Heterogeneity among Sexual and Gender Minority Adults by Age: The Kids are Not Alright

Original Research

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Abstract

Introduction: Sexual and gender minorities (SGM) experience more threats to their wellbeing than their straight peers. However, it is unclear whether there are within-group differences among SGM adults and whether these interact with chronological age.

Methods: To examine SGM heterogeneity by age, we used data from the 2023 Behavioral Risk Factor Surveillance System. We included 23,187 adults (M age= 46.2±19.6) identifying as SGM (24.1% gay/lesbian; 38.9% bisexual; 21.5% other sexual orientation; 15.6% questioning). Measures indexing emotional wellbeing were examined using 4 (Age) by 4 (SGM) ANOVAs and chi-square tests, as appropriate.

Results: Significant age and SGM main effects were qualified by interactions between age and SGM. Across measures, emerging adults and established adults often reported the highest challenges to wellbeing, particularly those who identified as bisexual or gay/lesbian. In contrast, across age groups, those who were questioning their SGM or identified as some other SGM status were often the least emotionally distressed.

Conclusions: Our study highlights the important mental health disparities within groups of SGM adults, especially among emerging and established adults. We advocate for increased mental health services and continued inclusion of SGM measures in publicly funded health surveillance surveys.

Key Words: Sexual Orientation, Emotional Wellbeing, Health Disparity, Lifespan

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Introduction

Mental health challenges are common among Americans, particularly emerging adults ages 18 to 25 years, multiracial adults[1], and sexual and gender minorities (SGM).[2,3] For adults identifying as SGM, these challenges often result in lowered mental health and physical wellbeing, relative to their straight peers.[2,3] Explanations for why differences emerge between straight and SGM adults include differential experiences with stigma and minority stress, as well as differences in health behaviors and less affirming healthcare.[4,5] Although examinations of within-group differences among SGM are rare, they often reveal stark differences across orientations.[6] However, these within-group investigations usually focus on a single age group, such as youth[6] or older adults.[7] A lifespan examination of within-group disparities among lesbian, gay, and bisexual (LGB) adults would advance the field. Focusing on the unique needs of people with various SGM identities informs the broader literature on lifespan development. Finally, given the current social and political climate, adults identifying as SGM may be experiencing particularly high threats to their well-being. Monitoring these effects is necessary for improved deployment of services.

Scientific Methods

Data Source

We used the public access data from the Centers for Disease Control and Prevention's (CDC) 2023 Behavioral Risk Factor Surveillance System (BRFSS).[8], which was released in September 2024. The BRFSS is an annual interview conducted with more than 400,000 Americans residing in all 50 US states, the District of Columbia, and three of the five inhabited US territories (i.e., Puerto Rico, Guam, Virgin Islands). The goals of the BRFSS include monitoring health promotion behaviors, health needs, and chronic health conditions of Americans. Adults responding to the BRFSS provide informed consent. Our local IRB deemed these analyses as "exempt" from their oversight through July 2026, due to the de-identified nature of the public-access data (IRB #: 2107363352). In September 2024, the data contained variables, including sexual orientation, that may no longer be available.

Participants

Of the 433,323 adults who answered the 2023 BRFSS question regarding sexual orientation, 5.4% (n=23,187) identified as a member of an SGM group. Specifically, 5,579 adults identified as gay or lesbian, 9,026 identified as bisexual, 4,975 identified with some other SGM identity, such as pansexual, asexual and other, and 3,607 were unsure or questioning their sexual orientation or identity. Among the SGM adults, age ranged from 18 to 80+ years (M=46.2 ± 19.6), and 41% identified as male. Racial and ethnic diversity characterized the SGM adults; 65.2% were white non-Hispanic, 6.7% were Black non-Hispanic, 7.0% identified as some other non-Hispanic race, 3.9% were multiracial, and 17.3% identified as Hispanic. Because we wanted to examine SGM interactions with age, we divided the SGM sample into four theoretically relevant age groups, including emerging/younger adults (n=6,139; ages 18 to 29, M=23.4 ± 3.4), established adults (n=7,379; ages 30 to 49, M=38.2 ± 5.7), midlife adults (n=4,211; ages 50 to 64, M=57.1 ± 4.3), and older adults (n=5,458; ages 65 to 80+, M=74.0 ± 5.3).

Protocol/Measures

As a surveillance interview, many constructs in the BRFSS are measured by single items. Because states may choose to omit modules from their interviews and because of skip patterns, unequal numbers of adults are included in the following analyses. However, because we are mindful that these data may play a role in subsequent meta-analyses, we include these varying cell sizes. We selected single-items that index emotional wellbeing: depression, unmet emotional needs, and the number of poor mental health days in the past month. Of note, all measures are coded such that higher scores reflect more mental health challenges.

<u>Depression</u>: Adults were asked whether they had ever been diagnosed with depression, a depressive disorder, or anxiety (1=yes, 0=no). In the current sample, 38.2% responded affirmatively (M= 38.2 ± 48.6; n= 22,981).

