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Knowledge and dispositions of caring professionals in school settings regarding trans, gender diverse and non-binary students: A scoping review of empirical research

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ABSTRACT

Background and Aim: This scoping review investigates the knowledge and dispositions of caring professionals in school settings regarding TGN students. Current literature highlight how trans, gender diverse and non-binary (TGN) students' self-reported wellbeing and feelings toward school climate are affected by the perceived attitudes and behaviors of caring professionals in school settings, however the research synthesizing the existing research is limiting. This scoping review brings together existing empirical literature identifying what is known about the knowledge and dispositions of caring professionals in school settings regarding TGN students.

Methods: In accordance with the JBI manual for evidence synthesis, this review utilized Arksey and O'Malley's five-stage methodological framework, and followed the PRISMA-ScR checklist and flowchart. Four electronic databases were used, with literature searches conduced on August 6, 2023. Included studies were assessed against predetermined inclusion/exclusion criteria, with included empirical studies written in English, no date or geographical limitation, online full-text availability, peer-reviewed, and relevant to the research question.

Results: 17 studies were included for final synthesis with nine being cross-sectional studies, six using qualitative methodologies, and two incorporating a mixed methods approach. The final synthesis comprised three themes exploring (1) Knowledge and confidence; (2) Attitudes and comfort; and (3) Competencies, capabilities and/or preparedness of caring school professionals toward TGN students. Findings highlight that caring school professionals generally hold positive attitudes toward TGN youth; however, they require further education and development to better support TGN students from a knowledge, confidence, competence, capability and preparedness perspective.

Conclusions: Findings from this study demonstrate the need for caring school professionals to receive further education regarding TGN knowledge and inclusive practices. Future research needs to comprehensively explore the training caring school professionals receive part of their initial and postgraduate training, including professional development, and through qualitative methodologies explore the multivariable relationships of the developed themes.

Introduction

Within schooling environments, research shows that lesbian, gay, bisexual, transgender, queer/questioning, intersex, asexual, and other (LGBTQIA+) youth are more likely to experience minority stresses (including abuse, discrimination, and physical harassment), when compared to their heterosexual, cisgendered and endosex peers (Brömdal et al., 2021; Coleman et al., 2022; Day et al., 2020; Hill et al., 2021). In more recent years, research has begun to focus on the specific educational experiences of trans, gender diverse and non-binary (hereon TGN) youth, documenting that they are more likely to encounter negative experiences compared to cisgender and LGBQ peers (Day & Brömdal, 2024; Jones et al., 2016; Manley et al., 2024; Riggs & Bartholomaeus, 2015).

Population-based studies from around the world estimate that 2–3% of young people identify as TGN (Strauss et al., 2021; Zhang et al., 2020), which is an increase from previous population estimates of 0.5–1.2% (Telfer et al., 2015; Winter et al., 2016). Parallel to this, the World Professional Association for Transgender Health (WPATH) promotes the highest standard of care for TGN individuals through their Stands of Care (SOC), most recently SOC-8 (Coleman et al., 2022). WPATH recognizes that the health and wellbeing of TGN people not only rely on clinical care, but also social and political climates that ensure, equality, full rights of citizenship and "social tolerance" for all (Coleman et al., 2022). This, in turn, indicates the significant need for inclusive school practices and policies, including the importance of having educational staff who recognize, affirm, and cater for this vulnerable cohort of students (Coleman et al., 2022; Riggs & Bartholomaeus, 2015).

Personal and educational issues experienced by TGN students

In the modern Western world, TGN identities are often viewed as a minority as cisnormativity reinforces biased and conservative gender identity beliefs, fostering educational climates that can be discriminative and hostile toward TGN students (Day & Brömdal, 2024; McBride, 2021; Miller et al., 2018; Schnarrs et al., 2019). Research suggests that due to cisnormativity and cisgenderism, TGN youth often experience microaggressions (e.g. involuntary insults, misgendering, denial of identity, deadnaming and inappropriate remarks or jokes), and macroaggressions (e.g. non-inclusive curricular, gendered architecture, oppressive administrative processes, and policies), including diverse forms of violence (Arijs et al., 2023; McBride, 2021).

Recent studies have reported that the majority of TGN young people experience difficulties with one or more issues including discrimination, damage to property, physical, verbal or sexual assault, peer rejection/social isolation, bullying and harassment at school (Agee-Aguayo et al., 2017; Bartholomaeus & Riggs, 2017; Becerra-Culqui et al., 2018; Day & Brömdal, 2024; Hatchel et al.,

2019; Manley et al., 2024; McBride, 2021; National LGBTI Health Alliance, 2021; Strauss et al., 2017). A survey administered by the Gay, Lesbian and Straight Education Network discovered that 35% of trans participants reported avoiding gender-segregated spaces (e.g. bathroom and changerooms), and 61% avoiding extracurricular activities and school functions due to their feeling unsafe and/or uncomfortable in those settings (Agee-Aguayo et al., 2017). Relatedly, this report documented lower academic achievement and decreased educational opportunities for TGN students. These findings are disconcerting given the significant amount of time young people spend in school, with such contexts being a primary source of social learning and interaction within this age group (Mackie et al., 2021a).

