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SEXUAL ORIENTATION CHANGE EFFORTS (SOCE) STRONGLY REDUCE SUICIDALITY: A COMMENTARY ON BLOSNICH ET AL., “SEXUAL ORIENTATION CHANGE EFFORTS, ADVERSE CHILDHOOD EXPERIENCES, AND SUICIDE IDEATION AND ATTEMPT AMONG SEXUAL MINORITY ADULTS, UNITED STATES, 2016–2018”, AJPH 110(7): 1024-1030

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Narrative Word Count: 2331 Keywords: sexual orientation, therapy, suicide, SOCE

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September 14, 2020

# The Editor

*American Journal of Public Health*

Transmitted online via Editorial Manager Dear Editor,

With this letter I am submitting a commentary titled “Sexual Orientation Change Efforts (SOCE) Strongly Reduce Suicidality” on the study: Sexual Orientation Change Efforts, Adverse Childhood Experiences, and Suicide Ideation and Attempt among Sexual Minority Adults, United States, 2016-2018, Blosnich et al., American Journal of Public Health 110 (July 2020):1024–1030

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Sincerely yours,



D. Paul Sullins, Ph.D.

Research Professor

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SEXUAL ORIENTATION CHANGE EFFORTS (SOCE) AND SUICIDALITY:

A COMMENTARY ON BLOSNICH ET AL., “SEXUAL ORIENTATION CHANGE EFFORTS, ADVERSE CHILDHOOD EXPERIENCES, AND SUICIDE IDEATION AND ATTEMPT AMONG SEXUAL MINORITY ADULTS, UNITED STATES, 2016–2018”, AJPH 110(7): 1024-1030

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Abstract

**Background:** Blosnich and colleagues’ recent analysis of the Generations survey data, consisting of a population sample of 1518 sexual minority persons, improperly concluded that “sexual minorities who experienced SOCE reported a higher prevalence of suicidal ideation and attempts than did sexual minorities who did not experience SOCE.” The majority of their analytic category “experienced SOCE” erroneously consists of persons expressing suicidality prior to experiencing SOCE, most of whom did not express further suicidality following SOCE. **Results:** In logistic regression models that replicate those of Blosnich et al. with corrected data, suicide planning was reduced by half (AOR .45, 95% CI .27, .72) for SOCE participants.

Estimated suicide ideation (AOR .62), intention (AOR .91) and attempts (AOR .68) were also reduced, but not significantly. Results were sharply partitioned by age at the time of SOCE, with all AORs above 1 for those who underwent SOCE as minors (under age 18) and below 1 for those participating in SOCE as adults (age 18 and older). Suicide attempts were five times less likely among adults who underwent SOCE (AOR .21, 95% CI .08, .57). For all respondents suicide attempts were only one-tenth to one-fifth as likely when SOCE followed an initial expression of suicide ideation (AOR .22, 95% CI .06, .82), planning (AOE .11, 95% CI .02, .50)

or intent (AOR .09, 95% CI .02, .40).

**Conclusion:** Restrictions on SOCE deprive sexual minorities of an important resource for reducing suicidality. The right of all adults to pursue therapy that affirms their persons, sexuality, identity and goals should be respected, whether they experience stability or dysphoria in their current sexual or gender identity.

# BACKGROUND

Blosnich and colleagues recently published a study which mistakenly concludes that “sexual minorities who experienced SOCE reported a higher prevalence of suicidal ideation and attempts than did sexual minorities who did not experience SOCE” (Blosnich et al. 2020). The conclusion is false because over half (55%, unweighted) of the cases in the analytic category “experienced SOCE” in this study consisted of persons who expressed suicidal ideation, planned suicide, formed an intent to commit suicide, and/or attempted suicide before ever undergoing SOCE treatment. A fundamental principle of social science method is that temporal precedence, in which the cause precedes the effect, is required to establish a real-world (nomothetic or efficient) cause-effect relationship (Babbie 2012, 92). Suicidal behavior which predated SOCE treatment, therefore, could not possibly have been caused or influenced by SOCE treatment.

Moreover, subsequent suicidality, particularly suicide attempts, were lower following SOCE treatment than for comparable persons who had not undergone SOCE treatment.

