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## The Current State of Sexual Fluidity Research

Sabra L. Katz-Wise, PhD<sup>1,2,3</sup>, Kieran P. Todd, MPH<sup>1,3</sup>

<sup>1</sup>Division of Adolescent/Young Adult Medicine, Boston Children's Hospital, Boston, MA, USA

<sup>2</sup>Department of Pediatrics, Harvard Medical School, Boston, MA, USA

<sup>3</sup>Department of Social and Behavioral Sciences, Harvard T. H. Chan School of Public Health, Boston, MA, USA

### Abstract

Sexual fluidity research (i.e., change over time in one or more sexual orientation dimensions) has grown exponentially, with advancements in conceptual models, measurement, and understanding of sexual orientation as a construct and developmental process that accommodates potential for change. Sexual fluidity research has also moved beyond samples of white cisgender women to consider the experiences of individuals with other sociodemographic characteristics and has examined change across multiple dimensions of sexual orientation, mechanisms of change, and associations with health outcomes. This review provides a brief narrative of historical conceptualizations of sexual orientation and fluidity and the current state of research on sexual fluidity. Finally, we identify opportunities for future research, policy, and clinical practice.

### Keywords

Sexual fluidity; sexual orientation

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In recent years, sexual fluidity research has increased, necessitating an evaluation of the current state of research and opportunities for additional exploration and advancement in this field. In this article, we first provide a brief overview of historical conceptualizations of sexual orientation and sexual fluidity (i.e., sexual orientation change over time). Then we review the current state of sexual fluidity research and limitations of research to date on this topic. Finally, we offer recommendations for future research, policy, and practice.

### 1. Research on Sexual Orientation and Sexual Fluidity Prior to 2011

The models that define sexual orientation have changed over time, alongside the research methodologies and implications for people who embody one or more sexual orientations. Sexual orientation has historically been defined within a binary model of two different types of people who are characterized by their sexual attractions (homosexual versus heterosexual) [1, 2]; in later years, bisexuality was added to this model. Known as the

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**Corresponding Author:** Sabra L. Katz-Wise, Division of Adolescent/Young Adult Medicine, Boston Children's Hospital, 300 Longwood Ave, Boston, MA 02115, 1-617-355-0924, sabra.katz-wise@childrens.harvard.edu.

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“master narrative” of sexual orientation, this dual model has been used to create static categories that do not consider the processes of sexual orientation development that instead posit a more fluid model of development that allows for changes in sexual orientation over time. Sexual orientation, in this model, develops early, in the same way for all sexual minorities (i.e., developing sexual orientation/identities at the same age in the same manner), and remains stable over the life course. Challenging this category-driven model, Diamond offered an alternative model. The “capacity for situation-dependent flexibility in sexual responsiveness”, which allows individuals to experience changes in sexual desire across both short-term and long-term periods, requires a model that is more dynamic than the “master narrative” [3]. Sexual fluidity explains that for some individuals, sexual orientation is not fixed and can be prompted to change by a variety of situational, interpersonal, and societal factors.

The advent of sexual fluidity research originated from the need to move past a static view of sexual orientation and was a response to a cisgender male-centered framework for understanding sexual orientation development. Before the 21<sup>st</sup> century, much like all human research, sexual orientation was studied primarily in men, with any frameworks and findings applied to women without studying them directly. In the late 1990s and beyond, Diamond’s research introduced the concept of sexual fluidity to push against narratives of static sexual orientation, while also centering women’s experiences.

Sexual fluidity research has been primarily conducted within the field of psychology, with some work done in sociology and public health. Notably, Baumeister’s research on female sexuality and “Differential Erotic Plasticity” asserted that compared to men: 1) women’s sexual histories should be more variable, 2) women are more influenced by sociocultural factors (e.g., culture, religion, peer influences), and 3) women have more “malleable behaviors” and thus are more likely to be more fluid in their sexuality over their life course [4]. Similarly, a study that evaluated sexual fluidity in three dimensions of sexual orientation (sexual fantasy, romantic attraction, and sexual behavior) in gay, straight, and bisexual men and women found gender differences, whereby women self-reported a greater change in their sexual orientation over time than men [5].

