

## ORIGINAL RESEARCH

# Demographic Differences in Circumcision Satisfaction among U.S. Males

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**Abstract:** **Introduction:** Male circumcision involves the partial or total removal of the prepuce (foreskin) from the penis, and it is the most common surgical procedure performed on infants in the USA. According to social convention theory, in demographic populations where male circumcision is more socially accepted, we would predict that circumcised men would be more likely to report satisfaction with their circumcision status. This exploratory study investigated the ways in which particular demographic sub-groups have differing attitudes and levels of satisfaction based on their circumcision status. **Materials and Methods:** The participant data used in these analyses are from a study conducted to explore the effects of false beliefs concerning circumcision and intact penises on circumcision satisfaction. After participant exclusion based on additional criteria, 902 male participants from the United States, ranging in age from 18-75 ( $M = 34.0$ ,  $SD = 10.0$ ), remained. A series of demographic information by circumcision status between participants Analysis of Variances (ANOVA) were conducted on circumcision status satisfaction. **Results:** Results indicated that circumcision status satisfaction varied as a function of race/ethnicity, religion, relationship status, and sexual orientation. Statistically significant differences in circumcision status satisfaction were found for all of the demographic variables. **Conclusion:** Using social convention theory, these data suggest that circumcision satisfaction is related to endorsement of the dominant culture and its norms surrounding the masculine body. Further investigation is warranted regarding causal implications of how one's demographic characteristics may affect one's satisfaction with their circumcision status.

**Keywords:** sexuality; masculinity; satisfaction; circumcision

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## 1. Introduction

Male circumcision involves the partial or total removal of the prepuce (foreskin) from the penis, and it is the most common surgical procedure performed on infants in the USA (1-3)[1, 2, 3]. However, it is much less common in other industrialized nations and is usually only performed in cases of medical necessity (4, 5). In the USA, non-therapeutic male neonatal circumcision (NTC) is generally performed on healthy infants for a variety of sociocultural, religious, or perceived medicalized benefits (5-7).

What might explain the support for male circumcision in the US? In order to explore this question, it is worth looking at

the research that has been conducted on understanding positive attitudes toward female genital cutting (FGC) in areas where the practice is common. Wahlberg and colleagues (8) reported that the majority of women support the practice in high prevalence areas, but when women who are circumcised move to low-prevalence areas, they are more likely to experience more negative attitudes toward FGC. Thus, where the practice is common, and also commonly accepted, attitudes toward the practice are favorable. As Abathun et al. (9) and Freymeyer and Johnson (10) have previously noted, social convention theory may help explain why practices like FGC are supported and maintained in high-prevalence areas as well as why there are more negative attitudes toward it in low-prevalence areas. When applied to the issue of FGC, social convention theory first developed by Mackie (11), and elaborated further by Mackie and LeJeune (12), states that social norms are powerful motivators of people's individual choices because they seek to maintain whatever the social

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equilibrium of their culture supports. When a family member chooses to have a girl undergo FGC, the choice, although individually made, is done so with the understanding that others will follow the same expectations of what the accepted social behavior is within that society. Thus, if the social norm is that all girls undergo FGC, then individual families make the decision to uphold convention with the expectation that other families will also do the same.

How might, then, social convention theory be used to explain support for male circumcision in the US and how might this relate to an individual's demographic characteristics? In demographic populations where male circumcision is more socially accepted, we would predict that men would be more likely to report satisfaction with being circumcised because it follows social convention. Some scholars have noted that a general asymmetry exists between FGC and male circumcision, in that FGC is regarded as harmful whereas male circumcision is seen as, at worst, harmless (13-15). Therefore, according to social convention theory, groups in which their circumcision status is consistent with their group's social norms should be more satisfied with their circumcision status.

