassment.

Building from these arguments, we aimed to document the frequency of street harassment in an Italian university population and examine the associations among street harassment experiences, negative psychological outcomes, and changes in behavioural habits. In line with the literature reported above, we expected that women would experience more street harassment than men (*Hypothesis 1a*), and that the perpetrators would be mainly men (*Hypothesis 1b*). Furthermore, we assumed that exposure to street harassment would have negative psychological effects regardless of whether people labelled their experiences as harassment or not (*Hypothesis 2*). In addition, we hypothesized that negative outcomes deriving from street harassment might explain the relationship between harassing behaviours experienced by respondents and the probability that they changed their daily routine (*Hypothesis 3*). Finally, through additional analyses, we aimed to examine whether participants' gender and age moderated the relationship between exposure to street harassment and negative psychological outcomes, changes in habits, and street harassment labelling.

3. The present study

3.1. Method

3.1.1. Participants and procedure

Ethical approval was obtained from the Ethics Committee of the University of Milano-Bicocca prior to data collection (protocol n. 598; 03/2021). Participation in the study was voluntary, and all participants consented to take part anonymously and confidentially. Given the correlational nature of our study, we aimed at collecting data on a large sample (i.e., $N > 250$) that would guarantee the stability of the tested correlations (Schönbrodt & Perugini, 2013) and a power of .80 for correlation as low as .17, as determined by *a priori* power analysis conducted using G*Power (Faul et al., 2009).

Table 1
Sociodemographic characteristics of the sample

Characteristics	<i>n</i>	%
<i>Gender</i>		
Female	2,400	86.83
Male	338	12.23
Non-binary	12	0.43
Prefer not to answer	14	0.51
<i>Age in years</i>		
18-25	2,112	76.41
26-40	479	17.33
41-50	94	3.40
51 and older	77	2.79
NA	2	0.07
<i>Role</i>		
Student	2,409	87.16
Researcher	146	5.28
Professor	102	3.69
Technical-administrative worker	101	3.65
NA	6	0.22
<i>Department (a)</i>		
Educational Sciences	501	20.80
Psychology	469	19.47
Sciences	425	17.64
Economics and Statistics	301	12.49
Law	251	10.42
Sociology	251	10.42
Medicine and Surgery	195	8.09
NA	16	0.66

Note: *N* = 2,764. (a) Department was requested only for students.

Data were collected through an online questionnaire using the Qualtrics survey web system. The link was distributed to all the students and personnel of the University of Milano-Bicocca via institutional e-mails between May and June 2021 so that people were able to participate in the study if desired. In order to get access to the questionnaire, respondents had to read the information about the study and agree to participate. A total of 59,455 among students, researchers, professors, and technical-administrative workers received the invitation, and only completely fulfilled questionnaires were included in the analyses¹. The considered final sample was composed of 2,764 participants (2,400 females, 338 males, 12 non-binaries, 14 prefer not to answer) who fully completed all the scales. The age distribution ranged between 18 and over 51, with approximately 76% of the respondents reported an age between 18 and 25 years old (see Table 1 for more details).

¹ The institutional e-mail address provided to students by the University of Milano-Bicocca remains active for the three academic years following graduation. It is thus likely that some students ignored the invitation to participate in the survey because they had already left the university.

3.1.2. Measures

The following scales were used to measure participants' experiences and opinions about street harassment. The order of the scales within the survey was fixed. The order of the items within each scale was randomized. After fulfilling the scales described below, participants were asked to indicate some demographic information about themselves. They were then debriefed and thanked for their participation².

Exposure to street harassment. Harassing experiences were measured with 13 items describing different types of harassing behaviours and the frequency with which the participants experienced each behaviour in the last four years³ (see Campos et al., 2017; Sullivan, 2011; e.g., «Someone made you feel uncomfortable with a whistling sound»; $\alpha = .91$). The score for each item ranged from 1 (*never experienced it*) through 2 (*once a month*), 3 (*2-4 times per month*), 4 (*every few days*), to 5 (*almost every day*). For the main analyses, scores were averaged across the 13 items such that a higher score indicated a greater self-reported frequency of street harassment experiences ($M = 2.01$; $SD = 0.68$).

Street harassment features. Street harassment features were obtained by presenting participants with an *ad hoc* created list of items about time (i.e., *day, evening, night*; $\alpha = .60$) and place (e.g., *park, marketplace or shop, on public transportation*; $\alpha = .84$). For each item, respondents were asked to indicate how frequently the harassing behaviours listed in the previous question happened at that time and in that place (from 1 = *never* through 2 = *rarely*, 3 = *sometimes*, 4 = *very often*, to 5 = *always*). Furthermore, participants were shown a list of features (i.e., sex, age, number of perpetrators, familiarity) and asked to indicate how frequently the perpetrators had those characteristics (from 1 = *never* through 2 = *rarely*, 3 = *sometimes*, 4 = *very often*, to 5 = *always*).

Negative psychological outcomes. To measure psychological outcomes of street harassment, participants were asked to indicate how frequently they felt different emotional and psychological states after the harassment experience. In particular, the scale was constituted by 15 items adapted from previous research (e.g., Bottesi et al., 2015; Kyriazos et al., 2018) and valuable on a 5-point Likert scale from 1 (*never*) through 2 (*rarely*), 3 (*sometimes*), 4 (*very often*), to 5

² At the end of the survey, participants were also asked to answer some open-ended questions. In particular, they were asked to describe at least one harassing experience they have lived and at least one harassing experience they have witnessed. Furthermore, they were requested to indicate some suggestions about the role the University might play against the phenomenon. We focused here on the quantitative part of our data collection, so we did not include qualitative analyses and results in the current manuscript.

³ Over the past two years, people have spent many months at home because of the COVID-19 pandemic. For this reason, participants were asked to think about street harassment experiences considering a longer time period (i.e., four years).

(*always*). Following the preliminary analysis on the scale (see the Supplementary Material on OSF)⁴, we removed four items because they worsened the scale's factor structure. The results of the principal component analysis conducted on the left 11 items showed the presence of three factors. Based on the meaning of the items, the first factor was related to self-objectification (three items, e.g., «I thought obsessively about my appearance»; $\alpha = .75$). Instead, the second factor comprised those items that refer to anxiety (four items, e.g., «I felt I was close to panic»; $\alpha = .70$). Finally, the third factor was related to uncertainty about life (four items, e.g., «I could not see anything good in my future»; $\alpha = .73$). Scores were averaged across the items such that higher scores indicated greater self-objectification ($M = 2.95$; $SD = 1.11$), anxiety ($M = 2.08$; $SD = 0.86$), and uncertainty about life ($M = 1.37$; $SD = 0.63$).

Changes in behavioural habits. Changes in habits were measured by asking participants if they changed their behaviours due to harassment experiences. The answer to the question was a binary variable (yes/no). In the case of a «yes» answer, respondents were presented an *ad hoc* created list of items describing different actions (e.g., «Avoiding certain areas or streets»; «Avoiding public transportation at night») and asked to check the options that best represented the participants' behavioural habits they changed in their life. The items were created on the basis of previous investigations, which used interviews and focus groups (e.g., Stop Street Harassment, 2014).