Across the globe TGN youth have been found to demonstrate elevated rates of psychological distress, self-harm and/or suicide risk in comparison to their cisgender and/or LGBQ counterparts (Connolly et al., 2016; Day & Brömdal, 2024; Hill et al., 2021; McDermott et al., Strauss et al., 2017; Veale et al., 2017; Watson et al., 2024). Mental health issues are significantly more prevalent amongst TGN young people when statistically compared to the cisgender population, with TGN adolescents being ten times more likely to be diagnosed with depression and/or anxiety, and twenty times more likely to have ever attempted suicide during this age (Strauss et al., 2017). Additionally, studies have reported that causes of suicide ideation and risk in this population can be multifactorial, including being attributable to forms of minority stress, life crises and transphobia (McDermott, 2018; Strauss et al., 2017).

Relationship between school staff and perceptions of TGN students' wellbeing and ratings of school climate

Studies have found that TGN students' self-reported wellbeing and feelings toward school climate are impacted by the perceived attitudes and behaviors (e.g. competency and support) of school staff (Day & Brömdal, 2024; Jones et al., 2016; Kelley et al., 2022; Manley et al., 2024; Ullman, 2017, 2022). Within such contexts, wellbeing is typically associated with efforts to

support students' mental health and social-emotional status, including coping with stressors, working productively, and being able to successfully contribute to community and achieve academic success (Graham et al., 2022). In a Canadian study conducted by Kelley et al. (2022), TGN students described that their overall wellbeing at school was mostly conditioned through positive interactions and validation of their gender identity by relevant staff, which included the use of their preferred name/s and pronoun/s. A similar Australian study conducted by Jones et al. (2016) on 14–25 years-of-age students found that TGN students were significantly less likely to report that staff treated them fairly or cared about their wellbeing in comparison to their cisgendered peers. Moreover, this study found that when supportive teachers were involved in at least one TGN activism activity, harassment and discrimination of TGN students in schooling environments decreased (Jones et al., 2016). Two-thirds of this study's participants rated their school's sexuality education as "mostly inappropriate" due to their teachers not including suitable content or being knowledgeable about gender diversity. Encouragingly, the younger survey participants (14–17 years-of-age) were provided with more trans-inclusive counseling at school (i.e. 67%), compared to 18–21 years-of-age (37%), and 22–25 years-of-age (22%) (Jones et al., 2016). This may indicate progressive changes in the attitudes, competency, and knowledge of school counselors over time.

In the *Free2Be?* Australian project including 51 TGN students (14–18 years-of-age), Ullman (2017) indicated the association between perceived teacher positivity and strong TGN connection to their school environment. However, these students were significantly less likely to report that their teachers were supportive of trans people compared to their cisgendered peers (Ullman, 2017). More recently, Ullman (2022) investigated school climate regarding gender and sexual diversity (including 197 students identifying as TGN) using student perceptions of teacher concerns and expectations as moderating factors to their sense of school belonging. Data from this study revealed that TGN students' sense of their teachers' personal investment and interest in them (both socially and academically), increased their sense of belonging and school connection.

From a school staff perspective, a scoping review on the mental health of TGN youth reported the significance of staff celebrating and validating the positioning of TGN youth within society (Mackie et al., 2021). Within this review, many staff working with TGN youth stated that they tried to "queer" or create safe counseling and school environments for TGN students, and by delivering TGN psychoeducation to teaching and other school staff. Furthering such research, Mackie, Patlamazoglou, et al. (2023) investigated cisgender school psychologists/counselors' perceptions of the TGN training/education. Participants highlighted a lack of exposure to LGBTQ+ education, indicating a universal deficit of competency for these professionals. The need for educational professionals to be able to offer a more holistic approach was identified, as there are varied components involved in best supporting such students (e.g. facilitating parental and schoolwide inclusive practices and understanding the multiple facets of identity development) (Mackie, Patlamazoglou, et al., 2023).

Given that teachers and other caring professionals are significant in fostering supportive, safe, and affirmative school environments for TGN students (Colvin et al., 2019; Day et al., 2020; Day & Brömdal, 2024; Mackie, Lambert, et al., 2021; Mackie et al., 2021), researchers have recently begun to call for and examine concepts solely related to working with TGN young people. For instance, after investigating the impacts of school climate on LGBTQIA + students' mental health, Colvin et al. (2019) advocated for future research to explore the experiences of TGN students independently from their LGBQ peers. Consequently, in such a review conducted by Mackie et al. (2021) on the mental health of trans youth, further research has been called for into the perceived competency, knowledge and/or attitudes of school staff in relation to working with TGN students.

As trans rights and health scholars, and educational professionals, with one author identifying as non-binary and pansexual, and the other as cisgender and heterosexual, we understand that caring professionals, including registered and

pre-service teachers, psychologists, guidance officers and other support and administrative school staff can significantly impact (both positively and negatively) the lives of TGN young people as they navigate school. Similarly, the aforementioned literature highlights the need to support this vulnerable school-aged population, but the research synthesizing the existing empirical research is lacking. This scoping review therefore brings together existing empirical literature and highlights the knowledge and dispositions of caring professionals in school settings regarding TGN students, and highlights recommended TGN affirming interventions, support mechanisms, and protective factors needed to support and promote optimal educational outcomes, including health and wellbeing for TGN students. To this end, this scoping review is guided by the following overarching question: What is known in the literature about the knowledge and dispositions of caring professionals in school settings regarding TGN students?

Method

As defined by the Joanna Briggs Institute (henceforth JBI), scoping reviews are a form of evidence synthesis that have the fundamental aim of systematically identifying and mapping the breadth of literature available on a selected topic, concept, or issue, within or across contexts (Munn et al., 2022). In accordance with the JBI manual for evidence synthesis (cited in Peters et al., 2020), this review utilized Arksey and O'Malley's (2005) five-stage methodological framework including the following steps: (1) identify the research question; (2) identify relevant studies; (3) select relevant studies; (4) chart the data; and (5) collate, summarize, and present the results. Additionally, the preferred reporting items for systematic reviews and meta-analyzes (PRISMA) extension for scoping reviews (PRISMA-ScR) checklist and flowchart was utilized, congruent with both approaches (Page et al., 2021; Tricco et al., 2018).

