Call to action: The need for an LGBT focused physical activity research strategy

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In 2011, the Institute of Medicine (IOM) released the report, *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding* highlighting numerous gaps in health research across the life course of lesbian, gay, bisexual, and transgender (LGBT) populations.¹ This report also included an overview of multiple health inequities among LGBT populations when compared to heterosexuals, including higher rates of chronic disease (e.g., heart disease, some cancers, obesity), mental health (e.g., suicide ideation, depression, anxiety), and social environmental health (e.g., violence, discrimination, social exclusion) concerns. While the report included a call for additional research to advance the understanding of health inequities among LGBT populations as well as the creation of theoretically sound and empirically driven health interventions, there was no specific mention of the role of physical activity (PA) as a means to addressing these and other health issues. It is well established that PA is linked to numerous physical, psychological, and social health benefits for all individuals over the life course.² Regular participation in moderate to vigorous aerobic PA (MVPA) and muscle strengthening activity is associated with stronger bones and improved muscular fitness; lower risks of heart disease, diabetes, depression, and certain forms of cancer; as well as improved health related quality of life and overall psychological well-being.² Given low participation rates in PA among LGBT people,³⁻⁸ steps need to be taken to ensure LGBT people are provided the same opportunities to become active and enjoy the health benefits that come from an active lifestyle. Researchers have identified both personal and social barriers that prevent LGBT people from being active. Barriers have included physical and psychological

challenges that stem from identified chronic health conditions as well as exclusionary discriminatory practices and homophobic, biphobic, and transphobic remarks that involve threats of violence. Historically, and currently, LGBT people have largely been systematically excluded from health research resulting in a knowledge deficit and a lack of well-informed PA interventions for LGBT people. Thus, this *Current Issues* paper will briefly provide an overview of PA research involving LGBT populations, including a discussion on how research efforts need to address LGBT inclusion in PA to overcome known health inequities. Suggestions for future research as well as calls for further funding are presented in the hope that they may stimulate progressive research endeavors.

PA recommendations and Review of LGBT PA research

Based on national recommendations by the United States Department of Health and Human Services (USDHHS) for aerobic PA, to achieve health benefits, adults (18-64 years) and older adults (over the age of 65 years) should regularly engage in one of the following: (1) a weekly total of 150 minutes of moderate-intensity PA, (2) a weekly total of 75 minutes of vigorous-intensity PA, or (3) a combination of MVPA totaling a minimum of 150 minutes during a week.² The USDHHS also recommends that adults and older adults perform moderate or high intensity muscle-strengthening activities that involve all major muscles on two or more days of the week. Children and adolescents should engage in 60 minutes of MVPA on each day of the week and incorporate muscle-strengthening activities on at least three days of the week.

74 Despite the well-documented health benefits associated with PA,² only minimal primary (e.g.
75 descriptive), secondary (e.g., moderating effects), and tertiary (e.g., mediating effects) research
76 has examined PA and factors associated with PA initiation and adherence among LGBT
77 populations.⁹ In primary research, a psychological process is identified and a problem is spotted.
78 Primary research to date shows that the majority of LGBT populations across the life course are
79 not sufficiently active to achieve health benefits, especially when compared to their heterosexual
80 counterparts. In terms of adolescents, LGB youth compared to heterosexual youth have lower
81 rates of participation in 60 minutes of MVPA each week (lesbian/gay = 19%; bisexual = 17%
82 heterosexual = 25%).³ Among adult females, lesbians (22-43%) and bisexuals (33%) compared
83 to heterosexuals (27-43%) may not differ in terms of participation in recommended levels of
84 PA,⁴ but lesbians experience unique barriers to engaging in PA including social exclusion and
85 bullying.⁵ However, the results from research examining PA among males has been mixed.
86 Among male populations, Dilley and colleagues found that 67% of both gay and heterosexual
87 males were sufficiently physically active.⁶ In contrast, Grogan and colleagues found that gay
88 males participated in PA an average of only 1 day each week compared to 3 days each week for
89 heterosexual males.⁷

91 While only minimal research has been used to examine participation in PA among LGB
92 populations, even fewer studies exist for the transgender population. Recently, a study by
93 Fredriksen-Goldsen et al. indicated that a higher percentage of transgender compared to
94 cisgender (i.e., non-transgender) older adults were more likely to be insufficiently active (23%
95 vs. 15%).⁸

