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Addressing Intersectional Stigma: LGBTQ+ Individuals Living with a Mental Illness

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by

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Abstract

The stigma process (i.e., stereotyping, prejudice, and discrimination) has profound and lasting effects on individuals within marginalized identities. Research has indicated that lesbian, gay, bisexual, trans*, queer, or questioning (LGBTQ+) individuals' experiences of stigma have contributed to the development of mental illness. Therefore, LGBTQ+ individuals living with mental illness experience a unique and challenging type of stigma, intersectional stigma, due to identification within multiple marginalized communities. Populations most vulnerable to stigma include individuals who identify with more than one stigmatized identity, such as LGBTQ+ individuals living with mental illness. Therefore, there is a need to explore strategies to address intersectional stigma. Contact (interaction between individuals within a marginalized population (out-group) and individuals within the dominant population (in-group) is the most effective form of stigma reduction as compared to education and protest alone. However, education (providing facts to counteract stereotypes) is also an effective stigma change strategy. The communication strategy of Entertainment-Education (EE) encompasses both the use of contact and education to affect behavioral change.

Prior research has examined the use of Entertainment-Education stories to address the stigma experienced by racial/ethnic minority individuals living with a mental illness. However, there has not been any research to date to examine the use of Entertainment-Education stigma change strategies to address LGBTQ+- and mental illness-related intersectional stigma. This dissertation research explores and examines the use of stories from individuals who identify as

LGBTQ+ living with a mental illness (a form of Entertainment-Education) to address intersectional stigma of LGBTQ+ and mental illness.

This dissertation begins with a systematic integrative review of the literature on contact-based interventions to address LGBTQ+-related stigma. Prior literature has already established the effectiveness of contact for reducing mental illness stigma. Therefore, this manuscript introduces and synthesizes the literature on contact-based interventions for reducing LGBTQ+-related stigma. In addition to the review, this manuscript proposes the use of contact-based interventions to address intersectional LGBTQ+ and mental illness stigma, setting the stage for the second article, which is the first to examine and evaluate the use of intersectional stories delivered through an Entertainment-Education communication framework, highlighting the lived experiences of LGBTQ+ individuals living with a mental illness.

An outcome of interest for this work is the reduction of intersectional LGBTQ+ and mental illness stigma. For this work, successful reduction of intersectional LGBTQ+ and mental illness stigma would mean reductions in both types of stigma among intervention participants. Using a randomized control trial, participants either viewed stories from LGBTQ+ individuals living with a mental illness, individuals living with a mental illness, or a control condition of TEDTalks. Results showed that stories of individuals living with mental illness effectively reduced mental illness-related stigma. However, intersectional stories of LGBTQ+ individuals living with a mental illness were only effective at reducing mental illness stigma and not LGBTQ+-related stigma. These results have implications for using specific culturally adapted Entertainment-Education interventions to reduce intersectional LGBTQ+ and mental illness stigma.

In a final article, a follow-up analysis of the randomized control trial, Entertainment-Education factors (perceived similarity to the storyteller, identification with the storyteller, and empathy with the storyteller) are examined to determine whether they might play a moderating role on the effect of stories of lived experience on stigma change. Results showed that EE factors did not moderate the impact of stories from LGBTQ+ individuals living with mental illness on mental illness-related stigma. However, identification with and perceived similarity to the storyteller did moderate the relationship of LGBTQ+ Mental Illness stories on genderism and transphobia from pre- to post-intersectional story condition. These results have implications for incorporating Entertainment-Education factors in developing contact-based interventions to address intersectional LGBTQ+ and mental illness stigma.

Overall, this dissertation makes novel contributions to the literature with preliminary data on the use of intersectional stories from LGBTQ+ individuals living with a mental illness to address intersectional LGBTQ+ and mental illness stigma. This is the first study to utilize Entertainment-Education to address LGBTQ+ and mental illness stigma and has implications for the widespread use of stories to address various forms of intersectional stigma that impact the LGBTQ+ communities, such as racial/ethnic minority LGBTQ+ individuals living with mental illness.

CHAPTER 1: INTRODUCTION

Background and Significance

Stigma

According to the Social-Cognitive Model of stigma (Corrigan & Kosyluk, 2014), stigma is a process that is comprised of three constructs: stereotypes (negative cognitions towards a marginalized group), prejudice (negative attitudes about a marginalized group), and discrimination (unjust behaviors towards a marginalized group due to prejudices and stereotypes). While this model was initially developed to explain the stigma experiences of individuals living with a mental illness, the Social-Cognitive Model of stigma also applies to other forms of stigma experienced by individuals of various marginalized identities.

Several types of stigma can be explained using Corrigan and Kosyluk's (2014) Types x Constructs matrix, which flushes out examples of the Social-Cognitive Model of stigma in terms of the three stigma constructs (stereotypes, prejudice, and discrimination) and four significant types of stigma (public stigma, self-stigma, label avoidance, and structural stigma). Two forms of stigma are most relevant to this dissertation:

a) **Public stigma** is the process by which the public or society endorses the stereotypes associated with the marginalized identity, responds emotionally to those stereotypes, and acts in a discriminatory manner toward individuals with this marginalized identity (Corrigan & Kosyluk, 2014). For example, a well-known and pervasive stereotype about individuals living with a mental illness is that they are dangerous. Because the

public endorses this stereotype, this may lead to discriminatory ostracism behaviors or isolate individuals with mental illness from society or communities.

b) **Self-stigma** occurs when individuals that identify as part of a marginalized group internalize the stereotypes and corresponding prejudice and discriminate against themselves. For example, a stereotype about individuals living with mental illness is that they are incompetent. If an individual living with a mental illness is aware of this stereotype and agrees with it ("Yes. I Agree. People with mental illness are incompetent."), and then applies the stereotype to themselves ("I am a person with a mental illness; therefore, I am incompetent."), resulting in a loss of self-esteem and self-efficacy. Low self-esteem and self-efficacy lead to a lack of goal-directed behavior among individuals living with a mental illness who internalize stigma, including not applying for employment or educational opportunities. They believe that they are incompetent and would therefore not succeed. This is also known as the "why try" effect ("Why try seeking a job, I wouldn't succeed at it anyway?"; Corrigan et al., 2009).

Research has shown that stigma has a profound, negative impact on how individuals feel about themselves (internalized stigma) and long-term outcomes of employment (Corrigan & Penn, 1999), quality of life (Corrigan et al., 2009; Corrigan & Kosyluk, 2014), social inclusion (Corrigan & Penn, 1999), healthcare access (Knaak, Mantler, & Szeto, 2017), and participation in treatment(Corrigan, 2004; Corrigan et al., 2014). Researchers have established the relationship between experiences of stigma (i.e., experiences of discrimination, harassment, physical violence, and bullying) and depression, anxiety, and poor mental health outcomes (Hatzenbuehler et al., 2013; King et al., 2008).

LGBTQ+ Stigma

Individuals that identify within the LGBTQ+ communities experience stigma related to sexual orientation and/or gender identity, which has been associated with homelessness (Morton et al., 2018), suicidal ideation (Haas et al., 2010), risk of physical health issues (Lick et al., 2013), and psychological/behavioral life outcomes (i.e., depression, anxiety, and substance use; Hatzenbuehler et al., 2013). LGBTQ+ stigma may also be understood through the Social-Cognitive Model of stigma (Corrigan & Kosyluk, 2014). As with the social-cognitive process model of mental illness stigma, the LGBTQ+ stigma process begins with stereotypes (negative cognitions or stereotypes towards sexual orientation or gender identity minority groups), prejudice (negative attitudes or emotional reactions about sexual orientation or gender identity minority groups), and discrimination (unjust behaviors towards members of LGBTQ+ communities due to prejudices and stereotypes).

There are two types of LGBTQ+ stigma of interest:

a) **Public stigma**, the process by which the public or society endorses the negative stereotypes/prejudices associated with LGBTQ+ individuals, reacts emotionally to these stereotypes and responds in a discriminatory manner. For example, a well-known and pervasive stereotype and prejudice about LGBTQ+ individuals are that they are not usual or "natural" (Wickersham & Vajner, 2020). Because the public believes and endorses this stereotype, this may lead to discriminatory behaviors of ostracism or isolation of LGBTQ+ individuals from society or communities.

b) **Self-stigma of internalized sexual stigma** occurs when LGBTQ+ individuals agree with the stereotypes, apply them to themselves, react emotionally, and finally discriminate against themselves. For example, a common stereotype is that identifying

as LGBTQ+ is not "normal." If LGBTQ+ individuals endorse this stereotype and apply it to themselves ("Yes. That's right. LGBTQ+ individuals are not normal. I identify as LGBTQ+, and therefore I am abnormal."), they may alienate themselves or avoid social connections. Prior research has shown that internalized sexual stigma leads to adverse outcomes of low self-esteem (Herek et al., 2009), suicidal ideation (Moradi et al., 2009), and greater levels of depression and anxiety (Hatzenbuehler et al., 2013) in LGBTQ+ individuals.

LGBTQ+ Individuals Living with Mental Illness

LGBTQ+ individuals experience mental illness (i.e., depression and anxiety) at twice the rate of the cisgender heterosexual population, which puts them at higher risk for adverse psychosocial outcomes, including suicide (CDC, 2016). LGBTQ+ individuals experience stigma due to their sexual orientation and/or gender identity. A strong line of research has established that LGBTQ+ individuals are at a higher risk than heterosexual, cisgender individuals for suicidal thoughts and suicide attempts (CDC, 2010; CDC, 2016; James et al., 2016; King et al., 2008). Identifying as LGBTQ+ is *not* a mental illness or disorder; however, a substantial percentage of LGBTQ+ individuals experience and develop a mental illness due to experiences of LGBTQ+-related stigma. According to the U.S. census, about 4.5% of the adult population identifies as lesbian, gay, bisexual, or transgender (LGBT; Newport, 2018), and 39% of those individuals reported having a mental illness in the past year (SAMHSA, 2020). This prevalence rate is approximately twice as high as the general population (NIMH, 2021). One research study indicates that gay men are about five times more likely to develop a panic disorder, and lesbian and bisexual women are three times more likely to have generalized anxiety disorder symptoms than the general population (Cochran et al., 2003).

Intersectionality

Intersectionality refers to a critical lens that emerged to understand the relationship between identities based on the diverse experiences of individuals. Intersectionality is a framework and methodology that informs research. The concept of intersectionality was first introduced by Crenshaw (1991) to highlight the complex and dynamic interaction between race and gender in the context of law studies. Crenshaw argued that the experiences of Black women differ from white women in that Black women experience disadvantages and marginalization as a woman and as a racial/ethnic minority. Black women could have a similar experience to white women on the counts of gender and those of Black men in terms of race (Cole, 2009). However, Black women altogether will have a different experience compared to white women and Black men due to the experience of double discrimination or the combined effects of genderism and racism that neither white women nor Black men would experience simultaneously (Cole, 2009). The experiences of Black women are not just the sum of gender and race but unique to that intersection (Rodriguez, 2019).

Crenshaw (1991) argued for academics and practitioners to account for the differential experiences of intersecting identities. The complexity of the experience of intersectional stigmas may be examined in the multi-level conceptualization of intersectionality between health-related stigma and other adversities originating from inequalities and/or identities (Rai et al., 2019). In a recent literature review on the impact of multiple marginalized identities' experiences of discrimination and mental health, Vargas and colleagues (2020) found that individuals with multiple marginalized identities exhibit a higher risk for some mental health problems. Individuals that experienced numerous forms of discrimination (intersectional stigma) were more likely to experience depression symptoms (Gayman & Barragan, 2013; Grollman, 2012), PTSD

(Reisner et al., 2016), and substance use issues (Vu et al., 2019) compared to individuals who only experienced one form of discrimination (encompassing only one marginalized identity).

LGBTQ+ Individuals Living with a Mental Illness

LGBTQ+ individuals living with a mental illness encompass multiple, marginalized, intersecting identities. The Minority Stress Model posits that individuals that are a part of a minority or marginalized identity (i.e., racial/ethnic, sexual orientation, gender identity, disability, mental illness) experience excess stress related to their identity and social standing (Kertzner et al., 2009; Meyer et al., 2008). Individuals that encompass multiple marginalized identities experience stress and stigma associated with the intersection of these identities (Crenshaw, 1991; Reinka et al., 2020). LGBTQ+ individuals living with mental illness experience stigma associated with their sexual orientation and/or gender identities and their mental illness identities. As individuals encompassing more than one marginalized identity, LGBTQ+ individuals living with a mental illness face intersectional stigma associated with these multiple identities leading to exponentially worse quality of life outcomes (Cole, 2009; Reinka et al., 2020).

While the Minority Stress Model allows for the understanding of the experiences of sexual and gender minorities, it does not sufficiently consider the ways that intersecting structures of oppression (e.g., heterosexism, racism, sexism, mental illness structural stigma) interact with intersecting social identities (e.g., sexual orientation, race, gender, mental illness, disability). Thus, the Minority Stress Model leaves out the most vulnerable LGBTQ+ individuals. To fully understand the contextual factors that affect LGBTQ+ individuals, Mink and colleagues (2014) developed the Intersectional Ecology Model of Sexual Minority Health (IEM). The IEM combines and integrates four elements: a) social cognitive theory (Bandura,

1986), b) the Lazarus model of stress and coping (Lazarus & Folkman, 1984), c) the four conceptual frameworks from the institute of medicine (life-course framework, minority stress perspective, intersectionality, and the social ecology perspective), and d) a strengths-based wellness approach to LGBTQ health.

The IEM (Mink et al., 2014) posits that a heteronormative culture creates a hostile environment for Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ+) individuals, which leads to experiences of stigma and has pervasive negative impacts on health outcomes (Hatzenbuehler et al., 2014; Mink et al., 2014). The IEM consists of two constructs: a) social context which highlights the experience of the stigma that emerges from interactions between LGBTQ+ groups, other marginalized identities/groups, and the greater society, and b) the stress cycle, which highlights the experience of stress as a series of responses and adaptations to a perceived threat to mental, physical, emotional, or spiritual well-being (Mink et al., 2014).

Addressing Stigma

There are three common change strategies to address the adverse effects of stigma: protest, education, and contact (Corrigan & Kosyluk, 2014). Protest is a stigma change strategy that highlights the injustices of various forms of stigma and works by shaming offenders for their attitudes and behaviors (Corrigan & Kosyluk, 2014). However, protest may produce unintended adverse effects where attitudes and behaviors towards the marginalized identity may be unchanged or worsen (Corrigan & Kosyluk, 2014). Education as a stigma change strategy challenges inaccurate stereotypes and replaces them with information using academic presentations, public service announcements, books, fliers, movies, and videos.

The third stigma change strategy is interpersonal contact which draws from Intergroup Contact Theory. Intergroup contact theory posits that the interaction between out-group members

(individuals within marginalized identities) and in-group members aids in reducing negative attitudes and beliefs between groups (Allport, 1954). For example, an individual living with a mental illness interacting (i.e., conversing, telling stories of their own experiences) with an individual without the lived experience of the targeted marginalized identity (mental illness) will reduce negative attitudes and behaviors (stigma) surrounding mental illness. Research has shown that contact between members of a marginalized group and those outside of that group is the most effective way of reducing stigma (Allport, 1954; Corrigan et al., 2012).

Interpersonal contact, as defined by Intergroup Contact Theory, has evolved to encompass a variety of different forms of contact aside from direct interpersonal contact, such as media-based contact (using media or virtual contact), e-contact (interaction between individuals mediated by computers or an online format), and imagined contact (the use of individuals' imagination of an interaction). Contact reduces stigma through facilitating interaction between marginalized individuals (out-group) and individuals who hold stigmatizing views in-group; Corrigan & Kosyluk, 2014).

Entertainment-Education

Entertainment-Education encompasses both education and contact-based stigma change strategies and takes the form of storytelling (Singhal & Rogers, 1999). Entertainment-Education (EE) is a communication strategy that intentionally embeds education and social issues in creating, producing, processing, and disseminating an entertaining program to effect individual, community, institutional, and societal change (Wang & Singhal, 2009). Entertainment-Education includes both education and contact-based stigma change strategies in the form of storytelling (the use of words and actions to portray experiences; Singhal & Rogers, 1999). Entertainment-Education (EE) incorporates the modern-day use of media to direct social change at an

individual, community, or systemic level (Singhal & Rogers, 1999). A recent meta-analysis has shown EE to effectively affect social change in promoting safer sex behaviors in youth (Orozco-Olvera et al., 2019). In another review, EE has a modest effect on increasing health knowledge (STIs, HIV, safer sex, cancer, and obesity), changing attitudes and intentions, and affecting health behaviors (Shen & Han, 2014).

Many factors contribute to the effectiveness of EE in instilling change. The Entertainment-Education Model of Overcoming Resistance incorporates two theories of change: a) social cognitive theory (SCT; Bandura, 2004) and b) the Extended Elaboration Likelihood Model (E-ELM) to conceptualize the role of EE in overcoming resistance (Moyer-Guse, 2008). We define resistance as the antithesis of persuasion or the reaction against change to some perceived pressure for change (Moyer-Guse, 2008). The EE Model of Overcoming Resistance considers how SCT and E-ELM help overcome resistance, resulting in the persuasive and social change effects of Entertainment-Education (EE; Moyer-Guse, 2008).

Social Cognitive Theory (SCT) posits that individuals learn through direct, experiential learning and vicariously by observing models such as those via media (Bandura, 2004). EE incorporates four cognitive subprocesses of SCT: 1)attention, the ability to grab a person's attention to the modeled behavior, 2)retention, the ability to have the individual remember the desired behavior 3)reproduction, the ability to execute the modeled behavior, and 4)motivation, the desire or will to do the behavior through its unique communication strategy of entertaining storytelling (Moyer-Guse, 2008). EE allows for viewers to connect with the stories and storytellers (perceived similarity and identification), which can increase self-efficacy (the observer's confidence in their ability to enact the behavior) and create changes in outcome

expectancies leading to story consistent attitudes and behaviors (or social change such as stigma change; Moyer-Guse, 2008).

The Extended-Elaboration Likelihood Model (E-ELM) posits that two constructs: absorption (the ability of a story to engage viewers with the narrative) and identificat6ion (perceived similarity to the storyteller) facilitate the ability for narratives to persuade viewers in changing beliefs, attitudes, and behaviors (Slater & Rouner, 2002). The Entertainment-Education consists of the two constructs of the E-ELM to convince viewers and affect stigma change. EE can influence beliefs, attitudes, and behaviors by reducing message counterarguing (a form of resistance) by engaging viewers in dramatic elements of the entertaining stories (i.e., absorption; Slater & Rouner, 2002). When viewers are engaged in EE's dramatic and entertaining aspects, they are less critical. They are less likely to counterargue with the embedded persuasive messages to influence beliefs, attitudes, and behaviors (Moyer-Guse, 2008). EE allows viewers to be transported into the story and identify with the interactions in the story to reduce counterarguing and selective avoidance, which leads to changes in story-consistent attitudes and behaviors (Moyer-Guse, 2008).

