

An Intersectional Perspective on Age Stereotypes: Bisexual and Gay Men are Stereotyped as Younger than Heterosexual Men Even When Aging

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ABSTRACT

We analyzed the age stereotypes of heterosexual, gay, and bisexual men and the implications of such stereotypes for the conceptualization of older gay and bisexual men, specifically. In Study 1a ($N = 158$) and 1b ($N = 155$), we found that compared to heterosexual men, participants stereotyped gay men more on young- than elderly-stereotypical traits. Participants represented bisexual men not as “somewhere in between” the stereotypes about heterosexual and gay men, but were characterized more by young- than elderly-stereotypical traits. In Study 2 ($N = 106$), we reasoned that because of their sexual orientation, both older gay and bisexual men would be viewed as atypical subtypes of older men, considered to be heterosexual by default. As atypical subtypes, both older gay and bisexual men may be stereotyped less on traits associated with elderly men and more on traits associated with their sexual orientation membership, namely young-stereotypical traits. Consistently, compared with older heterosexual men, both older gay and bisexual men were perceived as less typical of older men, and their perceived atypicality accounted for them being stereotyped less as older and more as younger men. The results have been examined for intersectional stereotyping research and practical implications are discussed.

KEYWORDS

Age categories; gay ageism; intersectionality; sexual orientation categories; stereotypes

Introduction

Most people have opinions about aging, and many people have thoughts about homosexuality. But few individuals have considered them simultaneously. (Grossman et al., 2001, p. 24)

Cultural stereotypes (i.e., a set of shared beliefs about a target group) are part of the social heritage individuals learn through, inter alia, socialization processes and media exposure (Crandall et al., 2002; Devine, 1989; Ehrlich, 1973). At the societal level, cultural stereotypes (i.e., stereotypes) about LGBT people

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play a crucial role in maintaining inequality (Pinsof et al., 2017), promoting homophobic bullying (Zotti et al., 2019), supporting hate crimes (Craig, 2002), and constraining access to health services (Earnshaw & Quinn, 2012). Because LGBT people grow up in societies where stereotypes about their group are collectively shared, LGBT people are not only aware of these stereotypes, but may find themselves internalizing them (Bianchi et al., 2017; Herek, 2007; Pacilli et al., 2011). For instance, media representations of gay men are overwhelmingly skewed toward young men, while the representations of heterosexual men are more age-diverse (Avila-Saavedra, 2009; BBC, 2012; Fejes, 2000; Jankowski et al., 2014). Consistently, stereotypes concerning gay men, but not those about heterosexual men, strongly conflate with those of young men (Carnaghi et al., 2022; Coladonato et al., 2022). Also, and at the cultural level, age stereotypes are negatively tinted over time (Levy, 2017). At the individual level, when such cultural beliefs are internalized by gay people they result in “feeling denigrated or depreciated because one is aging as a gay man” (i.e., internalization of gay ageism; Wight et al., 2015, p. 201). Indeed, gay men, more so than lesbian women, expect society to see them aging earlier than their heterosexual counterparts (i.e., accelerated aging; Bennett & Thompson, 1990; Minnigerode, 1976; Schope, 2005). Young gay men express concerns about aging (Warren, 2000) and older gay men often anticipate ageism in the gay community (Hajek & Giles, 2002). Also, age stereotypes within the gay community may create communicative boundaries between younger and older members (Fox, 2007). Together, this evidence attests to the importance of studying the age stereotypes of gay men at the societal level, given their detrimental effects at the individual level on gay men’s well-being at various stages of their lives (Gonçalves et al., 2020).

Thus far, the study of the age stereotypes concerning individuals from sexual minorities has limited its investigation to gay men, thus leaving unaddressed whether additional sexual minority groups might also be stereotyped as young by default. Likewise for gay men, ageism also constitutes a minority stress factor for bisexual men (Wight et al., 2015) and opens up the possibility that the stereotypes about bisexual men represent them as predominately young. However, research on stereotypes about this group has limited its investigation to beliefs about their promiscuity and sexual orientation confusion, thus leaving the age stereotypes about bisexual men unaddressed (Brewster & Moradi, 2010; Dyar et al., 2017; Friedman et al., 2014; Mohr & Rochlen, 1999; Spalding & Peplau, 1997; Zivony & Saguy, 2018). By expanding the investigation of the cultural beliefs about this group beyond the analyses of the above-mentioned stereotypical facets, the extant research not only complements studies on how bisexual men are socially represented, but also tests two alternative predictions concerning their age stereotypes based on previous works. First, media portrayals of bisexual men are skewed toward younger men (BBC, 2012; Kingston, 2002; Smith, 2002), and stereotypes about bisexual

men overemphasize youth-related characteristics, namely physical appearance and sexuality (Brennan et al., 2012; Callis, 2013). Thus, the selective exposure to young bisexual men and the frequent instantiation of youth-related characteristics in association with bisexual men may jointly contribute to stereotyping bisexual men as predominantly young, on par with gay men (Barsalou, 1985; Hegarty et al., 2004). Second, people may not always hold a well-delineated cognitive representation of bisexual men (Zivony & Lobel, 2014; see also, Burke & LaFrance, 2016). Indeed, bisexual men are often stereotyped as “somewhere in between” the representation of heterosexual men and that of gay men, given that bisexuality might be stereotypically viewed as a transient phase (Flanders & Hatfield, 2013; Mohr et al., 2013). Accordingly, the age stereotypes of bisexual men as predominantly young might be less pronounced than those about gay men, but likely stronger than those regarding heterosexual men.

The second aim of the current research is to further analyze the age stereotypes of gay and bisexual men, along with those of heterosexual men, in their intersections with aging, namely older gay men, older bisexual men and older heterosexual men. Both at the social and cognitive level, the representation of older men is strongly characterized by traits related to traditionalism, fragility, and carefulness (Chasteen et al., 2002; Cuddy & Fiske, 2002; Fiske et al., 2002; Kite et al., 1991; Wright & Sara Canetto, 2009). Importantly, the representation of older men not only carries stereotypical information consistent with the age category but also strongly conveys heteronormative presumptions. Indeed, older heterosexual men are considered the most typical, alias the prototype of older men (Coladonato, Carnaghi, et al., 2023), and the heteronormative assumption about older men exceeds that of young men (Carnaghi et al., 2022; Coladonato, Yzerbyt, et al., 2023). Moreover, compared to young men, older men are stereotyped more strongly on traits associated with heterosexual men (Carnaghi et al., 2022; Coladonato, Carnaghi, et al., 2023). As such, by virtue of their minority sexual orientation, both older gay men and older bisexual men may be relegated into subtypes at odds with the representation of older men as a whole. In other words, we assert that compared to older heterosexual men, both older gay men and older bisexual men would be perceived as “deviant,” aka atypical subtypes with respect to older men. Although sociological observations in the field of healthcare services (Brotman et al., 2003; Knochel et al., 2012) as well as theoretical claims in the field of sexuality studies (D’Augelli et al., 2001; Grossman et al., 2001) have acknowledged that sexual minorities are rendered “invisible” especially when it comes to their aging, no study has yet empirically tested whether older gay men, as well as older bisexual men, are dismissed as “deviant” cases when thinking of older men in general.