Street harassment labelling. To investigate street harassment labelling, respondents were presented the same behaviours listed at the beginning of the survey and asked to indicate the extent to which, in their opinion, each of them could be labelled as harassment (from 1 = *not at all* through 2 = *slightly*, 3 = *moderately*, 4 = *very*, to 5 = *extremely*; $\alpha = .90$).

3.2. Results

3.2.1. Introductory analyses

Over 91% of respondents ($n = 2,525$) reported experiencing at least one form of street harassment in the last four years. Table 2 shows the frequencies and percentages of harassing behaviours experienced by respondents on the basis of their gender (see the Supplementary Material on OSF for more details on these results by age)⁵. The most frequent harassments reported by females involve feeling uncomfortable because of a whistling sound and being looked at in a sexu-

⁴ Data and Supplementary Material are available from the OSF database, with the following access link: https://osf.io/kuzjs/?view_only=1737f19f5161494ab06b1dbd4d3ec.

⁵ Cf. footnote 4.

Table 2
Exposure to street harassment in the last four years by gender

Exposure to street harassment	<i>n</i> (%)														
	Never experienced it			Once a month			2-4 times for month			Every few days			Almost every day		
	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other
1. Someone made you feel uncomfortable with a whistling sound	297 (88)	179 (7)	11 (42)	24 (7)	266 (11)	4 (15)	11 (3)	836 (35)	3 (12)	6 (2)	962 (40)	8 (31)	0	157 (7)	0
2. Someone looked at you in a sexually allusive way	241 (71)	267 (11)	6 (23)	62 (18)	405 (17)	4 (15)	25 (5)	820 (34)	6 (23)	9 (3)	772 (32)	7 (27)	1 (0)	136 (6)	3 (11)
3. Someone was too close to you	215 (64)	497 (21)	8 (31)	84 (25)	693 (29)	6 (23)	34 (10)	837 (35)	4 (15)	4 (1)	333 (14)	8 (31)	1 (0)	40 (1)	0
4. Someone made gestures and calls towards you	298 (88)	531 (22)	11 (42)	28 (8)	638 (27)	4 (15)	10 (3)	752 (31)	6 (23)	2 (1)	431 (18)	5 (20)	0	48 (2)	0
5. Someone shouted or said obscene words to you	250 (74)	612 (26)	15 (58)	54 (16)	574 (24)	0	27 (8)	827 (34)	5 (19)	5 (1)	354 (15)	6 (23)	2 (1)	33 (1)	0
6. Someone slowed down and pulled over with their car	316 (94)	785 (33)	16 (62)	20 (6)	653 (27)	4 (15)	1 (0)	630 (26)	5 (19)	1 (0)	302 (13)	1 (4)	0	30 (1)	0
7. Someone criticized your appearance and/or insulted you	207 (61)	848 (35)	11 (42)	83 (25)	762 (32)	6 (23)	40 (12)	553 (23)	4 (15)	7 (2)	214 (9)	5 (20)	1 (0)	23 (1)	0
8. Someone touched you with the hand without your consent	267 (79)	1,122 (47)	15 (58)	50 (15)	717 (30)	5 (19)	17 (5)	474 (20)	5 (19)	4 (1)	80 (3)	1 (4)	0	7 (0)	0
9. Someone tried to draw your attention and, when you ignored them, started insulting you	295 (87)	1,234 (51)	15 (58)	31 (9)	563 (24)	6 (23)	8 (3)	434 (18)	5 (19)	4 (1)	147 (6)	0	0	22 (1)	0
10. Someone started following you	303 (90)	1,240 (52)	14 (54)	28 (8)	674 (28)	7 (27)	5 (1)	397 (17)	5 (19)	2 (1)	83 (3)	0	0	6 (0)	0
11. Someone made sexually explicit gestures towards you while you were walking	320 (95)	1,370 (57)	19 (73)	11 (3)	532 (22)	2 (8)	6 (2)	374 (16)	4 (15)	1 (0)	114 (5)	1 (4)	0	10 (0)	0
12. Someone showed you their private parts	316 (94)	1,875 (78)	19 (73)	16 (5)	385 (16)	5 (19)	5 (1)	122 (5)	2 (8)	1 (0)	17 (1)	0	0	1 (0)	0
13. Someone asked you to do something sexually or offered you money for sex	315 (93)	1,978 (82)	20 (77)	14 (4)	277 (12)	4 (15)	6 (2)	127 (5)	2 (8)	3 (1)	16 (1)	0	0	2 (0)	0

Note: Male *n* = 338; female *n* = 2,400; other (non-binary and prefer not to answer) *n* = 26.

ally allusive way, with 9 in 10 women frequently experiencing such behaviours. In particular, as shown in Table 2, only 7% and 11% of females indicated that they had never experienced these episodes. Instead, the most frequent behaviour experienced by males involves being criticized and/or insulted because of their appearance. Regarding men, it is important to note that the percentages of the *Never experienced it* option are always higher than 60% for all the harassment experiences. Finally, for both males and females, the least frequent harassment involves receiving explicit sexual requests, with 82% of women and 93% of men never experiencing such behaviour in the last four years. Overall, in line with our assumption (*Hypothesis 1a*), a *t*-test revealed that women ($M = 2.12, SD = 0.64$) experienced more harassment than men ($M = 1.24, SD = 0.38$), $t(644.09) = 35.72, p < .001$.

Table 3 shows descriptive statistics of the street harassment features reported by participants. Results showed that harassing behaviours were mainly experienced on public transportation and during the day and the evening. Furthermore, the majority of the perpetrators were strangers, alone with the victims, and between 31 and 60 years old. Importantly, in line with our expectation (*Hypothesis 1b*), these individuals were especially men, as indicated by the percentages reported in Table 3, according to which 98% of respondents experienced harassment by men at least once in the last four years.

Among all the respondents who experienced at least one harassing behaviour, over 97% of participants ($n = 2,457$) reported negative psychological outcomes due to the harassment episode. Table 4 shows the frequencies and percentages of the negative outcomes indicated by respondents on the basis of their gender (see the Supplementary Material on OSF for more details on these results by age)⁶. The most frequent outcomes reported by females and males involve states of self-objectification, with 82% of women and over 40% of men experiencing discomfort because of their appearance at least once in the last four years. Overall, a *t*-test revealed that women reported more self-objectification ($M = 3.04, SD = 1.06$), anxiety ($M = 2.13, SD = 0.85$), and uncertainty about life ($M = 1.38, SD = 0.63$) than men ($M = 1.78, SD = 1.03$ for self-objectification; $M = 1.48, SD = 0.73$ for anxiety; $M = 1.26, SD = 0.61$ for uncertainty about life), all *t*s > 2.58 and all *p*s $< .010$.

Regarding behavioural habits, 60% of respondents ($n = 1,503$) stated that they changed their daily routine after the harassment they experienced. In particular, most participants (males and females) reported that they now avoid certain areas or streets, try to hold the mobile phone nearby, and check not to be followed (see Table 5; see the Supplementary Material on OSF for more details on these results by age)⁷.