Blosnich et al.’s analysis, and the present re-analysis, makes use of Waves 1 and 2 of the Generations data, a well-crafted survey of a sample of persons (N=1518) statistically representative of the population of sexual minorities in the United States administered by the Williams Institute in 2016 and 2018 (Meyer 2020). For SOCE participation respondents were asked, “Did you ever receive treatment from someone who tried to change your sexual orientation?” and if so, their age when such treatment occurred. Four questions addressed lifetime suicidal behavior: “Did you ever in your life have thoughts of killing yourself?” “Did you ever have any intention to act on thoughts of wishing you were dead or trying to kill yourself?” “Did you ever think about how you might kill yourself (e.g. taking pills, shooting yourself) or work out a plan of how to kill yourself?” and “Did you ever make a suicide attempt

(i.e., purposefully hurt yourself with at least some intention to die)?” Response options for each question were “No”, “Yes, once” and “Yes, more than once”. Follow-up questions for the latter two responses asked how old the respondent was when they engaged in the behavior or in the first and most recent of multiple instances of the behavior. A full description of the survey methods and questionnaires has been published (Krueger et al. 2020). Two participants did not report their age at SOCE. For 32 cases recorded as repeated incidents of suicide behavior only a first incident date was reported; these were recoded as single incidents. Blosnich et al. did not examine when the suicidal behavior occurred relative to SOCE or whether it consisted of single or multiple instances or attempts. The present analysis makes use of both of these features of the data.

# Table 1. Timing of suicidal behavior relative to SOCE (in percent): Generations Data 2018 (n=1518)

Suicide behavior first occurred Suicide ideation

Suicide plan

Suicide intention

Suicide attempt

|  |  |  |  |
| --- | --- | --- | --- |
| N (%,S.E.) | N (%,S.E.) | N (%,S.E.) | N (%,S.E.) |
| SOCE (n=106) |  |  |  |  |
| Total suicide behavior | 89 (84.9, 4.1) \* | 73 (72.0, 5.4) \* | 59 (65.1, 5.5) \* | 42 (40.4, 6.0) \* |
| After SOCE | 20 (22.1,5.2) | 24 (28.2,5.8) | 17 (33.2,7.9) | 15 (37.6,7.3) |
| During SOCE | 11 (7.8,2.8) | 13 (10.6,3.8) | 11 (18.4,6.4) | 7 (9.8,4.0) |
| Before SOCE | 58 (55.0,6.1) | 36 (33.2,5.9) | 31 (48.5,8.2) | 20 (51.1,9.6) |
| Total suicide behavior during/after SOCE | 31 (28.6, 5.5) \*\*\* | 37 (37.0, 6.0) \*\* | 28 (31.9, 6.0) | 22 (19.8, 4.8) |
| No SOCE (n=1410)Total suicide behavior | 967 (73.4, 1.4) | 763 (58.7,1.6) | 524 (42.3, 1.7) | 323 (26.6, 1.5) |
| Percent repeated instances/attempts Before intervening SOCE | 45 (79.4, 6.8) | 19 (55.0, 10.6) | 15 (46.3, 11.3) | 5 (28.1, 12.2) |
| During/After SOCE | 17 (56.5, 11.9) | 10 (29.0, 9.6) \*\* | 12 (50.3,11.9) | 2 (9.8, 7.6) \*\* |
| No SOCE | 691 (73.1, 1.8) | 451 (62.1, 2.1) | 265 (55.1, 2.6) | 104 (36.1, 3.3) |

Percents shown are population-weighted. “Before SOCE”, occurred in a year before SOCE occurred; “During SOCE”, occurred in the same year as SOCE; “Following SOCE”, occurred in a year more recent than SOCE; “Total % SOCE”, total suicidal behavior among SOCE participants expressed as a percent of SOCE participants; “During/After % SOCE”, suicidal behavior occurring during or after participating in SOCE expressed as a percent of SOCE participants; “% No SOCE”, total suicidal behavior among non-SOCE participants expressed as a percent of non-SOCE participants. For 2 cases data on age of SOCE was missing, reducing usable SOCE N by 2. Different from corresponding “No SOCE” category by t-test, 1P <0.10; \*P <0.05; \*\*P <0.01; \*\*\*P

<0.001.