Furthermore, we assert that being perceived as atypical instances would additionally affect the age stereotypes concerning both older gay men and

older bisexual men. Evidence stemming from the social cognition approach showed that atypical category subtypes are less likely to be stereotyped on traits typically associated with the category, and are more likely to exhibit features that are contrary to that category as highlighted by the incongruent subtypes (Bodenhausen et al., 1995; Brewer et al., 1981; Carnaghi et al., 2020; Coladonato et al., 2022; Sherman, 1996). Accordingly, we suggest that as atypical subtypes, both older gay and bisexual men would be stereotyped less according to the traits associated with older men and more on stereotypical traits associated with their sexual orientation membership, that is, the stereotypical traits of young men. As a consequence, compared to both older men and older heterosexual men, older gay and bisexual men would be stereotyped less as old men and more as young men.

To corroborate this rationale, we further test the potential generative mechanism that could account for the anticipated pattern of age stereotypes of both older gay and bisexual men. Specifically, we ascertain whether compared to older heterosexual men, the reduced perceived typicality of both older gay and bisexual men with respect to older men may account for (i.e., mediate) the stereotyping of these subtypes as less old and younger.

A third, though explorative goal of the present research is to probe the role of previous contact with gay and bisexual men (Study 1a-b), with older gay and bisexual men (Study 2) and the age stereotyping of such groups. We tentatively analyze whether a lack of contact with individuals belonging to these groups could lead participants to strongly rely on age stereotypes about these groups, while increased direct contact with such groups would provide a more diverse representation of these groups, thereby diluting their age stereotypes (Shamloo et al., 2018). However, direct contact with bisexual and gay men in general, and with older gay and bisexual men in particular, could also cause these members to be decategorized and individuated, and hence no longer considered typical members of their groups (Brown & Hewstone, 2005). As such, participants' direct contact with bisexual and gay men may also be inconsequential to the age stereotypes about these groups.

Study 1a-b

In a pre-registered study¹ (Study 1a) and in a replication study (Study 1b), we assessed the age stereotypes about heterosexual, gay, and bisexual men (i.e., target groups). We suggested that heterosexual men would be equally stereotyped on young- and elderly-stereotypical traits, while gay men and bisexual men would be stereotyped more on young- than on elderly-stereotypical traits. Also, we hypothesized that compared to heterosexual men, gay men and bisexual men would be stereotyped more on young-stereotypical traits and less on elderly-stereotypical traits. Moreover, either gay men and bisexual men would show a similar pattern of age stereotyping, or bisexual men would be

stereotyped less on young-stereotypical traits and more on elderly-stereotypical traits than gay men. Finally, we tentatively explored the relationship between direct contact with bisexual and gay men and their age stereotyping.

Study 1a

Method

Participants. We recorded 235 clicks on the link to the online survey that was advertised on the web page of the University. Of these, $n = 1$ did not agree to participate, $n = 61$ did not report any ratings. As indicated in the pre-registration, we would exclude from the experimental sample those participants who skipped the rating of one or more given target groups on one or both young- and elderly-stereotypical trait dimensions (Data exclusion). None met this criterion. Also, we preregistered that we would exclude from the experimental sample participants who rated less than 5 out of 10 young- or elderly-stereotypical traits (Missing Data). Fifteen participants met this criterion and were excluded from the sample. No exclusion criteria were applied based on participant gender in the experimental sample. The final sample comprised $N = 158$ participants (Table 1). We performed a power analysis

Table 1. Age, gender, sexual orientation, citizenship, native language of participants as a function of the study (studies 1 and 2).

	STUDY 1a	STUDY 1b	STUDY 2
Age			
Range	19–64	20–63	18–23
<i>M</i>	24.77	31.30	19.60
<i>SE</i>	0.58	0.73	0.10
Not reporting	3	0	4
Gender			
Female	110	71	79
Male	43	81	21
Other	1	3	2
Not reporting	4	0	4
Sexual orientation			
Heterosexual	129	116	82
Bisexual	17	23	13
Gay	5	8	2
Other	3	8	3
Not reporting	4	0	6
Citizenship			
Italian	152	155	96
Other than Italian	3	0	3
Dual	0	0	2
Not reporting	3	0	5
Native language			
Italian	152	155	95
Other than Italian	2	0	5
Dual	1	0	1
Not reporting	3	0	5

Values pertaining to the participant's age are expressed in years. Demographic questions focused solely on participant gender and not their sex.

Table 2. List of age stereotypical traits used in study 1 & 2.

Young-Stereotypical traits	Energetic (<i>Energico</i>), Adventurous (<i>Avventuroso</i>), Carefree (<i>Spensierato</i>), Curious (<i>Curioso</i>), Flexible (<i>Flessibile</i>), Reckless (<i>Imprudente</i>), Rebellious (<i>Ribelle</i>), Disrespectful (<i>Irrispettoso</i>), Irresponsible (<i>Impulsivo</i>), Impatient (<i>Impaziente</i>)
Elderly-Stereotypical traits	Balanced (<i>Equilibrato</i>), Wise (<i>Saggio</i>), Patient (<i>Paziente</i>), Cautious (<i>Prudente</i>), Practical (<i>Concreto</i>), Forgetful (<i>Smemorato</i>), Tired (<i>Affaticato</i>), Shabby (<i>Trascurato</i>), Inflexible (<i>Inflessibile</i>), Lonely (<i>Solitario</i>)

The Italian translation of each trait is provided in parentheses.

using R (R Core Team, 2021) with WebPower package (Zhang & Mai, 2023). The analysis with $\alpha = .05$, $1 - \beta = .80$, and $N = 158$, suggested a minimum detectable effect (MDE) size Cohen's $f = .22$. Thus, with such a sample size the smallest effect size which we could detect (at 80% power) falls within the small-to-medium effect size area (Cohen, 1988).