<u>Unmet Emotional Support</u>: Some participants (n= 14,037) were asked about their unmet emotional support needs, "How often do you get the social and emotional support you need?". Responses ranged from 1= 'always' to 5= 'never'. The sample mean (M= 2.1 ± 1.1) indicated that emotional needs were "usually" met.

<u>Days of Poor Mental Health</u>: Adults *(n*= 22,564) were also asked how many days in the past 30 days they felt that their mental health was 'not good'. Sixty percent (M=60.0 ± 49.0) responded that they had experienced at least one poor mental health day in the past month. Among the 13,548 adults who reported at least one poor mental health day, a mean of 13.2 ± 10.3 poor mental health days characterized the sample.

Statistical Analyses

In order to examine age and SGM group differences in the means of the dependent variables, we used X^2 tests of association for dichotomous items and factorial ANOVAs for the Likert-type and continuous items. Main effects for age, SGM, and interactions that emerged as significant at $p \leq 0.05$ were probed by examining all pairs and relying on Bonferroni post hoc tests to locate the effects. A power analysis, implemented in G*Power[9], estimated that N= 8,000 would provide sufficient power (> .9) to detect small (f^2< .10) main effects for age and for SGM, as well as for their interaction in an ANOVA, at p< .05.

Results

Although each SGM group includes adults ages 18 to 80+, significant age differences were evident across SGM groups, $F(3,23183)$=1301.3, p< .001. Bisexual adults (M=38.5 ± 16.9) were younger than other sexual orientation identities (M=47.2 ± 20.1), who were significantly younger than gay and lesbian adults (M=48.6 ± 18.0), who were significantly younger than those who did not know or were questioning their SGM identity (M=60.2 ± 18.5).

We note that analyses with four age groups, four SGM groups, and multiple outcome measures necessitate rather large tables, such as Table 1. Moreover, because we were especially interested in potential age by SGM interactions, the tables quickly become burdensome for readers. For ease of readers, we present means and standard deviations in Table 1, the group mean tests in the text and summarize post hoc analyses in the text, rather than presenting the pairwise comparisons for each of the outcomes.

Table 1. Means and Standard Deviations by Age and SGM Groups

	Emerging/Younger 18-29 yrs	Established 30-49 yrs	Midlife 50-64 yrs	Older 65-80+ yrs
Depression (%)	$n = 6,056$	$n = 7,326$	$n = 4,186$	$n = 5,413$
1 Gay/Lesbian	45.0 ± 50.0	40.2 ± 49.0	35.0 ± 47.7	25.4 ± 43.5
2 Bisexual	55.6 ± 49.7	55.0 ± 49.8	40.1 ± 49.0	25.9 ± 43.8
3 Other Sexual Orientation	53.7 ± 49.9	44.5 ± 49.7	33.1 ± 47.1	18.5 ± 38.9
4 Questioning/Don't Know	13.9 ± 34.7	8.1 ± 27.3	12.4 ± 33.0	12.6 ± 33.2
Unmet Support Needs	$n = 3,972$	$n = 4,382$	$n = 2,463$	$n = 3,220$
1 Gay/Lesbian	2.1 ± 1.0	2.0 ± 1.0	1.9± 1.0	1.9 ± 1.1
2 Bisexual	2.2 ± .9	2.2 ± 1.0	2.1 ± 1.1	1.9 ± 1.0
3 Other Sexual Orientation	2.3 ± 1.0	2.3 ± 1.1	2.2 ± 1.3	2.0 ± 1.3
4 Questioning/Don't Know	2.5 ± 1.5	2.2 ± 1.5	2.2 ± 1.5	2.0 ± 1.4
Any v. Zero Poor Mental Health Days (%)	$n = 6024$	$n = 7237$	$n = 4093$	$n = 5210$
1 Gay/Lesbian	80.6 ± 39.5	67.91 ± 46.7	50.2 ± 50.0	34.2 ± 47.4
2 Bisexual	85.9 ± 34.8	78.7 ± 40.9	59.2 ± 49.2	37.3 ± 48.4
3 Other Sexual Orientation	83.3 ± 37.3	68.8 ± 46.3	50.9 ± 50.0	30.9 ± 46.2
4 Questioning/Don't Know	39.6± 49.0	27.5 ± 44.7	30.1 ± 45.9	22.5 ± 41.8
Number of Poor Mental Health Days (1+)	$n = 4959$	$n = 4983$	$n = 2034$	$n = 3184$
1 Gay/Lesbian	12.4 ± 9.6	11.7 ± 9.9	11.5 ± 10.4	10.7 ± 10.6
2 Bisexual	13.9 ± 9.7	13.9 ± 10.4	12.8 ± 10.9	10.8 ± 10.4
3 Other Sexual Orientation	15.2 ± 9.9	14.3 ± 10.7	13.9 ± 11.1	12.9 ± 11.2
4 Questioning/Don't Know	13.8 ± 10.9	11.2 ± 10.0	14.0 ± 10.9	11.5 ± 10.4

Data are Means ± SD

<u>Depression</u> diagnoses were uniformly high, as shown in Table 1. Significant differences were evident by age, X^2 (df=3)= 1430.11, $p<$ .001 and by SGM group, X^2 (df=3)=1600.03, $p<$ .001. These main effects were qualified by a significant interaction, X^2 (df=9)= 3415.69, $p<$ .001. A series of post hoc pairwise tests revealed that the highest depression diagnoses were reported by bisexual emerging adults, bisexual established adults and questioning established adults. These three differed significantly from all other groups. Gay and lesbian emerging adults, gay and lesbian established adults, gay and lesbian midlife adults, midlife bisexual adults, and questioning adults who were established, midlife, or older reported approximately equal incidences of depression. These seven were, however, significantly higher than the remaining six groups, who included all four age groups of adults with other SGM identities, as well as older gay and lesbian adults and older questioning adults.