### ***1.1. Social Convention Theory and Masculinity***

Due to the nature of male circumcision itself, in which a functional sleeve of erogenic tissue is removed from the glans of the penis, it is plausible to think that neonatal circumcision affects the eventual sexual experiences of the individual in some way. For example, Harrison (16) explains that one's circumcision status affects male sexuality broadly construed as well as results in different sexual performativity, due to the different physical manipulations of the penis that are possible with or without a foreskin, and thus different qualitative forms of pleasure. This leads Harrison (16) to conclude that circumcised and non-circumcised men are differently sexed. If male circumcision does in fact lead to differing experiences of sexuality, and if it has effects on one's sexual preferences through the marked body, how do men perceive these differences? What is the relationship between aspects of men's identity and their bodily satisfaction as a result of being circumcised? If only some men feel lower levels of satisfaction, but not others—what is different between these sub-groups? We argue that the embodiment of masculinity serves as a useful framework to make sense of how social convention theory can help explain alignment with particular norms in the United States.

Therefore, we are interested in looking at the ways in which particular demographic sub-groups of participants have differing attitudes and levels of satisfaction based on their circumcision status. While our analyses are purely exploratory, we believe that because the understanding of how masculinity relates to circumcision status may differ due to sub-group

expectations, some members who are circumcised will be more likely to report being satisfied with their status compared to their demographic counterparts.

## **2. Materials and Methods**

The participant data used in these analyses are from our previous study conducted to explore the effects of false beliefs concerning circumcision and intact penises on circumcision satisfaction (17). A total of 999 U.S. participants completed the entire survey. To take the survey, participants had to agree that they were a man of at least 18 years of age. Participants were excluded if they did not know, or preferred not to report, their circumcision status; if their circumcision took place after the infant period (up to 1 year old); if they failed at least one of two embedded attention checks; or if they chose not to answer one of the main outcome variables. This left 902 male participants, ranging in age from 18-75 ( $M = 34.0$ ,  $SD = 10.0$ ).

Racial breakdown of the sample included 74.5% (672) identifying as White/Caucasian/European American, 6.5% (59) as African American/Black, 5.5% (50) as Latino/Hispanic, 6.7% (60) as Asian, 0.2% (2) as Pacific Islander, 0.2% (2) as Native American, and 6.0% (54) identifying as Multi-Racial (3 participants did not report their race/ethnicity).

Religious breakdown of the sample included 17.2% (155) Protestant, 16.4% (148) Catholic, 5.3% (48) other Christian denomination, 1.9% (17) Jewish, 0.4% (4) Eastern/Greek or Asian Orthodox, 0.6% (5) Muslim, 0.2% (2) New Age, 0.4% (4) Hindu, 1.2% (11) Buddhist, 6.2% (56) Not religious, but spiritual, 23.3% (210) Agnostic, 24.4% (220) Atheist (19 participants preferred not to answer this question).

Relationship status breakdown of the sample included 37.4% (337) were Single, 4.1% (37) were in a casual/non-serious relationship with one person, 0.9% (8) were in a casual/non-serious relationship with more than one person, 18.2% (164) were in a serious relationship with one person, 3.1% (28) were engaged, 31.9% (288) were married, 0.6% (5) were separated, and 3.9% (35) were divorced.

Regarding sexual orientation, 90.1% (813) identified as heterosexual, 4.3% (39) identified as gay, 4.2% (38) identified as bisexual, 0.9% (8) identified as pansexual, 0.2% (2) identified by another non-heterosexual label (e.g., queer), and 0.2% (2) reported being asexual.

To explore our data, we conducted a series of demographic information by circumcision status between participants Analysis of Variances (ANOVA) using the Statistical Package for the Social Sciences (SPSS). We used ANOVA and Tukey post-hoc analyses on circumcision satisfaction. For all of our analyses, the demographic groups (e.g., race, sexual orientation) were our "independent variables" and the satisfaction score was our "dependent variable." Given the exploratory

nature of this research, we did not control for any potential confounds or moderators. Future research should explore these possibilities.

## 2.1. Demographic Information

Participants completed a demographic self-administered questionnaire via SurveyMonkey that assessed the race/ethnicity, religious preference, relationship status, and sexual orientation.

Racial groups were divided into three categories. Self-identified white, Caucasian, and European American participants made up the first racial category (White/Caucasian), African American/Black, Latino/Hispanic, Asian, Pacific Islander, and Native American participants were combined into the second racial category (People of Color), and participants identifying with more than one race/ethnicity or as multi-racial were combined into the third racial category (Multi-Racial). Although we acknowledge the artificial nature of these categories, these three groups were created due to the small samples of non-Caucasian men (also, see Results section below).