96

97 While the aforementioned studies describe some of the differences in PA participation rates
98 among LGBT populations compared to heterosexuals, additional secondary research, or factors
99 associated with the strength of a psychological process, is needed. For example, researchers may
100 wish to better understand the relationship between PA initiation and adherence among different
101 LGBT populations. This may include objectively measured rates of PA among multiple
102 demographic segments of LGBT populations, such as an examination of various income levels,
103 racial and ethnic groups, age groups, and geographic locales (e.g., rural, urban). Significant
104 limitations of previous LGBT research has included the oversampling of Caucasian, younger,
105 higher income, and highly educated individuals residing in urban settings. Additionally, a greater
106 understanding of barriers and facilitators of PA, psychological correlates (e.g., self-efficacy,
107 motivation, intention, and personality) as well as the moderating effects of factors such as social
108 support, resiliency, and discrimination on PA can provide a strong evidence-base for
109 understanding the unique experiences of LGBT populations. Without collecting basic scientific
110 evidence about LGBT populations and their relationship with PA initiation and maintenance,
111 important information guiding the design of effective theory-based interventions will not exist.
112 Despite the need for additional primary and secondary research examining PA within LGBT
113 populations, four pilot interventions (i.e., tertiary research) specific to LGB people have been
114 evaluated and published to date.^{5, 10, 11, 12} Two of these studies have examined the effects of
115 exercise on both physical and mental health, and involved predominately gay and lesbian adults
116 living with HIV.^{10, 11} One study examined the use of exercise to help gay and lesbian cancer
117 survivors and their caregivers address depressive symptoms.¹² The final study examined the

effects of a theory-based educational intervention to improve levels of MVPA in lesbians.⁵ None of the four studies involved transgender individuals and none of the studies showed a significant effect on PA engagement or any aspect of physical fitness. Given the non-significant results of these studies, there is a critical need for additional primary and secondary research to inform the design of interventions (i.e., tertiary research) targeting PA behaviours amongst LGBT people.

Recommendations for future research and practice

Due to limited primary, secondary, and tertiary research, several strategies should be considered for conducting PA research involving LGBT people. The IOM has established a series of recommendations to forward research for LGBT people,¹ recommendations that can be easily adapted to facilitate the creation of PA research programs. Perhaps what makes these initiatives so special and unique when examining PA research involving LGBT people is that they have never been attempted before. First, researchers and government stakeholders should acknowledge LGBT invisibility in PA research. Invisibility in PA research can be addressed through a number of strategies including: (1) comprehensive diversity training, (2) collaborative participatory research, and (3) assessment of sexual orientation and gender identity on all standard demographic questionnaires.

Comprehensive diversity training on sexual orientation and gender identity including specific knowledge pertaining to LGBT definitions, general health, and known health inequities should be available for all researchers (e.g., faculty, staff, and undergraduate and graduate students).

140 Additionally, a collaborative participatory research framework is needed in which LGBT people
141 are actively engaged in the research process to ensure their unique PA needs are being addressed.
142 As noted by the IOM,¹ research involving LGBT people can be challenging. Specifically, both
143 sexual orientation and gender identity are terms that can be difficult to define by the individuals
144 themselves and the researcher. Thus, many LGBT individuals may not participate in research as
145 they do not feel the process is inclusive of their unique identity. Individuals may also be reluctant
146 or afraid to participate in research that specifically targets LGBT people for fear of being ‘outed’
147 or persecuted. Providing a setting and process that ensures full confidentiality or anonymity is
148 critical to the protection of the participant. Finally, LGBT people comprise a small portion of the
149 general population, which may make recruitment difficult, labor intensive, and potentially costly.
150 Without key stakeholders established in the community, recruitment may be extremely
151 challenging if not impossible.

152
153 Another strategy to address invisibility in PA research involves the inclusion of sexual
154 orientation and gender identity as part of all standard demographic questionnaires. This
155 suggestion is in conjunction with the recent inclusion of LGBT health objectives for Healthy
156 People 2020, in which the federal government has identified the need for an assessment of LGBT
157 health via national level public health surveillance studies. These data can provide regional
158 breakdowns allowing both governmental and non-for-profit agencies to answer the *who, what,*
159 *why, when, and where* questions associated with PA participation. Through the assessment of
160 sexual orientation and gender identity on all surveys, as well as additional demographic
161 information (e.g., age, race, ethnicity, socioeconomic status) and psychological and

environmental correlates of PA, a thorough understanding of the primary and secondary levels of research may be achieved.

Additional IOM recommendations include improved and more rigorous research designs assessing LGBT populations. The majority of previous PA research among LGBT people has been based on observational research designs in which cross sectional sampling methods have been utilized. Reliance on more rigorous research designs, such as prospective studies with large and robust sample sizes, will enhance the validity of primary and secondary research findings. Once a more thorough evidence-base of the experiences of LGBT people and PA has been identified, tertiary research (i.e., experimental/quasi-experimental) can be used to evaluate complex and unique interventions for improving the initiation and maintenance of PA. Intervention research design should adhere to high standards and general good practice, including the use of valid and reliable questionnaires, objective PA measurement, use of behavioral theory, and unbiased reporting practices.

