


Outer-context determinants on the implementation of school-based interventions for LGBTQ+ adolescents

Implementation Research and Practice
Volume 5: Jan-Dec 2024 1–15
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DOI: 10.1177/26334895241249417
journals.sagepub.com/home/irp



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Abstract

Background

Schools are critical venues for supporting LGBTQ+ youth well-being. Implementing LGBTQ-supportive practices can decrease experiences of stigmatization, discrimination, and victimization that lead to adverse mental health outcomes like anxiety, depression, and suicidality. However, schools are also subject to a wide range of outer-context pressures that may influence their priorities and implementation of LGBTQ-supportive practices. We assessed the role of emergent outer-context determinants in the context of a 5-year cluster randomized controlled trial to study the implementation of LGBTQ-supportive evidence-informed practices (EIPs) in New Mexico high schools.

Method

Using an iterative coding approach, we analyzed qualitative data from annual interviews with school professionals involved in EIP implementation efforts.

Results

The analysis yielded three categories of outer-context determinants that created challenges and opportunities for implementation: (a) social barriers related to heterocentrism, cisgenderism, and religious conservatism; (b) local, state, and national policy and political discourse; and (c) crisis events.

Conclusions

By exploring the implications of outer-context determinants for the uptake of LGBTQ-supportive practices, we demonstrate that these elements are dynamic—not simply reducible to barriers or facilitators—and that assessing outer-context determinants shaping implementation environments is crucial for addressing LGBTQ health equity.

Plain Language Summary: High schools are critical to supporting youth who identify as lesbian, gay, bisexual, transgender, and queer or of other diverse sexualities and gender identities (LGBTQ+). The use of supportive practices in schools can help reduce experiences of stigmatization, discrimination, and victimization that lead to negative mental health outcomes like anxiety, depression, and suicidality. However, schools' ability to implement new practices is heavily influenced by forces stemming from their surrounding communities and broader society. These outer-context factors and their impact on implementation are generally understudied compared to factors considered to be squarely a part of schools. This article examines the role of outer-context factors, such as structurally-based social barriers, policy and political discourse, and crisis events, on the implementation of six evidence-informed practices (EIPs) intended to make schools safer and more supportive of LGBTQ+ youth. We find that while stigma, politics, and crises can undermine

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efforts within schools to improve their support and services, these same factors sometimes create opportunities, including renewed interest or urgency for addressing student needs. This article encourages implementation science researchers and practitioners to think through and plan for the ways that outer-context factors impact schools and other institutional settings, including using adaptable implementation frameworks and multilevel implementation strategies.

Keywords

adolescent health, health equity, implementation science, school health, sexual and gender minority health

Introduction

Schools are critical to supporting the well-being of youth who identify as lesbian, gay, bisexual, transgender, and queer or of other diverse sexualities and gender identities (LGBTQ+; Ancheta et al., 2021). Implementing LGBTQ-supportive interventions in school settings can reduce experiences of stigmatization, discrimination, and victimization that lead to adverse mental health outcomes like anxiety, depression, and suicidality (Johns et al., 2019; Kaczowski et al., 2022). However, local-, state-, and national-level factors impact internal priorities, limiting schools' capacity to implement practices focused on the health of stigmatized populations, referring to people who have experienced labeling, stereotyping, discrimination, and status loss due to social beliefs and practices (Link & Phelan, 2001; National Academies of Sciences et al., 2020).

Implementation science leverages social-ecological perspectives to attend to levels of influence impacting the implementation of new practices. For example, the Exploration, Preparation, Implementation, Sustainment (EPIS) Framework conceptualizes these levels as inner and outer contexts (Aarons et al., 2011). The inner context of schools consists of school policies and practices; leadership; staffing; resources; and student and staff demographics, attitudes, beliefs, and behaviors. The outer context encompasses sociocultural norms and values; laws and regulations; and the broader educational system. Bridging factors facilitate interplay between outer and inner contexts, often represented as interorganizational relationships, memoranda of understanding, and contracts (Lengnick-Hall et al., 2021). For schools, families can also be bridging factors (Lengnick-Hall et al., 2021; Shattuck et al., 2022).

Outer-context factors are understudied in implementation science relative to inner-context factors (Bruns et al., 2019; Escoffery et al., 2023; Lui et al., 2021; Moullin et al., 2019). Recent work highlights challenges in distinguishing the influences of outer- and inner-context factors (Warner et al., 2021). Previous work on outer-context factors mostly emphasizes relatively static or slow-to-change fiscal, policy, and other service environment factors (Lui et al., 2021; McHugh et al., 2020). A systematic review of determinants influencing the sustainment of school-based interventions found that school staff prioritized inner-context factors as highly relevant for

innovations, and the most commonly considered outer-context factors are socio-political and funding environments, and leadership support (Shoesmith et al., 2021). Research on such factors, however, almost exclusively centers on specific health behavior interventions targeting physical activity, obesity prevention, mental health, substance use, sexual health, and violence (Cassar et al., 2019; Herlitz et al., 2020), rather than structural interventions to improve the well-being of stigmatized populations.