Purpose of the Study

LGBTQ+ individuals living with a mental illness are a particularly vulnerable community that experiences complex intersectional stigma due to multiple marginalized identities. Research has established that individuals within multiple marginalized identities experience various forms of stigma and stress, leading to worse quality of life outcomes (Reinka et al., 2020). Existing literature documents the impact of intersectional stigma on quality of life (Reinka et al., 2020). One group that has not been studied thoroughly regarding intersectional stigma is LGBTQ+ individuals living with mental illness. I would include some info here about the health disparities

experienced by this group as justification for this work. Therefore, this dissertation has three aims: Aim 1) examine the current literature on the use of contact-based interventions to address LGBTQ+-related stigma (previous research documents the impact of contact-based interventions on mental illness stigma; Corrigan et al., 2012; Pettigrew & Tropp, 2006), Aim 2) examine the effectiveness of intersectional stories for addressing intersectional stigmas of LGBTQ+ and mental illness, and Aim 3) determine whether EE-related constructs (identification with, empathy towards, and perceived similarity to the storyteller) moderates the effect of LGBTQ+ and mental illness stories on intersectional stigmas.

Overview of Methods and Research Design

To address the purpose of the dissertation and expand on the literature on intersectional experiences and methods to address intersectional stigma, the dissertation will employ a multi-method study design: an integrative review and a quantitative research study. Each manuscript will address one of the three following research aims and research questions:

Manuscript 1 will use an integrative review to address Aim 1. While it has been established that contact-based interventions effectively address mental illness stigma, the literature has not yet summarized the use of contact-based interventions to address LGBTQ+-related stigma. Therefore Aim 1 will summarize studies examining the effects of contact-based interventions on reducing stigma towards individuals who identify within the LGBTQ+ communities.

Manuscript 1 Research Questions:

1. What forms of contact-based interventions have been used to reduce LGBTQ+-related stigma?

2. According to the existing literature, what is the effect of contact-based strategies for reducing LGBTQ+-related stigma?

Manuscript 2 uses a randomized control trial to address Aim 2: Examining the effectiveness of intersectional stories of LGBTQ+ individuals living with mental illness for reducing intersectional stigma.

Manuscript 2 Research Question:

1. Do stories of challenges and recovery from LGBTQ+ individuals living with mental illness reduce LGBTQ+- and mental illness-related stigma?

Manuscript 3 addresses Aim 3: Examining the impact of Entertainment-Education factors and their effects on intersectional stigma change.

Manuscript 3 Research Question:

1. Do Entertainment-Education factors (perceived similarity, empathy towards, and identification with the storyteller) moderate the effect of stories on reducing LGBTQ+ and/or mental illness-related stigma?

Definition of Terms

LGBTQ+

Several terms have been used in research to describe individuals included under the marginalized identity of sexual orientation and/or gender identity. Sexual and gender minorities (SGM) is one umbrella term used to describe these communities. However, to fully encompass the ever-evolving understanding of sexual and gender minority identities, LGBTQ+ will be utilized to describe individuals within the continuum of sexual and gender minority identities.

The LGBTQ+ umbrella encompasses several terms of sexual orientation and gender identity, which may include:

Lesbian: an individual who identifies as a woman whose primary sexual orientation is toward individuals of the same gender (HRC, n.d.).

Gay: an individual who identifies as a man whose primary sexual orientation is toward individuals of the same gender. Gay is also an umbrella term to describe individuals attracted to individuals of the same gender (HRC, n.d.).

Bisexual/Pansexual: a person whose primary sexual orientation is toward people regardless of gender (HRC, n.d.).

Transgender: An umbrella term for individuals whose gender identity, gender expression, or behavior does not typically associate with the sex they were assigned at birth (HRC, n.d.).

Queer: historically used as an epithet/slur towards individuals under the sexual orientation and/or gender identity minority. Some individuals have reclaimed this term in opposition to assimilation and is typically used as an umbrella term for individuals within the SGM umbrella (HRC, n.d.).

Questioning: may be used as an identity for individuals exploring one's own gender identity, gender expression, and/or sexual orientation (HRC, n.d.).

Asexual: a broad spectrum of sexual orientations characterized by varying degrees of sexual attraction or a desire for partnered sexuality (HRC, n.d.).

Intersex: an umbrella term to describe a range of natural body variations that do not fit into conventional definitions of male or female. Intersex variations include, but are not

limited to, variations in chromosome compositions and external and/or internal characteristics (HRC, n.d.).

Two-spirited: an umbrella term encompassing sexuality and gender in indigenous Native American communities. Two-spirit may refer to an embodiment of masculinity and femininity (HRC, n.d.).

Non-binary: gender identity and experience that individuals may encompass beyond the traditional view of the male/female gender binary (HRC, n.d.).

These are not universal definitions and are not comprehensive to the understanding of each of these terms or identities. The definitions provided here are meant to provide a basic understanding. It is important to note that individuals may define these identities differently as they are complex, fluid, and can change over time.

Mental Illness

According to the American Psychiatric Association (2022), mental illness encompasses a variety of health conditions that involve changes in emotions, thinking or behavior, or a combination of these two characteristics. Some common mental illnesses associated with LGBTQ+ individuals include depression and anxiety. Related to mental illness is the concept of mental health which refers to the functioning of an individual throughout daily life, including, but not limited to, healthy relationships, productive activities of work and school, and the ability to cope with and adapt to change. Individuals living with mental illness may have mental health concerns related to their diagnosis. However, while mental illness and mental health are related, these terms are not interchangeable. For example, an individual that experiences depression symptoms may identify as living with a mental illness. This individual's mental illness of depression may impact their relationships with others and their productivity in school or work

due to the symptoms of lethargy or isolation. Therefore, the individual's mental illness affects their mental health. However, an individual with issues in coping with change may be experiencing something situational that is not related to a mental illness.

Stigma

Stigma is a process that is comprised of three constructs: stereotypes (the negative beliefs or cognitions towards a marginalized group), prejudice (emotional reactions or negative attitudes towards marginalized groups), and discrimination (unjust behaviors towards individuals with marginalized identities; Corrigan & Kosyluk, 2014). Throughout this dissertation, stigma will be used as an umbrella term to describe the three constructs (stereotypes, prejudice, and discrimination) associated with the experiences of individuals within marginalized populations.

Intersectional Stigma

Intersectional stigma is the concept that characterizes the convergence of multiple stigmatized identities within an individual or group that affects health and wellbeing (Turan et al., 2019). This term was developed to address the need for an intersectional perspective in understanding the experiences and consequences of living with multiple stigmatized identities. Intersectional stigma is not simply the additive effects of experiences of various forms of stigma but also includes the relationship between and within marginalized identities and the impact or influence of structural and contextual factors (Cole, 2009; Crenshaw, 1991; Turan et al., 2019).

While intersectional stigma research is typically done through qualitative methods that explore the complex interactions between marginalized identity experiences, quantitative analyses of intersectional stigma are emerging (Bauer et al., 2021). In this dissertation, intersectional stigma experiences of LGBTQ+ individuals living with mental illness will be measured inter-categorically using pre-existing validated measures of LGBTQ+-related (attitudes

towards lesbians and gay women and genderism and transphobia) and mental illness-related stigma (public stigma and desired social distance).

Dissertation Manuscripts

The dissertation is designed to explore and examine the use of stigma-reduction strategies in addressing the unique experiences of LGBTQ+ individuals living with a mental illness. The dissertation studies add to the knowledge of addressing intersectional stigma and implications for the adaptation of interventions to address intersectional stigma. The dissertation is presented in a manuscript style, and the results are presented in the following three manuscripts:

1. *Integrative Review on Contact-Based Interventions to Reduce LGBTQ+ Related Stigma.* This integrative review provides an overview of contact-based interventions to reduce LGBTQ+-related stigma, discusses the implications for practice, and proposes recommendations for future incorporation of strategies to address LGBTQ+-related stigma.
2. *Examining the Effects of Storytelling as a Tool for Intersectional Stigma Change.* This manuscript focuses on the randomized control trial results investigating the use of stories from LGBTQ+ individuals living with a mental illness at addressing LGBTQ+- and mental illness-related stigma. In addition, this manuscript explores the importance of incorporating narratives of lived experience in the development of intervention programs to address stigma.
3. *The Role of Entertainment-Education Factors in Stories to Address Intersectional Stigma.* This manuscript focuses on the moderation effects of Entertainment-Education

factors (i.e., identification with the storyteller, perceived similarity to the storyteller, and empathy with the storyteller) on stories (intersectional and not) at reducing stigma.

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CHAPTER 2: MANUSCRIPT 1

INTEGRATIVE REVIEW ON CONTACT-BASED INTERVENTIONS TO REDUCE LGBTQ+-RELATED STIGMA

Abstract

Lesbian, gay, bisexual, trans*, or queer (LGBTQ+) individuals experience stigma due to their sexual orientation and/or gender identity, which has clear, profound, far-ranging effects on LGBTQ+ health, including a more significant risk of suicidality, depression, anxiety, substance use, and poor physical health. Several stigma change strategies have been used to mitigate the profound impact of LGBTQ+-related stigma in marginalized sexual and gender minority communities. Contact-based interventions to address LGBTQ+-related stigma rest on contact theory, which posits that intergroup contact between individuals of an in-group (majority group) and individuals of an out-group (minority or marginalized group) aids in the reduction of negative stereotypes, prejudice, and resulting discrimination. We summarize the literature between 2000 and 2020, examining and synthesizing 20 studies that explore contact-based interventions to reduce LGBTQ+-related stigma, stereotyping, prejudice, and discrimination. Overall, several forms of contact-based interventions have demonstrated positive effects on lowering LGBTQ+-related stigma. Future research should include examining the use of contact-based interventions in reducing the stigma faced by individuals within LGBTQ+ communities with intersecting marginalized identities.

Keywords: LGBTQ+ stigma, intersectionality, contact, stigma reduction, integrative review

Introduction

Stigma is a process that is comprised of stereotypes (negative cognitions towards a marginalized group), which leads to prejudice (negative attitudes about a marginalized group), and then discrimination (unjust behaviors towards a marginalized group due to prejudices and stereotypes; Corrigan & Kosyluk, 2014). Sexual and gender minorities (SGM) disproportionately experience stigma related to their SGM minority identities compared to their cis-gendered heterosexual peers. The Intersectional Ecology Model of Sexual Minority Health (IEM; Mink et al., 2014) posits that a heteronormative culture creates a hostile environment for Lesbian, Gay, Bisexual, Trans*, or Queer (LGBTQ+) individuals, which leads to experiences of stigma and has pervasive negative impacts on health outcomes (Hatzenbuehler et al., 2013; Mink et al., 2014).

The IEM consists of two constructs: a) social context which highlights the experience of the stigma that emerges from interactions between LGBTQ+ groups, other marginalized identities/groups, and the greater society, and b) the stress cycle, which highlights the experience of stress as a series of responses and adaptations to a perceived threat to mental, physical, emotional, or spiritual well-being (Mink et al., 2014). Individuals within marginalized identities experience the stigma process (stereotyping, prejudice, and discrimination) based on their minority status from their social context, which impacts an individuals' experience of stress and can lead to an enduring impact on multiple health outcomes, limits access to health resources, and results in poorer quality of life (Corrigan & Kosyluk, 2014; Hatzenbuehler et al., 2013; Mink et al., 2014). Extensive research indicates that individuals identifying within the LGBTQ+ communities experience stigma due to experiences of heterosexism and oppression based on their minority sexual orientation identity and/or their gender identity/gender nonconformity from the dominant culture (Bartos et al., 2014; Link & Phelan, 1995; Mink et al., 2014).

LGBTQ+ Identity as a Continuum

While sexual and gender minorities (SGM; which is inclusive of the LGBTQ+ communities) are discrete and distinct categories within society and in research, there is a growing need to understand and include the fluidity, diversity, and complexity of sexual orientation and gender identities to encompass the experiences of LGBTQ+ individuals (Garrett-Walker & Mongagno, 2021; Morgan, 2012; Suen et al., 2020) indeed. Sexual orientation and gender identity exist on a spectrum that, historically, research has failed to adequately capture (Seuen et al., 2020; Porta et al., 2020). Measures of sexual orientation have relied on traditional terms such as homosexual/gay, lesbian, bisexual, and heterosexual/straight, which do not encompass examples of non-traditional terms such as queer and pansexual. Regarding gender identity, studies have typically dichotomized gender into the two categories of male and female. More recent studies may include a category for transgender individuals; however, few allow participants to choose terms such as genderqueer, gender fluid, non-binary, or gender non-conforming (Porta et al., 2020). In focus groups with self-identified SGM participants, researchers explored the limitations with typical research questions for individuals that identify as a part of the LGBTQ+ communities (Seuen et al., 2020). SGM participants overwhelmingly highlighted the need for sexual orientation and gender identity questions to encompass the fluidity of the identities, including the concept that individuals' identities have multiple dimensions and may vary at any one time (Sueun et al., 2020). Sexual orientation and gender identity can change over an individual's lifetime (Seuen et al., 2020).

LGBTQ+ Individuals and Possible Experiences of Stigma

Individuals that identify within the LGBTQ+ communities may experience discrimination, harassment, and physical violence due to their identification with a marginalized

identity of sexual orientation and/or gender identity (Herek & Glunt, 1993; Mays & Cochran, 201l; Meyer, 2013). LGBTQ+ individuals face discrimination in schools (Cooper et al., 2014; Greene et al., 2013; Hall et al., 2013) on college campuses (Garvey & Rankin, 2018; Wright & McKinley, 2010), and within the workplace (McFadden, 2015). For example, LBGTQ+ youth often experience bullying (Cooper et al., 2014), shaming, and fear of judgment (Greene et al., 2013). LGBTQ+ college students experience discrimination and hostile campus climates (Garvey & Rankin, 2018; Woodford et al., 2014), and LGBTQ+ employees can face discrimination, struggle with career development, and interpersonal/group issues (McFadden, 2015). Due to these experiences of stigma, LGBTQ+ individuals are at a higher risk for suicide, depression, anxiety and develop more negative mental health outcomes as compared to the general population (Haas et al., 2010; Hatzenbuehler et al., 2014; King et al., 2008; Meyer, 2013).

Intergroup Contact Theory

To address negative impacts associated with the process of stigma (i.e., bias, prejudice, stereotyping, and discrimination) experienced by individuals within marginalized groups, research supports interpersonal contact with members of stigmatized groups as an effective stigma reduction strategy (Corrigan & Kosyluk, 2014; Corrigan et al., 2012). Contact theory posits that intergroup contact between individuals of an in-group (majority group) and individuals of an out-group (minority or marginalized group) aids in the reduction of negative attitudes and prejudice toward out-group members (Allport, 1954). Recent studies indicate four processes that are required for intergroup contact to mediate attitude change: a) learning about the out-group, which corrects negative views of the out-group, b) changing behavior which includes repetition of contact with out-group members, c) generating effective ties which

includes reducing anxiety and increasing empathy towards out-group members, and d) in-group reappraisal which includes changing perspectives on the definition of what it means to be an in-group member (Pettigrew, 1998). In a recent meta-analysis on intergroup contact theory, Pettigrew & Tropp (2006) confirmed that intergroup contact aided in reducing bias against several marginalized identities, including individuals within the LGBTQ+ communities, race/ethnicity, religion, age, and physical and mental health status. This type of contact has evolved to encompass various forms of exposure in addition to direct interpersonal contact to include indirect forms such as vicarious contact (which involves a relationship between a media source and an audience), parasocial contact (which involves exposure via a media source) and imagined contact (which consists of imagining contact between two individuals or groups (Dovidio et al., 2011; White et al., 2021).

The most common method of intergroup contact is in-vivo (in-person or face-to-face) contact between a member of the in-group and a member of the out-group (Corrigan & Kosyluk, 2014). In-vivo contact includes conversations, speaker presentations, or panel speakers and reduces stigma and prejudice related to sexual orientation (Walch et al., 2012). The research on contact-based stigma reduction approaches has expanded to include electronic- or e-contact (Boccanfuso et al., 2020). E-contact is a form of direct contact that is computer-mediated or within an online format. This contact includes interacting with individuals on an online forum through typing or texting. White and Abu-Rayya (2012) developed an e-contact for online conversations between in-group and out-group members.

Contact has expanded to include indirect forms of contact. One form of indirect contact is vicarious contact, also known as indirect mediated or virtual contact. Vicarious contact includes observing an in-group member interact with an out-group member, such as through viewing

videos, mass media content, or video narratives of individuals. A review indicated that vicarious contact with mass media such as television, radio, and the internet reduces prejudice of in-group members toward out-group members (Dovidio et al., 2011). Another form of indirect contact is parasocial contact or media contact. Parasocial contact is like vicarious contact in the use of contact via media; however, the primary difference is that parasocial contact is simply exposure to out-group members without observation of an interaction (White et al., 2021). For example, parasocial contact would include an individual watching a video or viewing an image of a transgender person. However, vicarious contact would be an individual observing a transgender person interact with a heterosexual individual. Research has shown that parasocial contact can reduce prejudice towards an out-group (White et al., 2021).

The definition of contact has also expanded to include imagined contact. Imagined contact is the act of imagining an interaction with a member of an out-group (Crisp et al., 2009). This form of contact is indirect because no in-vivo contact occurs; however, it does involve interaction with the self and a member of the out-group (Dovidio et al., 2011). Prior research indicates that imagined contact reduces bias towards elderly individuals and gay men (Turner et al., 2007).

Current Review

Due to the host of adverse outcomes affecting SGM individuals, it is vital to understand the best practices for addressing LGBTQ+-related stigma. Prior systematic reviews have focused solely on synthesizing information on interventions to address sexual prejudice (Bartos et al., 2014; Tucker & Potocky-Tripodi, 2006). However, there is a need to understand best practices and the use of different contact-based interventions to address LGBTQ+-related stigma, which includes the fluidity, diversity, and complexity of the experiences of LGBTQ+ individuals. The

effectiveness of contact-based interventions may vary according to gender identity, sexual orientation, or the complex intersection between these two identities. Therefore, the current review will consider this. The recent review summarizes the literature between 2000 and 2020, examining and synthesizing the contact-based interventions to reduce the LGBTQ+-related stigma process. The current review makes novel contributions to the existing literature on contact-based interventions to address the stigma experiences of SGM individuals. First, the review is the first to synthesize and organize the contact-based interventions into the five forms of contact (i.e., in-vivo, e-contact, vicarious, parasocial, and imagined) to understand the varied effects of different forms of contact on LGBTQ+-related stigma. Second, the review is the first to use an intersectional approach to examine the impact of contact-based interventions on addressing LGBTQ+-related stigma in the fluidity of SGM identities.

Methods

The current systematic integrative review examines the effects of contact-based interventions for reducing stigma towards individuals who identify within the LGBTQ+ communities, focusing on the fluidity, diversity, and complexity of the LGBTQ+ experience. The review was carried out using a protocol guided by the *Cochrane Handbook for Systematic Reviews of Interventions* (Tucker & Potocky-Tripodi, 2006).

Search Strategy

The search strategy was created with consultation from the research librarian to synthesize studies that consider LGBTQ+-related stigma's fluidity, diversity, and complexity of LGBTQ+-related stigma. In January 2021, a search for relevant research using keywords was performed in the PsychInfo, PubMed, SCOPUS, and Dissertations and Abstracts databases. The

search strategy includes three sets of search terms that were required to pull abstracts: a) terms relating to stigma (public stigma, stigma, stereotype, bias*, discrimination), AND b) LGBTQ+ identification terms (LGBTQ, LGBT, lesbian, gay, bisexual, pansexual, homosexual, transgender, queer, genderqueer, non-binary, gender identity, sexual orientation, SGM), AND c) contact-based intervention terms (contact program, contact strategies, contact intervention, contact theory).