Procedure. Data were collected via the Qualtrics survey platform (2021). After providing informed consent, participants were told that they would read different labels referring to distinct groups and had to think about how society at large viewed each of these groups (i.e., target groups; Coladonato et al., 2022; Petsko & Bodenhausen, 2019). Participants were presented with the following three target group labels (in Italian, in grammatical masculine plural form), one at a time, and in a random order: “Heterosexual men” (in Italian: *Eterosessuali*), “Gay men” (in Italian: *Omosessuali*), and “Bisexual men” (in Italian: *Bisessuali*). Each target group was presented with 20 traits, of which 10 were stereotypical of older men and 10 were stereotypical of young men (see Coladonato et al., 2022; Table 2 for all traits). Trait presentation was randomized across participants. Participants rated the degree to which each trait characterized each target group by using a 7-point scale, ranging from 1 (*Not at all typical*) to 7 (*Very much typical*). Next, we assessed participants' amount of direct contact with the target groups (Shamloo et al., 2018): “How many [target group] do you know?” (*None-More than ten*); “How frequently do you have contact with [target group]?” (*Never-Very often*). Responses to both items were given on a 5-point scale. The presentation of the target groups was randomized across participants. Finally, demographic information was collected (Table 1). Participants were then thanked and debriefed.

The study received ethical approval from the local University Ethics Committee (approval number 115/2021).

Results

Data were analyzed using the Jamovi statistical package (2021). The reliability of participants' ratings on both the young- and the elderly-stereotypical traits was satisfactory (Table 3). The ratings on these traits were averaged separately, and for each target group. Participants' averaged ratings were analyzed by means of a 3 (target groups: heterosexual men

Table 3. Reliability analyses (McDonald's ω) of participants' ratings on young- and elderly-stereotypical traits as a function of the target group, in study 1a, study 1b and study 2.

	Young-Stereotypical traits	Elderly-Stereotypical traits
Study 1a		
<i>Target Groups</i>		
Heterosexual men	.91	.84
Gay men	.88	.81
Bisexual men	.89	.88
Study 1b		
<i>Target Groups</i>		
Heterosexual men	.85	.79
Gay men	.84	.81
Bisexual men	.84	.86
Study 2		
<i>Target Groups</i>		
Older men	.75	.69
Older Heterosexual men	.78	.70
Older Gay men	.87	.80
Older Bisexual men	.88	.83

Values correspond to McDonald's ω .

vs. gay men vs. bisexual men) $\times 2$ (traits: young-stereotypical traits vs. elderly-stereotypical traits) ANOVA, with all variables as within-participants factors. Both the main effects of the target group, $F(2, 314) = 8.41$, $p < .001$, $\eta^2_p = .05$, and that of the traits, $F(1, 157) = 294.92$, $p < .001$, $\eta^2_p = .65$, were significant. Most importantly for our hypothesis, the target groups by traits interaction was significant, $F(2, 314) = 167.82$, $p < .001$, $\eta^2_p = .52$ (Figure 1). Pairwise comparisons (Bonferroni correction; $\alpha = .05/n = 9$ comparisons, $p < .006$) were carried out and marginal means are reported. Unadjusted p -values are reported in the text. Differently from our predictions, heterosexual men were stereotyped slightly more on elderly- than young-stereotypical traits, $t(157) = 5.49$, $p < .001$. As expected, gay men were stereotyped more on young- than elderly-stereotypical traits, $t(157) = 15.51$, $p < .001$. As hypothesized, bisexual men were also stereotyped more on young- than elderly-stereotypical traits, $t(157) = 17.04$, $p < .001$. Also, and in line with our hypothesis, participants showed a stronger attribution of young-stereotypical traits, $t(157) = 10.28$, $p < .001$, and a weaker attribution of elderly-stereotypical traits, $t(157) = 12.50$, $p < .001$, to gay than to heterosexual men. In a similar vein, and in accordance with our expectation, participants attributed more young-stereotypical traits, $t(157) = 12.22$, $p < .001$, and less elderly-stereotypical traits, $t(157) = 12.90$, $p < .001$, to bisexual than to heterosexual men. Differently from our expectation, participants attributed more young-stereotypical traits to bisexual than to gay men, $t(157) = 2.84$, $p = .005$, but, and in line with our hypothesis, the attribution of

Study 1a

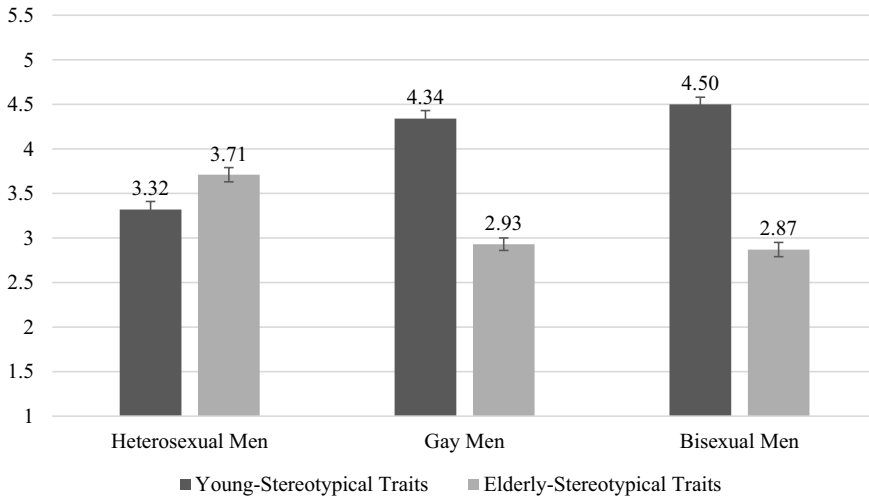


Figure 1. Participants' averaged ratings on young- and elderly-stereotypical traits as a function of the target group (i.e., heterosexual, gay, and bisexual men) in study 1a.

Error bars represent Standard Error. Values above the bars refer to estimated marginal means.

elderly-stereotypical traits to bisexual and gay men did not differ from each other, $t(157) = 1.27$, $p = .206$.

Exploratory analyses.

Direct contact. Participants' levels of direct contact with gay men and bisexual men were uncorrelated with the attribution of young- and elderly-stereotypical traits to the target groups (Table 4). Although not focal to the current hypothesis, we found that the attribution of elderly-, but not that of young-stereotypical traits to gay men, was negatively associated with participants' contact with heterosexual men.

Study 1b

Participants. A total of 155 participants were recruited via Prolific Academy and paid £1.50 for their participation in the study. We conducted a power analysis as in Study 1a. The analysis with $\alpha = .05$, $1 - \beta = .80$, and $N = 155$, suggested a minimum detectable effect (MDE) size Cohen's $f = .22$. Thus, with such a sample size the smallest effect size which we could detect (at 80% power) falls within the small-to-medium effect size area (Cohen, 1988).