Eligibility criteria

Further to above, the inclusion criteria followed the JBI guidelines (cited in Peters et al., 2020),

including participants, concept, and context, and are further explored below.

Participants

Participants within this study have been defined as *Caring Professionals* which include teachers, pre-service teachers, teacher aides, guidance officers/counselors, psychologists, social workers, administrative staff, principals, and educational staff/officers. At the time of the primary studies scoped in the literature, these participants needed to be currently, previously or intending to work in a school setting as detailed in the context below.

Concept

The concept has been restricted to research that details knowledge and/or dispositions of the participants relating to TGN students. Key concepts that have been included detailed in Table 2 are *Knowledge (K); Attitudes (A); Competencies, Capabilities and/or Preparedness (CCP); Comfort (C),* and *Confidence (Con).* LGBTQ+ studies have been included if TGN students are reported on independently from LGBQ. This review defines TGN to be representative of people whose sense of gender identity varies from their sex assumed at birth/and or those who do not prescribe to the normative binary roles or standards of gender expression (Australian Institute of Family Studies [AIFS], 2022; Mackie, Patlamazoglou, et al., 2023; World Health Organization, 2023). Used as an umbrella term, this definition also includes people who identify as non-binary, genderqueer, gender questioning, gender fluid, trans man and/or trans woman. Although it is believed that this definition is in line with current literature, using TGN as an umbrella term is complex as it is difficult to precisely reference a one-size-fits-all

Table 1. Search strategy.

Search terms
(Attitude* OR belief* OR perspective* OR "point of view" OR opinion OR understand* OR knowledge OR competenc* OR expertise OR capacity OR capability OR confidence) AND (Teach* OR educator* OR "caring professional*" OR "teacher aide*" OR "school officer*" OR "educational staff" OR "psychologist" OR "counsel*" OR "guidance officer") AND (School OR college OR "secondary school" OR "junior high school" OR "middle school" OR "high school" OR "primary school" OR "elementary school") AND (transgender or trans OR "trans man" OR "trans men" OR "trans male" OR "trans woman" OR "trans women" OR "trans female" OR non-binary OR "non binary" OR "gender diverse" OR "gender-diverse")

Table 2. Characteristics of reviewed studies.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Agee-Aguayo et al. (2017) USA	School Psychologists belonging to the California Association of School Psychologists (CASP) (n=91). Sexuality demographics: Exclusively Heterosexual 72.5% Exclusively Homosexual 8.8% Neither orientation 18.7%. Age demographics: 27–71 years.	To examine attitudes of school psychologists toward pupils who identify as transgender. Assessed "efforts and roles" regarding changes to legislation (AB 1266, 2013), meeting requirement of public schools to provide transgender students with "increased school-based equity and opportunities." Quantitative design: Cross-sectional online survey. Demographics Survey (Likert-scale scoring measures utilized). Significant analysis method/s: Descriptive analysis, Bivariate correlations between variables of interest and Analysis of Variance (One-way ANOVAs). Quality of Study: 7/8	Significant instrument/s: A: Attitudes Toward Transgender Student Questionnaire adapted from Bowers et al. (2015). CCP: Preparedness Survey	A: "School psychologists in California tend to perceive themselves as having positive attitudes toward trans students who identify as transgender" (p. 157). A: "93.4 % of the school psychologists surveyed indicated they would not be bothered by working directly with a transgender student" (p. 157). This statistic "does not speak to their comfort in handling issues related to someone having a transgender identity" (p. 157). A: "100% of the school psychologists surveyed shared a belief that transgender students should be entitled to an education equal to that of their non-transgender peers" (p. 157). A/C: "The vast majority (96.7 %) indicated they would be comfortable if a transgender student came out to them regarding their gender identity" (p. 157). K/CCP: "54% indicated their previous education had not adequately prepared them to meet the unique needs of the transgender student population" (p. 158). K: "Only about 2% of school psychologists surveyed stated that they received specific education regarding transgender issues in their respective graduate programs" (p. 158). K: "43% of school psychologists surveyed stated they have engaged in further professional development relating to transgender issues since the completion of their respective graduate programs" (p. 158). CCP: "School psychologists with a self-reported positive attitude toward transgender students were more likely to describe themselves as individually prepared to address transgender issues" (p. 158). CCP: "As participants' reported individual preparedness increased, their assessment of the school district's preparedness tended to decrease" (p. 158). K/A: "As school psychologists become more specialized in learning about the struggles of being transgender in a cis-dominant society, the more they perceive their districts as increasingly unprepared to address those specific struggles" (p. 158).	• Use of questionnaires that only allowed participants to provide short answers to specific questions. • Interviews were suggested for future research into specific ways school climate may be changing considering the legislation.
Ausloos et al. (2022) USA	Professional School Counselors (PSCs) working in a US public-school setting, from kindergarten to grade 12 (n=389). Gender demographics: Cis-male or -female 99% Nonbinary/Trans 0.3% Mostly-female 0.3% Transmasculine 0.3% Agender 0.3%. Age demographics: Median age 40.10 years.	To examine factors contributing to the competence of Professional School Counselors (PSCs) working with transgender students in the K–12 public school system. Quantitative design: Cross-sectional survey. Significant analysis method/s: Descriptive analysis, Multiple correlation analysis and multiple regression analysis. Quality of Study: 8/8	CCP/K: Gender Identity Counselor Competency Scale (GICCS) which included: Awareness Subscale, Knowledge Subscale and Skills Subscale. This scale was revised from The Sexual Orientation Counselor Competency Scale (Bidell, 2005).	CCP: PSCs "increased exposure to trans students may subsequently increase counselor competency in working with trans populations" (p. 75). CCP/K: "Postgraduate training was moderately positively correlated with total gender identity counselor competency, indicating that additional postgraduate training in trans issues increased competence" (pp. 75–76). CCP: "The presence of personal relationships with trans people was moderately positively correlated" with gender identity counselor competency (p. 78). A/CCP: "Avoidance of counseling trans students is likely to inhibit a PSC's ability to develop gender identity counselor competency" (p. 76). K: Postgraduate training was weakly positively correlated with Knowledge subscale scores, indicating that those who engage in professional training outside of graduate school increase their knowledge of trans students and trans issues (p. 76). K/Con/CCP: PSCs who personally knew a trans person felt more confident and competent in their knowledge about trans students and issues. CCP: "PSCs who have worked with trans students was moderately positively correlated with Skills subscale scores, which may indicate that PSCs who work with trans students will be more likely to employ necessary supports for trans students" (e.g., academic, career, and social/emotional supports) (pp. 76–77).	• As the study relied on self-report, the author(s) stated that potential social desirability factors and inattentive responding could potentially influence the quality of the data. • Data may not be representative of all demographics of counselors, as the sample largely consisted of white ciswomen. • The revised GICCS has not been used in many studies and additional research is required to assess its validity. • The study did not examine unique nuances within trans groups, such as non-binary and gender-fluid students.