Systematically examining the influence of outer-context factors on implementing interventions to enhance LGBTQ+ student well-being can inform future actions to promote long-term returns on efforts to reduce health inequities for stigmatized student populations in schools. Thus, we ask: How do outer-context determinants affect the implementation of LGBTQ-supportive practices in schools? We believe the answer to this question has implications for other school-based innovations, particularly for students with stigmatized identities.

Current Study and Context

We examine the implementation of six EIPs for supporting LGBTQ+ students in high schools in New Mexico, USA. While evidence-based practices (EBPs) foreground the explicit use of evidence, EIPs draw on both research evidence and professional expertise (Kumah et al., 2022). The six focal EIPs include creating safe spaces (Hatzenbuehler et al., 2014), staff professional development (Greytak et al., 2013), inclusive health education curricula (Baams et al., 2017), prohibiting LGBTQ-related bullying (Hatzenbuehler & Keyes, 2013), and providing access to LGBTQ-affirmative health, social, and psychological services (Brener et al., 2017; Ethier et al., 2018; Johns et al., 2019; Painter et al., 2018; Table 1). These LGBTQ-supportive practices are increasingly prevalent in over half of states (Shattuck et al., 2022), including in New Mexico, which has increased from 5% of schools implementing all six EIPs in 2010 to nearly 21% in 2018 (Brener et al., 2011, 2019). However, despite the benefits of these six EIPs, such as improved academic and health outcomes and feelings of school belonging, not all schools fully implement them (Kaczowski et al., 2022). Challenges include a lack of resources (e.g., staffing), socially conservative community pressure, beliefs that

Table 1*Description of School-Based LGBTQ-Supportive Practices*

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1. Identify “safe spaces” such as a counselor’s office, designated classroom, or student organization where LGBTQ+ youth can receive support from administrators, teachers, other school staff, or other students.
 2. Prohibit harassment and bullying based on a student’s perceived or actual sexual orientation or gender expression.
 3. Facilitate access to providers not on school property who have experience delivering health services, including human immunodeficiency virus (HIV)/sexually transmitted infection (STI) testing, counseling, and reproductive healthcare, to LGBTQ+ youth.
 4. Facilitate access to providers not on school property who have experience in providing social and psychological services to LGBTQ+ youth.
 5. Encourage staff members to attend professional development on safe and supportive school environments for all students, regardless of sexual orientation, gender identity, or gender expression.
 6. Provide health education curricula or supplemental materials, that is, HIV, STI, or pregnancy prevention information relevant, to LGBTQ+ youth (e.g., curricula or materials that use inclusive language or terminology).
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current services are adequate or LGBTQ+ students do not need specialized support, and homophobic and transphobic bias (Gower et al., 2018; Green et al., 2018; Ioverno & Russell, 2021; Johns et al., 2019; Kaczowski et al., 2022; Kull et al., 2016; Poteat et al., 2013; Saewyc et al., 2014; Shattuck et al., 2020; Shattuck et al., 2022; Shattuck et al., 2022). Much work still must be done to ensure all schools implement EIPs effectively, including addressing factors limiting implementation.

The current qualitative analysis is part of a larger five-year cluster randomized controlled trial leveraging EPIS and the Dynamic Adaptation Process (Aarons et al., 2012) to support schools implementing the EIPs, called “Reducing LGBTQ+ Adolescent Suicide (RLAS)”. The Dynamic Adaptation Process operationalizes the four EPIS phases, moving sites through reviewing data and solutions, assembling an implementation resource team (IRT), making context-specific adaptations, action planning, and implementing and sustaining innovations. Forty-two schools were randomized into implementation and delayed implementation conditions. Implementation condition schools assembled IRTs of school health professionals, teachers, administrators, and other community members to carry out the EIPs with three years of implementation support (e.g., coaching). Delayed implementation condition schools received 1 year of implementation support at the study’s close. Details on the study design are published elsewhere (Willging et al., 2016).

This study occurred in New Mexico, a state ranking 46th in median household income (U.S. Census Bureau, 2022a), with the third-largest percentage of residents below the poverty level (18.4%; U.S. Census Bureau, 2022b). Approximately 62% of students are Hispanic, 23% are White, and 10% are American Indian or Alaskan Native (New Mexico Public Education Department, 2023). The state has historically been supportive of LGBTQ+ people, including defining LGBTQ+ people as a protected class and banning insurance exclusions for transgender people (Human Rights Campaign, 2022). Although LGBTQ+ youth comprise approximately

15% of the high school-aged population, they face significant health disparities common for LGBTQ+ people across the nation, including higher rates of suicide, depression, self-injury, substance use, and riskier sexual behaviors (New Mexico Department of Health, 2019).

This analysis builds on our previous work to identify and address initial implementation barriers for RLAS (Willging et al., 2016; Green et al., 2018). During the preparation phase, readiness assessments revealed determinants that school staff anticipated impacting implementation (Green et al., 2018). Outer-context factors included sociopolitical and community environments, which also implicate resource availability. Inner-context factors included school policies and practices, staff knowledge of LGBTQ+ experiences, training deficits, neutrality discourses (i.e., stated desires to treat everyone the same), student attitudes and support, nonformalized safe spaces, and other pragmatic considerations.