To ensure that we were able to reach the predetermined N sample, given potential participant exclusion, we collected $N = 155$ (Table 1). No participant

Table 4. Correlations (pearson r) between participants' levels of direct contact with the target groups and participants' attribution of young- and elderly-stereotypical traits to the target groups.

	Young-Stereotypical traits	Elderly-Stereotypical traits
Study 1a		
<i>Target Groups</i>		
Heterosexual men ($M = 4.86$, $SE = .04$)	$r(158) = -.07$, $p = .384$	$r(158) = .01$, $p = .882$
Gay men ($M = 2.93$, $SE = .07$)	$r(157) = -.02$, $p = .815$	$r(157) = -.10$, $p = .232$
Bisexual men ($M = 2.47$, $SE = .08$)	$r(158) = .13$, $p = .115$	$r(158) = .07$, $p = .358$
Study 1b		
<i>Target Groups</i>		
Heterosexual men ($M = 4.84$, $SE = .04$)	$r(155) = .05$, $p = .571$	$r(155) = .21$, $p = .009$
Gay men ($M = 3.09$, $SE = .09$)	$r(155) = .12$, $p = .124$	$r(155) = .02$, $p = .787$
Bisexual men ($M = 2.42$, $SE = .09$)	$r(155) = .11$, $p = .176$	$r(155) = .004$, $p = .958$
Study 2		
<i>Target Groups</i>		
Older Heterosexual men ($M = 4.23$, $SE = .07$)	$r(106) = -.05$, $p = .623$	$r(106) = -.01$, $p = .94$
Older Gay men ($M = 1.23$, $SE = .04$)	$r(106) = .12$, $p = .211$	$r(106) = -.08$, $p = .435$
Older Bisexual men ($M = 1.11$, $SE = .03$)	$r(106) = .09$, $p = .334$	$r(106) = .13$, $p = .170$

In Study 1, $n = 1$ participant skipped both items related to contact with Gay men. Averaged means and standard errors related to the levels of direct contact for each target group are reported in parentheses.

was excluded from the experimental sample based on the criteria described in Study 1a.

Procedure. The procedure of Study 1b is identical to that of Study 1a.

Results

The reliability of participants' ratings on both the young- and the elderly-stereotypical traits was satisfactory (Table 3). The ratings on these traits were averaged separately, and for each target group. Participants' averaged ratings were analyzed by means of a 3 (target groups: heterosexual men vs. gay men vs. bisexual men) $\times$ 2 (traits: young-stereotypical traits vs. elderly-stereotypical traits) ANOVA, with all variables as within-participants factors. Both the main effects of the target group, $F(2, 308) = 12.57$, $p < .001$, $\eta^2_p = .08$, and that of the traits, $F(1, 154) = 370.10$, $p < .001$, $\eta^2_p = .71$, were significant. Most importantly for our hypothesis, the target groups by traits interaction was significant, $F(2, 308) = 178.40$, $p < .001$, $\eta^2_p = .54$ (Figure 2). Pairwise comparisons (Bonferroni correction; $\alpha = .05/n = 9$ comparisons, $p < .006$) were carried out and marginal means are reported. Unadjusted p -values are reported in the text. Differently from our predictions,

Study 1b

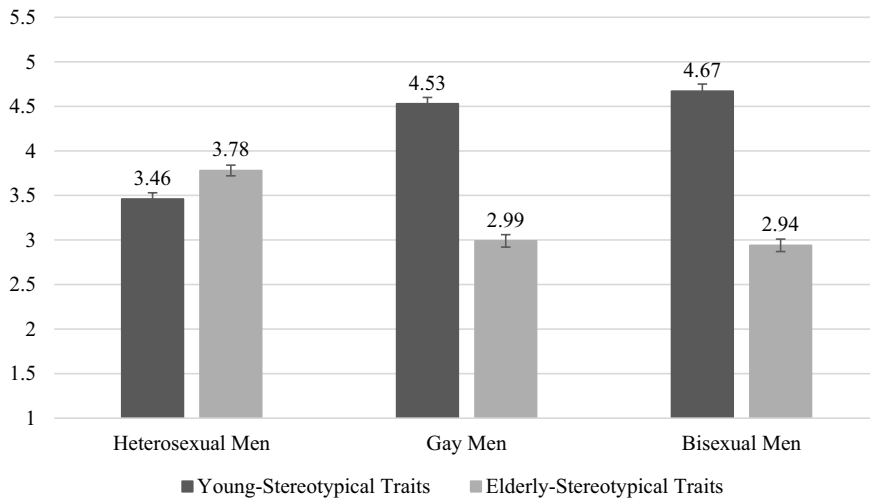


Figure 2. Participants' averaged ratings on young- and elderly-stereotypical traits as a function of the target group (i.e., heterosexual, gay, and bisexual men) in study 1b.

Error bars represent Standard Error. Values above the bars refer to estimated marginal means.

heterosexual men were stereotyped slightly more on elderly- than young-stereotypical traits, $t(154) = 5.11$, $p < .001$. As expected, gay men were stereotyped more on young- than elderly-stereotypical traits, $t(154) = 16.17$, $p < .001$. As hypothesized, bisexual men were also stereotyped more on young- than elderly-stereotypical traits, $t(154) = 18.05$, $p < .001$. Also, and in line with our hypothesis, participants showed a stronger attribution of young-stereotypical traits, $t(154) = 11.80$, $p < .001$, and a weaker attribution of elderly-stereotypical traits, $t(154) = 11.56$, $p < .001$, to gay than to heterosexual men. In a similar vein, and in accordance with our expectation, participants attributed more young-stereotypical traits, $t(154) = 13.72$, $p < .001$, and less elderly-stereotypical traits, $t(154) = 11.78$, $p < .001$, to bisexual than to heterosexual men. Finally, and confirming our hypothesis, the attribution of both young-stereotypical traits, $t(154) = 2.57$, $p = .011$, and elderly-stereotypical traits, $t(154) = 1.04$, $p = .302$, to bisexual and gay men did not differ from each other.

Exploratory analyses.

Direct contact. Participants' levels of direct contact with gay men and bisexual men were uncorrelated with the attribution of young- and elderly-stereotypical traits to the target groups (Table 4). Although not focal to the current hypothesis, we found that the attribution of elderly-, but not that of young-stereotypical traits, was positively associated with participants' contact with heterosexual men.