⁶ Cf. footnote 4.

⁷ Cf. footnote 4.

Table 3
Street harassment features

Street harassment features	<i>n</i> (%)				
	Never	Rarely	Sometimes	Very often	Always
<i>Time</i>					
Day	166 (7)	581 (23)	890 (35)	727 (29)	143 (6)
Evening	217 (9)	385 (15)	779 (31)	976 (39)	147 (6)
Night	805 (32)	402 (16)	533 (21)	637 (26)	129 (5)
Do not remember	2,064 (82)	226 (9)	160 (6)	51 (2)	24 (1)
<i>Place</i>					
Inside public transportation	514 (20)	514 (20)	728 (29)	644 (26)	125 (5)
Downtown	465 (18)	608 (24)	858 (34)	530 (21)	64 (3)
Neighbourhood	746 (30)	635 (25)	687 (27)	412 (16)	45 (2)
Park	805 (32)	612 (24)	725 (29)	357 (14)	26 (1)
While waiting for a transportation	422 (17)	436 (17)	777 (31)	751 (30)	139 (5)
Near friends/family/partner's house	1,091 (43)	660 (26)	571 (23)	187 (7)	16 (1)
Places for social activities (e.g., gigs)	1,139 (45)	698 (28)	515 (20)	164 (7)	9 (0)
Marketplace or shop	1,163 (46)	699 (28)	493 (19)	155 (6)	15 (1)
Eating places (e.g., bars, restaurants)	1,190 (47)	692 (27)	470 (19)	159 (6)	14 (1)
Near university	1,908 (76)	408 (16)	181 (7)	26 (1)	2 (0)
Gym	2,195 (87)	206 (8)	91 (4)	29 (1)	4 (0)
Inside university	2,325 (92)	153 (6)	36 (2)	11 (0)	0
<i>Perpetrator</i>					
<i>Sex</i>					
Male	61 (2)	87 (3)	66 (3)	139 (6)	2,157 (86)
Female	2,112 (84)	216 (9)	50 (2)	13 (0)	25 (1)
Do not remember	1,558 (63)	47 (2)	17 (1)	2 (0)	5 (0)
<i>Age</i>					
Less than 18 years old	1,234 (49)	738 (29)	320 (13)	93 (4)	21 (1)
18-30 years old	239 (10)	410 (16)	773 (31)	876 (35)	164 (7)
31-60 years old	196 (8)	232 (9)	552 (22)	1,222 (48)	268 (11)
61 and older	929 (37)	512 (20)	501 (20)	407 (16)	64 (3)
Do not remember	1,220 (48)	147 (6)	139 (6)	40 (2)	29 (1)
<i>Number of perpetrators</i>					
One person	64 (3)	227 (9)	678 (27)	1,130 (45)	413 (16)
Two people	516 (21)	446 (18)	912 (37)	569 (23)	28 (1)
More than two people	616 (25)	493 (20)	676 (27)	632 (25)	70 (3)
Do not remember	1,380 (55)	77 (3)	50 (2)	12 (1)	6 (0)
<i>Familiarity with perpetrators</i>					
Stranger	88 (3)	144 (6)	173 (7)	536 (21)	1,577 (63)
Known	1,539 (62)	596 (24)	219 (9)	66 (3)	49 (2)

Note: $N = 2,525$. Participants who did not report any street harassment experiences ($n = 239$) were discarded from these analyses.

Table 4
Negative psychological outcomes of street harassment by gender

	<i>n</i> (%)														
	Never			Rarely			Sometimes			Very often			Always		
	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other
1. I felt discomfort and ashamed of my appearance	107 (56)	410 (18)	7 (32)	33 (17)	319 (14)	2 (9)	20 (11)	518 (22)	5 (23)	19 (10)	639 (28)	4 (18)	11 (6)	427 (18)	4 (18)
2. I felt at the mercy of other people's gaze	117 (62)	211 (9)	3 (14)	23 (12)	204 (9)	3 (14)	26 (14)	505 (22)	3 (14)	18 (9)	807 (35)	5 (23)	6 (3)	586 (25)	8 (35)
3. I thought obsessively about my appearance	130 (68)	903 (39)	9 (40)	30 (16)	404 (18)	3 (14)	12 (6)	413 (18)	3 (14)	11 (6)	380 (16)	3 (14)	7 (4)	213 (9)	4 (18)
4. I had tremors (e.g., in my hands)	147 (77)	809 (35)	10 (44)	18 (19)	494 (22)	5 (23)	13 (7)	519 (22)	3 (14)	5 (3)	371 (16)	3 (14)	7 (4)	120 (5)	1 (5)
5. I felt I was close to panic	153 (81)	1,219 (53)	11 (49)	20 (10)	507 (22)	6 (28)	6 (3)	326 (14)	4 (18)	7 (4)	186 (8)	1 (5)	4 (2)	75 (3)	0
6. I had trouble starting what I needed to do	130 (68)	821 (36)	9 (40)	31 (16)	509 (22)	5 (23)	19 (10)	563 (24)	2 (9)	7 (4)	313 (13)	3 (14)	3 (2)	107 (5)	3 (14)
7. I overreacted to situations	132 (70)	1,054 (45)	10 (44)	31 (16)	576 (25)	6 (28)	12 (6)	387 (17)	4 (18)	9 (5)	211 (9)	1 (5)	6 (3)	85 (4)	1 (5)
8. I thought about giving up my studies	169 (89)	2,002 (86)	19 (80)	10 (5)	159 (7)	1 (5)	7 (4)	86 (4)	1 (5)	2 (1)	44 (2)	1 (5)	2 (1)	22 (1)	1 (5)
9. I thought about moving away	168 (88)	1,893 (82)	16 (73)	6 (3)	161 (7)	2 (9)	6 (3)	136 (6)	2 (9)	7 (4)	76 (3)	2 (9)	3 (2)	47 (2)	0
10. I thought about changing my job	173 (90)	1,993 (86)	17 (77)	8 (4)	150 (7)	2 (9)	3 (2)	97 (4)	1 (5)	3 (2)	41 (2)	2 (9)	3 (2)	32 (1)	0
11. I could not see anything good in my future.	153 (80)	1,473 (64)	15 (68)	17 (9)	400 (17)	3 (14)	9 (5)	252 (11)	2 (9)	7 (4)	136 (6)	2 (9)	4 (2)	52 (2)	0

Note: Male *n* = 190; female *n* = 2,313; other (non-binary and prefer not to answer) *n* = 22. Participants who did not report any street harassment experiences (*n* = 239) were discarded from these analyses.