Consistent with other school-based implementation research, school staff initially concerned themselves most with inner-context factors (Shoemith et al., 2021). Yet, underlying structural and cultural factors traditionally conceptualized as part of the outer context influenced inner-context factors. For example, neutral discourses were often used to excuse schools from addressing LGBTQ+ experiences, while foregrounding desires to support “all students” (Kuhlemeier et al., 2021). However, this category of “all students” is based on assumptions of heterosexuality (opposite-sex attraction) and cisgender identity (gender identity that conforms with the sex assigned at birth; see Appendix A for additional definitions; Shattuck et al., 2022). In practice, these assumptions lead to noninclusive bullying policies or the absence of gender-neutral restrooms. While these aspects may not appear overtly biased, they are grounded in the same erasure of LGBTQ+ identity as efforts like recent “Don’t Say Gay” bills that actively prohibit discussion of LGBTQ+ experiences in public schools. Whether intentional or not, ignoring the existence and needs of LGBTQ+ students contributes to lasting psychological

implications and the reinforcement of health inequities (Shattuck et al., 2022; Stephens, 2022). Implementation science sometimes has difficulty articulating these subtleties between larger structural and cultural forces to the inner context.

Extending from this previous work, we seek to examine the influence of outer-context factors on attempts to implement the six focal EIPs. What were the major outer-context factors influencing implementation efforts?

Materials and Method

The present analysis draws data from semi-structured qualitative individual and small group interviews conducted over five years at 11 urban and eight rural schools in the implementation condition. We excluded schools in the delayed condition from this analysis because they did not participate in an implementation process until the trial's final year, thus impeding our ability to describe interactions between outer-context factors and implementation efforts. In all, we undertook 208 individual and 62 small-group interviews between Fall 2016 and Spring 2021. These interviews comprised all the qualitative data for implementation sites, including readiness assessment data. The Pacific Institute for Research and Evaluation Institutional Review Board approved this study, and written informed consent was obtained from all participants.

The study team includes researchers of diverse sexual orientations, gender identities, and racial and ethnic backgrounds. This article's authors are majority queer-identified and include three sociocultural anthropologists and one pediatrician. Subscribing to a constructivist perspective and using grounded theory approaches, all authors acknowledge the role of multiple, overlapping, and competing perspectives of reality and value personal knowledge and experience in research processes (Charmaz, 2014).

We maintained auditable processes for practicing reflexivity throughout data collection, analysis, and confirmation of findings including biweekly periodic reflections—short structured conversations between coaches and two to three rotating members of the research team to discuss implementation progress (Finley et al., 2018)—and regular biweekly internal team meetings. Both types of interactions afforded time to discuss shifts in the social landscape, responses to participant accounts, and emergent patterns. Through these discussions and consultation with our Community Academic Partnership (CAP) consisting of local, state, and national school and adolescent health experts, we developed a list of potentially impactful factors that incorporated major social, political, and economic events.

Three researchers, including the first and third authors, used NVivo (QSR International, 2018) qualitative analysis software to apply an iterative analytic process. We first used open-coding techniques bounded by sensitizing concepts from EPIS. Open coding involves reading through qualitative data to locate categories of interest (Emerson

et al., 2011). We drew sensitizing concepts—ideas attuning researchers to particular areas of inquiry—from the outer-context constructs highlighted in EPIS, such as state-level policy, thus narrowing open coding to center on outer-context factors (Patton, 2014). This process more fully identified emergent outer-context factors, adding to the list generated by the study team and CAP. We then used the 60 items on the larger list as search terms to identify transcript text. Examples of search terms included COVID-19, mask, social distance, politics, religion, resources, lockdown, and racism (see Appendix B for all search terms). Focused coding—a more fine-grained process of coding helpful for identifying interconnections among categories—investigated the presence, context, and impact of the outer-context factors identified through the open-coding process (Emerson et al., 2011).

We coded data across EPIS phases to assess whether patterns of outer-context factors were identifiable among and between schools and in what order particular phenomena occurred. Year 1 (2016/2017 academic year) was identified as the preparation phase and years 2–4 (2017/2018–2019/2020) as the implementation phase. Year 5 (2020/2021) represented a transition toward EIP sustainment.

Researchers sought feedback from implementation coaches and the CAP, as both parties possessed extensive knowledge of site-specific, local, state, and national phenomena. Triangulation of interview data across multiple participant types and ongoing coach and CAP consultations help assure the credibility and trustworthiness of the findings (Halladay et al., 2017; Patton, 2014).

Results

Outer-context determinants fell into three main categories: structurally-based social barriers, policy and political discourse, and crisis events. Table 2 reviews major events within each category.