Next, relevant articles were screened by using pre-determined inclusion criteria: a) published between 2000-2020 to examine articles within the last 20 years, b) written in the English language, c) focused on LGBTQ+-related stigma (which includes interventions addressing intersectional stigma relating to SGM individuals), d) presented research findings regarding contact-based intervention, and e) included adults older than 18 years of age (as experiences of youth may differ from those of adults). Exclusion occurred if the study: a) described the effects of having interpersonal contact or connections with an SGM individual (i.e., collected information on whether participants had close friends or knew someone who identified as LGBTQ+) and did not use a contact-based intervention, b) focused on the development of scales or assessments, c) did not focus on LGBTQ+-related stigma, or d) was not a primary research article (e.g., opinion pieces, literature reviews, etc.). Two relevant systematic review references were also examined for possible studies that met the inclusion and exclusion criteria.

Two researchers reviewed the articles at two stages using these inclusion and exclusion criteria. During stage 1, two team members reviewed articles at the title and abstract level. During stage 2, two team members reviewed articles at the full-text level. A third reviewer resolved conflicts at stage 1 and stage 2. See Figure 1 for the Preferred Reporting Items for

Systematic Reviews and Meta-Analyses (PRISMA) Flow Diagram and a detailed overview of the search strategy and screening process.

Data Extraction

We extracted data from the studies using guidelines from the Cochrane Handbook for Systematic Reviews of Interventions (Higgins et al., 2020). Two reviewers extracted the data using a data extraction tool that includes information on methodology, study design, population demographics, sample size, data analysis, country of study, setting of the study, contact-based intervention description (with a focus on the intersectional SGM experiences), key findings (including effect sizes), future recommendations, and quality assessment. Two reviewers and conflicts extracted data were resolved through consensus by two reviewers. Final data are organized by contact intervention types (Table 1).

Quality Assessment

Two reviewers conducted a quality assessment of each article using a revised version of the Downs and Black checklist (Downs & Black, 1998) for randomized and non-randomized studies. The Downs & Black checklist is a comprehensive critical appraisal tool for assessing the quality of quantitative studies using healthcare interventions such as those used in this integrative review. The Downs & Black checklist (1998) has a high internal consistency (KR-20=.89), test-retest (r=.88), and inter-rater reliability (r=.75). The checklist examines several quality domains, including reporting, external validity, internal validity, selection bias, and power. Based on the Downs & Black checklist, all article assessments were good or high quality. Conflicts in the quality assessment were resolved through consensus by the two reviewers.

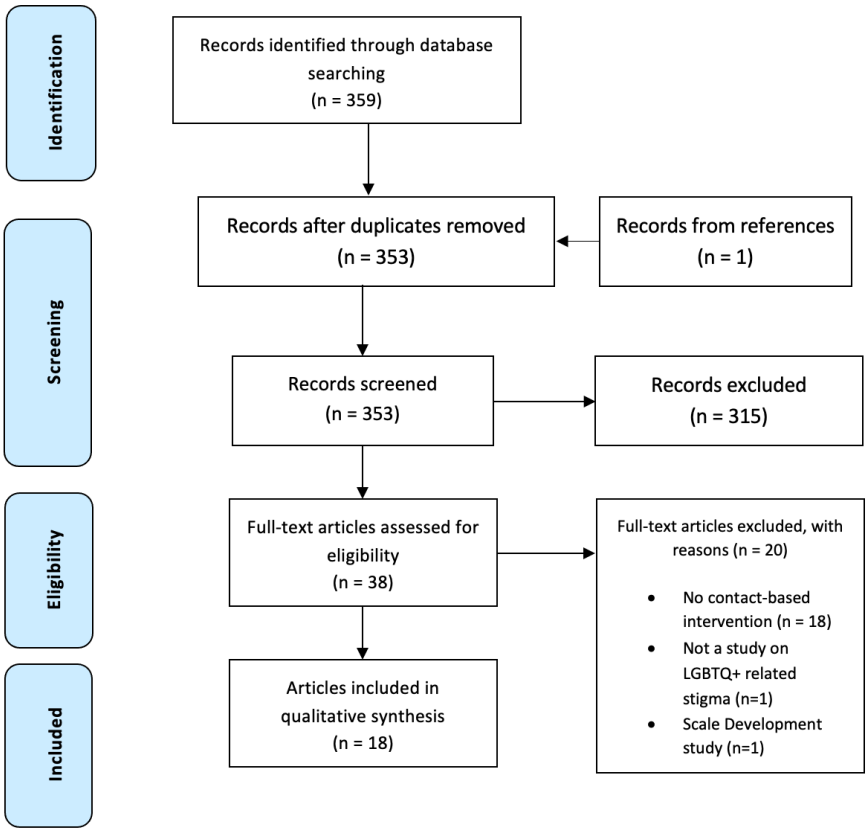

Figure 1

PRISMA Flow Chart for LGBTQ+ Integrative Review on Contact-Based Interventions

Results

Guided by the literature search protocol and the review's inclusion and exclusion criteria, we identified 353 abstracts for screening with one study from the two relevant reviews' reference lists. Based on the title and abstract screening, this integrative review included 38 full-text articles, and of these, the authors identified 18 articles for data extraction and synthesis. Three articles contained multiple studies, resulting in a total of 22 studies that the authors organized by contact-intervention type: a) in-vivo, b) online/e-contact, c) vicarious, d) parasocial, e) imagined, and f) multiple forms of contact. Table 1 provides further data extraction detail.

Table 1: Integrative Review on LGBTQ+ Contact-Based Interventions Data Extraction Results

Study	Country	Design; Analysis	Participants	SGM Attitude; Measures	Contact Intervention; SGM Confederate	Key Findings
In-Vivo Contact						
Graham et al. (2014). The moderating effect of prior attitudes on intergroup face-to-face contact	United States	RCT Three step hierarchical regression analysis	122 (76 female, 46 male) cisgender, heterosexual undergraduates majority white (37.7%)	Gay men and lesbian women; attitudes towards gay men and lesbian women,	Participants were randomly assigned to two conditions: role-playing with a confederate who self discloses as a gay man (50% of experimental conditions)/lesbian woman (50% of experimental conditions) or a heterosexual confederate (control). Within the role-playing confederates either disclosed their sexual orientation (as heterosexual or homosexual) or not. Confederates were mostly Caucasian (76%) with other races/ethnicities of Asian(12%), African American (12%). Confederates were between 22-27 years old.	Contact with a self-disclosed homosexual individual improved attitude towards gay men and lesbian women. In the full regression model, all the variables together predicted 68% of the variance,($F(5, 116)=48.56, p<.001$).

Table 1 Continued

Kwon & Hugelshofer (2012). Lesbian, gay, and bisexual speaker panels lead to attitude change among heterosexual college students	United States	RCT; Hierarchical multiple regressions	186 cisgender, heterosexual undergraduates (127 female, 59 male) from a medium sized University in the Pacific Northwest. A majority Caucasian (76.8%), 13.4% Asian, 5.4% Latinx, 1.1% African American, 0.5% Native American, and 2.7% Other.	Lesbian, Gay, and Bisexual individuals (sexual orientation); Attitudes towards lesbians and gay men, attitudes toward bisexual men and women, and previous contact with sexual minorities.	Classes were randomly assigned to either the control condition or the experimental condition(Speaker Panel composed of one lesbian individual, a gay male, and a bisexual individual). A majority of the speaker panel was for interactions between panel members and the class.	Male participants held significantly more negative attitudes towards gay men as compared to female participants. Participants who received the speaker panel intervention demonstrated more positive attitudes towards gay men, lesbian women, and bisexual individuals as compared to the control group (β=0.06-.07).
Rani & Samuel (2019)[a] Reducing transphobia: comparing the efficacy of direct and indirect contact	India	Longitudinal randomized experimental design; Two-way Mixed ANOVA	159 (102 male, 57 female) cisgender, heterosexual undergraduates	Transgender individuals; transphobia	Half of the participants (n=78; 53 male, 25 female) were randomized to Intervention 1: A Speaker Panel of three Transwomen	There was a statistically significant reduction in transphobia in participants in Speaker Panel group from pre to post, and post to 1 month follow up $F(2, 154) = 365.593$, $p < 0.0005$, partial η^2=0.826).
Rye & Meaney (2009). Impact of a homonegativity awareness workshop on attitudes toward homosexuality	Canada	Non-randomized Experimental Design; Mixed ANOVA	370 undergraduates at a Canadian University	Gay men and lesbian women; homonegativity	Students were already purposely participating in the workshop (n=114; 71 female, 43 male) on addressing homonegativity with facilitators that identify as LGB or not (control group; n=256)	Participants in the intervention condition (workshop) demonstrated significantly less homonegativity as compared to the comparison control group ($F(1, 361) = 65.18$, $p < 0.0001$, partial η^2=0.15).

Table 1 Continued

Sakalli (2003). The effects of social contact with a lesbian person on the attitude change toward homosexuality in Turkey	Turkey	RCT; MANOVA	54 (31 female; 23 male) heterosexual undergraduates taking an introductory psychology course	Gay men and lesbian women; attitudes towards homosexual individuals	Students were randomized to either in-Person contact with a 22-year-old Lesbian person (experimental) or a control condition.	The results showed that participants had a significant decrease in negative attitudes toward homosexuality after contact with a lesbian individual ($F(1,50)=4.45$, $p<.05$). However, the mean score for attitudes towards homosexuality after contact with a lesbian individual was still representative of negative attitudes towards homosexuality.
Walch et al. (2012). Using intergroup contact theory to reduce stigma against transgender individuals: Impact of a transgender speaker panel presentation	United States	Longitudinal Randomized Experimental Design; ANOVA	42 (33 female, 9 male) undergraduate students enrolled in a course on human sexuality, 71% white, 86% heterosexual,	Transgender Individuals; transphobia	Speaker panel of trans individuals and a lecture on trans individuals. Students were randomized to a condition where they viewed either: a) panel then lecture or b) lecture then panel.	The results reveal a significant reduction in transphobia scores over time (3 months follow-up) for both conditions (speaker panel then lecture/lecture then speaker panel) $F(3, 38)=8.08, p<.001$. There was significantly greater reductions in transphobia scores occurring for the participants who were exposed to the transgender speaker panel presentation as compared to the lecture. The effect size for the speaker panel presentation was small to medium (d=.31), while the effect size for the lecture presentation was very small (d=.09).

Table 1 Continued

E-Contact						
Boccanfuso, White, & Maunder (2020). Reducing Transgender Stigma via an E-contact Intervention	Australia	RCT; 2x2 ANCOVAs	A total of 114 participants. 77 undergraduate students and 37 community members. (83 women, 31 men), majority Anglo Celtic (32.5%),	Transgender individuals; transgender stigma	Synchronous text-based interaction with a transgender woman (experimental) or a cisgender woman	Significant main effect of contact condition ($F(1,106)=8.35$, $p=.005$, $\eta p^2 = .073$)Transgender individual e-contact significantly lowered transgender stigma in both men and women.
Lytle & Levy (2015). Reducing heterosexuals' prejudice toward gay men and lesbian women via an induced cross-orientation friendship	United States	RCT; ANCOVA	173 (119 female, 54 male) White, cisgender heterosexual, undergraduates	Gay men and lesbian women; Attitudes towards lesbians and gay men	Participants interacted with a confederate matched via gender via Skype Instant messenger (no video or audio). Participants were randomized into one of three conditions: a) reveal sexual orientation of gay/lesbian at the beginning of the conversation, b) reveal sexual orientation as gay/lesbian at the end of the conversation or c) did not disclose sexual orientation (control).	Conversations online involving features of friendship via the fast - friends procedure with a gay or lesbian conversation partner in either experimental condition (reveal at end or reveal at beginning) improved attitudes toward gay men and lesbian women($p=.026$) as compared to the control condition. Experimental conditions did not differ between each other in attitudes towards lesbians and gay men.

Table 1 Continued

White et al. (2019). Using Electronic Contact to Reduce Homonegative Attitudes, Emotions, and Behavioral Intentions Among Heterosexual Women and Men: A Contemporary Extension of the Contact Hypothesis	Australia	RCT; ANOVA and Mediation/ Moderation Analyses	140 heterosexual (74 female, 66 male) university students, 64.9% White and 25.7% Asian. 48.5% Christian, 39.4% no religion. Mean age 19.12 (SD=2.39)	Gay men and lesbian women; Attitudes towards lesbians and gay men	Participants were randomized to interact online via chat (no audio or video) with either a confederate (either a gay man or a lesbian woman that disclosed their sexual orientation at the beginning of the chat; experimental) or a heterosexual individual (control).	Intergroup anxiety mediates the role between E-contact with both sexual prejudice and out-group avoidance. E-contact with female participants decreased intergroup anxiety which indirectly reduces sexual prejudice and out-group avoidance regardless of confederate sex. E-contact with male participants had significant indirect effect which lowered intergroup anxiety which decreases sexual prejudice and out-group avoidance only when the confederate was a female lesbian but not with a gay man.
Vicarious Contact						
Gillig et al., (2018). More than a Media Moment: The Influence of Televised Storylines on Viewers' Attitudes toward Transgender People and Policies	United States	Non-Randomized Experimental Design: ANCOVAs	488 cisgender, heterosexual viewers of Royal Pains, 89% female, 84.2% non-Hispanic white,	Transgender individuals; Attitudes towards transgender people and politics and exposure to transgender individuals/stories	Individuals who viewed the target Royal Pains TV Episode with a transgender individual storyline were compared to a parallel sample of Royal Pains viewers who had not seen the target episode.	Participants who saw the episode reported more positive attitudes toward transgender people than those who did not ($F(2478)=24.24$, $p<.05$, $\eta p^2 = .05$). The greater number of transgender narratives seen/exposed, the more positive participants' attitudes toward transgender people ($F(2478)=6.73$, $p=.001$, $\eta p^2 = .03$).

Table 1 Continued

Madzarevic & Sogo-Sanfiel (2018). Positive Representation of Gay Characters in Movies for Reducing Homophobia	Serbia	Non-Randomized Experimental Design; T-test and Correlations	150 cisgender (39% female, 61% male), heterosexual undergraduates in social sciences and humanities, 84% Orthodox Christian, 11.3% Muslim, 4.7% Atheist. Mean age 22.13	Gay men; Homophobia,	Participants watched The Parade, a movie with a positive portrayal of a gay couple organizing a gay pride parade in Belgrade (a city that does not welcome such events).	Vicarious contact through the use of a movie reduced homophobia towards gay men in heterosexual undergraduates ($t(149)= 25.30, p<.001$). Character identification and inter-group contact are negatively correlated with homophobia ($r(150) = -.807$, $p< .001$). Religiosity was positively correlated with homophobia ($r(150)=.303, p<.001$).
Preub & Steffans (2020) Study 1. A video intervention for every straight man: The role of preattitudes and emotions in vicarious-contact effects	Germany	RCT; MANOVA and Mediation Analyses	120 cisgender, heterosexual males between the ages of 18-79, 46% employed, 20% retired,	Gay men; Implicit association test, attitudes towards gay men	Participants were randomly assigned to one of two conditions: a) a video where the main character interacted with a gay couple and their daughter. During the video the main character's attitude changes from prejudiced to not or b) control video with the same content but the new neighbor and not identified as gay (scenes with partner were cut).	Failed to find that vicarious contact affected attitudes towards gay men versus control condition ($F(3, 95) = 1.07$, $p= .366$).

Table 1 Continued

Preub & Steffans (2020) Study 2. A video intervention for every straight man: The role of preattitudes and emotions in vicarious-contact effects	United States	RCT; MANOVA and Mediation Analyses	108 cisgender heterosexual male undergraduate psychology students.	Gay men; attitudes towards gay men	Participants were randomly assigned to one of two conditions: a) a video where the main character interacted with a gay couple and their daughter. During the video the main character's attitude changes from prejudiced to not or b) control video with the same content but the new neighbor and not identified as gay (scenes with partner were cut).	No direct effect of vicarious contact on preattitudes towards gay men compared to control (t(99.03) = 0.94, p= .352). However, general positive and negative intergroup emotions mediated the effect of vicarious contact on explicit attitudes towards gay men.
Schiappa (2005) Study 1. The parasocial contact hypothesis	United States	Experimental Design/ Pre-Test Post-Test; Repeated measures ANOVA	174 college students (107 females, 65 males, 2 unknown)	Gay Men; Attitudes towards gay men and lesbian women, perceived homophily, social, task, and physical attraction,	Viewing of 10 TV Episodes of Six Feet Under (character David Fisher comes to terms with his homosexuality and gradually comes out to friends, family, and church).	There was a significant decrease in negative attitudes towards gay men after exposure to the TV episodes (a one sample t-test of the post-test scores found the difference significant (p<001). There were no changes in attitudes towards lesbian women after exposure to the TV episode (p=.21).
Schiappa (2005) Study 2. The parasocial contact hypothesis	United States	RCT	160 undergraduate students from a midwestern university (88 females, 66 males , 6 missing), mean age of 23.7 years,	Gay Men; Attitudes towards gay men and lesbian women, personality of gay men,	Viewing of TV Episodes of Queer Eye for the Straight Guy (reality-based makeover show featuring five gay professionals assisting a heterosexual male); Participants randomly assigned to one of four groups: control, treatment, post- control, and post- only treatment.	There was a significant decrease in negative attitudes towards gay men after exposure to the TV episodes. There were no changes in attitudes towards lesbian women after exposure to the TV episode.

Table 1 Continued

Parasocial Contact						
Flores et al., (2018). Challenged Expectations: Mere Exposure Effects on Attitudes About Transgender People and Rights	United States	RCT; Structural Equation Modeling	2,102 cisgender (majority women 49.2%), heterosexual community members, mean age of 50.6, a majority identified as white (80.5%), 32.3% Republican, and 44.3% Democrat, 23.4% Independent.	Transgender individuals; Discomfort with transgender people, transphobia, and transgender rights	Four conditions of images and vignettes, 1)Vignette of transgender individual and Images of gender-congruent transgender individuals (i.e., feminine appearing female and masculine appearing male), 2) Vignette of transgender individual and images of gender incongruent transgender individuals (i.e., feminine appear male and masculine appearing female), 3) Vignette about Japanese economic growth (control) and no image.	Relative to the Control group, people who received the Congruent or Incongruent images reported less discomfort with transgender people. Lower rates of discomfort were reported in the Congruent or Incongruent treatment relative to respondents assigned to the No Image condition. Mere exposure to narratives and images of transgender individuals was significant in reducing transphobia.
Rani & Samuel (2019)[a] Reducing transphobia: comparing the efficacy of direct and indirect contact	India	Long-itudinal randomize d experiment -tal design; Two-way Mixed ANOVA	159 (102 male, 57 female) cisgender, heterosexual undergraduates	Transgender individuals; transphobia	Half of the participants (n=81; 49 male, 32 female) were randomized to Intervention 2: A video where a transman speaks about his experiences, and problems he has faced.	There was a statistically significant reduction in transphobia in participants in Speaker Panel group from pre to post, and post to 1 month follow up ($F(2, 160) = 204.055$, $p < 0.0005$, partial $\eta^2=0.718$).