## 2. Sexual Fluidity Research in the Past Decade

The past decade (2011–2021) has seen an increase in research on sexual fluidity, with studies expanding on prior research in several key areas. First, this research has expanded the definition and types of sexual fluidity and considered the experiences of cisgender men and transgender and nonbinary (TNB) individuals, in addition to cisgender women. Second, recent research has examined fluidity in more than one sexual orientation dimension (i.e., attractions, identity, or behavior/gender of sexual partners), and begun to examine patterns of sexual fluidity beyond frequency with which sexual fluidity occurs. Third, this research has explored mechanisms and predictors of sexual fluidity to better understand why and when sexual fluidity occurs. Finally, this research has examined links between sexual fluidity and health outcomes.

## 2.1. Sexual Fluidity Among Different Populations

Research in the past decade has moved beyond the conceptualization of sexual fluidity as only change in attractions [1] to change in any dimension of sexual orientation [6–8]. In recent years, research has also started exploring different types of sexual fluidity among women, such as situational attractions and discordance between attractions and sexual partners [9]. It has also become more common for research to examine sexual fluidity in cisgender men, as well as TNB people, though some recent studies have still focused on cisgender women [10, 11]. Research that has included both cisgender women and men has provided an opportunity to examine gender differences in sexual fluidity frequency. This research has yielded mixed results, with some confirming earlier assumptions that cisgender women are more sexually fluid than cisgender men, and other research finding no gender difference, particularly among sexual minorities [12]. This research has also found that in general, sexual minorities are more sexually fluid than heterosexual individuals [6, 13], and that sexual fluidity is more common among adolescents than among young adults or adults [6], though individuals can be sexually fluid throughout adulthood [14]. Within sexual minorities, individuals with a plurisexual identity (i.e., orientation toward more than one gender; e.g., bisexual) are more likely than lesbian and gay individuals to be sexually fluid [13, 15]. Prior research has also found that TNB individuals have a high frequency of reporting sexual fluidity [16], with transgender men more likely than cisgender individuals to report sexual fluidity [17].

## 2.2. Change Across Sexual Orientation Dimensions

Although much of sexual fluidity research has been limited to one dimension of sexual orientation, more recently, research in this area has considered fluidity in multiple dimensions of sexual orientation. We identified three studies that examined sexual fluidity in all three primary dimensions of sexual orientation (identity, attractions, and behavior), two among adolescents and young adults [7, 8] and one among individuals in early to mid-adulthood [6]. One adolescent study found that frequency of sexual fluidity differed by dimension; for example, 26% of girls and 11% of boys reported identity fluidity, whereas 31% of girls and 10% of boys reported attraction fluidity [8]. Following the lead of prior research [3], sexual fluidity research has continued to move beyond the examination of sexual fluidity frequency among different groups to patterns of sexual fluidity, such as directionality (i.e., toward sexual minority orientation, toward heterosexual orientation, or within sexual minority orientation) [18–21].

## 2.3. Mechanisms and Factors Related to Sexual Fluidity

Research in the past decade has continued to examine mechanisms of and factors related to sexual fluidity. One study used qualitative interview data to develop the facilitative environments model, a theoretical framework of sexual fluidity as occurring at the confluence of multiple factors on individual, interpersonal, and societal levels [22]. Two studies examined attitudes and beliefs related to sexual fluidity, finding that fluidity in attractions was linked to attitudes toward bisexuality and beliefs about sexuality as changeable and influenced by one's environment, particularly among sexual minority women [23, 24]. Two recent studies examined the role of religiosity in sexual fluidity, with

one study finding that religiosity was not associated with changes in attractions over time among adolescents [25], and another study finding that more religiosity was associated with greater fluidity in sexual orientation identity among adults [26]. Another recent direction has been the examination of the role of genetics and how they work in tandem with environmental factors to create the conditions under which sexual fluidity may occur [2]. Notably, genetics cannot offer a full explanation for sexual fluidity, but rather must be considered alongside other contextual factors.