(Continued)

Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings. Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Bartholomaeus et al. (2017)Australia	Primary school teachers ($n = 75$) and Pre-service teachers ($n = 105$) in South Australian schools. Sexual orientations demographics: Teachers: Heterosexual/Straight 88.8% Bisexual 5.3% Lesbian/Gay 6.7%. Pre-service Teachers: Heterosexual/Straight 78.1% Bisexual 16.2% Lesbian/Gay 5.7%. Age demographics: Mean age: Teacher 41.79 years Pre-service Teacher 26 years.	To examine how "training," "experience" and "demographic factors" impact upon the "attitudes, comfort and confidence" of teaching transgender and gender diverse students. Quantitative design: Cross-sectional online survey. Significant analysis method/s: Analysis of Variance (T-tests) and descriptive analysis. Quality of Study: 7/8	**C/Con:** Instrument for confidence and comfort adapted from (Riggs and Bartholomaeus, 2016). **A:** Instrument adapted from (Goff, 2014) scale designed to assess music teachers' attitudes about supportive school practices toward transgender students. (Likert-scale scoring measures utilized).	**A/C:** Men reported less positive attitudes toward TGN inclusion and lower levels of comfort regarding working with TGN students compared to women (p. 131). **A:** Generally, no difference in attitudes toward gender diversity between teachers (older demographic) compared to pre-service teachers (younger demographic) (p. 131). **C/A/Con:** Direct experience in teaching a TGN student does not seem to help teachers feel more confident in their teaching, but this experience does seem to positively impact their attitudes and comfort levels (p. 132). **Con:** Participants who reported having a friend or family member who was TGN reported higher confidence (p. 132). **A/K/C:** "Participants who had heard about the Safe Schools Coalition reported more positive attitudes toward inclusion" (p. 131) and higher levels of comfort and confidence than those who had not. **A/Con/C:** Participants with a "more positive attitude toward inclusion" of TGN students were more comfortable and confident working with this demographic (p. 132). **Con/C:** Participants who were more comfortable reported higher levels of confidence (p. 132).	• Sample size was geographically limited and small. • It is likely that the sample is overrepresented by more motivated and aware teachers that are more inclusive of TGN inclusivity due to recruitment through the Sage Schools Coalition website. • As the study relied on self-report, the author(s) stated that potential social desirability factors could potentially influence the quality of the data.
Bowers et al. (2015) USA	School Psychologists working in US schools ($n = 246$). Gender demographics: Female 83% Male 15% Other 0% No Response 2%. Sexual orientation demographics: Exclusively Heterosexual 74%, Exclusively Homosexual 6% Other 19% No Response <1%. Age demographics: n/a.	To increase understanding of "current attitudes and beliefs" held by practicing US school psychologists toward students who "identify as transgender." Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis, Analysis of Variance (T-tests and one-way ANOVAs). Quality of Study: 7/8	**A:** Attitudes Questionnaire Survey adapted from *The Attitudes Toward Lesbians and Gay Men Scale* by (Herek & McLemore, 2011).	**A:** Participants "endorsed highly positive attitudes toward transgender students based on the attitudes measure employed" (p. 10) (mean = 46.16 out of 54, with a SD = 4.566). **A:** The results of the analyses suggested "school psychologists' attitudes toward transgender students did not vary by ethnicity, age, or highest degree earned" (p. 10). **A:** Individuals from southeast states reporting the lowest mean attitude scores and individuals from western states reporting the highest mean attitude scores (p. 10). **A:** "Significant differences between the attitudes of female and male respondents toward transgender students, with females endorsing more positive attitudes" (p. 10). **A:** "School psychologists with one to five encounters with transgender youth endorsed significantly higher attitudes than those who had never encountered transgender youth on the job" (p. 11). **A/Con:** "Those who were more confident in their abilities to address the needs of transgender students were more likely to endorse positive attitudes toward transgender students" (p. 11). (however, causation cannot be determined from correlational data). **A:** One's willingness to address the needs of transgender students increased attitude toward demographic of students (however, causation cannot be determined from correlational data) (p. 12). **A:** "83.7% reported they were either "willing" or "very willing" to address the needs of transgender students in schools" (p. 12). **A/K:** "One's education level around transgender issues was significantly correlated with one's attitudes toward transgender students; however, 75.5% of the study participants indicated they did not have specific education surrounding the needs of this unique population" (p. 12).	• A snowball technique was used to capture a convenience sample, meaning it may not be reflective of the broad scope of school psychologists in the USA. • Participants may have become biased or may have given socially expected responses due to state associations requiring some participants to become members or pay a fee to be in the organization. • Small sample size with only 11.4% representing non-majority racial and ethnic backgrounds. • Due to questionnaire being created on little information, internal consistency of the Likert scale was questioned due to a Cronbach's alpha level of .61.

Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings — Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Burns et al. (2023) Australia	Teachers in Australian schools: Primary school teachers (n = 56) and Secondary school teachers (48.1%) (n = 53). Sex /Gender demographics: Female 73.4% Male 25.7% Other 0.9% Sex Assigned at Birth demographics: Female 74% and Male 25.7% Sexually attracted to demographics: Same sex/gender 18.7% Another sex/gender 65.4% Both sexes/genders 13.1% Others 1.8% and Prefers Not to Say 0.9%. Age demographics: 18–24 0.9% 25–34 23.9% 35–44 26.6% 45–54 25.7% 55–64 15.6% 65+ (7.3%).	To explore the "beliefs towards, and comfort around" of a range of teachers about socializing with "same-sex attracted and trans and gender diverse people." To discover beliefs about "inclusive school-based policy" and other strategies aimed at the "wellbeing of same sex attracted, trans and gender diverse students." Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis, Analysis of Variance (t-tests) and Chi-square tests. Quality of Study: 6/8	**A/C:** *Attitudes and Beliefs about, and Comfort Socializing with Same Sex Attracted and Trans and Gender Diverse People.* **A/C:** *Attitudes and Beliefs about, and Comfort Socializing with Same Sex Attracted and Trans and Gender Diverse People.* **C:** *Comfort Supporting Same Sex Attracted and Students Identifying as Another Sex.* Measures adapted from RSE questions by (Burns and Hendriks, 2018) **K:** *School-based Policy and Whole School Strategies.* **K/Con:** *School Engagement.* Measures adapted from (Hebl, 2000). (Likert-scale scoring measures utilized).	**K:** 78% reported having received "no training to teach about sexual orientation or gender diversity" (p. 546). **A:** "On average, participants reported highly favorable attitudes and beliefs toward trans and gender diverse people (M = 27.83, SD = 4.29)" (p. 546). **A:** "Teachers were significantly more likely to report positive attitudes and beliefs toward same sex attracted people compared to trans and gender diverse people" (p. 546). **A:** "Secondary school teachers were more likely to hold positive beliefs about transgender students than primary school teachers" (p. 547). **A:** "Cisgender heterosexual participants' general beliefs toward trans and gender diverse individuals were significantly less positive than those of same sex attracted and/or transgender participants" (p. 547). **A:** "Some participants reported gender diversity conflicted with their cultural values (10%) or religious beliefs (18%)" (p. 547). **C:** 15% of participants "indicated they would not feel comfortable socializing with individuals who were trans and gender diverse" (p. 547). **A:** 13% "felt trans and gender diverse people should not be granted full legal recognition of the identity they declare" (p. 547). **C/Con:** "Participants reported high levels of comfort with their role engaging with issues concerning same sex attracted and transgender students' as they were 'significantly more comfortable responding to questions about same sex attracted or gender identity (92.3%); addressing name calling, bullying or harassment (94.4%) and supporting or accessing support to provide a safe environment for students who were same sex attracted or transgender (94.4%). However, 19% and 17% of participants did not feel comfortable or confident teaching about these issues respectively" (p. 547). **C:** "Teachers were significantly more likely to report higher levels of comfort supporting same sex attracted compared to trans and gender diverse students (F (11,85) = 60.865, p < 0.001)" (p. 547). **C:** "Primary school teachers were less comfortable (M = 13.15, SD = .34) in their role working with same sex attracted and transgender students than secondary teachers (M = 14.65, SD = .22) and this difference was significant (t(77.42) = −3.69, p < 0.001, Cohen's d = 0.76)" (p. 547). **A:** "Participants expressed a strong desire for inclusive school policies for trans and gender diverse students (n = 96/98; 98%)" (p. 548). **A/C:** "Participants who were not comfortable socializing with same sex attracted people were significantly less likely than other participants to agree that schools should admit transgender X2 (8, N = 100) = 53.193; p < 0.001" (p. 548). **A:** "Participants who were not comfortable socializing with trans and gender diverse X2 (8, N = 98) = 32.014, p < 0.001 people were significantly more likely to desire a policy that allowed for suspension or expulsion of students" (p. 548). **A:** "Only 3% (n = 3/100) of participants felt schools should have a policy that allowed for the suspension or expulsion of students who openly identified as same sex attracted or transgender. Participants who were not comfortable socializing with same sex attracted X2 (8, N = 98) = 48.885, p < 0.001 or trans and gender diverse X2 (8, N = 98) = 32.014, p < 0.001 people were significantly more likely to desire such a policy" (p. 548). **A:** "The majority of participants agreed that trans and gender diverse students (n = 95/98, 97%) should be treated the same as other students, with 54% (n = 55/98) of respondents. suggesting their school had a policy that addressed this for students" (p. 548). **A:** "Almost all respondents agreed teachers and school personnel were responsible for creating a supportive environment for trans and gender diverse students (n = 97/98, 99%)" (p. 549).	• Relatively small sample size. • Potentially biased findings due to participant self-selection (e.g, proactive teachers with more positive attitudes toward TGN are more likely to respond to research). • High representation of sexually and gender diverse teachers which may have impacted findings.