Table 5
Changes in behavioural habits by gender

Changes in behavioural habits	<i>n</i> (%)		
	Males	Females	Other
1. Avoiding certain areas or streets	19 (10)	1,195 (52)	7 (32)
2. Trying to hold the mobile phone nearby	11 (6)	1,156 (50)	9 (41)
3. Checking not to be followed	23 (12)	1,108 (48)	9 (41)
4. On public transportation, sitting near people of the same gender or who seem «trustworthy»	11 (6)	998 (43)	5 (23)
5. Walking fast or running	13 (7)	990 (43)	5 (23)
6. Avoiding making eye contact	17 (9)	944 (41)	8 (36)
7. Pretending to talk on the mobile phone with someone	10 (5)	933 (40)	8 (36)
8. Thinking in advance about how to get home	10 (5)	896 (39)	4 (18)
9. Changing train car by choosing a crowded one	7 (4)	891 (39)	5 (23)
10. Avoiding walking near groups of people	14 (7)	883 (38)	5 (23)
11. Avoiding public transportation at night	8 (4)	848 (37)	5 (23)
12. Always notifying someone of your movements	5 (3)	773 (33)	5 (23)
13. Talking on the mobile phone with someone	7 (4)	705 (31)	5 (23)
14. Sitting in the front seats of the buses	7 (4)	650 (28)	5 (23)
15. Avoiding walking or going jogging in isolated areas	4 (2)	642 (28)	1 (5)
16. Covering up as much as possible	3 (2)	583 (25)	4 (18)
17. Changing the way you dress	9 (5)	525 (23)	3 (14)
18. Having someone accompany you	1 (1)	520 (22)	1 (5)
19. Avoiding walking alone	3 (2)	476 (21)	0
20. Avoiding going out	3 (2)	299 (13)	1 (5)
21. Avoiding long walks	1 (1)	300 (13)	0
22. Avoiding going to public transportation stops in advance	7 (4)	218 (9)	1 (5)

Note: $N = 1,503$. Participants who did not report any street harassment experiences ($n = 239$) and those who indicated that they did not change their habits ($n = 1,022$) were discarded from these analyses.

Furthermore, it is noteworthy that all the harassing behaviours presented to the respondents were labelled as street harassment by both males and females. Indeed, the percentages of the *Not at all* option are less than 10% for all the harassment experiences regardless of gender (see Table 6; see the Supplementary Material on OSF for more details on these results by age)⁸. Overall, a *t*-test showed that women

⁸ Cf. footnote 4.

Table 6
Street harassment labelling by gender

	<i>n</i> (%)														
	Not at all			Slightly			Moderately			Very			Extremely		
	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other	Males	Females	Other
1. Someone made you feel uncomfortable with a whistling sound	18 (5)	29 (1)	0	32 (10)	111 (5)	1 (4)	87 (26)	371 (16)	5 (19)	88 (26)	632 (26)	2 (8)	113 (33)	1,257 (52)	18 (69)
2. Someone looked at you in a sexually allusive way	34 (10)	22 (1)	2 (8)	53 (16)	89 (4)	0	93 (27)	290 (12)	3 (11)	94 (28)	766 (32)	6 (23)	64 (19)	1,233 (51)	15 (58)
3. Someone was too close to you	19 (6)	18 (1)	0	45 (13)	76 (3)	1 (4)	105 (31)	467 (19)	5 (19)	116 (34)	1,049 (44)	12 (47)	53 (16)	790 (33)	8 (30)
4. Someone made gestures and calls towards you	16 (5)	19 (1)	0	37 (11)	68 (3)	0	80 (24)	288 (12)	3 (11)	107 (31)	786 (33)	9 (35)	98 (29)	1,239 (51)	14 (54)
5. Someone shouted or said obscene words to you	11 (3)	15 (1)	0	24 (7)	36 (1)	0	50 (15)	155 (7)	3 (11)	100 (30)	537 (22)	5 (19)	153 (45)	1,657 (69)	18 (70)
6. Someone slowed down and pulled over with their car	28 (8)	23 (1)	0	37 (11)	90 (4)	1 (4)	72 (21)	381 (16)	7 (26)	108 (32)	923 (38)	10 (40)	93 (28)	983 (41)	8 (30)
7. Someone criticized your appearance and/or insulted you	16 (5)	63 (3)	0	53 (16)	189 (8)	2 (8)	73 (21)	504 (21)	7 (26)	106 (31)	728 (30)	7 (26)	90 (27)	916 (38)	10 (40)
8. Someone touched you with the hand without your consent	11 (3)	20 (1)	0	6 (2)	11 (1)	0	8 (2)	26 (1)	2 (8)	38 (11)	76 (3)	2 (8)	275 (82)	2,267 (94)	22 (84)
9. Someone tried to draw your attention and, when you ignored them, started insulting you	12 (3)	23 (1)	0	19 (6)	51 (2)	0	34 (10)	201 (8)	3 (11)	95 (28)	610 (26)	7 (27)	178 (53)	1,515 (63)	16 (62)
10. Someone started following you	13 (4)	19 (1)	0	12 (3)	23 (1)	1 (4)	27 (8)	81 (3)	2 (8)	83 (25)	341 (14)	7 (26)	203 (60)	1,936 (81)	16 (62)
11. Someone made sexually explicit gestures towards you while you were walking	13 (4)	18 (1)	0	11 (3)	26 (1)	0	28 (8)	99 (4)	1 (4)	85 (25)	406 (17)	6 (23)	201 (60)	1,851 (77)	19 (73)
12. Someone showed you their private parts	13 (4)	30 (1)	0	2 (0)	7 (0)	0	6 (2)	16 (1)	1 (4)	17 (5)	43 (2)	0	300 (89)	2,304 (96)	25 (96)
13. Someone asked you to do something sexually or offered you money for sex	18 (5)	31 (1)	0	8 (2)	13 (1)	0	15 (5)	34 (1)	1 (4)	39 (12)	167 (7)	2 (8)	258 (76)	2,155 (90)	23 (88)

Note: Male *n* = 338; female *n* = 2,400; other (non-binary and prefer not to answer) *n* = 26.

($M = 4.47$, $SD = 0.51$) more frequently labelled harassing behaviours as street harassment than men ($M = 4.01$, $SD = 0.78$), $t(377.36) = 10.38$, $p < .001$.

3.2.2. Main analyses

In order to simplify the interpretation of the subsequent analyses, the socio-demographic variables included in the study were re-coded. In particular, age was re-coded as 1 = 18-40 years old, 2 = 41 and older. Instead, regarding role, we joined researchers, professors, and technical-administrative workers in the same category by re-coding this variable as 0 = student, 1 = personnel.

As reported in Table 7, correlation analysis showed that exposure to street harassment was positively associated with all the subscales of negative outcomes (i.e., self-objectification, anxiety, and uncertainty about life), changes in habits, and labelling the events as harassing behaviours. Further, all the negative outcomes of harassment were positively correlated with changes in habits and street harassment labelling. This latter variable was positively associated with changes in habits. Finally, gender, age, and role correlated with all the considered variables. In particular, results showed that females, younger respondents, and students scored higher in exposure to street harassment, negative outcomes, probability to change habits, and street harassment labelling.