Structurally-based social barriers

Heterosexism and cisgenderism's influence on schools and communities was evident from the study's start. Participants in the first year pointed out how LGBTQ+ people do not fit well within local, socially constructed gender hierarchies. Beliefs that heterosexuality is "normal" and there are only two acceptable genders dominated discussions, with some participants accepting such beliefs at face value and others challenging them. These attitudes influenced openness to implement the EIPs in rural and urban areas. In both settings, participants invoked neutrality discourses of "we treat everyone the same" to signify they do not discriminate, and nor do their schools. These beliefs held sway and reduced motivation among some school professionals to support the EIPs. Interviews also uncovered a pervasive lack of education among school professionals, contributing to LGBTQ+ students' invisibility and low

Table 2
Outer-Context Events Referenced During Data Collection

EPIS Phase	Date	Description	Locality
Exploration/Preparation (2016–2017)	5/16/2016	An updated nondiscrimination policy for students based on gender identity and expression is adopted in New Mexico's largest school district	NM
	6/12/2016	The Pulse nightclub shooting in Orlando, Florida leaves 49 dead	US
	6/30/2016	The Obama administration ends the ban on transgender military service members	US
	11/8/2016	Donald Trump is elected U.S. President	US
	1/20/2017	Donald Trump is inaugurated as U.S. President	US
	1/21/2017	Half a million people protest for gender equality in the Women's March on Washington, DC	US
	4/7/2017	The State of New Mexico prohibits youth conversion therapy and its advertisement in the 2017 Conversion Therapy Ban Act	NM
	7/26/2017	The Trump administration reinstates the ban on transgender military service members	US
	8/12/2017	The Unite the Right Rally in Charlottesville, Virginia takes place. A vehicle driven into a group of counter-protestors leaves one dead and 19 injured. President Trump does not fully condemn White nationalist actions.	US
	Implementation (2017–2020)	10/1/2017	A mass shooting in Las Vegas, Nevada leaves 59 dead and over 500 injured
10/31/ 2017		A terrorist attack in New York City leaves 26 dead and 19 injured	US
11/5/2017		A shooting at a church in Sutherland Springs, Texas leaves 26 dead and 19 injured	US
12/17/ 2017		A shooting at a local high school leaves two students and the shooter dead	NM
2/14/2018		A shooting at Stoneman Douglas High School in Parkland, Florida, leaves 17 dead and 17 injured	US
3/24/2018		Tens of thousands of people protest nationwide for stricter gun control in the March for Our Lives	US
10/7/2018		Conservative Brett Kavanaugh is confirmed to Supreme Court	US
10/11/ 2018		A shooting at a Pittsburgh, Pennsylvania synagogue leaves 11 dead and six injured	US
11/9/2018		A shooting in a California bar leaves 13 dead, including the shooter, and 15 injured	US
2/14/2019		A shooting threat at a local high school results in evacuation, but no injuries	NM
3/28/2019		The New Mexico Vital Records Modernization Act establishes a process for correcting sex designations on birth certificates, removes the surgery requirement, and allows for an "X" gender marker	NM
3/28/2019		The New Mexico Gender Neutral Bathroom Signs Act requires all single-occupancy restrooms in a public place to have gender-neutral signage	NM
4/3/2019		The New Mexico Safe Schools for All Students Act outlines specific requirements for the adoption of a comprehensive bullying prevention policy	NM
4/12/2019		A local school district holds an LGBTQ+ educational event for community, counselors, social workers, and parents	NM
8/3/2019		A shooting at a Walmart in El Paso, Texas, leaves 23 dead and 23 injured	US
10/2/2019		A series of student suicides in New Mexico sparks student advocacy at a local school district board meeting	NM
12/18/ 2019		President Trump is impeached by House of Representatives	US
2/19/2020		A student suicide reinvigorates community advocacy at a local school district board meeting, resulting in trainings for community members and school staff	NM
3/11/2020		The first COVID-19 cases in New Mexico are confirmed and a public health emergency is declared	NM
3/12/2020		Mass gatherings of over 100 people in one space are prohibited throughout New Mexico	NM
3/13/2020	New Mexico public schools close between March 16 and April 6	NM	
3/26/2020	New Mexico public schools are slated to remain closed until the end of the 2019–2020 school year	NM	
4/14/2020	The State of New Mexico launches "New Mexico Connect," a behavioral health support smartphone application	NM	

(Continued)

Table 2
(Continued)

EPIS Phase	Date	Description	Locality
Sustainment (2020–2021)	5/25/2020	The death of George Floyd sparks protests against racism, inequality, and police brutality across the nation and world	US
	6/23/2020	The New Mexico Public Education Department plans to start 2020–2021 school year, both virtually and in-person	NM
	7/23/2020	New Mexico schools shift to fully remote learning until at least September 8 due to changing pandemic conditions	NM
	8/26/2020	A letter from the American Civil Liberties Union outlines legal justification behind why it is illegal to disclose a student's gender identity or sexual orientation, including to parents or school administrators	US
	11/7/2020	Joseph Biden is elected U.S. President	US
	12/11/2020	The Pfizer-BioNTech COVID-19 vaccine receives emergency use authorization	US
	1/6/2021	Armed protestors storm the U.S. Capitol	US
	1/13/2021	President Trump is impeached a second time	US
	1/20/2021	Joseph Biden is inaugurated as U.S. President	US
	1/20/2021	A federal executive order preventing and combating discrimination on the basis of gender identity or sexual orientation is issued	US
	1/25/2021	The Biden administration repeals the ban on transgender military service members	US
	1/2021-4/2021	Schools across New Mexico begin hybrid learning based on local COVID-19 conditions	NM
	2/22/2021	A local school district adopts a policy allowing students to use their preferred names	NM
	3/8/2021	The New Mexico Public Education Department announces that schools will return to full in-person learning by April 5 (a little under one month)	NM
	3/29/2021	Rachel Levine, Assistant Secretary for Health, becomes the first openly transgender government official to hold an office that requires U.S. Senate confirmation	US
	3/29/2021	A local high school organizes a gender-neutral prom and homecoming court at the request of students	NM
	4/5/2021	Deadline for returning to in-person schooling	NM
	4/18/2021	A local school district considers a ban on transgender athletes	NM
	5/19/2021	A local school district board passes a resolution to support transgender students	NM
	6/22/2021	The American Civil Liberties Union issues a letter against bans on transgender athletes and the local school district ultimately does not discuss or adopt such a ban	NM
8/14/2021	A shooting at a local middle school leaves one student dead and the shooter in custody	NM	
8/16/2021	Students in local high schools protest dress code as unfair to female students	NM	
8/27/2021	A local school district updates student suicide protocols to include clearer guidelines for staff professional development and prevention programming.	NM	
9/22/2021	A local high school is sued for discrimination toward same-sex couples	NM	