(Continued)

Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
				A: "Most participants agreed that issues regarding same sex and identifying as another sex or should be included in the school curriculum in a positive manner (n=88/98, 90%) and discussed in the classroom (n=83/98, 84.5%)" (p. 549). **A:** " Participants were supportive of activities outside the classroom for students identifying as another sex (n=84/97, 86.5%)" (p. 549). **A/C:** "Participants who were not comfortable socializing with same sex attracted people (n=11/100; 11%) were significantly less likely to agree that sexuality and gender diverse issues should be included in the curriculum in a positive manner X2 (12, N=100) = 69.595, p<0.001; discussed in the classroom X2 (12, N=100) = 35.334, p<0.001; or out of class activities be provided for same sex attracted and transgender students X2 (12, N=100) = 21.583, p<0.001" (p. 549). **A/K:** "Almost all participants (93%) agreed that training should be provided to enable teachers to provide safe environments for transgender students" (p. 550).	
Francis (2023) South Africa	School staff including School Managers (n=4), School Teachers (n=19) and TGD School-attending students (n= 7) in South African schools. Sexuality demographics: Diverse regarding "race, gender, class, language, religion, sexuality and age." Age demographics: School managers and teachers' 28–60 years. TGD school attending students 17–18 years.	To explore how cisgenderism and transphobia are understood and responded to by investigating understandings and attitudes of a range of stakeholders in schools. Qualitative design: Semi-structured interviews. Significant analysis method/s: Thematic analysis Quality of Study: 9/10		The author reported four main themes: 1) "It's all so confusing;" 2) "Look the other way;", 3) "They are to blame"; and 4) "Shake hands, kiss and makeup." **It's all so confusing:** **K:** "Many teachers and school managers were uncertain what cisgenderism and transphobia meant and how to identify, address, or call out transgressors" (p. 7). They reported difficulties distinguishing between homophobia and transphobia. Participants showed little understanding of trans expression and trans identity. **A:** School managers and teachers made it clear that there was "a dire need for more information and professional development on TGD identities and cisgenderism" (p. 7). **CCP/A/K:** Many teachers failed to recognize the frequency TGN students are targets of violence due to challenging the idea of cisnormativity. Some don't accept or understand gender identities outside of binary system. **A:** TGN youth are often blamed for creating confusion and adding more work to teachers (e.g., changing of names and pronouns). **Look the other way:** **A/Com:** Staff either ignoring cisgenderist attitudes and acts or "looking the other way" (p. 8). **CCP:** A staff member reported an incident of not intervening when cisgenderism and transphobia occurred due to seeing the incident as funny (e.g., a meme). Staff member thought that students need to "learn how to deal with conflict" (p. 8). **A/CCP:** TGN school attending youth report transphobic incidents that staff ignore due to cisgenderist conditions. **A/CCP:** A teacher's unresponsive response to transphobia highlights that TGN youth must "contain themselves and remain calm" (p. 9) when transphobic incidences occur. **A:** Report of teacher deflecting responsibility from the institution to the student. Teacher shows no attempt to engage with the cis-dominant cultural practices and values at school. Students report teachers would not intervene to interrupt transphobia and that teachers "won't give me [student] the time of day; they are too busy" (p. 9). **Sheep in wolves clothing:** **A:** Some staff blame TGN youth for being targeted and treat them with doubt and suspicion. TGN youth are portrayed as aggressors and perpetrators by these staff. A teacher insinuates that a trans girl "posed a threat" (p. 9) to cis girls and they are "sheep in wolves clothing" (p. 9) so that they can check out girls in bathrooms. Another teacher said they cause rape, violence and trauma.	• No limitations were self- reported by author. • The author stated that they recruited through graduate students, school administrators and teachers that they had worked with, and then some snowball sampling occurred.