Discussion study 1a and 1b

Gay and bisexual men were characterized more as young than old men, while heterosexual men were characterized slightly more as old than young men in both Study 1a and 1b. Also, gay and bisexual men did not differ in terms of elderly-stereotypical traits in both Study 1a and 1b. The attribution of young-stereotypical traits to bisexual men appeared to be either slightly stronger than (Study 1a) or equal to that of gay men (Study 1b). More important, compared to heterosexual men, both gay and bisexual men were stereotyped more on young-stereotypical traits and less on elderly-stereotypical traits, in both Study 1a and 1b. The pattern of results corroborated evidence suggesting that gay men are conceptualized as young (Carnaghi et al., 2022; Coladonato et al., 2022), and showed that bisexual men are not stereotyped as “somewhere in between,” but rather, as strongly skewed toward young- over elderly-stereotypical traits (Flanders & Hatfield, 2013; Lippa, 2008; Mohr et al., 2013; Vaughn et al., 2017). The above-mentioned pattern of age stereotyping of both gay and bisexual men appeared to be largely independent from participants’ direct contact with the target groups, in both Study 1a and 1b.

Study 2

In Study 2, we assessed the age stereotypes about the groups issued by the intersection of “older men” with the sexual orientation categories of Study 1a-b. We expected that the age stereotypes of older heterosexual men would be similar to that of older men. By contrast, we expected that compared to older men, older gay and bisexual men would both, and equally, be stereotyped less as old and more as young men. Also, we assessed the perceived typicality of older heterosexual, older gay, and older bisexual men with respect to older men as a whole. We anticipated that compared to older heterosexual men, older gay and older bisexual men would be perceived as less typical of older men. Finally, we evaluated whether the age stereotypes of both older gay and bisexual men was mediated by the decreased perception in their typicality with respect to older men as a whole.

As in Study 1a-b, we exploratorily tested the relationship between participants’ contact with the target groups and their respective age stereotypes. Also, and differently from Study 1a-b, we assessed participants’ beliefs about the denial of bisexuality (i.e., Erasure of Bisexual Men Scale, Morgenroth et al., 2021). Indeed, societal beliefs about bisexual men portray them as being in a transient phase and as denying their actual gay sexual orientation (Alarie & Gaudet, 2013; Israel & Mohr, 2004). As such, one may argue that the pattern of age stereotyping of older bisexual men would replicate that of older gay men, especially if participants perceived bisexual men as “actually gay.” To probe this account, we tentatively

analyzed whether the age stereotyping of bisexual men in particular might be associated with participants' erasure of bisexuality.

Method

Participants. A total of 110 first-year psychology students took part in the experiment in exchange for course credit. Of these, $n = 2$ did not agree to participate, while $n = 2$ were excluded as they did not meet the inclusion criteria previously used in Study 1a-b. No exclusion criteria were applied based on participant gender in the experimental sample. The final sample comprised $N = 106$ participants (Table 1). As the data were collected in class, we could not predetermine the sample size given the variability in class attendance. We then conducted a power analysis as in Study 1a. The analysis with $\alpha = .05$, $1 - \beta = .80$, and $N = 106$, suggested a minimum detectable effect (MDE) size Cohen's $f = .32$. Thus, with such a sample size the smallest effect size which we could detect (at 80% power) falls within the medium effect size area (Cohen, 1988).

Procedure. The procedures were the same as in Study 1a-b, with the exception that participants in Study 2 were presented with four target group labels (in Italian, in grammatical masculine, plural forms): "Older men" (in Italian: *Anziani*), "Older heterosexual men" (in Italian: *Anziani eterosessuali*), "Older gay men" (in Italian: *Anziani omosessuali*), "Older bisexual men" (in Italian: *Anziani bisessuali*). The age stereotyping was assessed as in Study 1. Participants then indicated the degree to which, from the societal perspective, each target group was typical of young men, by means of a 7-point scale, ranging from 1 (*Not at all typical*) to 7 (*Very much typical*), and of elderly men, by means of the same 7-point scale (i.e., typicality). Importantly, participants rated "Older men" as first (i.e., order 1) or as the last target group (i.e., order 2), while the other target groups were always presented in a randomized fashion. Participants were randomly allocated either to order 1 or to order 2. Also, participants filled in the Erasure of Bisexual men Scale according to the societal perspective (i.e., EBmS; for instance, "Most 'bisexual' men just haven't come out as gay yet;" Morgenroth et al., 2021), using a 7-point scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). We assessed participants' own direct contact with older heterosexual, gay, and bisexual men as in Study 1a-b. The age stereotyping was assessed first, while the presentation of the typicality and EBMS was randomized across participants, direct contact was always presented as the last measure.

Results

Age stereotyping. The reliability of participants' ratings on both the young- and elderly-stereotypical traits was satisfactory (Table 3). Participants' averaged ratings were analyzed by means of a 4 (target groups: older men vs. older

heterosexual men vs. older gay men vs. older bisexual men) $\times$ 2 (traits: young-stereotypical traits vs. elderly-stereotypical traits) ANOVA, with all variables as within-participants factors. Both the main effect of the target group, $F(3, 315) = 18.28$, $p < .001$, $\eta^2_p = .15$, and that of the traits, $F(1, 105) = 131.11$, $p < .001$, $\eta^2_p = .56$, were significant. Most importantly for our hypothesis, the target groups by traits interaction was significant, $F(3, 315) = 103.97$, $p < .001$, $\eta^2_p = .50$ (Figure 3). Pairwise comparisons (Bonferroni correction; $\alpha = .05/n = 12$ comparisons, $p < .004^2$) were carried out. Unadjusted p -values are reported in the text. Both older men and older heterosexual men were stereotyped more on elderly- than on young-stereotypical traits, $t(105) = 21.14$, $p < .001$; $t(105) = 18.35$, $p < .001$, respectively. Although older heterosexual men, compared to older men, were stereotyped slightly less on elderly-stereotypical traits, such a comparison fell short of significance, $t(105) = 2.85$, $p = .005$. Also, no difference was found between the attribution of young-stereotypical traits to older heterosexual men and older men, $t(105) = 1.93$, $p = .056$. Compared to older men, older gay men were stereotyped less on elderly-, $t(105) = 9.62$, $p < .001$, and more on young-stereotypical traits, $t(105) = 10.84$, $p < .001$. Similarly, compared to older men, older bisexual men were stereotyped less on elderly- and more on young-stereotypical traits, $t(105) = 8.59$, $p < .001$ and $t(105) = 10.34$, $p < .001$, respectively. Also, no difference occurred between older gay and older bisexual men on both elderly- and young-stereotypical traits, $t(105) = 2.26$, $p = .026$ and $t(105) = .06$, $p = .953$, respectively. Finally, both older gay