# RESULTS

Table 1 reports the background descriptive numbers. The percentages shown are population-weighted but not adjusted for covariates. Of the 89 SOCE participants who reported ever having thoughts of suicide, 58 of them (65%) did so before they underwent SOCE. About half (48-53%) of the instances of suicide planning, intention and attempts also occurred before the respondent had encountered any SOCE. The lines labeled “Total suicide behavior” replicate replicate Blosnich et al.’s categorization by including suicidal behavior that occurred prior to SOCE, while the line “Total suicide behavior during/after SOCE” corrects the metric for SOCE participants to include only suicidal behavior that occurred during or after the respondent actually underwent SOCE. For every type of suicidal behavior, the former metric inflates the prevalence among SOCE participants to a rate higher than that among those who have never undergone SOCE, but with the corrected measure the prevalence in the SOCE group is lower than that in the non-SOCE group for suicide ideation and planning, with lower but non- significant samples estimates for suicide intention and attempt.

Table 2 compares Blosnich et al.’s logistic regression models for the association of ACEs and SOCE with suicide morbidity (shown in Table 4 of that study) with identical models using the corrected category of “Experienced SOCE”. The AOR for suicidal ideation in the replication model differs slightly from that reported by Blosnich et al. due to missing data on age at SOCE. In the corrected models suicidal ideation, planning and intention are significantly reduced following SOCE treatment compared to sexual minorities who did not undergo SOCE. Estimated suicide attempts are also reduced, but the estimate is not statistically significant.

# Table 2. Adjusted odds ratios (AORs) for most recent suicide morbidity following SOCE: Probability Sample of Sexual Minorities, United States, 2016-2018 (N=1,518)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Suicidal Ideation | Suicide Planning | Suicide Intention | Suicide Attempt |
| AOR (95% CI) | AOR (95% CI) | AOR (95% CI) | AOR (95% CI) |
| Experienced SOCE (n=1491) |  |  |  |  |
| Per Blosnich et al. | 1.93 (1.02, 3.67) | 1.75 (1.01, 3.06) | 2.50 (1.56, 4.01) | 1.75 (.99, 3.08) |
| Corrected | .11 (.06, .21) | .34 (.20, .59) | .55 (.31, .97) | .59 (0.30, 1.14) |
| As a child (under 18) | .19 (.08, .46) | .66 (.32, 1.33) | 1.26 (.61, 2.61) | 1.36 (.63, 2.95) |
| As an adult (18 or older) | .09 (.04, .22) | .20 (.09, .47) | .21 (.08, .52) | .14 (.04, .43) |
| Suicide attempts following behavior With intervening SOCE -% (SE) | 8.0 (5.3) | 4.7 (3.7) | 5.0 (3.9) | 26.4 (11.1) |
| With no SOCE - % (SE) | 35.5 (1.9) | 43.1 (2.2) | 57.3 (2.7) | 36.3 (3.3) |
| AOR (95% CI) | .22 (.06, .82) | .11 (.02, .50) | .09 (.02, .40) | .73 (.31, 1.69) |

ACEs, age, sexual minority identity, gender identity, race and educational attainment were included in the models but are suppressed in the table. Suicide attempts following Suicide Attempt reports the percentage of at least one subsequent suicide attempt. “Per Blosnich et al.” includes suicidal behavior that preceded SOCE. “Corrected” excludes suicidal behavior that predated experiencing SOCE.

Three additional analyses confirm and contextualize these findings. Table 1 reports the number and percent of repeated instances among the suicidal behavior reported before, during and after, or in the absence of SOCE treatment. The percentages shown are population-weighted but not adjusted for covariates. “Before intervening SOCE” reports behavior expressed before SOCE that recurred during or after SOCE treatment; “During/after SOCE” reports behavior that began following SOCE. Together these offer crude measures of the propensity of SOCE treatment to curb or instigate suicidal behavior. With the exception of suicide ideation expressed before SOCE, by these measures SOCE treatment is more effective than its absence both in ameliorating prior and reducing subsequent suicidal behavior. Both effects are strongest for the most serious suicidal behavior: suicide attempts. The prevalence of repeated suicide attempts following SOCE is less than one-third the prevalence with no SOCE.

Table 2 compares the proportion of each suicidal behavior that results in suicide attempts when followed or not followed by SOCE treatment. These percentages report marginal effects from adjusted logistic regression models. For suicide ideation, planning and intention, intervening SOCE dramatically reduces the risk of a suicide attempt, with AORs of .09 to .22.