Religious groups were also divided into three categories. Protestant, Catholic, and other Christian denominations were combined to make up the first religion category (Christian). Jewish, Eastern/Greek or Chinese Orthodox, Muslim, New Age, Hindu, Buddhist, and those identifying as not religious, but spiritual were combined into the second religion category (Other Religions), and those identifying as Agnostic or Atheist were combined into the third religion category (Agnostics/Atheists). Again, although we acknowledge the artificial nature of these categories, these three groups were created due to the small samples of non-Christian men (also, see Results section below).

Relationship status was divided into four categories. Participants identifying as single made up the first relationship status category (Single). Participants who were in a casual/non-serious relationship with one person, in a casual/non-serious relationship with more than one person, or were in a serious relationship with one person were combined into the second relationship status category (In a Relationship). Participants who were engaged or married were combined into the third relationship status category (Engaged or Married). Participants who were separated or divorced were combined into the fourth relationship status category (Separated or Divorced).

Sexual Orientation was divided into two categories. Participants who identified as heterosexual made up the first sexual orientation category (Heterosexual). Participants who identified as gay, bisexual, pansexual, or by another non-heterosexual label (e.g., queer) were combined into the second sexual orientation category (Non-Heterosexual). Participants identifying as asexual were omitted from the

sexual orientation analyses.

## 2.2. Circumcision status

To assess circumcision status, participants were asked "To your knowledge, are you circumcised?" They were given the option of answering "Yes," "No," "I don't know," and "Prefer not to answer." Only participants who answered "Yes" or "No" were included in these analyses<sup>1</sup>.

## 2.3. Circumcision satisfaction

Participants were asked three questions to assess their degree of satisfaction with their circumcision status: "How satisfied/dissatisfied are you with your circumcision status?" (1 = very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied); "How much is your circumcision status a positive/negative issue for you in your everyday life?" (1 = a very negative issue, 2 = a negative issue, 3 = neither a negative nor a positive issue, 4 = a positive issue, 5 = a very positive issue); "How positively/negatively does your circumcision status affect your sexual experience (if you are sexually active)?" (1 = very negatively, 2 = negatively, 3 = neither negatively nor positively, 4 = positively, 5 = very positively). These three items showed good internal consistency (Cronbach's  $\alpha = .79$ ) and were moderately positively intercorrelated ( $r_s = .50-.66$ ;  $p_s < .001$ ). They were therefore averaged to form a Circumcision Satisfaction Score.

<sup>1</sup> Previous research has shown that many men do not know whether they are circumcised, or incorrectly identify their circumcision status 18. Risser JM, Risser WL, Eissa MA, Cromwell PF, Barratt MS, Bortot A. Self-assessment of circumcision status by adolescents. *Am J Epidemiol.* 2004;159(11):1095-7. To address this issue, an additional measure of circumcision status was administered. Specifically, drawings of what appear to be circumcised penises (drawings 1, 2, and 3) and non-circumcised penises (drawings 4, 5, and 6) in both flaccid and erect states were shown, and participants were asked to select the drawing from each category that most resembled their own penis (adapted with permission from Bossio, 2015). The flaccid and erect drawing choices were highly internally consistent (Cronbach's  $\alpha = .87$ ), so these were mean averaged into a single circumcision-status-by-drawing-choice measure. Scores on this new measure ranging from 1 through 3.5 were recoded as 1 for "circumcised" while scores ranging from 4 through 6 were recoded as 2 for "non-circumcised" to correspond with codings from the self-report measure, "To your knowledge..." (there were no scores between 3.5 and 4). The two ways of measuring circumcision status were highly significantly correlated:  $r = .75$ ,  $p < .001$ .