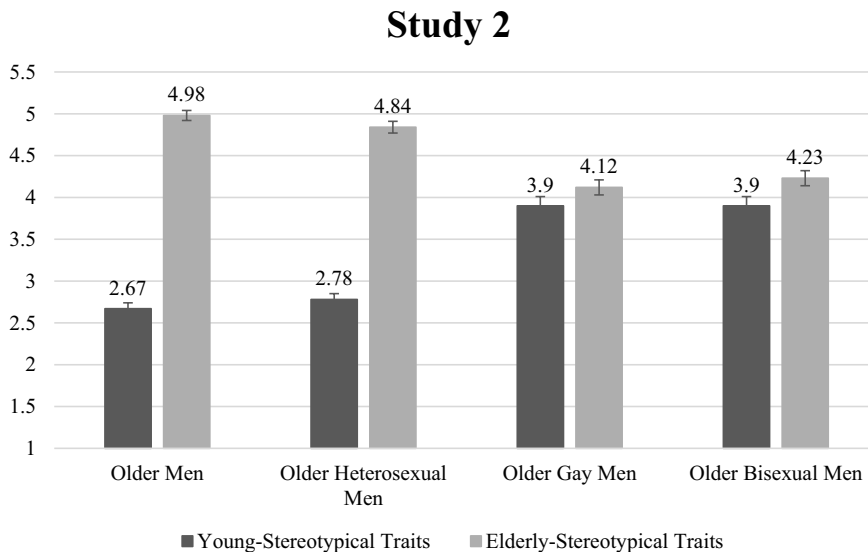


Figure 3. Participants' averaged ratings on young- and elderly-stereotypical traits as a function of the target group (i.e., older men, older heterosexual men, older gay men, and older bisexual men) in study 2.

Error bars represent Standard Error. Values above the bars refer to estimated marginal means.

and older bisexual men were stereotyped to a similar degree on elderly- and young-stereotypical traits, $t(105) = 1.30$, $p = .196$; $t(105) = 1.94$, $p = .055$, respectively.

Typicality. We subtracted the typicality ratings of each target group with respect to young men to those with respect to older men (i.e., higher values indicated a stronger typicality perception of that target group with respect to older over young men). Due to $n = 3$ missing values for older heterosexual men, $n = 3$ missing values for older gay men, and $n = 2$ missing values for older bisexual men, this analysis was performed on $N = 98$ participants. The typicality score was analyzed with an ANOVA 3 (target group: older heterosexual men vs. older gay men vs. older bisexual men). The omnibus effect was significant, $F(2, 194) = 77.69$, $p < .001$, $\eta^2_p = .44$. Post-hoc analyses showed that compared to older heterosexual men ($M = 2.40$, $SE = 0.26$), participants perceived both older gay men ($M = -0.19$, $SE = 0.24$), $t(97) = 9.19$, $p < .001$, and older bisexual men ($M = -0.21$, $SE = 0.22$), $t(97) = 9.67$, $p < .001$, as less typical of older men. No difference occurred between older gay men and older bisexual men, $t(97) = 0.14$, $p = .891$.

Mediation analyses. Mediation analyses were carried out by means of structural equation modeling without latent variables, with Maximum Likelihood parameter estimation and NLMINB optimizer (R package *lavaan* framework, version 0.6.15; R Core Team, 2021; Rosseel, 2012). The mediation analysis comprised two dummy factors as the independent variables, namely X_1 contrasting the effect of older heterosexual men (contrast code = 0) vs. older gay men (contrast code = 1), and X_2 contrasting the effect of older heterosexual men (contrast code = 0) vs. older bisexual men (contrast code = 1). The outcome variable was the attribution of elderly-stereotypical traits (Figure 4, Panel A), and the attribution of young-stereotypical traits to the target groups (Figure 4, Panel B). The potential mediator was the typicality of the target groups with respect to older over young men. Given that the experiment was a full within-participants design, each participant was treated as a cluster to account for the variability stemming from the repeated measure variables. As for elderly-stereotypical traits (Panel A), X_1 yields a negative and significant relation with the mediator (a_1 path: $B = -2.59$, $SE = 0.28$, $z = 9.19$, $p < .001$), indicating that older gay men, relative to older heterosexual men, were perceived as less typical of older men. In similar vein, older bisexual men, compared to older heterosexual men, were perceived as less typical of older men. (a_2 path: $B = -2.61$, $SE = 0.28$, $z = 9.67$, $p < .001$). Moreover, typicality was positively and significantly associated with the attribution of elderly-stereotypical traits (b path: $B = 0.65$, $SE = 0.25$, $z = 2.55$, $p = .011$), thus the higher the typicality of the target groups with respect to older men, the stronger the attribution of elderly-stereotypical traits to the target groups.