To determine if exposure to street harassment had negative effects regardless of whether people labelled their experiences as harassment or not (*Hypothesis 2*), we tested three moderation models by conducting multiple linear regression analyses. In particular, exposure to street harassment was conceptualized as independent variable, street harassment labelling was entered as the moderator, and the three subscales of negative psychological outcomes of harassment (i.e., self-objectification, anxiety, and uncertainty about life) were entered as dependent variables (see Figure 1). Given that gender, age, and role emerged as significantly related to the considered variables, we treated this information as covariates in all the tested models. Regarding self-objectification and anxiety, the results showed positive main effects of exposure to harassing behaviours and street harassment labelling (all $ps < .001$). However, in line with our hypothesis, the tested moderations were not supported, as shown by the non-significant interaction effects ($p = .177$ for self-objectification, $p = .274$ for anxiety). Instead, regarding uncertainty about life, only exposure to street harassment had a significant positive effect ($p < .001$). Both street harassment labelling and the interaction effect were not significant (all $ps > .05$).

Since the variable about changes in habits was dichotomous, multiple linear and logistic regressions were used to test for the mediation effects of negative psychological outcomes deriving from street harassment in the relationship between exposure to harassing behaviours and changes in habits (*Hypothesis 3*). Gender, age, and role were treated as covariates. As shown in Table 8, expo-

Table 7
Correlations among the variables considered in the study

Variable	1	2	3	4	5	6	7	8
1. Exposure to street harassment	–							
2. Self-objectification	.52**	–						
3. Anxiety	.56**	.50**	–					
4. Uncertainty about life	.38**	.38**	.44**	–				
5. Changes in habits (a)	.41**	.40**	.44**	.27**	–			
6. Street harassment labelling	.22**	.24**	.19**	.08**	.14**	–		
7. Gender (b)	.43**	.30**	.20**	.05**	.21**	.26**	–	
8. Age (c)	-.27**	-.20**	-.11**	-.08**	-.12**	-.09**	-.15**	–
9. Role (d)	-.29**	-.25**	-.15**	-.09**	-.15**	-.11**	-.19**	.59**

Note: (a) 0 = no, 1 = yes; (b) 0 = male, 1 = female. Participants who identified themselves as «Non-binary» and those who selected the «Prefer not to answer» option ($n = 26$) were discarded from the analysis. (c) 1 = 18-40 years old, 2 = 41 and older. (d) 0 = student, 1 = personnel. ** $p < .001$.

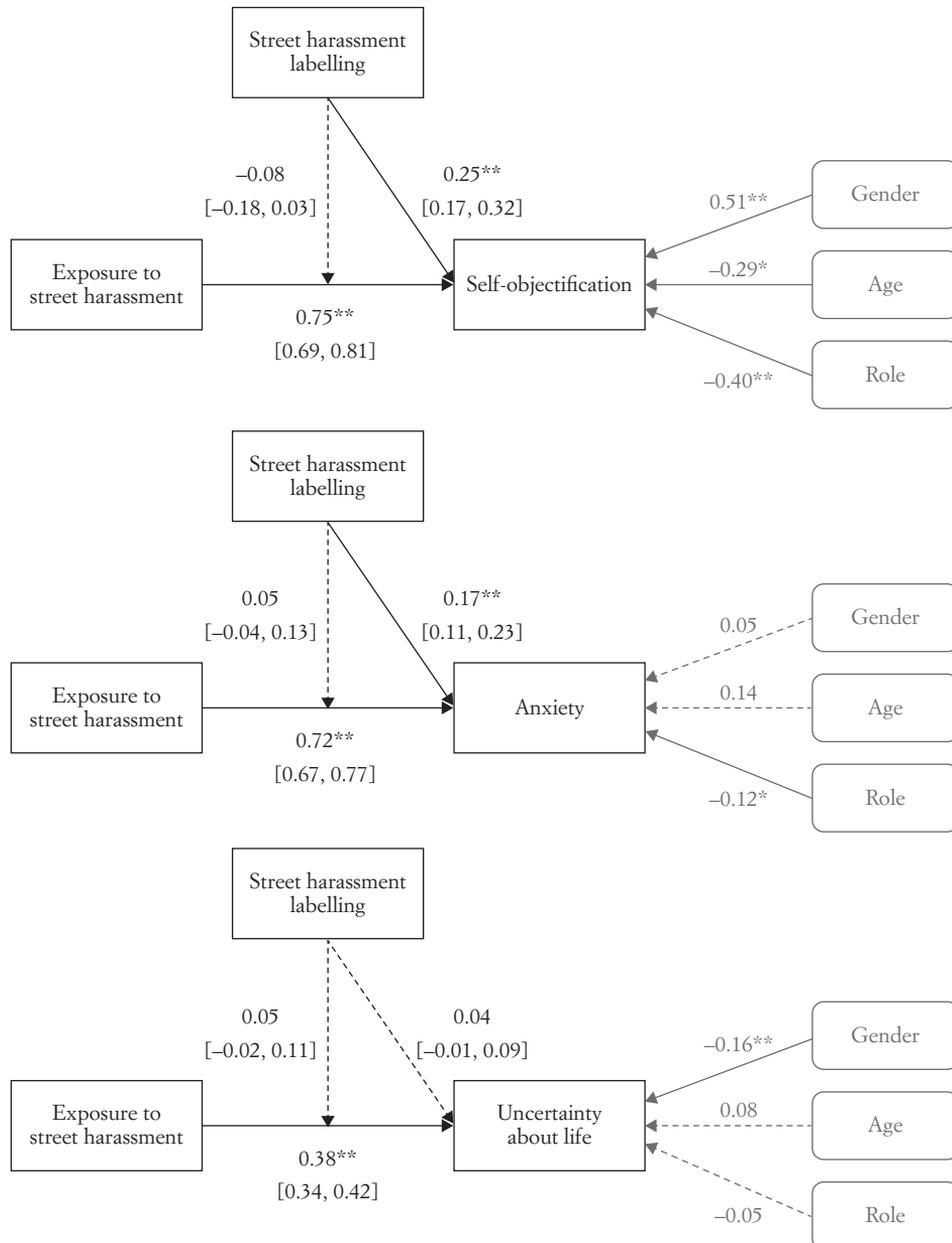
Table 8
Regressions of exposure to street harassment on changes in habits when negative outcomes (i.e., self-objectification, anxiety, and uncertainty about life) were the mediators

	<i>b</i> (SE)	Beta	<i>t</i>	95% CI for <i>b</i>		<i>p</i>
				Lower	Upper	
<i>Prediction of self-objectification</i>						
Exposure to street harassment	0.76 (0.03)	0.44	24.69	0.70	0.82	<.001
Gender (a)	0.63 (0.07)	0.15	8.69	0.49	0.78	<.001
Age (b)	-0.35 (0.11)	-0.61	-3.12	-0.57	-0.13	.002
Role (c)	-0.40 (0.07)	-0.11	-5.43	-0.55	-0.26	<.001
<i>Prediction of anxiety</i>						
Exposure to street harassment	0.73 (0.02)	0.54	30.63	0.69	0.78	<.001
Gender (a)	0.11 (0.06)	0.03	1.89	-0.004	0.22	.059
Age (b)	0.11 (0.09)	0.02	1.24	-0.06	0.28	.214
Role (c)	-0.13 (0.06)	-0.04	-2.18	-0.24	-0.01	.029
<i>Prediction of uncertainty about life</i>						
Exposure to street harassment	0.39 (0.02)	0.39	19.68	0.35	0.42	<.001
Gender (a)	-0.16 (0.05)	-0.07	-3.51	-0.25	-0.07	<.001
Age (b)	0.07 (0.07)	0.02	1.03	-0.07	0.21	.301
Role (c)	-0.05 (0.05)	-0.02	-1.01	-0.14	0.05	.314
	<i>b</i> (SE)	OR	Wald	95% CI for OR		<i>p</i>
				Lower	Upper	
<i>Prediction of changes in habits</i>						
Exposure to street harassment	0.64 (0.10)	1.89	38.31	1.55	2.32	<.001
Self-objectification	0.34 (0.05)	1.40	39.32	1.26	1.56	<.001
Anxiety	0.77 (0.08)	2.17	96.30	1.86	2.53	<.001
Uncertainty about life	0.43 (0.11)	1.53	14.39	1.23	1.91	<.001
Gender (a)	-0.59 (0.21)	0.55	7.67	0.36	0.84	.006
Age (b)	0.19 (0.29)	1.20	0.41	0.68	2.13	.523
Role (c)	0.20 (0.19)	1.22	1.13	0.85	1.76	.288