Table 1 Continued

Imagined Contact						
Dermody (2013). The Failure of Imagined Contact in Reducing Explicit and Implicit Out-Group Prejudice Toward Male Homosexuals	Australia	RCT; 2 (sex: female, male) x3 (group: imagery control, prime control, imagined interaction)ANOVAs	85 cisgender(52 female, 33 male), heterosexual, undergraduates	Gay Men; attitudes towards gay men, implicit association test,	Script with a scenario for participants one of three conditions: 1) outdoor scene (control), 2) imagine and think about male homosexuals, 3) imagine meeting a male homosexual stranger for the first time.	There was no significant interaction effect between group and sex for attitudes toward gay men ($F(2,79)=1.181, p=.312$) and implicit associations towards gay men ($F(2,79)=1.068, p=.349$). Imagined contact was not effective in reducing prejudice towards gay men.
Turner et al. (2007). Imagining intergroup contact can improve intergroup attitudes	United Kingdom	RCT; t-tests	27 male heterosexual undergraduate students (ages 19-25)	Gay Men; intergroup anxiety, out-group evaluation, perceived out-group variability.	Script to imagine that you are talking to a gay man that has sat next to you on a train (experimental) or asked to imagine you are on a three-day hiking trip (control)	Significantly less intergroup anxiety following the imagined contact task compared to the control condition ($t(25) = –3.71$, $p = .001$). Significantly more positive out-group evaluations following the imagined contact task ($M = 3.82$) compared to the control condition ($M = 3.02$) ($t(25) = 2.10$, $p = .046$)Imagined intergroup contact was sufficient to improve attitudes towards gay men

Table 1 Continued

West (2015) Study 1. Imagined Contact Works in High-Prejudice Contexts: Investigating Imagined Contact's Effects on Anti-Gay Prejudice in Cyprus and Jamaica	Cyprus	RCT; ANOVA and Mediation Analyses	42 cisgender, heterosexual undergraduate males (mean age 22.01).	Gay Men; attitudes towards gay men, intentions to engage in future contact.	Script of a scenario meeting a gay male stranger (experimental) or imagine an outdoor scene (control)	Participants in the imagined contact condition reported more positive attitudes ($F(1, 39)=4.16, p=0.048, \eta p2=0.10$) and greater intentions to engage in future contact with gay men ($F(1, 39)=7.91, p=0.008, \eta p2=0.17$) as compared to the control condition. Imagined contact directly predicted more positive attitudes ($\beta=0.40, p=0.048$) and directly predicted positive behavioral intentions ($\beta=0.52, p=0.049$), which indicated partial, complementary mediation. Imagined contact improved attitudes and behavioral intentions toward gay men in Cyprus,
West (2015) Study 2. Imagined Contact Works in High-Prejudice Contexts: Investigating Imagined Contact's Effects on Anti-Gay Prejudice in Cyprus and Jamaica	Jamaica	RCT; ANOVA and Mediation Analyses	100 heterosexual students (80 females, 20 males), mean age 21.37 years.	Gay Men; attitudes towards gay men, social acceptance, and social distance.	Randomized to three conditions with a script of 1) scenario meeting a gay male stranger for the first time (imagined condition), 2) simply think about gay men (priming condition), or 3) imagine and outdoor scene (control)	Participants in the imagined contact condition reported more positive attitudes toward gay men than did participants in the control condition ($p=,042$). Condition directly predicted more positive attitudes($\beta=0.43, p=0.01$) but did not directly predict social acceptance ($\beta=-0.03, p=0.86$), which indicated indirect-only mediation.

Table 1 Continued

Multiple Forms of Contact						
McDermott et al. (2018). Ameliorating transnegativity: assessing the immediate and extended efficacy of a pedagogic prejudice reduction intervention	Western Europe	Longitudinal Quasi-experimental design; ANCOVA	66 cisgender, heterosexual Caucasian female undergraduates	Transgender individuals; attitudes towards transgender individuals	Classroom-based Pedagogic Intervention with Trans Individuals. At week 4, participants viewed "Soldier's Girl" a film about a transwoman and her relationship with a self-identified cisgender heterosexual U.S. soldier. At week 5 a panel of speakers(a self-identified gender-queer person in their 30s, a 60-year-old trans woman, and a cisgender female in her thirties) spoke with the class and answered questions.	There was a significant reduction in transnegativity across the time (between baseline and week 5, baseline and week 12, between week 5 and 12).

[a] Rani et al. (2019) is one randomized experimental longitudinal study that compares in-vivo and parasocial contact-based interventions.

Included Study Characteristics

Population Samples

Of the 22 included studies, 19 (86.4%) focused on undergraduate students, two (9.1%) on community members, and one (4.5%) included both students and community members. Most of the studies (17; 77.3%) focused on cisgender, heterosexual individuals, while the other five studies (22.7%) did not specify gender or sexual orientation. All studies reported the sex of the participants, including four studies (18.2%) that focused on male participants only, one (4.5%) that focused on female participants only, and 17 (77.3%) that included both males and females.

Geographical Information

Of the 22 studies included in the review, nine were conducted in the United States (40.9%), three in Australia (13.6%), one in Serbia (4.5%), one in Canada (4.5%), one in Cyprus (4.5%), one in India (4.5%), one in Germany (4.5%), one in Turkey (4.5%), one in Jamaica (4.5%), one in the UK (4.5%), and one in Western Europe (4.5%).

Research Design and Contact Intervention Methods

All the studies used quantitative methods: 14 were randomized controlled trials (63.6%), two were non-randomized experimental designs (9.1%), two used experimental designs (pre- and post-test; 9.1%), and four were longitudinal studies (18.2%). Together, the studies addressed four types of contact-based intervention: six examined vicarious contact (27.3%), six included in-vivo contact (27.3%), three utilized e-contact/online-based contact (13.7%), and four included imagined contact-based interventions (18.2%) and one (4.5%) included multiple forms of contact.

SGM Attitudes Addressed

Nine studies (40.9%) used contact-based interventions to address attitudes towards gay men, five studies (22.7%) addressed attitudes towards gay men and lesbian women, seven studies (31.8%) addressed attitudes towards transgender individuals, and one study (4.5%) focused on attitudes towards sexual orientation (gay men, lesbian women, and bisexual individuals). While the researchers attempted to include all studies on SGM individuals and encompassing the spectrum of sexual orientation and gender identity in the search criteria, all studies included in this review only identified the use of limited SGM identities (gay men, lesbian women, bisexual individuals, and transgender individuals).

Key Findings and Themes Synthesized

One study was a longitudinal experimental design that randomized participants to either an in-vivo or parasocial contact intervention (Rani & Samuel, 2019). This study is included in Table 1 twice (once under in-vivo contact and once within parasocial contact) with corresponding results based on the contact-based intervention.

In-Vivo Contact

Six studies used in-vivo contact-based interventions to reduce LGBTQ+-related stigma (Table 1). Four of the studies used in-vivo conversations with a member of the LGBTQ+ communities as an intervention, with two including an education component (i.e., classroom intervention or workshop). Two studies used a speaker panel of LGBTQ+ individuals as the contact-based intervention. Two studies identified in-vivo contact as an effective strategy for reducing transphobia in participants across time (Rani & Samuel, 2019; White et al., 2021). Interactions where LGBTQ+ individuals disclosed their identity improved attitudes towards gay men and lesbians (reduced homonegativity) among participants (Graham et al., 2014; Rye &

Meaney, 2009; Sakalli, 2003). The results of one study indicated that using a speaker panel of LGB individuals is an effective strategy for increasing positive attitudes towards LGB individuals (Kwon & Hugelshofer, 2012).

Online/E-Contact

Three studies used e-contact as a contact-based intervention (Table 1). All three studies used an online platform or format where participants interacted via chat or instant messenger synchronously. E-contact was associated with significant reductions in transgender stigma, stigma toward gay men, and stigma toward lesbians in male and female heterosexual, cisgender participants (Boccanfuso et al., 2020; Lytle & Levy, 2015; White et al., 2019). One study further examined whether the reduction of sexual stigma (stigma towards the sexual orientation of gay men and lesbians) was dependent on the sexual identity of the e-contact out-group member (White et al., 2019). Researchers found that male heterosexuals experienced significantly more sexual stigma reduction when the e-contact was with a lesbian versus a gay man.

Vicarious Contact

Six of the included studies examined vicarious contact-based interventions as a tool for reducing LGBTQ+-related stigma (Table 1). The six studies examining vicarious contact had a TV episode (Royal Pains) with transgender characters (Gillig et al., 2018), a TV episode (Royal Pains and Queer Eye) with gay characters (Schiappa, 2005), videos of gay men interacting with heterosexual individuals (Preuß & Steffens, 2020) a movie (The Parade) depicting gay male characters (Madžarević & Soto-Sanfiel, 2018). Five studies examined vicarious contact-based interventions to reduce stigma toward gay men. While one study[47] failed to show a direct effect of vicarious contact on the reduction of attitudes towards gay men in Germany, four studies utilizing vicarious intervention did indicate a significant decrease in attitudes towards gay men

(Schiappa, 2005; Preuß & Steffens, 2020; Madžarević & Soto-Sanfiel, 2018). One study examined vicarious contact-based interventions to reduce transphobia, finding that vicarious contact effectively reduced transphobia in heterosexual, cisgender community members (Schiappa, 2005).

Parasocial Contact

Two studies examined the use of parasocial contact-based interventions for reducing LGBTQ+-related stigma. One study by Flores and colleagues (2018) provided participants with narratives and images of transgender individuals to reduce transphobia, finding that parasocial contact effectively reduced transphobia in heterosexual, cisgender community members. Another study, as a part of a randomized experimental design comparing in-vivo versus parasocial contact interventions, used a video of a transman telling his story and experiences with transphobia (Rani & Samuel, 2019). The video of a transman was found to be effective at reducing transphobia from pre- to post-intervention, but the effect was not sustained at one-month follow-up (Rani & Samuel, 2019).

Imagined Contact

Four studies used imagined contact-based interventions to reduce negative attitudes towards gay men (Table 1). One study indicated that imagined contact was not effective in reducing negative toward gay men (Dermody et al., 2013), while the other three studies (Crisp et al., 2009; West et al., 2015) indicated that imagined contact improved attitudes toward gay men in the UK, Jamaica, and Cypress. All studies asked participants to imagine meeting a gay male stranger for the first time.

Combination of Contact

One study used both vicarious and in-vivo contact for the intervention to reduce negative attitudes towards trans individuals (McDermott et al., 2018). In this study, McDermott and colleagues (2018) had students in a class watch the movie "Soldier's Girl' about a transwoman and her relationship with a self-identified cis-gender heterosexual soldier. A week later, the students attended a panel discussion where three panelists (a genderqueer person, a transwoman, and a cisgender female) spoke to the class and interacted with the class through questions and answers. This multi-step use of two forms of contact-based interventions significantly reduced negative trans attitudes across time (McDermott et al., 2018).

Discussion

This integrative review provides a novel synthesis and overview of the multiple forms of contact-based interventions (in-vivo, e-contact, vicarious, parasocial, and imagined) used to address LGBTQ+-related stigma within the literature from 2000 to 2020. Contact theory has included various direct and indirect forms of contact to address the stigma associated with marginalized identities. The results provide promising information on the effectiveness of contact-based interventions to address LGBTQ+-related stigma.

Interpersonal contact theory first examines the use of interpersonal in-vivo contact to reduce stigma. This review aligns with prior research on the effectiveness of in-vivo interpersonal in-group and out-group contact at reducing stigma towards individuals with marginalized identities (Pettigrew & Tropp, 2006). Our review indicates that in-vivo interpersonal contact, such as conversations with individuals with marginalized/stigmatized identities, speaker presentations, and panels, effectively reduce stigma toward gay men, lesbian, bisexual individuals, and transgender individuals. Interpersonal contact theory continues to be a

widely accepted stigma-reduction strategy. These findings align with prior research indicating that interpersonal contact predicts attitudes towards gay men better than any other demographic or social-psychological variable (Herek & Glunt, 1993).

White and Abu-Rayya (2012) developed e-contact as an alternative contact medium between in-group and out-group members. The review identified e-contact (contact through online interactions via chats on platforms) as an effective strategy for reducing LGBTQ+-related stigma. White and colleagues found (2019) that e-contact effectively reduces negative attitudes towards Lesbian women, Gay men, and Bisexual (LGB) individuals but that the sexual identity of the out-group contact member mediated this effect. Heterosexual males had more significant reductions in stigma towards LGB individuals when the out-group member involved in the e-contact was a lesbian woman compared to e-contact with a gay man. This result may be due to the layer of gender identity and the stereotypes heterosexual men may hold against lesbians versus gay men.

Vicarious contact, which is grounded in Social Cognitive Theory (SCT; Bandura, 1986), indicates that observing the interactions of another person with whom you identify can affect personal behaviors and opinions. There were conflicting results on vicarious contact-based interventions for addressing LGBTQ+-related stigma; most articles indicated that vicarious contact, such as videos, movies, and TV shows, effectively increased positive attitudes towards LGBTQ+ individuals. The conflicting results on the effectiveness of vicarious contact interventions to address LGBTQ+-related stigma may be due to the reliance on the individual's connection to the out-group member with the stigmatized identity while engaging with the media (i.e., video, movie, TV show). Of importance to note is the time frame of the integrative review which includes studies from 2000 to 2020. The visibility and representation of LGBTQ+

individuals in media (i.e., TV shows, and movies) have increased over the last two decades, however still insufficient.

The Parasocial Contact Hypothesis posits that observing positive portrayals of out-group members is akin to direct in-vivo (face-to-face) contact and can reduce prejudice towards out-group members (Schiappa, 2005; White et al., 2021). The review indicated that parasocial contact (in this case, the use of images and narratives of transgender individuals and a video of a transman telling his experiences of transphobia) could reduce negative attitudes and beliefs towards transgender individuals (Dermody et al., 2013). This is in line with prior research implicating parasocial contact to reduce prejudice and negative attitudes toward out-group members (White et al., 2021). However, the review only included studies examining the effect of parasocial contact on transphobia. It did not include any studies on attitudes towards sexual orientation or the intersection and fluidity of the SGM identities.

In the case of contact-based interventions using media (vicarious and parasocial), the contact stigma change strategy's effectiveness depends on the portrayal of the LGBTQ+ individual/communities (either negative or positive portrayal; White et al., 2021). Media is the primary site of social knowledge regarding LGBTQ+ identities (McInroy & Craig, 2015; McInroy & Craig, 2017). However, media representations of LGBTQ+ characters may be problematic. In a study with LGBTQ+ youth, participants reported that representation of LGBTQ+ characters was one-dimensional and relied heavily on stereotypes and exaggerated gender roles/expectations (i.e., gay men as either hyper-masculine or hyper-feminine, masculine lesbians as unfeminine, boyish, or militant; McInroy & Craig, 2017). LGBTQ+ youth also reported that transphobia in media was notably significant compared to homophobia (McInroy & Craig, 2015). The impact and effectiveness of contact-based interventions may invariably rely on

positive portrayals that also do not perpetuate stereotypes. Additionally, the premise of these interventions to include SGM confederates may place the burden of reducing LGBTQ+-related stigma on SGM communities themselves. There is a need to consider a balance in elevating SGM voices while not overburdening the responsibility of effecting change on LGBTQ+ communities.

Imagined contact is considered the mental simulation of social interaction with an individual from a marginalized or out-group community (Crisp & Turner, 2009). The review indicated that imagined contact was inconclusive as a contact-based intervention in reducing LGBTQ+-related stigma. There were only three studies included in the review from three different countries. The studies examined imagined contact in reducing negative attitudes towards gay men; however, the studies reported conflicting results on the effectiveness of imagined contact as a means of stigma reduction. Imagined contact is effective across various other out-groups, such as reducing bias towards elderly persons and ethnic and national groups (Turner et al., 2007). However, imagined contact research has indicated a need for two key elements to effectively reduce stigma: a) active engagement in the mental stimulation, and b) the imagined contact must be positive. These two elements may not have been indicated or addressed in the studies within the review and may explain the possible conflict in results. Further research is needed to determine the effectiveness of imagined contact in reducing LGBTQ+-related stigma.

The review synthesized 21 studies using contact-based interventions to address LGBTQ+-related stigma. However, none of the interventions discuss the LGBTQ+ experiences of intersectionality, mainly in racial/ethnic minority LGBTQ+ communities, which are often especially stigmatized and discriminated against. All the studies focused on either addressing

attitudes towards sexual orientation (lesbians, bisexual individuals, or gay men) or gender identity (trans individuals) alone. While some interventions included SGM confederates of minority racial/ethnic identity, they did not discuss or provide any broader context as to how the multiple marginalized identities of the SGM confederates may or may not have impacted the intervention. As identified within the IEM, the social context posits the importance of the experiences of stigma from the interactions between LGBTQ+ communities, other marginalized groups, and the greater society (Mink et al., 2014).

Furthermore, our results synthesized contact-based interventions from studies conducted across several different countries/regions (United States, UK, Australia, Serbia, Canada, Cyprus, India, Germany, Turkey, Jamaica, and Western Europe). While globally, the average acceptance of LGBTQ+ individuals has increased since 1980, some countries and regions worldwide have decreased in acceptance of LGBTQ+ communities from 2010 to 2020 (Flores, 2021). Of the countries and regions included in this review, Canada, the UK, Australia, the United States, India, Germany, and Western Europe showed an overall increase in acceptance of LGBTQ+ individuals from 2010 to 2020 (Flores, 2021). In contrast, attitudes towards LGBTQ+ individuals have remained unchanged from 2010 to 2020 in Cyprus, Jamaica, Serbia, and Turkey (Flores, 2021). Of note to consider in examining the effectiveness of contact-based interventions at addressing LGBTQ+-related stigma is the cultural context of the different societal views on LGBTQ+ communities within the various countries. As indicated in the Intersectional Ecological Model of Sexual Minority Health, the dominant culture plays a role in the stigmatizing experiences of individuals within multiple marginalized identities (Mink et al., 2014). Therefore, differences in dominant cultures and views of heteronormativity will vary across countries and would impact the experiences of LGBTQ+ individuals.

Limitations and Future Directions

Our integrative review examined the literature on contact-based interventions addressing LGBTQ+-related stigma; LGBTQ+ communities encompass multiple identities, including individuals of marginalized sexual orientation and gender identity within a fluid continuum. A limitation of the review was the lack of representation of an intersectional lens in addressing LGBTQ+-related stigma and the fluidity of sexual orientation and gender identity. All measures of sexual orientation and gender identity stigma experiences and attitudes within this review relied on traditional terms of transgender individuals, lesbians, gay men, and bisexual individuals, which do not encompass the growing understanding and terms for LGBTQ+ individuals such as queer, pansexual, genderqueer, gender fluid, non-binary, gender non-conforming, or same-gender-loving. Future research should consider the fluidity and continuum of experiences with the LGBTQ+ communities and work to understand the mechanisms underlying contact-based interventions further, especially addressing the complexities and unique experiences within the SGM identity.