Finally, federal, state, and local government entities, foundations, academic institutions, and other not for profit organizations should provide needed funding opportunities for the examination of LGBT health, particularly PA. By providing multiple types of funding opportunities (e.g., small grants, exploratory/developmental grants, academic research enhancement awards) young researchers can have the opportunity to build a career around understanding the PA behaviors of LGBT populations. Currently, the National Institutes of Health (NIH), is providing a funding opportunity (i.e., *Health of Sexual and Gender Minority*

184 *Populations*) for advancing knowledge of the health status of diverse populations so as to
185 improve the effectiveness of health interventions and services for members of such groups.
186 Previously in 2012, the USDHHS, Office on Women's Health provided a funding opportunity
187 for nutrition and PA based research titled: *Healthy Weight in Lesbian and Bisexual Women:*
188 *Striving for a Healthy Community*. Continued offerings of funding opportunities through NIH
189 and USDHHS as well as targeted opportunities through other federal funding sources such as the
190 Robert Wood Johnson Foundation, are critical to the advancement of theoretically informed
191 research to improve initiation and maintenance of PA, promote health and well-being, and
192 prevent or limit the impact of chronic illnesses among LGBT populations.

194 Conclusion

196 Overall, LGBT people face many physical, mental, and social health challenges that compromise
197 their overall health and well-being. Physical activity is one behavioral strategy that may reduce
198 health inequities among LGBT populations. Unfortunately, little research has effectively and
199 comprehensively examined: (1) rates of PA participation among LGBT populations (primary),
200 (2) correlates of PA participation (secondary), (3) moderating effects on PA (secondary), and (4)
201 unique strategies to assist individuals in initiating and maintaining a regular program of PA
202 (tertiary). Many challenges, in conjunction with systematic exclusion from the research process,
203 have contributed to this limited knowledge gathered about the PA behaviors and ultimately the
204 health and well-being of LGBT people. However, given the importance of PA to the health of all
205 individuals, efforts need to be made to help establish equitable and rigorous research programs to

206 ensure LGBT people benefit from public health PA initiatives and have the chance to lead

207 healthy and fulfilling lives.

208

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References

1. Institute of Medicine. *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*. Washington, DC: The National Academies Press; 2011.
2. United States Department of Health & Human Services. 2008 Physical activity guidelines for Americans. Atlanta, GA: CDC.
<http://www.health.gov/paguidelines/pdf/paguide.pdf> . Published 2008. Accessed December 1, 2015.
3. Mereish EH, Poteat P. Let's Get Physical: Sexual Orientation Disparities in Physical Activity, Sports Involvement, and Obesity Among a Population-Based Sample of Adolescents. *Am J of Public Health*. 2015;105(9):1842-1848. doi: 10.2105/AJPH.2015.302682
4. Boehmer U, Bowen DJ. Examining factors linked to overweight and obesity in women of different sexual orientations. *Prev Med*. 2009;48(4):357–361. doi: 10.1016/j.ypmed.2009.02.003
5. Brittain DR, Dinger MK. BE-PALS: An innovative theory-based intervention to promote moderate physical activity among adult lesbians. *WSPAJ*, 2014;22(2):71-75. doi: <http://dx.doi.org/10.1123/wspaj.2014-0017>
6. Dilley JA, Simmons KW, Boysun MJ, Pizacani BA, Stark MJ. Demonstrating the importance and feasibility of including sexual orientation in public health surveys: Health disparities in the Pacific Northwest. *Am J Public Health*. 2010;100(3):460-467. doi: 10.2105/AJPH.2007.130336

7. Grogan S, Conner M, Smithson H. Sexuality and exercise motivations: Are gay men and heterosexual women most likely to be motivated by concern about weight and appearance? *Sex Roles*. 2006;55(7-8):567-572. doi: <http://10.1007/s11199-006-9110-3>
8. Fredriksen-Goldsen, KI, Cook-Daniels L, Kim HJ, et al. Physical and mental health of transgender older adults: An at-risk and underserved population. *Gerontologist*. 2014;54(3):488-500. doi:10.1093/geront/gnt021
9. Zanna MP, Fazio RH. *The attitude-behaviour relation: Moving toward a third generation of research*. In: Wanna MP, Higgins ET, Herman CP, eds. *Consistency in social behaviour: The Ontario Symposium*. Vol 2. Hillsdale, NJ: Erlbaum;1982:283-301.
10. Baigis J, Korniewicz DM, Chase G, et al. Effectiveness of a home-based exercise intervention for HIV-infected adults: A randomized trial. *J Assoc Nurses AIDS Care*, 2002;13(2):33-45.
11. Neidig JL, Smith BA, Brashers DE. Aerobic exercise training for depressive symptom management in adults living with HIV infection. *J Assoc Nurses AIDS Care*. 2003;14(2):30-40.
12. Kamen C, Heckler C, Janelins MC, et al. A dyadic exercise intervention to reduce psychological distress among lesbian, gay, and heterosexual cancer survivors. *LGBT Health*. 2016;3(1):57-64. doi: 10.1089/lgbt2015.01.01