awareness of needs. However, over time, participants sought resources to address knowledge gaps.

Many IRT members struggled to reconcile their religious identities with their efforts to improve support for LGBTQ+ students. A counselor and a teacher at a smaller rural school reflected on the toll of being associated with LGBTQ-supportive programming.

Participant 1: I just wanted to throw this out there because this is why I was leery of joining whenever (name) started the program, is because I'm a Christian, so I was worried about

.... I'm sorry. I get really emotional ... how people in the community or even certain family members would view me. The way I see it, as (name) said, we're advocates for students. Whenever we walk in that door, we are here for them. Sorry. I feel like that would have been a barrier that I had to face. I'm okay with that. It's okay. I'm proud to be a Christian representing this group.

Participant 2: ... I also am a Christian. I'll be honest, during the professional development meeting, I kind of was, I had my sister. She's a librarian here. Whenever they asked the team [IRT] to stand up, I stood up. I kind of glanced, her

body language was kind of I just felt like she was kind of like, "Why are you a part of that team?" It made me feel uncomfortable and it made me question.

This tearful exchange exemplified the social realities of participants that deterred their colleagues from getting involved in changing school climates to better support LGBTQ+ students.

During the early implementation phase, school administrators and IRT members described feelings of ambivalence, pessimism, and fear of "backlash," and shared examples in which their efforts to implement the practices met community opposition. An administrator at a small urban school shared a sarcastic comment by a parent expressing disagreement with efforts to be affirming of LGBTQ+ students: "We have calls and complaints about anything perceived as LGBTQ+ supportive. What I heard is a person called and said, 'Why don't you put out the Rainbow Flag instead of the American Flag.'" Throughout RLAS, we observed ongoing engagement with coaches and technical experts, staff training on LGBTQ+ experiences, and the development of implementation leaders committed to the EIPs, knowledgeable and willing to troubleshoot barriers. These factors were crucial in overcoming apprehension about change within the larger community.

Policy and Political Discourse

Policy and political discourse at multiple levels affected school climates and implementation.

National Political Discourse. When asked about the national climate, participants linked political leaders' publicly documented "inappropriate" behavior, the lack of accountability in social media, and perceived increases in student and staff incivility. When asked about LGBTQ+ students feeling "less safe" and a reported rise in bullying and harassment in their school, a teacher at a large urban school explained,

A lot of our students now have more inappropriate behaviors because they see it Our President does that type [of] thing We were taught, 'If you don't have anything nice to say, don't say anything at all.' That went out the door ... because everybody can [say], 'Well that's my opinion, and I can say what I want, I don't care if it hurts everybody....' I think that has a lot to do with our government and our social media.

This explanation exemplified similar statements participants made throughout the implementation phase into the sustainment phase.

State Policy and Legislation. State policy affected EIP implementation. Before RLAS started, the governor of New Mexico gutted the state's behavioral health system in 2013 through a policy closing the major agencies specializing in services for young people and their families

(Willging et al., 2015; Willging & Trott, 2017). The aftermath of this policy change posed challenges for the EIP focused on facilitating access to affirming off-campus social and psychological service providers. For all years of data collection, participants referenced the shutdown's ongoing damage, which exacerbated health resource scarcity, particularly in rural communities. An administrator at a small rural school highlighted the valuable role their school-based health center played in supporting students, but indicated a lack of other easily accessible resources elsewhere: "The nearest hospital to us is about 45 min away and there's probably more resources in that area than here." One way IRTs dealt with this situation was to collaborate with our coaches to bring LGBTQ+ training to the few local providers, including in federally qualified health centers forced to pick up the slack.

The sociopolitical context shifted under the next gubernatorial administration. Affirmative legislation was passed banning conversion therapy (Conversion Therapy Ban, 2017), making it easier for gender-diverse people to correct sex designations on birth certificates (Vital Records Modernization Act, 2019), and requiring that all public single-stall restrooms be gender-neutral (Gender-Free Bathroom Signs Act, 2019). An antibullying law inclusive of LGBTQ+ identity was also passed (Safe Schools for All Students Act, 2019). Additionally, the governor issued an executive order for collecting LGBTQ+ identity data by all state agencies (Executive Order for Sexual Orientation and Gender Identity Data Collection, 2021) to advance health equity.