Furthermore, like most individuals, individuals within the LGBTQ+ communities encompass more than one identity and may identify with multiple marginalized identities that face unique experiences based on their intersection (Cole, 2009; Crenshaw, 1991). While there has been a broad range of literature on the effects of stigma on individuals within one marginalized identity, there is a lack of studies on the impact of stigma on individuals within the intersection of multiple stigmatized groups. One study has shown that individuals with intersecting multiple marginalized identities are more likely to have worse quality of life outcomes (Reinka et al., 2020). In a recent study, researchers found that SGM people of color experience heterosexism within their racial/ethnic identities, leading to the internalization of

those negative attitudes (Sarno et al., 2021). Future studies should include incorporating the complex multiple marginalized identities LGBTQ+ individuals encompass in the development of stigma reduction interventions.

Conclusion

A variety of contact-based interventions (in-vivo, e-contact, vicarious, parasocial, and imagined) have been examined to decrease LGBTQ+-related stigma experiences (prejudices, attitudes, biases, and discrimination). However, there is a need for future research on contact-based interventions that address LGBTQ+-related stigma to include interventions that encompass the fluidity, diversity, and complexity of sexual orientation and gender identities as well as the impact of other marginalized intersectional identities (i.e., race, ethnicity, sex, and mental health status, etc.). The intersection and interaction of multiple marginalized identities that arise from social constructs (i.e., race, ethnicity, economic status, social position, gender, sexual orientation) determine access to social capital, which impacts health outcomes (Mink et al., 2014). Therefore, the focus of future research should encompass an intersectional framework wherein consideration of intersecting identities, and social positions are integral in understanding social experiences and addressing LGBTQ+-related stigma**.**

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*Indicates articles included in the review

CHAPTER 3: MANUSCRIPT 2

EXAMINING THE EFFECTS OF STORYTELLING AS A TOOL FOR INTERSECTIONAL STIGMA CHANGE

Abstract

Lesbian, gay, bisexual, trans*, or queer (LGBTQ+) individuals living with mental illness experience stigma associated with marginalized identities of sexual orientation, gender identity, or both, and mental illness. Sharing stories of lived experiences is an effective approach to reducing various types of stigma. However, it is unclear whether stories shared by LGBTQ+ individuals living with mental illness can reduce mental illness and LGBTQ+-related stigma. Using a randomized control trial, participants watched stories of LGBTQ+ individuals living with a mental illness, non-LGBTQ+ individuals living with mental illness, or a control condition (TEDTalk) to examine the use of intersectional stories in addressing LGBTQ+- and mental illness-related stigma. Intersectional stories of LGBTQ+ individuals living with a mental illness effectively reduced mental illness-related stigma (personal stigma and discrimination). However, they were ineffective at reducing LGBTQ+-related stigma (negative attitudes towards lesbians and gay men, transphobia, or genderism). Our study highlights the need to develop culturally adapted anti-stigma programs in collaboration with individuals with lived intersectional LGBTQ+ and mental illness experiences.

Keywords: intersectional stigma, storytelling, LGBTQ+ stigma, mental illness stigma

Introduction

Stigma is a process comprised of three constructs: stereotypes (inaccurate and negative cognitions about a marginalized group), prejudice (negative emotions about a marginalized group), and discrimination (unjust behaviors resulting from prejudices and stereotypes). The stigma process can have a profound, negative impact on how individuals feel about themselves (internalized stigma) and long-term outcomes (employment, quality of life, social inclusion, healthcare access, and participation in treatment; Corrigan & Kosyluk, 2014). Research has established the relationship between experiences of stigma (i.e., discrimination, harassment, physical violence, and bullying) and poor mental health outcomes (Hatzenbuehler et al., 2013; King et al., 2008).

Sexual and gender minorities are individuals that identify as lesbian, gay, bisexual, transgender, queer, or questioning (LGBTQ+). LGBTQ+ individuals experience stigma due to their sexual orientation and/or gender identity, which has a significant, deleterious effect on LGBTQ+ health, including greater risk of suicidality, depression, anxiety, substance use, and poor physical health (Hatzenbuehler et al., 2013). According to a recent poll, about seven percent of the U.S. population identifies as lesbian, gay, bisexual, or transgender (LGBT), which has doubled in the last decade (Jones, 2022), and 39% of those individuals report having a mental illness in the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). This is about double the prevalence of the general population at 20.6% in 2019 (National Institute of Mental Health [NIMH] 2021). One research study found that gay men were about five times more likely to develop a panic disorder, and lesbian and bisexual women were three times more likely to have generalized anxiety disorder symptoms than the general population (Cochran et al., 2003). Transgender and nonbinary individuals are disproportionately

more likely to experience depression, anxiety, and suicidal ideation than the general population (Tordoff et al., 2022). Research has established that LGBTQ+ individuals are at higher risk than their heterosexual, cisgender counterparts for suicidal thoughts and non-fatal suicide (CDC, 2010; CDC, 2016; James et al., 2016; King et al., 2008).

Identifying as LGBTQ+ is not a mental illness; however, a substantial percentage of LGBTQ+ individuals experience and develop a mental illness due to experiences of LGBTQ+-related stigma (i.e., discrimination, bullying, and harassment). LGBTQ+ individuals with a mental illness encompass multiple, marginalized, intersecting identities. According to social stress theories, individuals who are part of a minority or marginalized identity (racial/ethnic, sexual orientation, gender identity, mental illness) experience excess stress related to their identity and social standing (Kertzner et al., 2009; Meyer et al., 2008). Individuals that encompass multiple marginalized identities may experience compounded stress and stigma associated with the intersection of these identities (Crenshaw, 1991; Reinka et al., 2020). LGBTQ+ individuals are living with mental illness experience stigma related to their marginalized identities of sexual orientation, gender identity, or both, and mental illness-related stigma. As individuals encompassing more than one identity, LGBTQ+ individuals living with a mental illness face unique and challenging experiences of the stigma associated with these multiple identities leading to worse quality of life outcomes (Cole, 2009; Reinka et al., 2020).

Addressing Stigma

Evidence-based stigma reduction approaches have been developed, including education and contact to address the adverse outcomes associated with stigma experiences (Corrigan et al., 2012). Education provides individuals with truths supported by research to correct inaccurate stereotypes. Contact reduces stigma by facilitating interaction between marginalized individuals

and individuals with stigmatizing views. In a recent meta-analysis, contact-based approaches involving individuals that identify as part of the marginalized identity and sharing their stories and lived experiences with others were shown to be the most effective approach to stigma reduction (Corrigan et al., 2012). In a recent integrative review on contact-based interventions to address LGBTQ+-related stigma (Tran et al., 2022a), researchers found that hearing stories from lesbians (Sakalli, 2003), transgender individuals (Rani & Samuel, 2009; Walch et al., 2012), and gay men (Graham et al., 2014) were effective at reducing LGBTQ+-related stigma (negative attitudes towards lesbians and gay men, and transphobia).

This Is My Brave (TIMB) is a contact-based stigma reduction program that features storytellers with lived experiences of mental illness. TIMB's programming reduces stigma, improves beliefs that people with mental illness are capable of recovery and should be in control of their own lives, and improves attitudes towards treatment-seeking (Kosyluk et al., 2018). In a randomized controlled trial comparing TIMB's storytelling format (which incorporates a creative theatrical component), a traditional storytelling format, and a control condition, the TIMB use of storytelling along with the traditional storytelling format was significantly more effective at reducing the desired social distance from people with mental illness (a proxy for discrimination) relative to the control condition. TIMB was more effective than the comparison and control condition for reducing perceived differences between individuals with mental illness, which according to the Modified Labeling Theory (MLT), reduces subsequent stereotyping, prejudice, and discrimination (Kosyluk et al., 2020; Link et al., 1989).

TIMB has been culturally adapted to highlight stories from Black Americans living with mental illness. This special edition titled "This Is My Brave: Stories from the Black Community" has been found to reduce mental illness stigma significantly and perceived difference toward

mental illness, increase anti-racism sentiments and increase beneficial attitudes toward treatment-seeking from pre- to post-show (Conner et al., 2022). Furthermore, Black, Indigenous, and People of Color (BIPOC) viewers showed greater improvement in overall attitudes towards mental health treatment and beneficial attitudes towards treatment-seeking than non-BIPOC viewers (non-Hispanic white individuals).

Current Study

While TIMB, as a contact-based stigma reduction program, has been found to address racism and stigma around mental illness, no research has been conducted on concurrently using stories to address LGBTQ+- and mental illness-related stigma. Our current study is the first to explore the use of stories in addressing the intersectional stigma of LGBTQ+-related stigma (homophobia, transphobia, genderism, attitudes towards lesbians and gay men) and mental illness stigma (public stigma, desired social distance [a proxy of discrimination]). Based on prior research, we hypothesized that:

1) Viewing stories from individuals living with mental illness (but do not identify as LGBTQ+) would significantly reduce mental illness-related stigma from pre-and post-survey relative to the control condition.
2) Viewing stories from LGBTQ+ individuals with mental illness would significantly reduce mental illness-related stigma from pre-and post-survey relative to the control condition. Additionally, viewing stories from LGBTQ+ individuals with mental illness would significantly reduce LGBTQ+-related stigma from pre- and post-survey to the stories from people living with mental illness (who did not identify as LGBTQ+) and the control condition.

Methods and Materials

The current study utilizes a randomized control design to assess the impact of intersectional stories addressing LGBTQ+ and mental illness-related stigma. Participants were randomized into three story conditions: 1) LGBTQ+ storytellers living with mental illness (LGBTQ+ MI story condition), 2) storytellers living with mental illness but do not identify as LGBTQ+ (MI story condition), and 3) a control condition of stories from TedTalks. Since its inception, TIMB has recorded every storyteller's performance and hosts these stories on its YouTube channel. For the LGBTQ+ MI story condition, two stories (10 minutes) were selected based on whether the storyteller self-identified within the video as a member of the LGBTQ+ community. One story was from a white lesbian woman and another story from a Black transman, both living with depression. In the MI story condition, two TIMB stories (10 minutes) were selected based on storytellers that identify as having a mental illness but do not self-identify as LGBTQ+. One story was from a white woman and another from a Black woman, both living with depression. In the control condition, participants view a 10-minute video from two TEDTalks of individuals telling a general story (one story on environmental issues by Ernestine Leikeki Sevidzem (Sevidzem, 2020) and one story on growing up in China by Nanfu Wang (Wang, 2019)).

Recruitment

Inclusion criteria were: 1) individuals aged ≥18 years, 2) speaking English fluently, and 3) living in the United States. Participants were recruited nationally through the platform Prolific, a crowd-working platform suited for the needs of the scientific community of researchers (Palan & Schitter, 2018). Prolific allows for a more diverse population that is naïve to experimental research (Peer et al., 2017). Two separate population samples were also

purposively recruited: 1) Individuals that identify as a part of a sexual, gender minority, or both (i.e., lesbian, gay, bisexual, pansexual, transgender, nonbinary, asexual, and queer) and 2) Individuals that identify as cisgender and heterosexual. Participants were balanced across groups based on sex (male and female).

Measures

Participants responded to a survey at two times: before and after watching the randomized story condition. All LGBTQ+- and mental illness-related stigma measures were captured in the pre-and post-survey.

Demographic Information

In the pre-survey, participants answered a demographic questionnaire that included age, race/ethnicity, gender, sexual orientation, education level, relationship status, mental health diagnosis, past mental health treatment, and current mental health treatment.

Mental Illness Related Public Stigma

The Attribution Questionnaire (AQ-9) measures the public stigma of mental illness (Corrigan et al., 2013). The AQ-9 is a 9-item scale where participants are given a vignette about Harry, an individual with mental illness, and asked questions like "how dangerous do you feel Harry is?". Answers are on a 9-point Likert scale (1=not at all and 9=very much). This scale has good internal consistency ($\alpha = 0.73$), test-retest reliability ($r = 0.73$) and construct validity (Corrigan et al., 2014).

Mental Illness Discrimination

The Social Distance Scale (SDS) measures desired social distance from individuals living with mental illness, a proxy of discrimination (Link et al., 1987). The SDS is a 7-item scale that utilizes a 4-point Likert scale (1=Definitely willing to 4=Definitely unwilling). Participants are

given a vignette about an individual, James, who has been diagnosed with bipolar disorder. An example of a question is, "how would you feel about sitting next to James [a student with bipolar disorder] in class?" This scale has good internal consistency (α =.75) and construct validity (Link et al., 1987)

Sexual Orientation Stigma

Sexual orientation stigma was measured using the Attitudes Toward Lesbians and Gay Men (ATLG) scale (Herek, 1998). This is a 10-item measure using a 5-point Likert scale (strongly disagree to strongly agree). The ATLG has high levels of internal consistency (α >.85) and good test-retest reliability (rs >.80). An example statement from the ATLG is, "I think homosexuals are disgusting." The ATLG has two subscales, the Attitudes Towards Lesbians (ATL) and the Attitudes Towards Gay Men (ATG), which have good reliability and validity.

Gender Identity Stigma

Gender Identity Stigma was measured using the revised and abbreviated form of the genderism and transphobia scale (GTS-R-SF; Hill & Willoughby, 2005; Tebbe et al., 2014). This is a 13-item scale using a 7-point Likert scale (strongly agree to strongly disagree). The GTS-R-SF has shown good reliability (α = 0.91; Tebbe et al., 2014). The scale has also demonstrated good validity with correlations with social dominance orientation, aggression proneness, and need for closure.

Interpersonal relationships with LGBTQ+ Individuals

Contact or interpersonal relationship with someone from the LGBTQ+ communities was captured using two items: "Do you have any family members that identify as LGBTQ+?" and "Do you have any close friends that identify as LGBTQ+?" Participants were provided with yes, maybe, no, and unsure responses.

Identity as LGBTQ+

Participants were labeled a part of the LGBTQ+ continuum based on answers to two demographic questions. If participants answered the demographic question of "How would you describe your sexual orientation" as either "bisexual/pansexual" or "gay/lesbian/queer," they were labeled as LGBTQ+. In contrast, participants that answered "heterosexual" were labeled as non-LGBTQ+. If participants answered the demographic question "What is your gender identity?" as "non-binary," "transgender," or "genderfluid," they were also labeled as LGBTQ+.

Identity as Living with a Mental Illness

Participants were coded as living with a mental illness if they answered "yes" to a question asking them, "Have you ever been diagnosed with a mental illness?" Participants that answered "no" to this question were labeled as not living with a mental illness.

Data Analysis

One-way ANOVAs were used to analyze continuous variables, and chi-square tests were used to analyze categorical variables to confirm no group differences in participant samples between the three story conditions. A priori statistical power analysis was performed for sample size estimation using G*Power3.1 (Faul et al., 2009) for repeated measures ANOVA within-between interaction with six groups, a moderate effect size (f=.25) and an alpha of .05. Results showed that a total sample size of 90 participants was required to achieve a power of .95.

Results

Participants

A total of 218 participants completed the pre-and post-survey with an average age of 36.11 (SD= 12.41). Most participants were female (51.8%), identified as White or Caucasian

(77.5%), non-Hispanic (92.7%), heterosexual (48.2%), single (43.1%), had a bachelor's degree (35.3%), had a previous mental illness diagnosis (61.5%), and are currently not in treatment for mental health concerns (69.3%). Table 2 provides participant demographics by story conditions: LGBTQ+ MI, MI, and Control. No significant differences were found between the three conditions for demographic variables of interest (race, ethnicity, sex, sexual orientation, gender identity, mental health diagnosis, age, education, or relationship status).

Table 2

Demographics of Participants Across Story Conditions

	LGBTQ+ MI	Mental Illness	Control	Total
N	75	69	74	218
Age (SD)	35.57 (11.97)	36.16 (12.89)	36.59 (12.55)	36.11 (12.41)
Sex Assigned at Birth				
Male (%)	39 (52.0)	34 (49.3)	32 (43.2)	105 (48.2)
Female (%)	36 (48.0)	35 (50.7)	42 (56.8)	113 (51.8)
Gender Identity				
Male	38 (50.7)	34 (49.3)	29 (39.2)	101 (46.3)
Female	30 (40.0)	32 (46.4)	39 (52.7)	101 (46.3)
Non-Binary	5 (6.7)	2 (2.9)	5 (6.8)	12 (5.5)
Transgender	1 (1.3)	-	1 (1.4)	2 (0.9)
Sexual Orientation				
Heterosexual (%)	38 (50.7)	36 (52.2)	31 (41.9)	105 (48.2)
Bisexual/Pansexual (%)	24 (32.0)	21 (30.4)	24 (32.4)	69 (31.7)
Gay/Lesbian/Queer (%)	12 (16.0)	10 (14.5)	12 (16.2)	34 (15.6)
Asexual (%)	1 (1.3)	2 (2.9)	6 (8.1)	9 (4.1)
Missing (%)	-	-	1 (1.4)	1 (0.5)
Race				
American Indian/ Alaskan Native (%)	1 (1.3)	2 (2.9)	-	3 (1.4)
Asian/Asian American (%)	8 (10.7)	6 (8.7)	6 (8.1)	20 (9.2)
African American/Black (%)	5 (6.7)	3 (4.3)	9 (12.2)	17 (7.8)
White/Caucasian (%)	58 (77.3)	55 (79.7)	56 (75.7)	169 (77.5)
Other (%)	3 (4.0)	3 (4.3)	3 (4.1)	9 (4.1)
Ethnicity				
Hispanic (%)	8 (10.7)	5 (7.2)	2 (2.7)	15 (6.9)
Non-Hispanic (%)	67 (89.3)	63 (91.3)	72 (97.3)	202 (92.7)

Table 2 Continued

	LGBTQ+ MI	Mental Illness	Control	Total
Education				
Between 9th and 12th grade/ no degree (%)	1 (1.3)	-	2 (2.7)	3 (1.4)
High School Degree (%)	10 (13.3)	12 (17.4)	8 (10.8)	30 (13.8)
Some College but No Degree (%)	20 (26.7)	16 (23.2)	23 (31.1.)	59 (27.1)
Associate degree (%)	10 (13.3)	9 (13.0)	5 (6.8)	24 (11.0)
Bachelor's Degree (%)	26 (34.7)	25 (36.2)	26 (35.1)	77 (35.3)
Graduate or Professional Degree (%)	8 (10.7)	7 (10.1)	10 (13.5)	25 (11.5)
Relationship Status				
Single (%)	29 (38.7)	32 (46.4)	33 (44.6)	94 (43.1)
In a Relationship (%)	20 (26.7)	8 (11.6)	22 (29.7)	50 (22.9)
Married or Domestic Partnership (%)	21 (28.0)	24 (34.8)	15 (20.3)	60 (27.5)
Divorced (%)	5 (6.7)	5 (7.2)	3 (4.1)	13 (6.0)
Widowed (%)	-	-	1 (1.4)	1 (0.5)
Previous Diagnosis of Mental Illness				
Yes (%)	41 (54.7)	38 (55.1)	45 (60.8)	134 (61.5)
No (%)	32 (42.7)	29 (42.0)	28 (37.8)	82 (37.6)
Unsure (%)	2 (2.7)	2 (2.9)	1 (1.4)	2 (0.9)
Current Treatment				
Yes (%)	19 (25.3)	22 (31.9)	24 (32.4)	65 (29.8)
No (%)	56 (74.7)	47 (68.1)	48 (64.9)	151 (69.3)
Unsure (%)	-	-	2 (2.7)	2 (0.9)

Effects of Storytelling on Intersectional Stigma

Next, to address our hypotheses, a 3 (story conditions) x 2 (LGBTQ+ or heterosexual cisgender) x 2 (timepoints) repeated measures ANOVA mixed design was used to assess relationships between story conditions (LGBTQ+ MI, MI, and Control) and LGBTQ+ identity (LGBTQ+ or cisgender heterosexual) and stigma variables (mental illness public stigma, mental illness discrimination, gender identity stigma, and sexual orientation stigma) across two time points (pre-and post- following viewing story conditions) using SPSS software version 28 (IBM, 2020). There was no significant three-way time*story condition*LGBTQ+ identity interaction effect for measures on LGBTQ+-related stigma (ATLG, ATL, ATG, GTS) or mental illness-related stigma (AQ, SDS). There was a significant two-way interaction of time*LGBTQ+

identity on attitudes towards gay men ($F(2,205)=15.70$, p =.02). There was a significant two-way interaction of time*condition on desired social distance ($F(1,205)=11.08$, p = .03). The analyses did not support our hypotheses that intersectional stories would reduce intersectional stigma. Further post hoc examination found that groups differed significantly in terms of LGBTQ+ (ATLG, ATL, ATG, GTS) and mental illness-related stigma (AQ, SDS) measures between LGBTQ+ and cisgender heterosexual participants across conditions (LGBTQ+ MI, MI, and Control) at pre-survey and a post-survey. Follow-up analyses were performed to determine whether randomization and effects of conditions separately effectively reduce stigma measures (LGBTQ+- and mental illness-related) and whether identification with the marginalized identities (LGBTQ+ or mental illness) played a role.