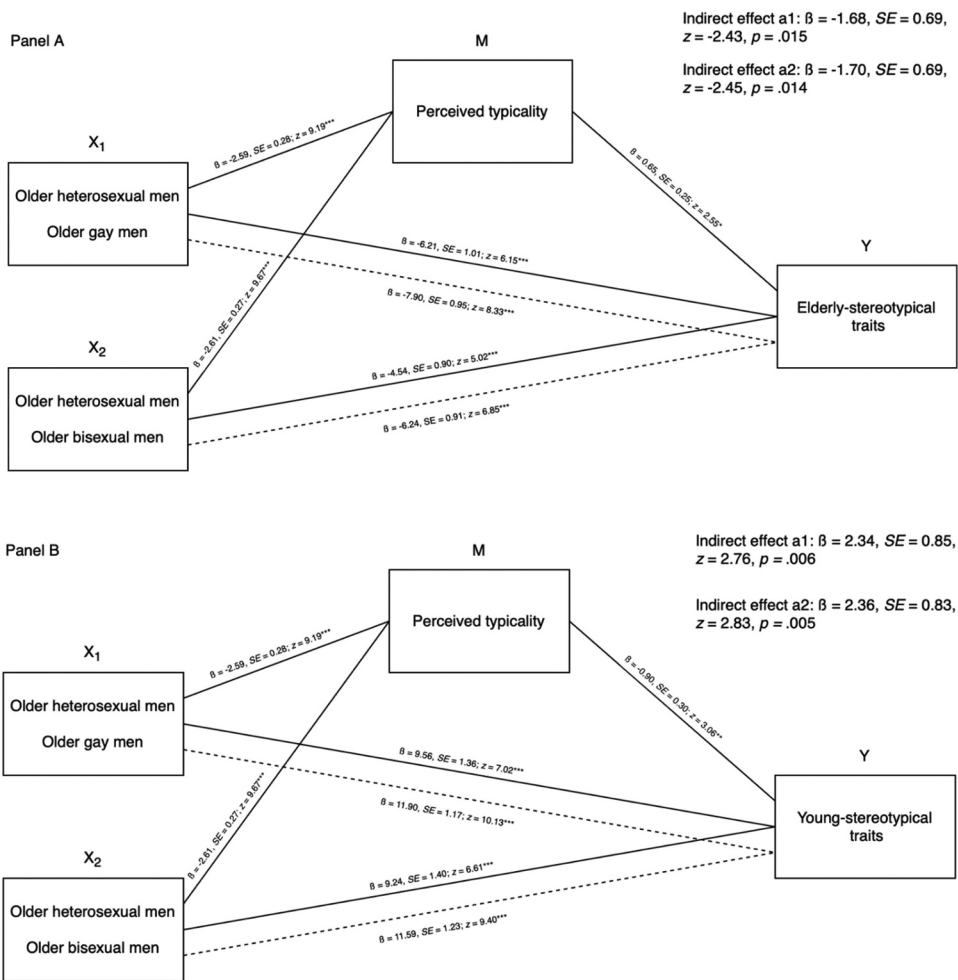


Figure 4. The mediating role of the perceived typicality of older heterosexual men vs. older gay men and of older heterosexual men vs. older bisexual men in the attributions of elderly-stereotypical traits (panel A) and of young-stereotypical traits (panel B) to such target groups. Total effects are indicated by dotted lines. *** $p < .001$; ** $p < .005$; * $p < .01$.

The direct effect of both X_1 and X_2 on the attribution of elderly-stereotypical traits to the target groups were significant (c'_1 path: $B = -6.21$, $SE = 1.01$, $z = 6.15$, $p < .001$; c'_2 path: $B = -4.54$, $SE = 0.90$, $z = 5.02$, $p < .001$). Finally, both relative indirect effects of X_1 and X_2 through the typicality of the target groups were statistically significant (a_1b path: $B = -1.68$, $SE = 0.69$, $z = 2.43$, $p = .015$; a_2b path: $B = -1.79$, $SE = 0.69$, $z = 2.45$, $p = .014$). Hence, the reduced typicality of older gay men relative to that of older heterosexual men mediated the decreased attribution of elderly-stereotypical traits to the former compared to the latter target group (mediation prop. = 0.21, $SE = 0.80$, $Z\text{-Wald} = 2.53$, $p = .011$, relative to a total effect c_1 path: $B = -7.90$, $SE = 0.95$, $z = 8.33$, $p < .001$). Along the same line, the weakened typicality of older

bisexual men relative to that of older heterosexual men mediated the reduced attribution of elderly-stereotypical traits to the former compared to the latter target group (mediation prop. = 0.27, $SE = 0.10$, $Z\text{-}Wald = 2.66$, $p = .008$, relative to a total effect c_2 path: $B = -6.24$, $SE = 0.91$, $z = 6.85$, $p < .001$).

As for the young-stereotypical traits (Panel A), older gay men, relative to older heterosexual men (X_1), were perceived as less typical of older men (a_1 path: $B = -2.59$, $SE = 0.28$, $z = 9.19$, $p < .001$). Also, older bisexual men (X_2), compared to older heterosexual men, were perceived as less typical of older men. (a_2 path: $B = -2.61$, $SE = 0.28$, $z = 9.67$, $p < .001$). Moreover, the higher the typicality of the target groups with respect to older men, the weaker the attribution of young-stereotypical traits to the target groups (b path: $B = -.90$, $SE = 0.30$, $z = 3.06$, $p = .002$). The direct effect of both X_1 and X_2 on the attribution of young-stereotypical traits to the target groups were significant (c'_1 path: $B = 9.56$, $SE = 1.36$, $z = 7.02$, $p < .001$; c'_2 path: $B = 9.24$, $SE = 1.40$, $z = 6.61$, $p < .001$). Importantly, the relative indirect effect of X_1 as well as that of X_2 through the typicality of the target groups were statistically significant (a_1b path: $B = 2.34$, $SE = 0.85$, $z = 2.76$, $p = .006$; a_2b path: $B = 2.36$, $SE = 0.83$, $z = 2.83$, $p = .005$). These results indicated that the decreased typicality of older gay men relative to that of older heterosexual men mediated the increased attribution of young-stereotypical traits to the former compared to the latter target group (mediation prop. = 0.20, $SE = 0.70$, $Z\text{-}Wald = 2.75$, $p = .006$, relative to the total effect, c_1 path: $B = 11.90$, $SE = 1.17$, $z = 10.13$, $p < .001$). Similarly, the reduced typicality of older bisexual men relative to that of older heterosexual men mediated the enhanced attribution of young-stereotypical traits to the former compared to the latter target group (mediation prop. = 0.20, $SE = 0.07$, $Z\text{-}Wald = 2.81$, $p = 0.005$, relative to the total effect, c_2 path: $B = 11.59$, $SE = 1.23$, $z = 9.40$, $p < .001$).

Exploratory analyses.

Direct contact. Participants' levels of direct contact with older heterosexual men, older gay men, and older bisexual men were uncorrelated with the attribution of both young- and elderly-stereotypical traits to the target groups, respectively (Table 4).

Erasure of bisexual men scale (EBMS). Participants' averaged ratings on the scale ($\omega = .83$) were uncorrelated with the attribution of young- and elderly-stereotypical traits to older heterosexual men, $r(105) = -.07$, $p = .503$ and $r(105) = .02$, $p = .826$, respectively, older gay men, $r(105) = .15$, $p = .140$ and $r(105) = -.11$, $p = .261$, respectively, and older bisexual men, $r(105) = .17$, $p = .087$ and $r(105) = -.11$, $p = .285$, respectively.

Discussion

Our findings showed that the age stereotyping of older men was very similar to that of older heterosexual men but dramatically different from that of both

older gay and bisexual men. Indeed, similarly to older men, older heterosexual men were stereotyped more on elderly- than on young-stereotypical traits. By contrast, compared to older men, both older gay and bisexual men were equally stereotyped less on elderly- and more on young-stereotypical traits. Also, and relative to older heterosexual men, older gay and bisexual men were equally considered less typical of older men as a whole. Importantly, the age stereotypes of both older gay and bisexual men were accounted for by their reduced typicality with respect to older men as a whole, as evidenced by the mediation analyses. The fact that the age stereotypes of older bisexual men replicated that of older gay men did not seem to be associated with cultural beliefs about the denial of male bisexuality. Finally, the age stereotypes of the target groups were largely independent from participants' direct contact with these groups.