Note: $N = 2,503$. OR = odds ratio. Participants who did not report any street harassment experiences ($n = 239$), those who identified themselves as «Non-binary» and those who selected the «Prefer not to answer» option ($n = 22$) were discarded from these analyses. (a) 0 = male, 1 = female. (b) 1 = 18-40 years old, 2 = 41 and older. (c) 0 = student, 1 = personnel. Significant effects are in italic type.

Figure 1

Results of the tested moderation models. Standardized coefficients with 95% confidence intervals are reported. Participants who did not report any street harassment experiences (n = 239), those who identified themselves as «Non-binary» and those who selected the «Prefer not to answer» option (n = 22) were discarded from these analyses. Dashed arrows represent non-significant effects



* $p < .05$, ** $p < .001$.

sure to street harassment was positively related to all the negative outcomes of harassing behaviours (i.e., self-objectification, anxiety, and uncertainty about life) and changes in habits. Negative outcomes deriving from harassing experiences were also connected with a greater probability of changing habits. All the indirect effects of negative outcomes of harassment on the relationship between street harassment experiences and changes in habits were positive and significant ($a*b = 0.26, p < .001$ for self-objectification; $a*b = 0.56, p < .001$ for anxiety; $a*b = 0.17, p < .001$ for uncertainty about life). Therefore, in line with our assumption, negative outcomes deriving from street harassment experiences mediated the relationship between harassing behaviours experienced by respondents and the probability that they changed their daily routine.

3.2.3. Additional analyses

A series of moderation models were tested to explore whether participants' gender and age moderated the relationships between exposure to street harassment and the other key variables (i.e., negative psychological outcomes, changes in habits, and street harassment labelling). In particular, exposure to street harassment was considered as independent variable, gender and age were entered as the moderators, and negative psychological outcomes, changes in habits, and street harassment labelling as dependent variables. Regarding age, no moderation was observed ($ps > .133$ for all the interaction effects; for more details see the Supplementary Material on OSF)⁹. Instead, gender was a significant moderator only of the associations between exposure to street harassment and the three negative psychological outcomes considered in the study (i.e., self-objectification, anxiety, and uncertainty about life). Although the relationships between harassment experiences and the three negative outcomes were always significant, these associations were stronger for male than for female respondents (see Table 9 and Figure 2).

4. Discussion

The main aim of this study was to document the frequency of street harassment and examine the associations among street harassment experiences, negative psychological outcomes, and changes in behavioural habits in an Italian university population. In line with previous literature in this field (e.g., DelGreco & Christensen, 2020; Willness et al., 2007), we provided evidence of the relationship between exposure to street harassment and anxiety, self-objectification, and uncertainty about life.

⁹ Cf. footnote 4.

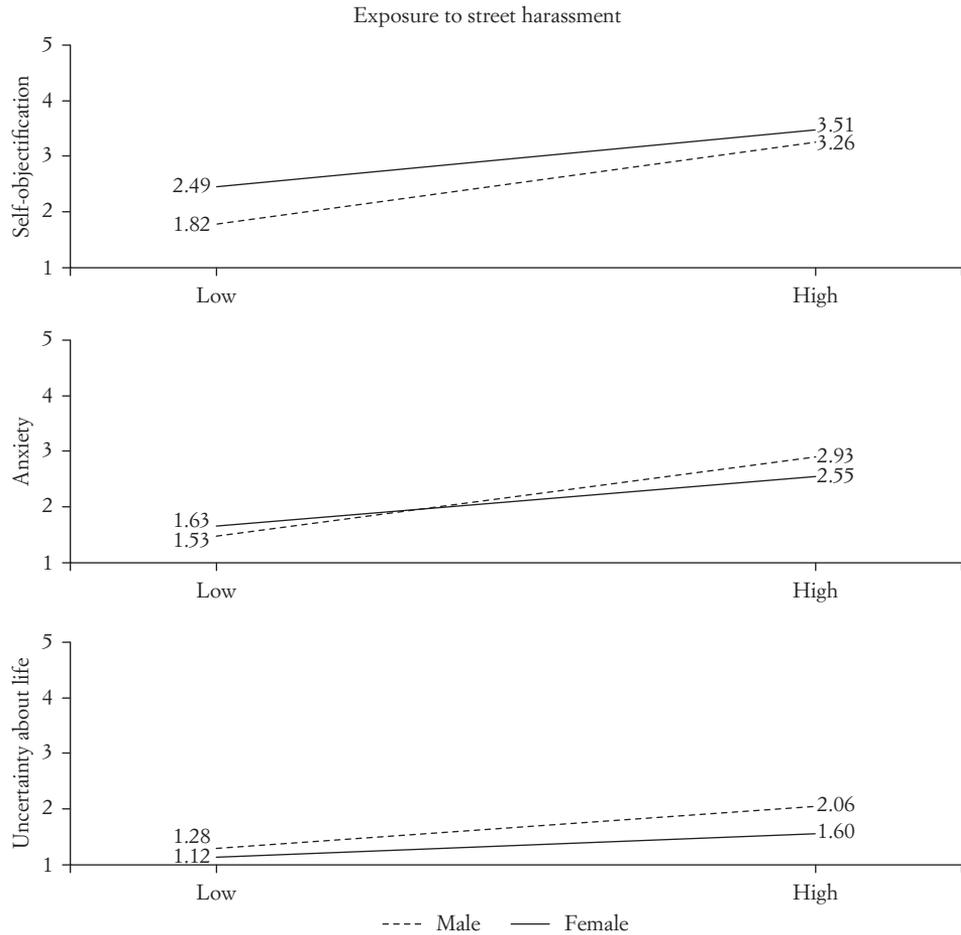
Table 9
Moderation effect of gender on the associations between exposure to street harassment and negative psychological outcomes