Table 3

Comparisons of Stigma Measure Means between LGBTQ+ and Cisgender Heterosexual Participants

Measure	Time	Identity		*p*
		LGBTQ+	Cisgender heterosexual	
Mental Illness Personal Stigma	Pre	31.43	35.34	.035
	Post	29.20	33.72	.007
Mental Illness Discrimination	Pre	6.54	10.39	< .001
	Post	5.58	9.65	< .001
Attitudes Towards Lesbians and Gay Men	Pre	12.27	20.15	< .001
	Post	12.59	19.63	< .001
Attitudes Towards Lesbians	Pre	6.70	10.07	< .001
	Post	6.72	9.86	< .001
Attitudes Towards Gay Men	Pre	5.57	10.08	< .001
	Post	5.87	9.77	< .001
Genderism and Transphobia	Pre	85.38	73.45	< .001
	Post	86.22	75.00	< .001

Control Condition

There was no significant time*Mental Health Diagnosis interaction effect for discrimination or personal stigma. There was no significant time*LGBTQ+ Identity interaction effect for attitudes towards lesbians and gay men, and genderism and transphobia. There was no significant main effect in mental illness (AQ, SDS) or LGBTQ+ (ATLG, ATG, ATL, GTS) measures from pre- to post-story conditions. Therefore, as expected, the control condition lacked a treatment effect.

LGBTQ+ Living with Mental Illness Story Condition

There was a significant time*Mental Health Diagnosis interaction effect for discrimination ($F(1,71) = 7.13$, $p = .03$). There was a significant reduction in mental illness discrimination (SDS) from pre- to post-LGBTQ+ MI story condition ($F(1,71) = 16.49$, $p < .001$). There is a significant Mental Health Diagnosis main effect (between subjects). Post hoc tests show individuals that have no mental health diagnosis have a significant reduction in desired social distance (SDS) from pre- to post-story condition. There was not a significant effect of personal stigma from pre-to post-LGBTQ+ MI story condition ($F(1,71) = 3.51$, $p = .07$).

There was no significant time*LGBTQ+ Identity interaction effect for attitudes towards lesbians and gay men, and genderism and transphobia. There was no significant main effect in LGBTQ+-related stigma measures (ATLG, ATG, ATL, GTS, and subscales; $p > .05$) from pre- to post-LGBTQ+ MI story conditions. Even when controlling for contacts with LGBTQ+ individuals (know a family member or friend who identifies as LGBTQ+) and personal LGBTQ+ identity, there was no significant effect or reduction of LGBTQ+-related stigma.

Individuals Living with Mental Illness Story Condition

There was no significant time*Mental Health Diagnosis interaction effect for discrimination or personal stigma. There was a significant main effect of discrimination and personal stigma. Participants showed a significant reduction in mental illness discrimination (SDS) from pre- to post- MI story condition ($F(1,64) = 16.88$, $p < .001$), and a significant reduction in personal stigma (AQ) from pre-to post-MI story condition ($F(1,64) = 24.739$, $p < .001$).

There was no significant time*LGBTQ+ Identity interaction effect for attitudes towards lesbians and gay men, and genderism and transphobia. There was no significant main effect in LGBTQ+-related stigma measures (ATLG, ATG, ATL, GTS; $p > .05$) from pre- to post-MI story condition.

Table 4

Means of Mental Illness and LGBTQ+ Related Stigma Measures by Story Conditions

Measure	Scale Cronbach α		Story Condition						*F*	Contrast	Effect Size (partial η^2)
			LGBTQ+ MI (n=75)		MI (n=68)		Control (n=74)				
	Pre	Post	Pre	Post	Pre	Post	Pre	Post			
AQ	.75	.72	33.19	31.90	33.86	30.71	32.85	31.36	2.41		.02
SDS	.92	.94	8.33	7.57	8.27	6.88	8.48	8.01	**4.03***	MI > Control LGBTQ+ MI >Control	.04
ATLG	.95	.96	16.17	16.08	16.98	17.21	14.96	14.61	.45		.004
ATL	.87	.90	8.31	8.24	8.82	8.85	7.82	7.60	.22		.002
ATG	.94	.94	7.86	7.85	8.17	8.36	7.01	7.14	.61		.006
GTS	.96	.93	79.38	80.90	79.11	79.53	80.64	82.14	.42		.004

Discussion

This is the first study to examine whether intersectional stories of LGBTQ+ individuals living with a mental illness could reduce intersectional LGBTQ+- and mental illness-related stigma. Viewing stories from individuals living with mental illness (but do not identify as LGBTQ+) significantly reduced mental illness-related stigma from pre-and post-survey relative to the control condition. Viewing stories from LGBTQ+ individuals with mental illness significantly reduce mental illness-related stigma from pre-and post-survey relative to the control condition. However, these intersectional stories did not significantly reduce LGBTQ+-related stigma from pre- and post-survey. Prior research has shown that various forms of contact-based interventions are effective at lowering LGBTQ+- (Tran et al., 2022a) and mental illness-related stigma (Kosyluk et al., 2018; Kosyluk et al., 2020) separately, there has not been research on whether an intersectional approach to contact-based interventions is effective at reducing intersectional LGBTQ+- and mental illness-related stigma.

The impact of stories from individuals with lived experience continues to be an effective tool to reduce mental illness-related stigma. Both stories from LGBTQ+ individuals living with mental illness and stories from non-LGBTQ+ individuals living with mental illness effectively reduce mental illness-related stigma (personal stigma and desired social distance). Recent literature has highlighted the need for and importance of having individuals with lived experiences as a part of anti-stigma programs to address mental illness-related stigma. A key component of contact-based stigma reduction programs is the collaboration and input from individuals with lived experiences of mental illness (Corrigan et al., 2012; Shawan et al., 2022).

In developing stigma reduction programs, it is essential to consider input from individuals with lived experience (Rigg & Murphy, 2013). The stigma change TLC4 model

includes six factors: Targeted, Local, Credible, Continuous, Contact, Change Goals (Michaels et al., 2015). The TLC4 posits that stigma change programs that implement the six factors activate four behavior change domains which have been shown to promote change: 1) capturing and maintaining attention, 2) information relevancy, 3) active thought, and 4) sparking an emotional appeal (Michaels et al., 2015). Utilizing input from individuals with lived experience in the development of stigma reduction programs incorporates several of the required factors of the TLC4 model. Individuals with lived experience are a) credible as individuals who have experienced stigma due to their identity, b) local as individuals with lived experience can come from the community, and c) able to provide their own stories as a means for stigma change (contact).

For example, as a component of developing an anti-stigma campaign in Singapore, researchers conducted focus groups with individuals with lived experiences of mental illness (Shawan et al., 2022). Participants reiterated and reported that anti-stigma campaigns should focus on stories from people with lived experience (contact) to illustrate that mental illness does not need to be a barrier and that individuals living with mental illness can be productive members of society (credible and local; Shawan et al., 2022).

Our study used stories from TIMB, an anti-stigma program that provides a platform for persons with lived experiences to share their stories of hope and recovery. Results from this study align with prior research on the effectiveness and power of stories in reducing mental illness-related stigma (Corrigan et al., 2012). In a meta-analysis, Corrigan et al. (2012) found that contact is more effective at reducing mental illness stigma than education. These findings align with research showing that contact with stories from individuals living with mental illness effectively reduced mental illness stigma. However, our results were not in line with a recent

integrative review indicating that the use of media (such as videos of LGBTQ+ individuals) effectively reduced LGBTQ+-related stigma (Tran et al., 2022a).

While our stories of the lived experience of mental illness significantly reduced mental illness-related stigma, the intersectional story condition of LGBTQ+ individuals living with a mental illness did not reduce LGBTQ+-related stigma (negative attitudes towards lesbians and gay men, genderism, or transphobia). This was not in line with our hypothesis, as prior research has shown that the use of intersectional stories effectively reduces multiple intersectional forms of stigma. In a pilot study, TIMB: Stories from the Black Community was effective at reducing mental illness stigma (personal stigma) and increasing anti-racism attitudes (Conner et al., 2022), while TIMB: Stories from the Asian, Pacific Islander, Desi American (APIDA) community was effective at reducing mental illness stigma and anti-Asian stereotypes (Tran et al., 2022b). While our study did not show that intersectional stories of LGBTQ+ individuals living with a mental illness reduced both LGBTQ+- and mental illness-related stigma, it does highlight the effectiveness and importance of culturally adapting programs.

Our findings highlight the importance of involving key stakeholders and individuals with lived experience in developing anti-stigma programs to address intersectional stigma. The story condition of LGBTQ+ individuals living with mental illness was taken from TIMB's archive of stories from past performances. The stories selected were from individuals who self-identified as LGBTQ+ within their story and spoke about some of their experiences related to their LGBTQ+ identity. While the stories contained experiences of an LGBTQ+ person with a mental illness, these stories were not from a culturally adapted show like the TIMB: Stories from the Black Community or TIMB: Stories from the APIDA community. This may explain why no change was found there was no change in LGBTQ+ stigma from pre- to post- LGBTQ+ individuals with

mental illness stories, as these stories were not developed to target LGBTQ+ stigma. TIMB focuses on reducing mental illness-related stigma through their stories of individuals with lived experience, which explains why our experimental condition of LGBTQ+ MI stories only reduced mental illness-related stigma.

In a recent study, researchers in Swaziland and Lesotho developed a participatory theatre program in collaboration with LGBT individuals (Logie et al., 2019). The 2-hour participatory theatre program was composed of three skits on LGBT stigma in healthcare, family, and community settings. Follow-up interviews with participants found that the stigma change program promoted positive change in attitudes towards LGBT individuals, increased knowledge, empathy, and self-reflection (Logie et al., 2019). In another study, Calzo and colleagues (2020) developed a theatre-based HIV prevention program for LGBTQ+ youth. The program was developed with narratives and feedback from LGBTQ+ individuals of color. It was found to provide a slight increase in HIV knowledge, safer sex self-efficacy, and confidence to engage in peer education for HIV (Calzo et al., 2020).

This study shows the importance of input from LGBTQ+ individuals in the development of programs, as well as the possible capacity for stories to reduce LGBTQ+-related stigma. Stories from individuals with lived experience (i.e., narratives) are important as a tool for stigma change and are also needed to develop stigma change programs. Narratives are a valuable approach to developing stigma change programs as they can identify context important for interventions and provide guidance (Rigg et al., 2014). Individuals with lived experiences' narratives may also be used to improve stigma change programs as they may be the targeted audience or the intended beneficiaries of the programs themselves (Murphy & Rigg, 2014).

Limitations

One limitation of the study was using pre-recorded videos from TIMB's archive of stories that included individuals that identify as LGBTQ+ living with a mental illness. TIMB is a mental illness stigma change program that asks storytellers with lived experience to share their stories of mental health challenges and recovery. While researchers chose stories that encompass LGBTQ+ experiences and elements, as suggested from previous literature, these stories may not have highlighted facets of LGBTQ+ experiences to reduce LGBTQ+-related stigma. Another limitation of the study is using the continuum of LGBTQ+ individuals as one marginalized identity. LGBTQ+ individuals encompass sexual orientation and gender identity and their complex relationships as marginalized identities. Our study does not consider this and does not, therefore, explore nuances inherent in LGBTQ+ identities. The use of separate measures as constructs to assess intersectional LGBTQ+ and mental illness stigma as separate constructs is another limitation. Intersectional experiences are not simply the summation of the separate identities (i.e., LGBTQ+ and mental illness) but are also the unique relationship between the identities (Cole et al., 2009; Crenshaw, 1991).

Future Directions

Participants that viewed stories of individuals that identify as LGBTQ+ and living with a mental illness did not show a reduction in intersectional stigma (i.e., mental illness and LGBTQ+). This finding supports the importance and future implication of developing a special edition TIMB show of LGBTQ+ storytellers. Following the process put in place with the development of the special edition of TIMB: Stories from the Black Community, the culturally adapted TIMB: LGBTQ+ show should include input from key stakeholders (i.e., LGBTQ+ individuals living with a mental health condition, and advocates of LGBTQ+ and mental health).

Future research should also consider the development of a stigma measure that truly assesses the unique intersectional experiences of LGBTQ+ individuals living with a mental illness. As there are currently no valid and reliable measures of intersectional LGBTQ+ and mental illness stigma.

Conclusion

Stories of lived experience are one of the best and most effective ways to reduce mental illness-related stigma. This study uniquely contributes to the literature in that it is the first to examine the use of stories from LGBTQ+ individuals living with a mental illness to reduce intersectional LGBTQ+- and mental illness-related stigma. Intersectional stories have the capacity to be effective at reducing intersectional stigma among the most vulnerable populations. The knowledge gained from our study on intersectional stories has implications for the adaptation of other intersecting marginalized identities and addressing stigma as a public health concern.

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CHAPTER 4: MANUSCRIPT 3

THE ROLE OF ENTERTAINMENT-EDUCATION FACTORS IN STORIES TO ADDRESS INTERSECTIONAL STIGMA

Abstract

Entertainment-Education (EE) strategies are effective at affecting health behavior change among youth promoting healthy behaviors, increasing health knowledge, changing attitudes and intentions, and affecting health behaviors. Prior research has found that intersectional stories of LGBTQ+ individuals living with a mental illness were effective at reducing mental illness-related stigma but were not effective at reducing LGBTQ+-related stigma Therefore there is a need to explore what EE factors may moderate the effect of intersectional stories on addressing intersectional mental illness and LGBTQ+ stigma. Using data from a previous study, we examine whether EE factors (perceived similarity to, empathy for, and identification with the storyteller) moderate the effect of intersectional stories on reducing LGBTQ+ and mental illness stigma. Our results revealed that EE factors did not have an impact on stories told by LGBTQ+ individuals living with mental illness at reducing mental illness-related stigma. However, identification with and perceived similarity to the storyteller did moderate the relationship of LGBTQ+ MI stories in reducing genderism and transphobia. Our study has significant implications for the use of EE intersectional stories as prevention and intervention strategies designed to reduce intersectional mental illness and LGBTQ+-related stigma.

Keywords: Entertainment-Education, stigma, mental illness, LGBTQ+, intersectionality

Introduction

Two evidence-based change strategies have been adopted for stigma reduction: education and contact (Corrigan & Kosyluk, 2014) to mitigate the host of adverse outcomes associated with stigma in marginalized communities. Education aims to reduce stigma by correcting inaccurate stereotypes and replacing them with facts about the stigmatized group. Contact reduces stigma by facilitating interaction between marginalized individuals and individuals with stigmatizing views. Research has shown that contact with the stigmatized group is the most effective mental illness stigma change approach, including virtual contact (i.e., media; Corrigan et al., 2012). Media-based contact, such as the communication strategy of Entertainment-Education, has effectively elicited social change on an individual, community, and societal level (Singhal & Rogers, 1999).

Entertainment-Education

Entertainment-Education includes both education and contact-based communication strategies and takes the form of storytelling (Singhal & Rogers, 1999). Entertainment-Education (EE) incorporates modern-day use of media to direct social change at an individual, community, or systemic level (Singhal & Rogers, 1999). EE has proved effective at affecting health behavior change among youth by promoting safe sex behaviors (Orozco-Olvera, Shen, & Culver, 2019) and has a modest effect on increasing health knowledge (knowledge about STIs, HIV, safer sex, cancer, and obesity), changing attitudes and intentions, and affecting health behaviors (Shen & Han, 2014). Prior research has shown that there are three factors of EE that are important to consider:

1) *Identification with the storyteller:* Schank and Berman (2002) indicate that the more viewers can see themselves as the character/storyteller, the more personally relevant the story, the more likely individuals may learn from it.
2) *Empathy with the storyteller:* Empathy has been indicated as part of identification and an important factor in adopting the storyteller's goals, motivations, or feelings (Cohen, 2001).
3) *Perceived similarity to the storyteller:* Perceived similarity or homophily to a storyteller (i.e., their attributes, physical appearance, beliefs, values) is more likely to catch the viewer's attention and therefore more likely to be influenced by the storyteller (Bandura, 2004).

This Is My Brave

This is my Brave (TIMB) is an example of Entertainment-Education that is effective for reducing mental illness-related stigma through contact-based stigma change involving creative storytelling (Kosyluk et al., 2018; Kosyluk et al., 2020). TIMB entertains audiences with poetry, song, monologue, and other forms of creative expression embedded with educational messages surrounding mental illness and the possibility of recovery in a preliminary pre-post pilot study. Kosyluk and colleagues (2018) found that the TIMB intervention decreases stigma improves beliefs that people with mental illness are capable of recovery and should be in control of their own lives and improves attitudes towards treatment seeking. In a follow up randomized controlled trial comparing TIMB's storytelling format, a traditional storytelling format (without the use of creative expression), and a control condition (Kosyluk et al., 2020), the TIMB use of storytelling along with the traditional storytelling format was significantly more effective at reducing the desired social distance from people with mental illness (a proxy for discrimination)

relative to the control condition. TIMB was more effective than the comparison and control condition for reducing perceived differences from individuals with mental illness. According to Modified Labeling Theory (MLT), reduces subsequent stereotyping, prejudice, and discrimination (Link et al., 1999).

Intersectional Storytelling

Recent efforts by TIMB have included using intersectional stories to address intersectional stigma experiences of individuals within multiple marginalized identities. Individuals within the intersection of marginalized identities have unique experiences about and with their identities as individuals with lived experiences. TIMB, in collaboration with key stakeholders (community leaders, researchers, advocates, and individuals with lived intersectional experience), developed two special edition shows: "Stories from the Black Community" and "Stories from the Asian, Pacific Islander, Desi American (APIDA) Community." Pilot evaluations of these culturally adapted shows has shown that intersectional stories effectively address intersectional stigma (Conner et al., 2022; Tran et al., 2022a). Conner and colleagues (2022) found that intersectional stories of Black individuals living with mental illness effectively reduced mental illness stigma and increased anti-racist attitudes. Pilot data from Tran and colleagues (2022) found that intersectional stories of APIDA members living with a mental illness were effective at reducing mental illness stigma and negative stereotypes towards Asian Americans.