## 2.4. Procedure

Study procedures were approved by the IRB of the university that funded this research. The study was conducted with workers from Amazon's Mechanical Turk (MTurk) marketplace, who were paid \$1.00 USD for their time. Previous research suggests that MTurk samples are generally as reliable as university student samples, while being more demographically diverse [e.g., (19)]. The survey was described as a "Men's Sexual and Reproductive Behavior and Knowledge Questionnaire," so that prospective participants would not know in advance that they would be asked questions about circumcision specifically. This was in order to avoid any possible selection biases, for example, overrepresentation of men with especially strong feelings about circumcision. After providing informed consent, participants were given a "Men's Sexual and Reproductive Health Knowledge Quiz," consisting of various filler questions designed to make the cover story more credible. These questions purported to assess their knowledge of general men's sexual health and reproductive issues unrelated to circumcision, such as the prevalence of prostate cancer, what a vasectomy entails, and so on. They were then told, "In the next part of the survey, we are going to focus on additional male reproductive and sexual health issues. In this section, the questions will relate to the topic of male circumcision, a common men's health issue." This wording was chosen to imply that questions relating to circumcision were just a part of the overarching survey, and not the specific focus of the study.

Participants were administered the Demographic Information, Circumcision Status, and Circumcision Satisfaction items described above. They also completed additional measures not relevant to these analyses (i.e., a False Beliefs measure; see (17) for details). Then, participants were fully debriefed (online).

## 3. Results

As noted previously, a series of demographic information by circumcision status between participants Analysis of Variances (ANOVA) using the Statistical Package for the Social Sciences (SPSS) were conducted on circumcision status satisfaction. As demonstrated in Table 1, statistically significant differences in circumcision status satisfaction were found for all of the demographic variables. All reported between-groups differences are statistically significant at  $p < .01$ , unless otherwise noted.

Specifically, for race, results demonstrated a statistically significant main effect for racial group,  $F(2, 893) = 5.12$ ;  $p = .006$ . However, this main effect was qualified by a statistically significant racial group by circumcision status interaction,  $F(2, 893) = 6.94$ ;  $p = .001$ . As displayed in Table 1, Tukey HSD post-hoc analyses demonstrated that circumcised men of color

expressed greater satisfaction with their circumcision status than both intact and circumcised Caucasian men, intact men of color, and circumcised multi-racial men<sup>2</sup>.

For religion, results demonstrated a statistically significant religion group by circumcision status interaction,  $F(2, 874) = 11.49$ ;  $p < .001$ . As displayed in Table 1, Tukey HSD post-hoc analyses demonstrated circumcised Christian men expressed greater circumcision status satisfaction than intact Christian men, circumcised men of other religions, and both intact and circumcised agnostics/atheists<sup>3</sup>.

For relationship status, results demonstrated a statistically significant main effect for both relationship group,  $F(3, 894) = 4.97$ ;  $p = .021$ , and circumcision status,  $F(1, 894) = 6.81$ ;  $p = .009$ . However, these main effects were qualified by a statistically significant relationship group by circumcision status interaction,  $F(3, 894) = 3.81$ ;  $p = .010$ . As displayed in Table 1, Tukey HSD post-hoc analyses demonstrated circumcised men who were engaged or married were more satisfied with their circumcision status compared to circumcised men who were single.

Finally, for sexual orientation, results demonstrated a statistically significant main effect for sexual orientation group,  $F(1, 896) = 5.33$ ;  $p = .021$ . However, this main effect was qualified by a statistically significant sexual orientation group by circumcision status interaction,  $F(1, 896) = 7.55$ ;  $p = .006$ . As displayed in Table 1, Tukey HSD post-hoc analyses demonstrated circumcised heterosexual men expressed greater satisfaction with their circumcision status compared to intact heterosexual men and circumcised non-heterosexual men; intact heterosexual men also expressed greater satisfaction than circumcised gay men.

## 4. Discussion

The results of our research demonstrate that satisfaction with being circumcised differs as a function of race, religion, relationship status, and sexual orientation. Furthermore, such differences are consistent with Social Convention Theory and social norms surrounding masculinity.

For race, circumcised men of color expressed greater satisfaction with their circumcision status than both intact and circumcised white men, intact men of color, and circumcised multi-racial men. This may be due to a broader phenomenon in that Black men may have a stronger investment in their

<sup>2</sup> Asian men reported greater circumcision satisfaction compared to African American men,  $p = .022$ ; however, circumcision satisfaction scores for the other men of color groups were not statistically different from each other.

<sup>3</sup> Men of other religions did not significantly differ from each on the circumcision satisfaction score.

**Table 1:** One-Way Analysis of Variance and Tukey HSD Post-Hoc Analyses Demonstrating Differences in Circumcision Satisfaction as a Function of Race, Religion, Relationship-Status, and Sexual Orientation.