	Self-objectification						Anxiety						Uncertainty about life					
	<i>b</i> (SE)		<i>t</i>		<i>p</i>		<i>b</i> (SE)		<i>t</i>		<i>p</i>		<i>b</i> (SE)		<i>t</i>		<i>p</i>	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
EST	1.13 (0.16)	7.11	0.82	1.44	<.001	1.10 (0.12)	9.11	0.87	1.34	<.001	0.61 (0.10)	6.11	0.41	0.80	<.001	0.41	0.80	<.001
Gender (<i>a</i>)	0.45 (0.13)	3.52	0.20	0.71	<.001	-0.14 (0.10)	-1.41	-0.33	0.05	.159	-0.31 (0.08)	-3.87	-0.47	-0.15	<.001	-0.47	-0.15	<.001
EST × Gender	-0.33 (0.16)	-2.01	-0.64	-0.09	.044	-0.38 (0.12)	-3.05	-0.62	-0.13	.002	-0.23 (0.10)	-2.24	-0.43	-0.03	.025	-0.43	-0.03	.025
Male	1.13 (0.16)	7.11	0.82	1.44	<.001	1.10 (0.12)	9.11	0.87	1.34	<.001	0.61 (0.10)	6.11	0.41	0.80	<.001	0.41	0.80	<.001
Female	0.81 (0.03)	25.72	0.74	0.87	<.001	0.73 (0.02)	30.49	0.68	0.77	<.001	0.38 (0.02)	19.43	0.34	0.42	<.001	0.34	0.42	<.001

Note: EST = Exposure to street harassment. Male *n* = 190; female *n* = 2,313. Participants who did not report any street harassment experiences (*n* = 239), those who identified themselves as «Non-binary» and those who selected the «Prefer not to answer» option (*n* = 22) were discarded from these analyses. (*a*) 0 = male, 1 = female. Significant effects are in italic type.

Figure 2

Moderation effect of gender in the relationships between exposure to street harassment and self-objectification, anxiety, and uncertainty about life



More specifically, we found that exposure to street harassment was associated with negative psychological outcomes regardless of whether people studying and working at the university labelled their experiences as harassment or not. Furthermore, analyses demonstrated that negative outcomes deriving from street harassment mediated the relationship between harassing episodes experienced by respondents and the probability that they changed their daily routine. Crucially, all the tested models remained significant by controlling for participants' gender, age, and role.

According to our hypotheses and previous research (e.g., Stop Street Harassment, 2014), we found that women experienced more street harassment than men

and that perpetrators were mainly stranger males between 31 and 60 years old. This result and our overall findings on street harassment features confirm a well-known trend in this field, according to which street harassment and gender violence are usually perpetrated by men who are not known to the victim (i.e., not a co-worker or friend) in public domains such as on the street, in stores, or on public transportation (Bowman, 1993; Fairchild & Rudman, 2008). Moreover, correlation analysis showed that females, younger respondents, and students scored higher in exposure to street harassment, negative outcomes, probability to change habits, and street harassment labelling. These results enrich previous literature on this topic, according to which female and younger undergraduate students were more likely to be victims of harassing behaviours (see Wood et al., 2018).

Besides, additional moderation models demonstrated that although the relationships between harassment experiences and negative psychological outcomes were significant for both males and females, these associations were stronger for male than for female respondents. In this regard, it is important to note that females' self-objectification scores were consistently higher than those reported by male participants, especially with lower levels of street harassment exposure (see Figure 2). This finding seems to confirm the pervasiveness of self-objectification among women regardless of whether they experienced street harassment or not. Accordingly, a large body of research has documented that girls and women are targeted more often than boys and men for sexually objectifying treatment in their day-to-day lives (Murnen & Smolak, 2000; Swim et al., 2001). As a consequence, girls and women tend more frequently to adopt an objectified view of the self. Indeed, although being objectified renders women passive and powerless (Nussbaum, 1995; Saguy et al., 2010), the objectified lens through which they come to view themselves simultaneously emphasizes their value to men as sex objects.

Regarding the negative outcomes of anxiety and uncertainty about life, our results showed stronger relationships for male than for female respondents. Even though some studies examining sexual harassment among adolescents or young adults found stronger negative effects for female than for male respondents or no differences (Chiodo et al., 2009; Mitchell et al., 2014), others found that male respondents were more strongly affected than females (Kaltiala-Heino et al., 2016; Romito et al., 2019). Crucially, Kaltiala-Heino and colleagues (2016) found that the associations between most items of sexual harassment and depression were stronger for boys than for girls. An explanation for these and our results is that girls and women tend to perceive harassment as routine behaviour by thus reporting a smaller increase in negative effects. In contrast, given that boys and men are less familiar with the phenomenon, experiencing even a few harassment episodes immediately made them more anxious and concerned about their future and lives. In this regard, several authors argued that because women are more used to sexual and street harassment, they have learned to live with it, whereas men find harassment unexpected (de Haas et al., 2009; Johnson et al., 2010). Another explanation for

these findings may be related to the manhood threat. As indicated by many scholars (e.g., Gilmore, 1990; Kimmel, 1994; Vandello & Bosson, 2013; see also Pacilli, 2020; Volpato, 2013), manhood is a precarious social status that is constructed in antithesis to femininity. Thus, experiencing harassing behaviours usually directed at women might raise doubts about one's masculinity and elicit negative outcomes, such as anxiety and uncertainty about life.

We believe that our study makes a novel contribution in different ways. First, as far as we know, our findings constitute one of the first empirical pieces of evidence of the frequency of street harassment experiences among students and workers at an Italian university. It is noteworthy that whereas existing research has been conducted almost exclusively among young women and on the phenomenon of sexual harassment (e.g., Romito et al., 2017; Santinello & Vieno, 2004), we focused here on a university sample involving both students and workers, and on one of the most understudied yet commonly experienced forms of violence, namely street harassment. Our results show that over 91% of respondents (i.e., 2,525 out of 2,764 participants) reported suffering at least one form of street harassment in the last four years by confirming the pervasiveness of this phenomenon even though people's experiences of intrusive behaviours in public space remains an understudied area. Crucially, our study is the first to show the above mentioned trend of stronger associations of exposure to street harassment with negative psychological outcomes for male than for female respondents in an Italian university sample.

By comparing our results with those of a previous investigation conducted in 2012 by the Equal Opportunities Committee of the University of Milano-Bicocca, we detected an increase in harassment incidents targeting respondents in the context of the university. In particular, by focusing on sexual harassment, researchers found that 1.4% of the respondents (i.e., 58 out of 4,053) has experienced at least one harassing episode within the university buildings since attending university. Most of the episodes occurred in classrooms (24%) and involved unwanted comments (42%). Instead, our data showed that 8% of the participants (i.e., 200 out of 2,525; see Table 3) had suffered street harassment inside university in the last four years, with the majority of the episodes involving being looked at in a sexually allusive way (92%; data not shown). Although the methodology adopted in the two investigations is quite different, this comparison seems to indicate the relevance of our study in providing an updated and alarming picture of the phenomenon.