Several IRTs sought to enact training on and dissemination of these new policies, drawing from them to scaffold EIP implementation in schools. Some participants saw local and state-level action as critical to protecting LGBTQ+ youth, but insufficient depending on national politics. A Genders and Sexualities Alliance (GSA; clubs where LGBTQ+ students and their allies can access social support) sponsor at an urban school explained that despite supportive schools and state government, students and staff still felt uneasy about the safety of LGBTQ+ students: "Well, they (kids) feel threatened at the national level. They feel like they don't really understand, and you know, truthfully, I don't either. It's harder than just, 'Hey, yeah, but will the national conservative movement undo some of our state protections?'"

Conservatism in School Decision-Making. In all schools, decision-making power was consolidated at the top of district hierarchies and often intersected with political ideologies of conservatism, which affected school communities. One teacher recounted discussing with students how this hierarchy operates:

Who are the important people in the school? The students. And then the teachers and then the principals and then the super and then the board. Okay? Let's change our ranking

criteria now to decision-making. Who makes all the decisions? The board, the super, the principal, the teachers, the students.

A counselor described how the lack of decision-making authority invested in educators hampered integrating LGBTQ+ concerns into health education curricula at a large urban high school. Noting how limited her school's health education was, she explained, "So, the idea of like, 'Oh, make your sex ed inclusive.' I'm like, 'What sex ed?' Because this is a very conservative district..."

For participants, political conservatism translated into the powerful discourse of "academics is what we are here for." For example, many rural schools hired staff from nearby Texas, characterized as a conservative bastion. Texan staff were thusly viewed as more conservative, "old school," and less concerned with social-emotional learning. Speaking of an administrator's lack of support for LGBTQ+ programming, an administrator at a rural school explained:

I feel some barriers there. This is a (person) that comes out from Texas. Things are viewed a little differently in Texas than in New Mexico. Of course, we're in a school. Academics is what we're here for. But if you socially and emotionally are not there, you're not going to get through school.

In smaller towns, kinship relations maintained the influence of people ascribing to such ideologies in positions of power. One school nurse observed, "It's a political town. Everybody is tied to somebody's uncle on the school board." These connections led to hesitance in making decisions that upset the status quo within schools, leading to fear of disciplining some students for anti-LGBTQ+ behaviors because of the potential for familial conflict.

Crisis Events

Over the study's course (2016–2021), major crisis events shifted schools' priorities in ways necessary for student safety and well-being, but sometimes undermined implementation efforts. School staff often conceptualized the EIPs as peripheral to more immediate needs. These events included increased gun violence, student suicides, and the COVID-19 pandemic.

Gun Violence. Especially between 2016 and 2018, school safety emerged as a chief concern for staff professional development and student programming in the wake of multiple high-profile mass shootings, including at Florida's Pulse nightclub (June 2016) and Stoneman Douglas High School (February 2018), and at New Mexico's Aztec High School (December 2017). The student-led national "March for Our Lives" protests (March 2018) advocated for stricter gun control. In this heated atmosphere, participants reported that active shooter drills and training "overshadowed" all other

school safety and well-being programming. Echoing statements from others, a nurse explained, "Safety is a real concern right now. We're doing lots of training. Just like our state conference is focusing on active shooter (drills). Can you believe that? I never would've thought that ten years ago."

Student Suicidality. Student suicides, while unfortunate and devastating, often renewed participants' commitment to providing suicide prevention training for staff, making administrators more open to scheduling time for those efforts. In one school, a student suicide prompted its IRT to request designated time during a mandatory staff meeting for evidence-based suicide prevention training. In another school, multiple suicides led students to demand at a school board meeting that district leadership does more to prevent further deaths. This effort led to an increased commitment to support student mental health, which aided EIP implementation. In a third school, the death of a prominent student athlete sparked similar actions to address student suicidality.

COVID-19 Pandemic. With the pandemic arriving in New Mexico in March 2020, public schools suspended all in-person learning for several weeks, transitioning to virtual learning, without a full return to in-person learning until April 2021. That dramatic shift disrupted schools' academic functions and social and health services provision. Participants struggled to perform their regular work, let alone implement new practices in their now-virtual schools.

However, IRTs were prompted to undertake efforts to provide school-based support due to growing fears about student mental health, isolation at home, dangers facing LGBTQ+ youth (e.g., violent homes, identity concealment, maladaptive coping), and loss of family and community members. IRTs creatively pondered how to make safe spaces available to students, including hosting virtual GSAs with varying success ranging from those with committed and engaged students to some IRTs holding open virtual meeting times regardless of attendance.

Participants navigated communication challenges during the pandemic, utilizing electronic connectivity to support LGBTQ+ students. Some strategies included incorporating mental health hotlines and other mental health resources into school websites and virtual learning platforms; using email and instant messages; adding LGBTQ-affirming symbols to email signatures and video backgrounds; and holding virtual "drop-in" hours. Several participants enhanced resource lists with information on LGBTQ+ affirmative health providers; notable because most IRTs had limited success in previously creating and disseminating such lists. The pandemic prompted new interest in relaying information to students not physically present in a school and without the usual access to information gatekeepers like school nurses, counselors, or social workers.