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Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
				Shake hands, kiss and makeup: **CCP:** TGN student reports feeling defeated and let down by teachers when they make them and the aggressor "apologize and forgive" (p. 10) each other. **CCP:** Another TGN student wasn't sure why she had to apologize in a mediation process, but just did. Students are hoping for more considered intervention from teachers (cisnormativity and relations of power are not featured in teachers' attempts to intervene). TGN youth are needing to "fit into a cisnormative school culture" (p. 11).	
Gegenfurtner (2021) Germany	Pre-service teachers from a large public German university (n = 560). Sex/Gender demographics: Female 78% Male 22%. Age demographics: Mean age 22.08 years.	To examine the attitudes of pre-service teachers toward transgender children and adolescents at school by examining specific factors: "prior contact, religiosity, political preference, sexual orientation and teacher gender." Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis and Analysis of Variance (t-tests and ANOVAs). Quality of Study: 6/8	**A:** *Attitudinal Contact and Demographic Survey.* Measures adapted from Norton and Herek (2013).	**A:** Transgender attitudes was an overall mean of 62.36 (SD = 25.73). "This score indicates that participants tended to have a favorable attitude toward transgender children and adolescents at school" (p. 4). **A:** "Teachers who have a transgender individual in their social network, $F_{(1554)} = 8.768$, $p = 0.003$, $\eta^2 = 0.016$, or have a close trans friend, $F_{(1557)} = 16.620$, $p < 0.001$, $\eta^2 = 0.029$, reported more positive transgender attitudes" (p. 5). **A:** Transgender attitudes were more positive when pre-service teachers are less religious. "Significant main effects of religiosity were obtained, $F_{(1558)} = 7.019$, $p = 0.008$, $\eta^2 = 0.012$, with higher ratings for less religious pre-service teachers" (p. 5). **A:** Transgender attitudes would be more favorable for pre-service teachers who preferred a left-wing rather than a right-wing political party. "The one-way ANOVA revealed a statistically significant main effect of political preference, $F_{(1475)} = 58.011$, $p < 0.001$, $\eta^2 = 0.109$, with higher ratings for participants with left-wing political preferences" (p. 5). **A:** No main significance of transgender attitudes regarding sexual orientation of pre-service teachers (p. 5). **A:** Higher positive attitudes held by female participants compared to male participants toward transgender students. "The one-way ANOVA demonstrated a significant main effect of teacher gender, $F_{(1558)} = 19.852$, $p < 0.001$, $\eta^2 = 0.034$, with higher ratings for women than men" (p. 6).	• Results are limited to the one-dimensional approach of the Norton and Herek's (2013) single-scale thermometer approach to measurement. • The study used two-point answers instead of continuous scaling for variables which could have affected results. • Convenience sampling approach was used so it is possible that participants with extreme transphobic attitudes did not partake. • Thermometer scores grouped transgender students as one and didn't specify female-to-male or male-to-female students. The author stated that future research could include more sensitive measurements.

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Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Mackie, Lambert et al. (2023) Australia	Registered psychologists who have worked in an Australian school setting plus experience one-on-one counseling of at least one student who identifies as transgender (n = 7). Gender demographics: All participants identified as cisgender. Age demographics: Mean age 38.9 years.	To explore the experiences of school psychologists working with transgender young people in a school counseling context. To contribute to a discussion of implications for the field. Qualitative design: Semi-structured interviews. Significant analysis method/s: Interpretative Phenomenological Analysis (IPA). Quality of Study: 10/10		Four superordinate themes and twelve subordinate themes reported in the study. **Affirming Agency (Superordinate theme):** **CCP:** Validation (subordinate theme): "Several participants discussed the importance of validating or 'normalizing' transgender identities and experiences within the counselling space" (p. 8). **CCP:** Autonomy and control (subordinate theme): Participants, through counseling, "affirmed a sense of autonomy and control within transgender young people." "Some participants emphasized the 'expert' status of transgender young people in their own lived experiences. Participants placed agency into the hands of the transgender young people during counselling sessions" (p. 9). **CCP:** "Queering" the counseling space (subordinate theme): "Creating a safe, non-judgmental counselling environment was endorsed by many participants as a way for transgender young people to freely express themselves and explore the non-cisnormative aspects of their identities." (p. 9). Participants acknowledged and disrupted their own cisnormative views by allowing the transgender student to "queer" their views (p. 10). **A/CCP/K:** "Some participants felt a sense of responsibility to provide transgender psychoeducation to teaching staff to, firstly, ensure communication of appropriate terminology (e.g. preferred name and pronouns) was in place, and secondly, to ensure staff were updated on current non-cisnormative gender issues, identities, language, and inclusionary practices" (p. 10). **CCP/K:** "Some participants explained their role in developing gender support plans and gender policies within their schools to help advocate for the specific gender-related needs (e.g. uniform, toilets, school camps, engagement in physical education activities, etc.) of transgender young people" (p. 10). **Perceived competency and transgender knowledge (Superordinate theme):** **K/CCP/Con:** Learning from transgender clients (subordinate theme): "Prior to working with transgender young people, all participants admitted low knowledge about transgender issues and expressed uncertainty in working with this population" (p. 10). **CCP:** Linking in with external supports (subordinate theme): Participants reported feeling "as though their skills and competencies were inadequate to holistically and comprehensively support transgender young people in the ways they needed. This often led participants to link transgender young people in with specialized professionals and/or services" (p. 11). **K:** Need for professional transgender training (subordinate theme): "Many participants shared a need for engaging in professional transgender training and education" (p. 11) to further improve their knowledge. "Participants agreed that targeted training would have benefited their work with transgender young people in school counseling, particularly in more clinical aspects of client presentation (e.g. gender dysphoria)" (p. 11). **Expectations and surprises (Superordinate theme):** **Con/A/K:** Deficit assumptions (subordinate theme): Participants would often pathologize transgender presentations. "Before even meeting and engaging with the young people, participants assumed they were already out of their professional depth due to the 'complexity' of transgender presentations and the accompanying severe mental health issues" (p. 12).	• Only psychologists responded to this study. As counselors and psychologist training is very different, the study may not be representative of all professional staff working in school counseling roles. • The study did not address issues of intersectionality within school counseling specifically, thus participants did not address this important aspect of school counseling. • Due to the participants having different levels of practical experience working with transgender students in schools, it was unclear whether the amount of experience influence participants' experiences in school counseling. • Due to the small sample of this qualitative study, these findings may not be generalizable, especially to contexts outside of the secondary school setting.