The best estimate for the repeat of an initial suicide attempt is also lower following SOCE, compared to no SOCE, but is not significant in these data.

Table 2 also reports that a reduction in suicidality was much more likely for those who underwent SOCE as adults, with AORs of .09 to .21, than as children, with AORs of .19 to 1.36. Half of those who underwent SOCE treatment did so as adults; mean age was 18.2 (S.E .6) years. **CONCLUSION**

Blosnich et al.’s speculation that SOCE treatment has an “insidious association with suicide risk” and that it “may compound or create … suicidal ideation and suicide attempts” are not only emphatically false but state the case exactly backwards. The association of suicidality with SOCE is due much more to persons with suicidal behavior subsequently undergoing SOCE than to persons who have undergone SOCE seeking suicide. As the regression models above suggest, the effect is much stronger for adults. The proportion (S.E.) of each suicidal behavior among those participating in SOCE as adults that was expressed prior to undergoing SOCE therapy was: ideation, 77% (7.5); planning, 66% (9.5); intention, 73% (10.0); and attempt, 78% (10.0). This indicates that these adults disproportionately selected into SOCE treatment following suicidal behavior. Blosnich et al. thus correctly observed a strong association of SOCE with suicidality but mistakenly reversed the direction of causation. For sexual minority adults, experiencing SOCE did not lead to higher suicidality; rather, experiencing suicidality led to higher SOCE participation.

The fact that most suicidality alleged to result from SOCE treatment in fact preceded such treatment is sufficient to rebut the false claim that SOCE treatment instigated suicidality. It is not necessary also to show that SOCE relieved pre-existing suicidality better than no SOCE; persons selecting into SOCE treatment, for example, may have more intractable forms of suicidality. As the evidence above shows, however, SOCE participation strongly reduced almost all forms of pre-existing suicidality. Following SOCE, the odds of suicide ideation was reduced by almost 90% (AOR .11), of suicide planning by two-thirds (AOR .34), and of suicide intention almost by half (AOR .55). Only suicide attempt risk was not significantly reduced overall and may be higher for children, but for adults suicide attempt risk following SOCE was strongly reduced, by 86% (AOR .14). For both adults and children, progression to attempted suicide was dramatically reduced by SOCE. When followed by SOCE treatment, suicide ideation was only a fifth as likely to lead to a suicide attempt; suicide planning and intention a tenth as likely; and an initial suicide attempt was a third less likely to lead to second attempt.

It is possible, moreover, that these findings understate the beneficial effect of SOCE treatment on suicidality and affect, since those who may have attained the goal of SOCE—to adopt heterosexual identity, orientation or sexual function—were systematically screened from the survey sample, which only included those currently identifying as a sexual minority. Further research that includes persons for whom SOCE may have been successful would add greatly to our understanding of the full effects of this form of therapy.

Objections to SOCE on the ground that sexual minority status is immutable are not tenable. Although controversial, the ability of persons to transition sexual orientation identities is well documented (Diamond 2016; Diamond and Rosky 2016; Williams and Woning 2018). Both genomic and twin studies have converged on the finding that minority sexual orientation is

about twice as responsive to environment as it is to genetic influence, which is not determinative but diffuse and polygenetic (Ganna et al. 2019; Polderman et al. 2015). Bailey and colleagues, writing for the American Psychological Association, doubt that therapy can change internal sexual attraction but assert that “[i]t is, of course, possible to change one’s public sexual- orientation identity, and … whether one will or will not engage in same-sex or opposite-sex sexual behavior … . These sorts of choices likely explain claims by ex-gays and ex-lesbians that they are no longer leading a “homosexual lifestyle” (Bailey et al. 2016, 86). Similar choices are also made by transgender men and women who choose to transition from their birth gender identity despite its biological immutability. The right of all adults to pursue therapy that affirms their persons, sexuality, identity and goals should be respected, whether they experience stability or dysphoria in their current sexual or gender identity.

Whatever the psychological or ontological status of the question, the evidence presented above makes clear that, contrary to the claims of Blosnich et al., SOCE treatment strongly reduces suicidality among sexual minorities, especially when undergoing such treatment as an adult. Judicial or legislative restrictions on SOCE participation deprive sexual minorities of an important resource for reducing suicidality, putting them at substantially higher suicide risk.

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