General discussion

Our findings suggest that participants have different age stereotypes concerning distinct sexual orientation categories pertaining to men. Both gay and bisexual men were stereotyped as prevalently young. Heterosexual men displayed a less age-polarized stereotype, but were represented as slightly more old than young. Our results confirm previous evidence on the age stereotyping of gay men as young by default and show, for the first time, that bisexual men are also conceptualized as young (Carnaghi et al., 2022; Coladonato, Carnaghi, et al., 2023). The current findings complement previous research on the stereotypes about bisexual men, suggesting that not only are they perceived as being promiscuous, unsure of their own sexual orientation, and in unstable relationships, but that they are also characterized along traits that are stereotypical of young men (Brewster & Moradi, 2010; Dyar et al., 2017; Ferster & Zivony, 2023; Friedman et al., 2014; Mohr & Rochlen, 1999; Spalding & Peplau, 1997; Zivony & Saguy, 2018). Hence, it appears that at least for our participants, cultural representations of bisexual men are not an unclear portrayal “in between” those of heterosexual and gay men, but rather appear to be well-established when it comes to their age stereotypes (Burke & LaFrance, 2016; Flanders & Hatfield, 2013; Mohr et al., 2013; Zivony & Lobel, 2014).

Furthermore, participants' stereotype assumptions concerning these categories in terms of age have dramatic implications for the appraisal of gay men and bisexual men, when foregrounded as older men. Indeed, older heterosexual men were considered the most typical subgroup within older men as a whole, while older gay and bisexual men were represented as “deviant” cases. Dismissing older gay and bisexual men as atypical exemplars with respect to older men accounted for the age stereotypes of these groups. In fact, the age stereotypes of older heterosexual men were similar to those of older men as

a whole, confirming that older men are stereotypically construed as heterosexual by default. By contrast, older gay and bisexual men are stereotyped as younger and less old than older men. The fact that the older sexual minority men showed comparable levels of age stereotyping seems to be independent from the cultural beliefs that deny male bisexuality and equate the representation of bisexual men with that of gay men. Rather, the mediation analyses suggest that the age stereotypes of both older gay and bisexual men are, at least in part, explained by their atypicality with respect to older men. Such results are in line with the cognitive model of category-exemplar dynamics (Brewer et al., 1981; Rothbart, 1996). Atypical members are less likely to be stereotyped on traits considered central and prototypical of their membership (i.e., elderly-stereotypical traits), and more on traits that implied by their “deviant” membership (i.e., young-stereotypical traits). Additionally, and as shown by research on intersectionality, atypical members such as older gay and bisexual men are less likely to be cognitively available when processing their respective age category, thus perpetuating their “invisibility” within the category of older men (Carnaghi & Yzerbyt, 2006; Carnaghi et al., 2022; Coladonato, Yzerbyt, et al., 2023; Preddie & Biernat, 2021; Purdie-Vaughns & Eibach, 2008; Rothbart, 1996; Sesko & Biernat, 2018). Hence, older gay and bisexual men are perceived as young (compared to older heterosexual men), and older men are unlikely to be thought of as gay or bisexual men. This pattern of results is consistent with research on the heteronormativity of race categories pertaining to men, and the “invisibility” of gay men within the category Black men. Indeed, on the one hand, Black gay men are perceived less as stereotypical of their racial group and more as stereotypical of White people, and on the other hand Black men are unlikely to be expected to be gay (Benson & Volpe, 2023; Petsko & Bodenhausen, 2019; Petsko et al., 2022).

Moreover, our exploratory analysis suggests that participants’ amount of direct contact with the sexual minorities under consideration was unrelated to the age stereotyping of such minority groups. This evidence is consistent with results suggesting that familiarity and past experience with bisexual individual clients were not related to less biased clinician evaluations of client issues that are stereotypically associated with bisexual individuals (e.g., “difficulty with commitment in relationships,” and “unstable relationships,” Ferster & Zivony, 2023). It is worth noting that in the current research the amount of contact was assessed at the participants’ subjective level, while the age stereotyping of the different groups was assessed from a societal perspective. This methodological choice allowed us to test whether the lack of personal contact with sexual minorities would lead participants to rely on cultural stereotypes. However, having set the measurements at different levels of analysis may have exacerbated the dissociation between the variables under investigation. Future studies may assess the participants’ endorsement of the cultural age stereotypes of sexual minorities to more effectively test its relation to participants’ amount of contact

with those sexual minorities. Finally, it is worth noting that the current results might be highly context sensitive. Italy, for instance, still displays high levels of sexual prejudice (ILGA, 2023), with very few health services dedicated to elderly gay men and their unique needs. While such factors may also characterize other geographic and cultural areas (Pereira et al., 2018; Sharma & Subramanyam, 2023), one should acknowledge that unique contextual variables might play a critical role in the emergence and maintenance of the specific age stereotypes ascribed to gay men and bisexual men. Additional cross-cultural studies are needed to enhance the external validity of the current findings.

Despite these limitations, our results have practical implications. First, they may be useful in informing health professionals about the unique age-related issues that gay and bisexual men may experience. Indeed, cultural stereotypes that stress the significance of youth-related characteristics such as physical appearance might increase the risk of self-objectification in both young gay and bisexual men (Martins et al., 2007; Szymanski et al., 2019), and concerns about appearance-related bodily decline in older gay and bisexual men (Lodge & Umberson, 2013). Second, they call for a more age-diverse, realistic representation of both gay and bisexual men in the media, which has already been inclusive of intersectional minorities (e.g., Glaad, 2023; Netflix, 2021). Promoting the inclusion of older gay and bisexual male characters in the media may help debunk the monolithic representation of gay and bisexual men as only young and counteract the cognitive representation of older gay and bisexual men as “exceptions” to older men. Third, notwithstanding the notable level of maturity in the literature concerning workplace sexual orientation (Ozturk & Rumens, 2020; Ozturk & Tatli, 2018), the concurrent examination of age and sexuality within employment has gained increased attention only more recently (Ozturk et al., 2020). Further research could investigate ways to enhance work and organizational climates in terms of inclusiveness that jointly consider both sexual orientation and age diversity. Finally, it might be useful to routinely use language that is more diverse in terms of sexual orientation when talking about aging, such as in advertisements targeted at older people, so as to construct a less heteronormative representation of older individuals. Hopefully, these suggestions might help to increase the number of people who think about aging and individuals from sexual minorities also jointly, as advocated for in the quote at the beginning of this paper.

Notes

1. The pre-registered title of Study 1a was not consistent with the title of the present article as it did not include Study 2.
2. Application of the Bonferroni corrections generated by Jamovi resulted in different corrected levels of ps, but the pattern of results was the same as that reported in the main text of Study 2 (see Supplementary material).

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Data availability statement

Data files and analyses are available on the OSF website: https://osf.io/yjfmn/?view_only=eec09ac8525e4d5fa66ddaebb3b389e1

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