#### 2.4. Sexual Fluidity and Health

The final area in which sexual fluidity research has expanded in the past decade is health outcomes. This research has generally found that sexual fluidity is linked to more adverse health outcomes, including greater depression, greater substance use, and higher body mass index [18, 19, 27–30]. Studies examining links between directionality of sexual fluidity and mental health have yielded different results by gender and health outcome. In one study, only fluidity toward a sexual minority identity was associated with greater substance use among boys, but fluidity in any direction (toward heterosexual, toward sexual minority, multidirectional) was associated with greater substance use among girls [21]. Another study found that identity fluidity was differentially linked to body mass index and physical activity levels, depending on the direction of the change; for example, men who reported fluidity toward a sexual minority identity had a lower BMI and greater physical activity, whereas men who reported fluidity toward a heterosexual identity had the opposite pattern [19]. Two additional studies examined associations between sexual fluidity and health among transgender individuals, finding that attraction fluidity was associated with increased risk for adverse mental health outcomes among transgender adults [31] and identity fluidity was associated with more adverse mental health outcomes among transgender men [17]. Notably, these studies have been limited to the examination of fluidity in just two sexual orientation dimensions: sexual orientation identity and attractions; to our knowledge, no research has examined how fluidity in sexual behavior is associated with health outcomes.

### 3. Prior Limitations and Recommendations for Future Research on Sexual Fluidity

Prior research on sexual fluidity has been limited in several ways, related to sampling, measurement and study design, and implications of sexual fluidity on individual health behaviors and outcomes. In terms of sampling, previous sexual fluidity research has typically been conducted with samples that are cisgender and white race/ethnicity. Although some research has examined sexual fluidity among TNB people [16], more research is needed to fully understand sexual orientation changes among this population. Another important area for future research is patterns of sexual fluidity by race/ethnicity, as social and cultural norms and beliefs about sexual orientation may affect whether and when sexual fluidity occurs. Qualitative methods may be particularly useful in understanding how these factors may relate to sexual fluidity in different race/ethnicity groups.

In terms of measurement, much of prior sexual fluidity research has been limited in considering fluidity in only one sexual orientation dimension, though a small number

of studies have examined multiple dimensions [6–8]. It is critical to examine fluidity in multiple dimensions of sexual orientation, as these dimensions are not always aligned within an individual person at any given time point [32, 33] and thus there may be differences in how and whether each of these dimensions change over time. More research is needed on patterns of change across sexual orientation dimensions, such as whether dimensions change simultaneously or sequentially. It will also be important for sexual fluidity research to measure change both retrospectively (i.e., reflecting on past change) and prospectively (i.e., reporting change over time, such as measuring current sexual orientation identity at multiple time points in a longitudinal study). Finally, more research is needed to understand whether and how sexual fluidity – particularly fluidity in sexual partner gender – is related to both health behaviors and mental and physical health outcomes.

#### 4. Implications for Policy and Practice

Specific research questions and methodologies are not only important for increasing our knowledge about sexual orientation, they are also necessary for informing policy and clinical practice, such as sexual and reproductive health care, which can be better tailored to specific patients if clinicians are informed and knowledgeable about sexual fluidity and related outcomes. First, a better sense of who is a part of the sexual minority community is required, demanding explicit and thorough measurement of sexual orientation both in US population-level surveys, as well as in clinical intake and assessments. Such measurement should be rigorous and ideally assessed at multiple time points over the life course to ensure accurate collection of sexual orientation data and to provide affirming care for all individuals. Accurate assessment of sexual orientation is especially relevant for sexual health care in youth. If we can more accurately assess and understand sexual fluidity in youth, we can better advocate for inclusive comprehensive sexuality education that provides young people with the tools they need to have safer sex, regardless of the gender of their sexual partner(s). More broadly, accurate assessment of sexual orientation can inform clinical care of individuals of all ages, better ensuring that all individuals have access to affirming medical and mental health care.

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