Demographic Variable	Demographic Categories (n) MEANS (SD)								F-value
RACE	White/Caucasian		People of Color		Multi-Racial				
	Intact (85)	Circumcised (587)	Intact (73)	Circumcised (100)	Intact (12)	Circumcised* (42)			
	3.6 <sub>b</sub> (0.78)	3.6 <sub>b</sub> (0.73)	3.6 <sub>b</sub> (0.72)	4.1 <sub>a</sub> (0.71)	3.8 (0.77)	3.7 <sub>b</sub> (0.94)			F(1, 893) = 7.83 p<.01
RELIGION	Christian		Other Religions		Agnostics/Atheists				
	Intact (59)	Circumcised (292)	Intact (19)	Circumcised (80)	Intact (86)	Circumcised (344)			F(5, 874) = 13.24, p<.01
	3.4 <sub>b</sub> (0.78)	3.9 <sub>a</sub> (0.74)	3.8 (0.59)	3.6 <sub>b</sub> (0.80)		3.6 <sub>b</sub> (0.74)	3.5 <sub>b</sub> (0.70)		
RELATIONSHIP-STATUS	Single		In a Relationship		Engaged or Married		Separated or Divorced		
	Intact (68)	Circumcised (269)	Intact (52)	Circumcised (157)	Intact (48)	Circumcised (268)	Intact (2)	Circumcised (38)	F(7, 894) = 5.16 p<.01
	3.6 (0.79)	3.5 <sub>b</sub> (0.75)	3.7 (0.67)	3.7 (0.78)	3.5 (0.72)	3.8 <sub>a</sub> (0.73)	2.5 (1.65)	3.7 (0.76)	
SEXUAL ORIENTATION	Heterosexual**				Non-Heterosexual (e.g., Gay)				
	Intact (154)		Circumcised (659)		Intact (14)		Circumcised (73)		F(3, 896) = 14.16 p<.01
	3.6 <sub>b</sub> (0.73)		3.7 <sub>a</sub> (0.73)		3.6 (0.93)		3.2 <sub>c</sub> (0.83)		

Note: All groups with different subscripts are statistically significant at p<.01, unless otherwise noted by asterisks.

\* Difference at p=.02; \*\*Difference at p=.04

physical presence, compared to White men, because they are more likely to be labeled by others as being hypermasculine [see (20, 21) for review]. Furthermore, being circumcised may reinforce positive feelings of assimilation and acceptance of dominant cultural ideal of physical appearance (22), which could also explain why Asian participants also reported greater levels of satisfaction (23). In other words, because it is culturally normative for men to be circumcised in the United States, being circumcised may be an additional way in which racial/ethnic minority groups attempt to embody this particular masculine ideal. Particularly for Black/African American men, whose bodies have been the objects of racialized science since the 19th century, it is possible that their medically pathologized bodies are targeted for intervention in the form of circumcision (24-26). These types of medical racism may shape the ways in which men of color perceive their own bodies as non-normative if they do not match the embodied expectations of the dominant group (24).

Furthermore, as Innes and Anderson (27) observe, there is more than simply a desire to "fit in" with the dominant group. "The hegemonic nature of the fear of 'minority masculinities' is rooted in Western society and acts as a counterpoint to the preferred hegemonic white hetero-patriarchal masculinity," such that one's status as a male racial/ethnic minority is met with fear based on dominant ideologies that label black and

brown bodies as both threatening and deviant [(27), p. 10, emphasis in original]. Thus, two mechanisms may be at play here: from a medicalized perspective, the racial/ethnic minority body itself may be targeted for circumcision, and internally, those of a minority status may seek out the embodiment of the dominant group in order to avoid negative labeling.

For religion, circumcised Christian men expressed greater circumcision status satisfaction than intact Christian men, circumcised men of other religions, and both intact and circumcised agnostics/atheists. Most research literature on the connection, and, ultimately, critique, between religion and circumcision from a Western context has focused on Jewish [e.g., (28-30)] and Muslim [e.g. (31-33)] traditions. Given the limited research on attitudes among Christian men and circumcision, we can only speculate on these observed differences in our data. Because Christianity is the dominant religion in the United States, this difference may also reflect reinforcement and acceptance of cultural expectations and beliefs (34, 35).