Furthermore, our results expand research on the negative psychological outcomes deriving from street harassment. It has been found that people who have experienced street and sexual harassment have lower self-esteem and higher levels of anxiety, insecurity, depression, and self-objectified perceptions (e.g., DelGreco & Christensen, 2020; Fairchild & Rudman, 2008). Our research adds a tile to this picture by providing quantitative estimates of the negative effects of street harassment, a topic that we believe deserves more attention due to the deleterious mental

health effects documented in the current work, and by showing that these negative outcomes occur whether the victim label their experiences as harassment or not. Only a few studies have documented this peculiar and important association (e.g., Magley et al., 1999). Therefore, not only did we contribute to confirm the pervasiveness of street harassment, but we also demonstrated that it is the harassment itself and not its label or appraisal as stressful that is associated with detrimental psychological outcomes.

In addition, we found that the harmful outcomes deriving from street harassment are associated with the probability that the victims change their daily routine and thus their relationship with urban spaces. In particular, we found that 52% of female respondents experiencing street harassment at least once in the last four years now avoid certain streets. Instead, 28% of females avoid walking or going jogging in isolated areas. A recent investigation on safe perceptions indicated that women and men perceive fear differently, and their psychological experiences of cities are different. Women feel unsafe in cities and tend to avoid accessing towns by way of walking due to this fear. Hence, perceptions of safety and fear hamper the experience women have in cities (see Sethi & Velez-Duque, 2021). Our results and previous findings provided important evidence that tangible action plans need to be developed and adopted because (especially) women seem to feel unsafe while walking in cities. Due to this perception of safety, they might alter ways of engaging with urban spaces. We believe that these results pave the way for a better understanding of cities' urban space, design, and gender relations. Indeed, using a psychological perspective to design urban spaces can provide a preventative solution in making cities feel safer and more accessible for women.

4.1. Limitations and future directions

Despite the relevance of our findings, some limitations should be considered. First, whilst large and robust, the present sample is mainly composed of females (2,400 out of 2,764 respondents). Further investigations could increase the study of street harassment by using a more balanced sample across gender. In this regard, it is important to note that the overall response rate was quite low, namely 4.6% (i.e., 2,764 out of a total of 59,455 contacted people; see also Note 1). Therefore, those who responded to the survey were a self-selecting sample and may not be wholly representative of the academic population. As a result, the estimate of the frequency of street harassment experiences was not always clear and further research is therefore required to develop insight into this.

Furthermore, the present study is limited by its cross-sectional and correlational perspectives, and as such cannot determine causality with regard to the variables analysed. Future research should examine the long-term impact of street harassment experiences through a longitudinal design.

Another relevant point concerns the measure we used to investigate exposure to street harassment. Indeed, this variable was measured with 13 items describing different types of harassing behaviours and the frequency with which the participants experienced each behaviour in the last four years (from 1 = *never experienced it* to 5 = *almost every day*). However, we did not collect data on whether the selected behaviours referred to a single harassing experience (e.g., someone slowed down with their car and made you feel uncomfortable with a whistling sound) and on when the reported harassing behaviours occurred (e.g., two days or four years before the data collection). Future investigations should consider this information in order to better understand the incidence of the phenomenon and its negative outcomes.

Moreover, we believe that further studies should focus more on the role of street harassment features in how these episodes are perceived. Burn (2019) investigated how contextual factors interacted with individual factors to influence the incidence of harassment and stated that personal predisposing factors (e.g., hostile sexist attitudes) combined with situational factors (e.g., masculine group norms) could determine whether harassment occurs. In the context of street harassment, Weselmann and Kelly (2010) found that college-aged men were more likely to engage in catcalling behaviour when in a group than when alone due to the influence of group norms, the anonymity granted, and the opportunity for group bonding. Similarly, Benard and Schlaffer (1984) found that catcallers described their behaviour as both harmless and fun, with the majority reporting that catcalling helped them to relieve boredom and develop camaraderie with other men. Thus, the presence of other ingroup members contributes to harassment proclivity due to the anonymity provided. Related to the role of harassment features, the research literature on sexual violence documented that the capability of recognizing an episode as a rape depends on the fact that it presents the features that qualify a rape episode according to rape myths (Harned, 2005; Ryan, 2011; Sarmiento, 2011). Testing whether the same happens for street harassment might be interesting for future studies.

Finally, it is important to note that we did not investigate the role of bystanders through a quantitative perspective. Several studies examined bystanders' behaviours in different circumstances. For example, Baldry (2005) conducted a study about bullying behaviours among students aged between 12 and 16 years old and found that though the most likely reaction is supporting the victim by trying to discourage the bully, gender differences emerged, with girls more likely than boys to support the victim and boys more likely to encourage the bully or simply ignore. In the context of intimate partner violence, several research projects have demonstrated that victim-blaming attitudes, traditional gender role beliefs, hostile sexism, and acceptability of partner violence against women have been linked to a lesser willingness to intervene (e.g., Baldry & Pagliaro, 2014; Cinicola, 2015; Cinquegrana et al., 2018). Even though bystanders may play an important role in street harassment, there has been limited research on their role and factors influencing their behaviour in these peculiar circumstances. Fileborn (2017) examined street harassment victims' expe-

periences of bystander intervention and found that bystander intervention was rare, with participants indicating they had experienced considerably more street harassment than bystander intervention. Similarly, 23% of men and 20% of women in Stop Street Harassment's (2014) study said they had proactively responded to street harassment that they witnessed as a bystander. Furthermore, Fileborn's (2017) results showed that bystander intervention often reduced the perceived harm of an incident of street harassment and could form an important component of street harassment victims' justice needs. Future studies should deepen these results and examine public helping reactions in order to reduce a victim's secondary victimization in street harassment cases (see also Penone & Spaccatini, 2019).

5. Conclusions

Although street harassment may seem a less severe form of victimization than intimate partner violence or sexual assault, it appears to be associated with negative psychological outcomes, especially in terms of anxiety and self-objectification. Guidelines drafted by the World Health Organization (WHO, 2013) reminded that violence is a serious public health problem and encouraged health professionals to ask especially women about violence, listen to them empathically and non-judgmentally. To implement this practice, health professionals should be trained and knowledgeable about violence. Until now, their training has mostly focused on intimate partner violence or sexual assault; street harassment should be included (see also Romito et al., 2017). Indeed, with a greater understanding of the links between different types of violence – including street harassment – and well-being, clinicians will be better able to care for their patients. Results from our study have the potential to inform design for mental health interventions that could reduce negative health outcomes such as anxiety and self-objectification. We showed that street harassment is not just a trivial annoyance but a public health issue that should be further explored.

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Conflict of interest

The Authors declare that there is no conflict of interest.

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Street harassment and its negative psychological outcomes in an Italian university population

The goal of this research was to document the frequency of street harassment and examine the associations among street harassment experiences, negative psychological outcomes, and changes in behavioural habits. A sample of students and workers at an Italian university was surveyed ($N = 2,764$). Findings indicated that exposure to street harassment had negative psychological effects regardless of whether people labelled their experiences as harassment or not. Furthermore, analyses demonstrated that negative outcomes deriving from street harassment mediated the relationship between harassing behaviours experienced by respondents and the probability that they changed their daily routine. Crucially, all the tested models remained significant by controlling for participants' gender, age, and role. Research and practical implications were discussed.

Keywords: street harassment, psychological outcomes, behavioural habits, university sample.

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