In a recent study, Tran and colleagues (2022b) examined whether TIMB intersectional stories of LGBTQ+ individuals living with a mental illness can be used to address intersectional stigma (LGBTQ+- and mental illness-related). Researchers found that intersectional stories of LGBTQ+ individuals living with a mental illness were effective at reducing mental illness-

related stigma (personal stigma and discrimination) but were not effective at lowering LGBTQ+-related stigma (negative attitudes towards lesbians and gay men, transphobia, or genderism; Tran et al., 2022b). Therefore, there is a need to explore what factors may moderate the effect of intersectional stories on addressing intersectional mental illness and LGBTQ+ stigma. As TIMB is a form of Entertainment-Education, our current study will explore EE factors as possible moderators of intersectional stories at reducing intersectional stigma.

Current Study

While TIMB storytelling is effective at reducing mental illness stigma, TIMB as a form of Entertainment-Education has not been examined. The current study therefore examines, using data collected from a study examining the use of stories from LGBTQ+ individuals living with a mental illness, whether EE factors moderate the relationship between intersectional mental illness and LGBTQ+-related stigma from pre-story to post-story condition. Based on prior research studies, we hypothesize that:

1) Entertainment-Education factors of identification with empathy for and perceived similarity to the storyteller will moderate the effect of stories from individuals living with a mental illness in reducing mental illness stigma (personal stigma and desired social distance).
2) Entertainment-Education factors of identification with empathy for and perceived similarity to the storyteller will moderate the effect of stories from LGBTQ+ individuals living with a mental illness in reducing LGBTQ+-related stigma (attitudes towards lesbians and gay men, and genderism and transphobia).
3) Identifying as an individual with a mental illness will moderate the effect of stories on reducing mental illness stigma (personal stigma and desired social distance).

4) Identifying within the LGBTQ+ community will moderate the effect of stories on reducing LGBTQ+-related stigma (attitudes towards lesbians and gay men, and genderism and transphobia).

Methods

The study utilizes data from a randomized control trial examining the use of intersectional stories of LGBTQ+ individuals living with a mental illness at reducing intersectional stigma (mental illness and LGBTQ+; Tran et al., 2022b). Participants were randomized to view one of three story conditions: 1) TIMB LGBTQ+ storytellers living with mental illness (LGBTQ+ MI), 2) TIMB storytellers living with mental illness (MI), and 3) control condition of TEDTalk storytellers. Our study only utilizes data from participants that were randomized to the two experimental story conditions: stories from LGBTQ+ individuals living with a mental illness (LGBTQ+ MI: one story from a white queer woman and one from a Black transman) and individuals with lived experience of mental illness (MI; one story from a white woman and one from a Black woman). More detailed information on the previous study methods can be found in Tran et al. (2022b).

Participants and Recruitment

Participants were recruited nationally online through the crowdsourcing platform Prolific. The inclusion criteria were a) 18 years of age or older and b) living within the United States.

Measures

Participants responded to a survey at two time points: before watching the randomized story condition and after watching the randomized story condition. In the initial study, participants answered a demographic survey to examine the background characteristics of the

sample. The demographics survey includes measures of age, race/ethnicity, gender, sexual orientation, education level, relationship status, and, if applicable, mental health diagnosis. The Attribution Questionnaire (AQ-9; Corrigan et al., 2013), the Social Distance Scale (SDS; Link et al., 1987), the Genderism and Transphobia Scale (GTS; Hill & Willoughby, 2005), the Attitudes Towards Lesbian Women and Gay Men (ATLG; Herek, 1998) was completed by participants at pre and post time points. The Character Identification Scale (Cohen, 2012), the Interpersonal Reactivity Index (IRI; Davis, 1983), and the Attitude and Background Homophily Scale (McCroskey et al., 1975) was completed by participants' post-story condition to measure the Entertainment-Education factors.

Identity as Living with a Mental Illness

Participants were labeled as living with a mental illness if they answered "yes" to a question asking them, "Have you ever been diagnosed with a mental illness?" Participants that answered "no" to this question were labeled as not living with a mental illness.

Identity as LGBTQ+

Participants were labeled a part of the LGBTQ+ continuum based on answers to two demographic questions. If participants answered the demographic question of "How would you describe your sexual orientation" as either "bisexual/pansexual" or "gay/lesbian/queer," was labeled as LGBTQ+. In contrast, participants that answered "heterosexual" were labeled as non-LGBTQ+. If participants answered the demographic question "What is your gender identity?" as "non-binary," "transgender" or "genderfluid," they were labeled as LGBTQ+.

Mental Illness Related Personal Stigma

The Attribution Questionnaire (AQ-9) measures personal mental illness stigma (Corrigan et al., 2013). The AQ-9 is a 9-item scale with good reliability ($\alpha = 0.73$). Participants are given a

vignette about Harry, an individual with mental illness, and asked questions like "how dangerous would you feel about Harry?" Answers are on a 9-point Likert scale (1=not at all and 9=very much).

Mental Illness Discrimination

Desired social distance from individuals living with a mental illness is a proxy for discrimination. The Social Distance Scale (SDS) measures desired social distance from an individual living with a mental illness (Link et al., 1987). The SDS is a 7-item scale that utilizes a 4-point Likert scale (1=Definitely willing to 4=Definitely unwilling). An example of a question is, "how would you feel about sitting next to James [a student with bipolar disorder] in class?" This scale has an internal consistency of $\alpha = 0.75$.

Sexual Orientation Stigma

The Attitudes Toward Lesbians and Gay Men (ATLG) scale measures sexual orientation stigma (Herek, 1998). This is a 10-item measure using a 5-point Likert scale (strongly disagree to strongly agree) with high levels of internal consistency ($\alpha > .85$) and good test-retest reliability ($rs > .80$). The ATLG also contains two subscales: attitudes towards lesbians (ATL) and attitudes towards gay men (ATG). These two subscales have shown great internal consistency ($\alpha > .85$; Siebert et al., 2014).

Gender Identity Stigma

The genderism and transphobia revised short-form scale (GTS-R-SF) measures genderism and transphobia (Hill & Willoughby, 2005). This is a 13-item scale using a 7-point Likert scale (strongly agree to strongly disagree) with high internal consistency ($\alpha = 0.96$; Tebbe et al., 2014). An example item is "people are either men or women."

Identification with the storyteller

Cohen's (2012) Character Identification and Engagement with Story measure measures the degree to which the participant identifies with the character or storyteller. Cohen's character identification is a 10-item measure where participants indicate "Yes" or "No". An example of an item is "While viewing the storytellers, I felt I was a part of the action." Cohen's character identification measure has good internal consistency ($\alpha = 0.80$).

Empathy with the storyteller

The interpersonal reactivity index (IRI) measures individual differences in empathy (Davis, 1983). The IRI is a 16-item measure using a 5-point Likert scale from "does not describe me well" to "describes me well." An example of a question is, "I often have tender, concerned feelings for people less fortunate than me." This scale has good validity ($\alpha = 0.80$) and reliability.

Perceived similarity to the storyteller

The Attitude Homophily Scale and Background Homophily Scale (McCroskey et al., 1975) measures the homophily or perceived relatedness of the participant to the storyteller. This is a 16-item scale using a 7-point Likert scale asking questions like "doesn't think like me" and "does think like me" based on a subscale. This scale has good internal consistency ($\alpha = 0.80$).

Data Analysis

Quantitative data collected from the study were analyzed using SPSS statistical software, version 28 (IBM, 2021). Using independent samples t-tests, we compared the means of EE factors across the two story conditions. Preliminary analyses were performed for each moderation hypothesis to ensure no violation of normality, linearity, multicollinearity, and homoscedasticity assumptions. Moderation hypotheses were tested using Hayes' Process Macro version 4.0 to perform multiple regression analyses, provide model estimations, and generate

conditional and indirect effects (Hayes, 2013). Process macro generates bootstrap confidence intervals, a preferred method for testing moderation because it yields greater statistical power and lowers the possibility of making Type 1 errors (Hayes, 2013). Process model 1 was used to test our moderation hypotheses, including the conditional interactional effects, through bootstrapping (sample of 5000). To probe significant interactions, we set the conditioning values of the moderator variable at -1 SD, Mean, and +1 SD to represent low, average, and high levels. Interpretation of output was performed based on the guidelines provided by Hayes (2013).

Results

Participants

A total of 144 participants completed the survey with an average age of 35.85 (SD= 12.37). Most participants were male (50.7%), identify as White or Caucasian (78.5%), non-Hispanic (90.3%), heterosexual (51.4%), single (42.4%), had a bachelor's degree (35.4%), had a previous mental illness diagnosis (54.9%), and currently not in treatment for mental health concerns (71.5%). Table 1 provides participant demographics in detail by story condition.

Table 5

Demographic Information of Participants by Story Condition

	LGBTQ+ MI	Mental Illness	Total
N	75	69	144
Age (SD)	35.57 (11.97)	36.16 (12.89)	35.85 (12.37)
Sex Assigned at Birth			
Male (%)	39 (52.0)	34 (49.3)	73 (50.7)
Female (%)	36 (48.0)	35 (50.7)	71 (49.3)
Gender Identity			
Male	38 (50.7)	34 (49.3)	72 (50.0)
Female	30 (40.0)	32 (46.4)	62 (43.1)
Non-Binary	5 (6.7)	2 (2.9)	7 (4.9)
Transgender	1 (1.3)	-	1 (0.7)

Table 5 Continued

	LGBTQ+ MI	Mental Illness	Total
Sexual Orientation			
Heterosexual (%)	38 (50.7)	36 (52.2)	74 (51.4)
Bisexual/Pansexual (%)	24 (32.0)	21 (30.4)	45 (31.3)
Gay/Lesbian/Queer (%)	12 (16.0)	10 (14.5)	22 (15.3)
Asexual (%)	1 (1.3)	2 (2.9)	3 (2.1)
Race			
American Indian/Alaskan Native (%)	1 (1.3)	2 (2.9)	3 (2.1)
Asian/Asian American (%)	8 (10.7)	6 (8.7)	14 (9.7)
African American/Black (%)	5 (6.7)	3 (4.3)	8 (5.6)
White/Caucasian (%)	58 (77.3)	55 (79.7)	113 (78.5)
Other (%)	3 (4.0)	3 (4.3)	6 (4.2)
Ethnicity			
Hispanic (%)	8 (10.7)	5 (7.2)	13 (9.0)
Non-Hispanic (%)	67 (89.3)	63 (91.3)	130 (90.3)
Education			
Some high school/no degree (%)	1 (1.3)	-	1 (0.7)
High School Degree (%)	10 (13.3)	12 (17.4)	22 (15.3)
Some College but No Degree (%)	20 (26.7)	16 (23.2)	36 (25.0)
Associate degree (%)	10 (13.3)	9 (13.0)	19 (13.2)
Bachelor's Degree (%)	26 (34.7)	25 (36.2)	51 (35.4)
Graduate or Professional Degree (%)	8 (10.7)	7 (10.1)	15 (10.4)
Relationship Status			
Single (%)	29 (38.7)	32 (46.4)	61 (42.4)
In a Relationship (%)	20 (26.7)	8 (11.6)	28 (19.4)
Married or Domestic Partnership (%)	21 (28.0)	24 (34.8)	45 (31.3)
Divorced (%)	5 (6.7)	5 (7.2)	10 (6.9)
Widowed (%)	-	-	
Previous Diagnosis of Mental Illness			
Yes (%)	41 (54.7)	38 (55.1)	79 (54.9)
No (%)	32 (42.7)	29 (42.0)	61 (42.4)
Unsure (%)	2 (2.7)	2 (2.9)	4 (2.8)
Current Treatment			
Yes (%)	19 (25.3)	22 (31.9)	41 (28.5)
No (%)	56 (74.7)	47 (68.1)	103 (71.5)

TIMB Entertainment-Education Factors

All story conditions encompassed EE factors of identification with, empathy for, and perceived similarity to the storytellers. Means of EE factors can be found in Table 2. Further examination found a significant difference in perceived similarity between story conditions (t

(142) = 3.27, p =.001). TIMB mental illness storytellers were significantly perceived as more similar than TIMB LGBTQ+ individuals living with mental illness storytellers.

Table 6

Means of Entertainment-Education Factors Across Story Conditions

Measure (SD)	Cronbach's α	Story Condition		*t*	*p*
		LGBTQ+ MI (n=75)	MI (n=68)		
Empathy for Storyteller	.77	42.40 (8.06)	41.24 (8.21)	-.87	.39
Perceived Similarity to Storyteller	.91	26.55 (10.66)	32.51 (11.23)	1.93	.06
Identification with Storyteller	.89	34.91 (7.87)	37.23 (6.47)	**3.27**	**.001**

LGBTQ+ Individuals with Mental Illness Stories

Entertainment-Education factors were examined to determine whether they moderate the effects of stories from LGBTQ+ individuals living with mental illness in reducing intersectional stigma (mental illness(MI) and LGBTQ+).

EE Factor Effect on LGBTQ+ MI Stories to Address Mental Illness Stigma

A multiple linear regression was used to examine whether each EE factor moderated the effect of LGBTQ+ MI stories on mental illness personal stigma from pre-to post-story condition. The results revealed that each EE factor (identification with, empathy for, and perceived similarity to the storyteller) did not moderate the relationship of personal mental illness stigma from pre- to post-LGBTQ+ MI story condition.

A multiple linear regression was used to examine whether each EE factor moderates the effect of LGBTQ+ MI stories on discrimination from pre-to post-story condition. The results revealed that each EE factor (identification with, empathy for, and perceived similarity to the

storyteller) did not moderate the relationship of desired social distance from pre- to post-LGBTQ+ MI story condition.

EE Factor Effect on LGBTQ+ MI Stories to Address LGBTQ+ Related Stigma

A multiple linear regression was used to examine whether each EE factor moderates the effect of LGBTQ+ MI stories on genderism and transphobia (GTS) from pre-to post- story condition. The results revealed that identification with the storyteller (CCI) significantly moderated the relationship of GTS from pre-to post-LGBTQ+ MI story condition (b = .02, t(71) = 3.48, p < .001). The model explained 63% of the variance of the outcome (R^2 = .71, F(3, 71) = 57.03, p < .001). A simple slopes analyses indicated that the effect of CCI at -1SD (low CCI), average CCI, and +1SD (high CCI) was positive and significant.

The results revealed that perceived similarity (AHS) to the storyteller significantly moderated the relationship of GTS from pre-to post-LGBTQ+ MI story condition (b = .02, t(71) = 3.08, p = .003). The model explained 70% of the variance of the outcome (R^2 = .70, F(3, 71) = 54.18, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was positive and significant. The results revealed that empathy (IRI) with the storyteller did not moderate the relationship of GTS from pre-to post-LGBTQ+ MI story condition.

A multiple linear regression was used to examine whether each EE factor moderated the effect of LGBTQ+ MI stories in attitudes towards lesbians and gay men (ATLG) and its subscales (ATL and ATG) from pre-to post-story condition. The results revealed that empathy (IRI) to the storyteller significantly moderated the relationship of ATLG from pre-to post-LGBTQ+ MI story condition (b = -.01, t(71) = -2.15, p = .04). The model explained 95% of the variance of the outcome (R^2 = .95, F(3, 71) = 501.42, p < .001). A simple slopes analyses

indicated that the effect of IRI at -1SD (low IRI), average IRI, and +1SD (high IRI) was negative and significant. The results revealed that perceived similarity (AHS) and identification (CCI) with the storyteller did not moderate the effect of LGBTQ+ MI stories on ATLG from pre-to post-LGBTQ+ MI story condition.

The results revealed that perceived similarity (AHS) to the storyteller significantly moderated the relationship of ATL from pre-to post-LGBTQ+ MI story condition (b = -.01, $t(71)$ = -2.42, p = .02). The model explained 92% of the variance of the outcome (R^2 = .92, $F(3, 71)$ = 260.45, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that identification (CCI) with the storyteller significantly moderates the relationship of ATL from pre-to post-LGBTQ+ MI story condition (b = -.01, $t(71)$ = -2.03, p = .05). The model explained 92% of the variance of the outcome (R^2 = .95, $F(3, 71)$ = 268.77, p < .001). A simple slopes analyses indicated that the effect of CCI at -1SD (low CCI), average CCI, and +1SD (high CCI) was negative and significant. The results revealed that empathy (IRI) with the storyteller did not moderate the effect of LGBTQ+ MI stories on ATL from pre-to post-LGBTQ+ MI story condition.

The results revealed that empathy (IRI) to the storyteller significantly moderated the relationship of ATG from pre-to post-LGBTQ+ MI story condition (b = -.01, $t(71)$ = -2.98, p = .004). The model explained 98% of the variance of the outcome (R^2 = .98, $F(3, 71)$ = 506.20, p < .001). A simple slopes analyses indicated that the effect of IRI at -1SD (low IRI), average IRI, and +1SD (high IRI) was negative and significant. The results revealed that perceived similarity (AHS) and identification (CCI) with the storyteller did not moderate the effect of LGBTQ+ MI stories on ATG from pre-to post-LGBTQ+ MI story condition.

Individuals living with a Mental Illness Stories

Entertainment-Education factors were examined to determine whether they moderate the effects of stories from individuals living with mental illness in reducing intersectional stigma (mental illness and LGBTQ+).

EE Factor Effect on MI Stories to Address Mental Illness Stigma

A multiple linear regression was used to examine whether each EE factor moderated the effect of MI stories on mental illness personal stigma from the pre-to post-story condition. The results reveal that identification with the storyteller (CCI) significantly moderates the relationship of personal stigma from pre-to post-MI story condition (b = -.02, $t(64)$ = -2.40, p = .02). The model explained 84% of the variance of the outcome (R^2 = .84, $F(3, 64)$ = 114.58, p < .001). A simple slopes analyses indicated that the effect of CCI at -1SD (low CCI), average CCI, and +1SD (high CCI) is negative and significant. The results revealed that perceived similarity(AHS) to the storyteller significantly moderated the relationship of personal stigma from pre-to post-MI story condition (b = -.01, $t(64)$ = -3.71, p < .001). The model explained 88% of the variance of the outcome (R^2 = .88, $F(3, 64)$ = 151.51, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that empathy with the storyteller did not moderate the effect of MI stories on personal stigma from pre- to post-MI story condition.

A multiple linear regression was used to examine whether each EE factor moderated the effect of MI stories on discrimination from the pre-to post-story condition. The results revealed that identification with the storyteller significantly moderated the relationship of desired social distance from pre-to post-MI story condition (b = -.03, $t(64)$ = -3.06, p = .003). The model explained 81% of the variance of the outcome (R^2 = .81, $F(3, 64)$ = 91.25, p < .001). A simple

slopes analyses indicated that the effect of CCI at -1SD (low CCI), average CCI, and +1SD (high CCI) was negative and significant.

The results revealed that perceived similarity to the storyteller significantly moderated the relationship of desired social distance from pre-to post-MI story condition (b = -.01, $t(64)$ = -2.52, p = .01). The model explained 81% of the variance of the outcome (R^2 = .81, $F(3, 64)$ = 93.32, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that empathy with the storyteller did not moderate the effect of MI stories on personal stigma from pre- to post-MI story condition.