While Christianity as a whole is a non-circumcising religion, the majority of Christian men are still circumcised; it may be that these greater satisfaction levels are based more on a sense of cultural belongingness rather than religious status itself. Because there is no Christian religious mandate to circumcise, there is also no widespread Christian theologi-





cal debate on the practice [see (36)]. However, over the past few decades, there has been a much more rigorous debate amongst members of both Judaism and Islam, in which those religious mandates are being questioned and even abandoned altogether [see (29, 30, 33, 37)]. It is possible that some men may be less satisfied with being circumcised for religious reasons rather than to because it is a cultural norm in the United States.

For relationship status, circumcised men who were engaged or married were more satisfied with their circumcision status compared to circumcised men who were single. These results are inconsistent with previous research demonstrating no differences in body image satisfaction as a function of relationship status [e.g., (38)]. This difference may be due to the fact that previous studies have assessed body image more broadly. Further research to explore this discrepancy is warranted.

For sexual orientation, circumcised heterosexual men expressed greater satisfaction with their circumcision status compared to intact heterosexual men and circumcised non-heterosexual men; intact heterosexual men also expressed greater satisfaction than circumcised non-heterosexual men. These results are inconsistent with Loehle et al. (39) who found no differences between sexual orientation groups. This dissatisfaction among non-heterosexual men may be due to the socially constructed connection between male genitalia and conceptions of masculinity (40). Among gay men in particular, those who were circumcised reported lower levels of satisfaction with their circumcision status. This is a peculiar finding, given that the majority of gay men in our sample also reported being circumcised. Further research to explore this discrepancy is also warranted.

Popularized discourse on male circumcision does not often consider the ways in which the procedure itself physically and ideologically shapes hegemonic conceptions of the idealized male body. The types of discussions that do seem to occur, both within popular culture and academia, tend to focus more on whether or not the presence or absence of foreskin impacts a man's sexual pleasure [see (41), for a more in-depth discussion]. The psychosexual significance of the foreskin itself is influential in these discourses (42) insofar as hegemonic conceptions of the "proper" male body include the assumption that men are expected to have prolonged sexual performance during sexual intercourse and that in a heterosexual experience, the man is "responsible" for their partner's sexual satisfaction.

However, there is a growing body of literature that the foreskin is a very important part of penile anatomy with a number of important functions, and that removal of this tissue destroys a number of highly specialized nerve endings that are useful to sexual experience [see (2, 43-45)]. These popularized assumptions lend themselves to a form of social con-

trol in which circumcision itself serves as a regulator of sorts for the "normalized" male body and masculine sexual performativity. As well, Harrison (16) argues that circumcision status may actually mark one's body and permanently affect the types of sexual behavior that a man is able to experience. For example, Harrison explains that a sexual technique such as docking is physically impossible for men who have been circumcised, resulting in an entirely different set of sexual abilities and experiences. Such normative male body ideals, then, also shape participation in various types of sexual activities and may also affect levels of satisfaction with one's circumcision status as well.

## 5. Limitations

Even though these results demonstrate an interesting, statistically significant pattern of results, some limitations should be discussed. Foremost, the number of intact men, compared to circumcised men, is low. This is primarily due to a combination of factors: we analyzed data from research that was conducted on US American men, who are significantly more likely to be circumcised compared to other populations, and because of the nature of the research design, the researchers could not specifically recruit intact participants. In addition, some of the subsamples (e.g., non-heterosexual men) are also low. Therefore, future research should explore these proposed group differences with a larger sample.

## 6. Conclusion

These results suggest that understanding genital satisfaction may require understanding the cultural, social, and personal aspects of the individual. Foremost, these data suggest that circumcision satisfaction is related to endorsement of the dominant culture and its norms surrounding the masculine body. That is, with the exception of race, in general, heterosexual, Christian, married, circumcised men were more satisfied than their respective peers. This furthers the rationale of social convention theory (12) that attitudes toward one's body (i.e., circumcision status) may be influenced by the dominant social norms and accepted social behavior within that society.

## 7. Appendix

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### 7.2. Author contribution

All the authors have the same contribution.

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### 7.4. Conflict of interest

No conflict of interest.

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