Discussion

Our examination of outer-context factors impacting the implementation of six school-based LGBTQ-supportive EIPs yielded three broad categories: structurally-based social barriers, policy and political discourse, and crisis events. While outer-context factors are not simply reducible to barriers and facilitators, this analysis demonstrates it is crucial to consider the outer context in implementation because (a) changes in the outer context directly influence inner-context factors; (b) these influences do not always manifest through formalized bridging factors (e.g., contracts), thus making their influence difficult to recognize; and (c) changes in the outer context can impact the focal health problem of interventions. Our study illustrates this third phenomenon (e.g., the growing behavioral health crisis during the pandemic) exacerbating or ameliorating negative health outcomes. Therefore, tracking outer-context changes when implementing new practices to improve health is critical for successful implementation, especially when practices are aimed at improving health equity for stigmatized populations.

Outer-Context Influence on Inner-Context Dynamics

This study shows that cultural and structural forces, often considered external to organizations, affect inner-context factors such as motivation for change (Shattuck et al., 2022). Heteronormative ideas about gender and sexuality, prevalent in schools and communities, inhibit supportive action (Hatzenbuehler, 2011, 2014; Hatzenbuehler et al., 2013; Kuhlemeier et al., 2021). Participants shared fears about publicly acknowledging their LGBTQ+ allyship. The strong grip that heteronormative views about gender and sexuality, frequently communicated through religious terms, had on members of conservative communities made allyship new, strange, alienating, and demotivating for some school staff (Green et al., 2018). It is important to note that even given the racial, ethnic, and cultural diversity of New Mexico, these views were common across all communities. Although not emphasized by our participants, other research contrastingly describes how cultural and religious traditions and kin networks in these communities can influence LGBTQ+ health positively through strong social connections and pragmatic support (Willging et al., 2006).

Policy and political discourse emerged as a second set of outer-context factors impacting implementation. The policy environment is often recognized as modifiable, leading scholars to focus on policy-level interventions and implementation strategies (Bruns et al., 2019; Crable et al., 2022; Harris et al., 2012). When considering policy, we must attune ourselves to both obvious policy arenas, like school policy, and related areas, like broader health policy, that can impact innovations. For example, state policy tremendously influenced EIPs concerning healthcare access. Notably, past gubernatorial actions dismantled the

behavioral health system in New Mexico, an already medically underserved state (Willging et al., 2015; Willging & Trott, 2017). Although IRTs wanted to facilitate access to LGBTQ-supportive providers, inadequate service availability attributable to these actions hampered efforts. While school policy influenced school-facilitated access, such as defining who could make referrals and to which organizations, larger-order state health policy shaped whether referrals resulted in care. However, it is rarely realistic to expect school-based professionals to enact state policy change, thus requiring intervention in the outer context.

School policies regarding bullying and harassment directly result from state policy. Before this passage of the Safe Schools for All Students Act, for instance, it was at school districts' discretion to address sexual orientation or gender identity in discrimination, bullying, and harassment policies. LGBTQ+ inclusive policies and training on those policies can increase staff self-efficacy and increase the likelihood of intervention (Waasdorp et al., 2021). At the same time, state-level commitments to addressing LGBTQ+ well-being may bolster willingness within schools to undertake supportive action.

Outer-context factors, such as national political discourse, impacted schools' inner contexts by influencing student and staff behaviors, attitudes, and beliefs. Researchers have established a relationship between the political polarization of the country and increased prevalence of bullying and harassment among students and specifically toward LGBTQ+ youth (Huang & Cornell, 2019). National politics also influence staff members' attitudes and behaviors regarding gender and sexuality and their willingness to intervene in homophobic and transphobic bullying (Hobaica et al., 2021).

Findings regarding crisis events illustrate how outer-context conditions and priorities can dramatically affect schools. For example, while the implementation of active shooter drills in schools did not necessarily change how schools functioned, the threat of immediate harm provided the rationale for deprioritizing and addressing marginalized students' needs. In contrast, the pandemic fundamentally changed schools' inner contexts. Remote and hybrid learning, safety protocols, and uncertainty regarding in-person learning made it challenging to attend to students' needs. However, some schools assigned to the implementation condition were able to maintain and implement changes to support LGBTQ+ students despite the additional challenges. Increased attention to LGBTQ+ student needs stemming from crises in the outer context drove these shifts. The heightened sense of urgency that the challenging pandemic and student suicides brought likely bolstered school-based efforts to implement EIPs.

Bridging factors

In EPIS, outer and inner contexts interact via bridging factors (Moullin et al., 2019) organized into three broad

categories of relational ties (e.g., partnerships between organizations), formal arrangements (e.g., contracts), and processes (e.g., data sharing; Lengnick-Hall et al., 2021, 2020). However, our findings illustrate that while some bridging factors are obvious, like those conceptualized in previous work (e.g., policies), outer contexts can influence inner contexts in more subtle ways. Outer-context structural-based barriers like heterocentrism and cisgenderism influence inner contexts through families or other close community ties (Shattuck et al., 2022). The national political discourse can influence individual-level behaviors, attitudes, and beliefs that shape the inner context. The relationship between outer- and inner-context variables is observable within the dynamics of the inner context (e.g., not wanting to be a part of an IRT or increasing incivility among students), but the connection with outer-context forces comes into view through long-term qualitative data collection. To fully appreciate and intervene in the influence of the outer context on the inner context, researchers must systematically and thoughtfully attend to the linkages across both and through what mechanism(s) that influence operates, recognizing that bridging factors will not always take the form of concrete or measurable factors, such as a contract or shared process. Bridging factors may be abstract and ideological but potent in how they affect implementation processes (Shattuck et al., 2022).