EE Factor Effect on MI Stories to Address LGBTQ+ Related Stigma

A multiple linear regression was used to examine whether each EE factor moderates the effect of MI stories on genderism and transphobia (GTS) from pre-to post-story condition. The results revealed that each EE factor (identification with, empathy for, and perceived similarity to the storyteller) did not moderate the relationship of GTS from pre- to post-MI story condition.

A multiple linear regression was used to examine whether each EE factor moderates the effect of MI stories on attitudes towards lesbians and gay men (ATLG) from pre-to post-story condition. The results revealed that perceived similarity to the storyteller significantly moderated the effect of MI stories on ATLG from pre-to post-MI story condition (b = -.02, $t(64)$ = -3.42, p = .001). The model explained 75% of the variance of the outcome (R^2 = .75, $F(3, 64)$ = 62.59, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that perceived similarity to the storyteller moderated the effect of MI stories on ATL from pre-to post-MI story condition (b = -.01, $t(64)$ = -3.06, p = .003). The model explained 83% of the

variance of the outcome (R^2 = .83, F(3, 64) = 47.91, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that perceived similarity to the storyteller moderated the effect of MI stories on ATG from pre-to post-MI story condition (b = -.02, t(64) = -3.70, p = .001). The model explained 77% of the variance of the outcome (R^2 = .77, F(3, 64) = 72.90, p < .001). A simple slopes analyses indicated that the effect of AHS at -1SD (low AHS), average AHS, and +1SD (high AHS) was negative and significant. The results revealed that empathy with the storyteller and identification with the storyteller did not moderate the effect of MI stories on ATLG, ATL, or ATG from pre- to post-MI story condition.

Shared Identity with Storyteller and Stigma Reduction

Shared identity with the storyteller as a moderating factor was explored in reducing stigma from pre- to post-story conditions.

Mental Illness Identity as a Moderator

A multiple linear regression is used to examine whether mental illness identity moderated the effect of stories on mental illness stigma (personal stigma and discrimination) from pre-to post- LGBTQ+ MI and MI story conditions. Results showed that there was no significant moderation effect of mental illness identity.

LGBTQ+ Identity as a Moderator

A multiple linear regression was used to examine whether LGBTQ+ identity moderated the effect of stories in LGBTQ+-related stigma (ATLG, ATL, ATG, and GTS) from pre-to post-LGBTQ+ MI and MI story conditions. Results showed that LGBTQ+ identity significantly

moderated the effect of LGBTQ+ MI stories on ATL (b = -.47, $t(71)$ = -3.13, p = .003). The model explained 92% of the variance of the outcome (R^2 = .92, $F(3, 71)$ = 256.35, p < .001). A simple slopes analyses indicated that the effect of LGBTQ+ identity or identity as cisgender heterosexual was negative and significant. Results showed that LGBTQ+ identity did not moderate the effect of LGBTQ+ MI stories on ATLG, ATG, and GTS from pre- to post-LGBTQ+ MI story condition. Results showed that LGBTQ+ identity did not moderate the effect of MI stories on ATLG, ATG, ATL, and GTS from pre- to post-MI story condition.

Discussion

This is the first study to explore the impact of Entertainment-Education factors (identification, empathy, and perceived similarity to storytellers/characters) on intersectional stories of LGBTQ+ individuals living with a mental illness and its impact on reducing intersectional LGBTQ+- and mental illness-related stigma. Our study provides novel information to advance the current understanding of Entertainment-Education in addressing intersectional stigma. Our results indicate that Entertainment-Education factors play a role in stigma change to address intersectional LGBTQ+- and mental illness-related stigma.

EE factors did not impact stories told by LGBTQ+ individuals living with mental illness at reducing mental illness-related stigma. However, identification with and perceived similarity to the storyteller did moderate the relationship of LGBTQ+ MI stories in reducing genderism and transphobia. Viewers with higher identification and perceived similarity to the storyteller had a higher impact on reducing genderism and transphobia from pre- to post-LGBTQ+ MI story condition. Furthermore, empathy with the storyteller significantly moderates the relationship of reducing negative attitudes towards lesbians and gay men from pre- to post-LGBTQ+ MI story condition.

This is in line with the Social Cognitive Theory that posits identification with characters and emotional response are central to the use of media to change viewers' beliefs and attitudes (Bandura, 2004). Previous research on the use of media (i.e., films and tv shows) to address LGBTQ+-related stigma also supports the importance of Entertainment-Education factors in reducing stigma. In a study examining the effects of two young gay male characters in the TV show, The Fosters, researchers revealed that viewers' gender identity and sexual orientation influenced emotional involvement with the storyline, which led to positive changes in attitudes towards same-sex relationships (Gillig & Murphy, 2016). However, it is important to note that cisgender heterosexual participants responded with disgust after watching the TV show and, in turn, did not have a significant influence on attitudes (Gillig & Murphy, 2016). In another study, researchers found that EE exposure to a TV episode of Royal Pains about transgender individuals reduced negative attitudes towards transgender individuals (Gillig et al., 2018). Our study, however, did not find that shared LGBTQ+ identity moderates the effect of LGBTQ+ MI stories on ATLG, ATG, or GTS, unlike results seen in prior literature on addressing ATG (Gillig & Murphy, 2016) or GTS (Tebbe et al., 2014). LGBTQ+ identity only moderated the effect of LGBTQ+ MI stories on attitudes towards lesbians (ATL).

Identification with and perceived similarity to the storyteller did moderate the relationship of MI stories in reducing mental illness-related stigma. This is in line with prior research indicating the importance of perceived similarity in reducing mental illness stigma (Violeau et al., 2020). Researchers report that perceived similarities mediate the effect of continuum beliefs of schizophrenia (the idea that schizophrenia is not discrete but continuous symptoms and found within the general population) in reducing mental illness stigma (Violeau et al., 2020).

While our study attempts to examine the use of intersectional stories at reducing intersectional stigma, we utilized general measures for each stigma studied (LGBTQ+ and mental illness). Evolving guidance on intersectional research indicates the use of quantitative instruments that can be used to assess the unique experiences of intersectional stigma within a specific group (Turan et al., 2019). This may include in-depth interviews with LGBTQ+ individuals living with a mental illness to explore the unique experiences of stigma at the intersection of LGBTQ+ and mental illness and the inter-and intra-relationship of those marginalized identities. Narratives of lived intersectional experience would provide needed guidance and context in developing an intersectional LGBTQ+ MI stigma measure (Rigg et al., 2014).

Our findings suggest considerations for the development of intersectional storylines in media (i.e., TV shows and movies) as a conduit of change. Media is the primary transmitter of social knowledge regarding LGBTQ+ identities (McInroy & Craig, 2015; McInroy & Craig, 2017) and has the ability to impact beliefs and attitudes dependent on the stories shared. Therefore, Entertainment-Education factors of identification, empathy and perceived similarity to storytellers/characters are vital for the use of media to affect changes in stigma. As EE programming strives to affect behavioral change on an individual, community, and societal level, representative programming of LGBTQ+ and mental illness storylines informed by lived experiences should be considered.

Limitations

This study has some limitations. The first is the intersectional identities of the storytellers from each condition. The LGBTQ+ MI story condition included one storyteller that is a white woman who identifies as a lesbian, and the second storyteller is a Black transman. In the MI

story condition, one storyteller is a white woman, and the second storyteller is a Black woman. The storytellers represented in our study conditions do not encompass the diversity of the LGBTQ+ communities.

Furthermore, our study does not consider the intersectional identities and complexities of the relationship between race, ethnicity, sexual orientation, gender identity, and gender expression. In a recent study on gender expression (how one embodies and outwardly presents the continuum of gender), participants reported the importance of their gender expression as a part of their identity as LGBTQ+ and their experiences of discrimination (Anderson, 2020). This is important to note as researchers have found that harassment due to gender nonconformity is more strongly associated with depression symptoms than harassment due to sexual orientation alone (Martin-Storey & August, 2016). Due to the importance of gender expression in the experiences of LGBTQ+ individuals, future research on Entertainment-Education to reduce intersectional LGBTQ+- and mental illness-related stigma should consider the role of gender expression.

Conclusion

Entertainment-Education factors of perceived similarity, identification with, and empathy for the storytellers at the intersection of LGBTQ+ living with a mental illness play a role in reducing LGBTQ+-related stigma. The knowledge gained from our study has significant implications for the use of EE intersectional stories as prevention and intervention strategies designed to minimize intersectional mental illness and LGBTQ+-related stigma. Our results have implications for the large-scale use of an intersecting stigma change strategy with the long-term public health effect of reducing the negative public health impacts of suicidality, depression,

anxiety, physical health, and poor life outcomes within LGBTQ+ individuals with mental illness due to decreased experiences of stigma.

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CHAPTER 5: SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

Summary

The purpose of this dissertation was threefold: 1) examine the current literature on the use of contact-based interventions to address LGBTQ+-related stigma, 2) examine the effectiveness of intersectional stories for addressing intersectional stigmas of LGBTQ+ and mental illness, and 3) examine whether EE-related constructs (identification with, empathy towards, and perceived similarity to the storyteller) moderate the effect of LGBTQ+ and mental illness stories on stigma reduction. Each manuscript in this dissertation contributed to a deeper understanding of addressing intersectional LGBTQ+ and mental illness stigma through contact by using stories of lived experiences.

To our knowledge, there is no existing literature on the use and evaluation of contact-based interventions to address intersectional LGBTQ+ and mental illness stigma. A recent meta-analysis already reported that contact-based interventions effectively reduce mental illness-related stigma (Corrigan et al., 2012). Therefore, a separate search was done to examine the use of contact-based interventions to address LGBTQ+-related stigma. The first manuscript lays the foundation for the dissertation by synthesizing the literature on the benefits of contact-based interventions to reduce LGBTQ+-related stigma.

The second manuscript explores the use of intersectional stories of LGBTQ+ individuals living with a mental illness to address intersectional LGBTQ+ and mental illness stigma. The third manuscript explores how Entertainment-Education factors (perceived similarity to the storyteller, identification with the storyteller, empathy with the storyteller, and shared identity

with the storyteller) impact the effects of intersectional stories for addressing intersectional stigma.

Recommendations for Research

Research has primarily focused on understanding attitudes, beliefs, and/or behaviors associated with singular stigma. However, as our most vulnerable communities inhabit multiple marginalized identities, there is a need to develop and evaluate interventions that address the complexities associated with intersectional stigma. This dissertation explored the use of one form of contact-based intervention, the use of storytelling, to address intersectional stigma. This dissertation supports the capacity of intersectional stories to reduce intersectional stigma as moderated by Entertainment-Education factors. While intersectional LGBTQ+ individuals living with mental illness stories were effective at reducing mental illness stigma, they were not found to be effective at reducing LGBTQ+-related stigma. This seems to call for culturally adapted intersectional stories (stories communicating the experience of this intersection between being a member of the LGBTQ+ communities and an individual living with a mental illness) and contact-based interventions.

Development of Culturally Adapted Intersectional Stigma Interventions

Cultural adaptation refers to the systemic modification of an evidence-based treatment or prevention protocol that would consider language, culture, and context (Bernal et al., 2009). The Cultural Adaptation Stage Model integrates both "top-down" and "bottom-up" approaches through a series of adaptation stages which is deemed critical in the development of the effective intervention (Barrera & Castro, 2006). In the first stage of the Cultural Adaptation Stage Model, information gathering focuses on input from subcultural group members input ("bottom-up" elements) at multiple time points (Barrera & Castro, 2006). Input from individuals with lived

experiences is vital to developing impactful and effective interventions to address stigma (Rigg & Murphy, 2013). Therefore, future research should focus on culturally adapting intersectional stories of LGBTQ+ individuals living with a mental illness as a form of Entertainment-Education to reduce intersectional stigma using input from individuals with lived experience.

Development of Intersectional Stigma Measures

This dissertation assessed intersectional stigma as separate measures of LGBTQ+ and mental illness stigma. However, recent literature theorizes that measuring stigma components separately may not represent the experiences of individuals living at that intersection (Turan et al., 2019). In the case of this dissertation, stigma experiences of LGBTQ+ individuals living with mental illness may not be captured by the separate scales of LGBTQ+ stigma (attitudes towards lesbians and gay men and the genderism and transphobia scale) and mental illness stigma (public stigma and desired social distance from mental illness). The experiences of LGBTQ+ individuals living with mental illness may be unique in and of themselves beyond the additive effect of LGBTQ+ and mental illness stigma (Cole, 2009; Crenshaw, 1991). Therefore, there is a need to conduct foundational qualitative work and follow-up validation analyses to develop an intersectional measure to assess the stigma experiences of LGBTQ+ individuals living with mental illness.

Expand on Understanding of Intersectional Stigma

While this dissertation focused on addressing the intersectional stigma of LGBTQ+ individuals living with mental illness, intersectional identities may include more than two marginalized identities. There is a need for further research on the experiences of intersectional stigma within the communities of LGBTQ+ individuals living with a mental illness, such as aspects of racial/ethnic identity and socioeconomic status. Research on the intersection of

LGBTQ+ Black, Indigenous, or People of Color (BIPOC) has found that there were considerable heterogeneous differences among this intersection in the prevalence of mental distress (Walubita et al., 2022).

Intersectionality research and theory also highlight the importance of contextual factors that impact the experiences of individuals within intersections (Mink et al., 2014). There is considerable variability across U.S. state laws that affect individuals within the LGBTQ+ communities (Agénor et al., 2022). Prior research has shown that LGB individuals that live in states with nondiscrimination laws that protect individuals from hate crimes and discrimination associated with sexual orientation have fewer psychiatric hospitalizations (Hatzenbuehler et al., 2009). States with laws that discriminate against LGBTQ+ populations show higher anxiety symptoms and binge drinking rates among LGBTQ+ individuals (English et al., 2021). While research has begun to show that LGBTQ+ structural stigma—a stigma that has made its way into law and policy—impacts LGBTQ+ mental health, there is little research on how other forms of structural stigma (i.e., mental illness structural stigma) may also affect the intersectional experiences of LGBTQ+ individuals living with a mental illness. Therefore, future research should also begin to explore and expand on the understanding of how structural mental illness and LGBTQ+ stigma, the stigma that has made its way into law and policy, impacts individual intersectional experiences.

Conclusions

This dissertation introduces foundational work, contributing to our understanding of the use of stories for addressing intersectional LGBTQ+ and mental illness stigma, and highlights the importance of narratives in developing interventions to address stigma. Intersectional stigma is a concept that has emerged to characterize the convergence of multiple marginalized identities

within a person or group, with the goal of better understanding how to address the unique effects on health encountered by multiple marginalized identities. Due to the complexities of intersectional LGBTQ+ identities and the vulnerabilities of marginalized intersectional identities, there is a need to expand on research to understand and address intersectional stigma.

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APPENDICES

Appendix A: Informed Consent to Participate in Research – Quantitative Study

Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study
Title: Examining the Effects of Storytelling as a Tool for Change
Study # 002296

Overview: You are being asked to take part in a research study. The information in this document should help you decide if you would like to participate. The sections in this Overview provide the basic information about the study. More detailed information is provided in the remainder of the document.

Study Staff: This study is led by Ms. Jennifer Tran, a graduate student at The University of South Florida. This person is called the Principal Investigator. She is being guided in this research by Dr. Kristin Kosyluk. Other approved research staff may act on behalf of the Principal Investigator.

Study Details: This study is conducted at The University of South Florida. The purpose of the study is to conduct research examining the effects of storytelling on addressing stigma. This study will take approximately 30 minutes, including answering survey questions and watching a short video.

Participants: You are being asked to take part because you are an adult over 18.

Voluntary Participation: Your participation is voluntary. You do not have to participate and may stop your participation at any time. There will be no penalties or loss of benefits or opportunities if you do not participate or decide to stop once you start.

Benefits, Compensation, and Risk: We do not know if you will receive any benefit from your participation. There is no cost to participate. You will be compensated $4.75 through Prolific for your participation. This research is considered minimal risk. Minimal risk means that study risks are the same as the risks those you face in daily life.

Confidentiality: Even if we publish the findings from this study, we will keep your study information private and confidential. Anyone with the authority to look at your records must keep them confidential.

Why are you being asked to take part?

We would like to learn more about the effects of storytelling and its ability to affect social change, such as stigma. You are being asked to participate because you are a USF student.

Study Procedures

If you take part in this study, you will be randomized into one of three groups (Group A: watch videos of LGBTQ+ individuals living with mental illness stories, Group B: stories of individuals living with mental illness, or Group C stories from individuals talking about their general

experiences). Once you have been assigned a condition, you will participate in the study and respond to a series of pre-survey questions (about 10 minutes), watch a video (based on your group A, B, or C) of three individuals telling their stories (about 10 minutes), and a post-survey (about 10 minutes). During the surveys, if you miss a question, you will be reminded to respond to that question or given a choice to proceed without answering. Throughout the survey, there will be "cheater" questions to determine your attention to the survey. If you answer a cheater question wrong, you will be sent to the end of the survey and no longer eligible to receive compensation. The only identifying information collected for this study will be your email address which will be used to contact you for each phase of the study. The email addresses will not be directly associated with participants' personal information

Alternatives / Voluntary Participation / Withdrawal

You do not have to participate in this research study. There are no alternatives to participation in this study. You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

Benefits and Risks

We are unsure if you will receive any benefits by participating in this research study. This research is considered to be minimal risk.

Compensation

You will be compensated $4.75 through Prolific after you complete the study.

Privacy and Confidentiality

We will do our best to keep your records private and confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Certain people may need to see your study records. The only people who will be allowed to see these records are:

- The research team, including the PI and all other research staff,
- The University of South Florida Institutional Review Board (IRB).

It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. If you complete and submit an anonymous survey and later request your data be withdrawn, this may or may not be possible as the researcher may be unable to extract anonymous data from the database.

Contact Information

If you have any questions, concerns, or complaints about this study, call Ms. Jennifer Tran at (813)974-6019 or email at jtgtran@usf.edu. If you have questions about your rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638 or contact the IRB by email RSCH-IRB@usf.edu.

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else to let people know who you are. You can print a copy of this consent form for your records.

Consent to Take Part in Research

By choosing the appropriate button below, I am freely giving my consent to participate in this study. I understand that by proceeding with this survey, I agree to participate in research, and I am 18 years of age or older.

Appendix B: Exemption Determination for Study

EXEMPT DETERMINATION

March 8, 2021

Jennifer Tran
4202 E. Fowler Avenue
MHC 1110
Tampa, FL 33620

Dear Mrs. Tran:

On 3/6/2021, the IRB reviewed and approved the following protocol:

Application Type:	Initial Study
IRB ID:	STUDY002296
Review Type:	Exempt 3
Title:	Examining the Effects of Storytelling as a Tool for Change
Funding:	None
Protocol:	• Protocol_Version #1_03.05.2021.docx;

The IRB determined that this protocol meets the criteria for exemption from IRB review.

In conducting this protocol, you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Please note, as per USF policy, once the exempt determination is made, the application is closed in BullsIRB. This does not limit your ability to conduct the research. Any proposed or anticipated change to the study design that was previously declared exempt from IRB oversight must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant a modification or new application.

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

Sincerely, Various

Menzel
IRB Research Compliance Administrator

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