<u>Unmet Emotional Needs</u> exhibited both age [F(3,14021)= 40.35, $p<$ .001] and SGM effects [F(3,14021)= 34.01, $p<$ .001], which were modified a significant interaction, F(9,14021)= 2.11, p= .025. Post hoc analyses revealed many similarities across the sixteen subgroups. However, those with other sexual identities, especially among the emerging and established adults, most frequently reported having unmet emotional needs.

<u>Poor Mental Health Days</u> were common. When comparing any poor days versus zero poor days, differences were evident in main effects for age [X^2 (df=3)= 3600.63, $p<$ .001], SGM status [X^2 (df=3)= 2342.55, $p<$ .001], and qualified by the interaction between the two, X^2 (df=9)= 3248.50, $p<$ .001. Post hoc analyses suggested that across age groups, those who were questioning their SGM were somewhat protected from poor mental health. In contrast, emerging and established adults, and a significant percentage of middle-aged adults, were struggling.

Among those who reported <u>any poor mental health days</u> in the past thirty, significant main effects were observed for age [$F(3,13532)= 13.70, p< .001$], for SGM [$F(3,13532)= 24.74, p< .001$] and the interaction [$F(9,13532)= 2.25, p< .017$]. Post hoc pairwise comparisons revealed a striking story: among those who experienced any poor mental health days, there were few differences by age or SGM. Notably, however, those who embraced bisexual and other identities among emerging adults and established adults experienced approximately two weeks of poor mental health days. Other groups reported around 10 poor mental health days.

Discussion

The prevalence of mental health challenges is high among SGM adults. Thirty-eight percent of participants reported being diagnosed with depression compared to 18.5% of Americans.[10] Higher rates of depression in SGM adults has been attributed to more challenges to their physical health and emotional wellbeing than their straight peers experience including lower income, stigma and barriers to healthcare.[2,3]

Much like the general population[1], emerging adults and established adults identifying as SGM reported higher depression compared to older adults. It is unclear why such dramatic age differences emerge. It is possible that older adults have developed a resilience to stigma and have become more accepting of their identities.[11] However, these questions cannot be answered using the BRFSS data.

Gay and lesbian emerging adults, gay and lesbian established adults, gay and lesbian midlife adults, midlife bisexual adults, and questioning adults who were established, midlife, or older reported approximately equal incidences of depression. These seven were, however, significantly higher than the remaining six groups, who included all four age groups of adults with other SGM identities, as well as older gay and lesbian adults and older questioning adults. Thus, although the mean levels are higher than for their straight peers, the patterns for age are similar to those of the non-queer public.[1]

Implications

Our results emphasize the need to continue to monitor wellbeing among SGM adults, as there are significant challenges to mental health among SGM groups and there are important differences across SGM identities. Although older age is associated with better wellbeing across both SGM and straight adults, we note that adults who identified as questioning their sexual or gender identity or identifying with an SGM that was other than gay, lesbian, or bisexual, report better emotional wellbeing. It is noteworthy, as well, that other and questioning adults reported having unmet emotional needs. Thus, discerning why they report higher levels of wellbeing than their peers is an important investigation for future studies. Including richer items in health surveillance surveys may allow us to disentangle these effects in the future. In contrast to the main effects favoring adults with other SGM and questioning identities, our emerging adult SGM members are struggling. The number of poor mental health days experienced by emerging adult SGM people is troubling because of the increased personal cost experienced by these individuals, the increased demand for health care and concomitant cost to the system, and the potential for lost contributions to society.

Finally, data from the CDC's BRFSS are funded by tax dollars appropriated by the US Congress. As scientists and citizens, we strongly advocate for access to all of the data that has been collected by the BRFSS. Moreover, we urge others to advocate for the inclusion of survey items related to sex, gender, and SGM status. If data are not collected, we cannot know the difficulties faced by many Americans. SGM Americans appear to be in need of more mental health services, rendering the health surveillance surveys as crucial.

Conclusions

Mental health challenges are high among SGM Americans. Examining within-group heterogeneity helps to impart dignity and respect to all citizens. Moreover, focusing on differences across age groups may help to inform future services, programs, and policies. As a community of scholars, we must maintain the inclusion of the needs of vulnerable groups in tax-supported health surveillance surveys. Such data allows us to develop evidence-based interventions to support current emotional needs and to anticipate needed services for the future.

Conflicts of Interest

No conflicts of interest.

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