Outer Context and the Causes and Solutions of Health Disparities

Outer contexts exert a demonstrable influence on facilitators and barriers in the inner context (Escoffery et al., 2023; Nilsen & Bernhardsson, 2019), either through direct overt action or more subtle connections. They are also important factors in producing health outcomes. When supporting equity-oriented interventions, researchers and implementers must consider the wider landscape of social determinants of health the outer context generates. For example, protections at the school, state, and national levels intersect to improve health outcomes for LGBTQ+ populations, including reduced suicidality, substance use, and experiences of bullying and violence (Gorse, 2022; Kaczkowski et al., 2022; Saewyc et al., 2020; Watson et al., 2021). For RLAS, national and state legislation colored the background within which school staff worked. Unsupportive policies or outspoken political opponents of LGBTQ+ equality can undermine health outcomes for LGBTQ+ youth. Participants connected students' negative experiences in schools with the influence of national political polarization. They acknowledged students' interpretations of anti-LGBTQ+ policies as threatening their safety and acceptance. While still to be shown in New Mexico-specific data, shifts in national and state leadership and supportive policies, such as

passing a conversion therapy ban, reflect measures to make communities safer for LGBTQ+ people. Furthermore, efforts involving sexual orientation and gender identity data collection are expected to impact LGBTQ+ youth health positively. In fact, in January of 2023, the Biden-Harris administration released the first-ever federal evidence agenda on LGBTQ+ equity that included collecting and strategically using sexual orientation and gender identity data as a key component (National Science and Technology Council, 2023).

The pandemic is a prime example of how outer-context factors can impact the implementation of health equity interventions and the target health problem. The pandemic dramatically changed how schools provided students with educational, health, and social support. At the same time, the disconnection from those supports, isolation of students at home, and potentially unsafe and unsupportive home environments fueled fears about increased mental and behavioral health challenges for youth, particularly for LGBTQ+ youth (Chadi et al., 2022; Fish et al., 2020; Henderson et al., 2020; Meherali et al., 2021; Nearchou et al., 2020; Ormiston & Williams, 2022; O'Shea et al., 2021). Within the context of the pandemic, outer-context factors (e.g., public health crisis measures, home environments, rural community settings) shifted the public health problem of LGBTQ+ youth suicide while at the same time posing new implementation barriers. This example accentuates the importance of the outer context for both the production of health disparities and the efforts attempting to address those disparities.

Limitations

Our analysis has two main limitations. First, the study was conducted in a single state with schools that self-selected to implement support for LGBTQ+ populations. The limited geographic scope and the possible selection bias toward LGBTQ+-affirming schools may have influenced the results. Second, we are unable to compare our findings to what happens in similar sites implementing EIPs in the absence of these outer-context factors.

Conclusion

Our analysis highlights the shifting dynamics of outer contexts and their subtle and overt connection to inner-context factors. Outer contexts can change as much and as rapidly as inner contexts. Implementing new practices is a recursive process, requiring concern for systemic, larger-order processes when designing implementation. Many implementation models, including EPIS and the Consolidated Framework for Implementation Research, draw our attention to the outer context and call for revisiting prior activities like assessments to adjust to changing conditions (Aarons et al., 2011; Damschroder et al., 2022; Domlyn et al., 2021). This iterative process must continually

reevaluate the outer context and its impact on inner-context implementation. Research must account for how changes in the outer context influence health disparities and, accordingly, how we measure intervention outcomes and thus proceed with implementation, adaptations to EIPs and other innovations, and handle tailoring to meet the new context.

Longitudinal qualitative data collection allows for assessing, countering, and leveraging outer-context factors. Our data collection approach demonstrates the value of sustained engagement with implementation sites over time and the attention paid by researchers and coaches to emergent contextual factors. Sites pivoted and adapted to changing circumstances because robust data collection enabled implementation guidance to pivot and adapt.

The outer context's influence on health equity necessitates crafting implementation strategies that extend beyond the inner context. If the outer context imposes constraints on implementation (as is the case for stigmatized populations), we must design interventions and implementations to buffer or overturn the potentially disruptive impact of the outer context.

Acknowledgments

We thank Sonnie Davies, Evelyn Byrd, and Bonnie Richard for their valuable contributions to data collection, particularly compiling the outer-context events, and for help formatting this article. We would also like to thank the members of our Community Academic Partnership and all of our participating schools for their commitment to SGM health equity.

Data Availability Statement

Data are available upon reasonable request to the principal investigators (CW and MR).

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The Eunice Kennedy Shriver National Institute of Child Health and Human Development (R01HD83399) funded this research.

Supplemental Material

Supplemental material for this article is available online.

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