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Mangin (2020) USA	Elementary School leaders nominated by parents who perceived them as "supportive" educational workers in US Elementary Schools (n = 20 school leaders including 9 school principals). (Phase one of the study). Sexuality demographics: 1 participant had an agender spouse. Several principals had some family or friend exposure to a TGD adult. Age demographics: n/a	To explore how 'elementary schools can better support transgender students' by examining the experiences of school leaders described by parents as supporting their transgender children. Qualitative design: Semi-structured interviews. Significant analysis method/s: Thematic analysis Quality of Study: 9/10		**K:** Small things = big difference (subordinate theme): "Many participants discussed their surprise in learning that the seemingly small changes or milestones within transgender young people's lives contributed to big differences in these young peoples' day-to-day wellbeing" (p. 12). **K:** The disclosure process (subordinate theme): "Some of the participants were 'taken off-guard' regarding 'how much, or how little, support they needed to provide' during the transgender student's disclosure journey" (pp. 12–13). **CCP:** The principals in this study reported using a child-centered approach to guide decision making and are guided by their student's needs (p. 265). Several schools in this study reported "school-level aims that included social justice and social–emotional well-being as a central focus" (p. 266). **K/CCP:** Parents were often the primary source of knowledge regarding transgender children. Only a few of the principals had prior knowledge about transgender people. Utilizing the family connection allowed them to creating "transgender-inclusive schools" (p. 267). **K:** All the participants reported needing to learn more about TGN. The majority of the principals started with "little to no specialized knowledge that could inform their efforts to support transgender children" (p. 268). Some began with harmful misconceptions regarding TGN individuals. **K:** "The principals in this study emphasized the importance of learning and knowledge for creating a positive school experience for transgender elementary students" (p. 269). Professional learning was limited to a single session in most of the schools. **A:** Many of the principals reported "shifting their personal convictions and overcoming their initial disbelief that a young transgender child could know their gender identity" (p. 269). **K:** Some schools had a dedicated LGBTQ-related educator for professional development (sometimes the transgender student's parents paid for the training). **Con/A:** "Creating opportunities for the student population to learn about gender and transgender children was somewhat more challenging for the principals in this study. Principals of socially progressive schools reported more confidence in this task, as gender was more of an acceptable topic for children to discuss in school" (p. 273). Some principals were cautious about introducing students to the concepts of transgender children. **CCP:** Explicitly teaching students about gender and transgender was limited. **A:** The principals viewed having a transgender student as a growth opportunity as "not only did principals learn factual information about being transgender, the situation challenged them and their school community to grow in unanticipated ways" (p. 275). All of the principals from this study described their experience as professionally and personally beneficial. Some of the language they used included "humbling," "powerful," "enlightening," "an honor," "exciting learning opportunity," "emotional experience," and "transformative" (p. 275).	• As the study relied on self-reports, the author(s) stated that the data may only partially represent or not reflect the experiences of other school communities. • As the site selections were based on parents' recommendations, the data may not represent the perspective of TGN students.

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Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Mangin (2022) USA	Elementary teachers from five US elementary schools with principals characterized by parents as supporting their transgender and/or gender-expansive children. (n = 31) (Phase 2 of the study) Gender demographics: Gay/ lesbian 9% Transgender 0%. Age demographics: n/a	To examine practices and challenges for elementary teachers in supporting "transgender and/or gender-expansive" elementary students. Qualitative design: Observations and semi-structured interviews. Significant analysis method/s: Thematic analysis Quality of Study: 9/10		**CCP:** Three main strategies were used to decrease gendered practices: using more inclusive language, gender-neutral classroom management strategies and facilitate gender-expansive play (p. 329). **CCP:** Two main strategies were used to increase discussion about gender: exposing students to literature with transgender and gender-expansive characters, and implementing lessons or curriculum related to gender (less commonly practiced) (p. 329). **CCP:** Teachers affirmed children's gender expression and identity in multiple ways: referring to students with their claimed names, affirmed student's choice of clothing, modeled affirming language when noticing harmful child socialization/comments, and creating a supportive space for children to socially transition or to share their transition story. Teachers and student worked collaboratively to create an affirming coming out experience (p. 329). **CCP:** Challenges that were experienced related to: Ingrained methods/communication to class (e.g., "ladies and gentlemen") (p. 329).	• As the study relied on self-reports, the author(s) stated that the data may only partially represent or not reflect the experiences of other school communities. • As the site selections were based on parents' recommendations of leaders who were "supportive," findings may not be generalizable of other school leadership that may not be as supportive to TGN students and issues.
Markland et al. (2023) UK (England)	Secondary school teachers from four British schools (n = 15). Sexuality demographics: n/a Age demographics: n/a	To explore teacher beliefs re gender identity and how this "influences the support offered to trans-spectrum young people." Qualitative design: Semi-structured focus groups and one individual interview. Significant analysis method/s: Thematic analysis Quality of Study: 10/10	**K/A/Con/CCP:** Adapted Transgender Inclusive Behavior Scale	**A:** "Teachers expressed a desire to develop their skills in implementing trans-spectrum-inclusive practice" (p. 6). These practices were largely focused on supporting individual students but did evolve to reflecting on how they would like to work at a whole-class or whole-school level. **K/Con:** Teachers often fearful of making mistakes and non-understanding what constitutes as appropriate practice (p. 6). **K/Con:** Teachers portrayed limited knowledge of school policy and guidance and had restrictive narratives to inclusion at the beginning of discussions. "Although teachers felt they were not yet well-equipped to enact practices, they expressed a desire to engage in training" (p. 5). **Key Themes:** **Navigating school context, culture and community:** **A/C:** Both the presence and absence of community diversity (including religious faith and single sex schools) was regarded as a "barrier and created uneasiness in teachers who felt discussions of gender identity would be met with resistance" (p. 5). **A:** The safety of cisgendered students using the same bathroom was mentioned by participants. "The narrative around cisgender girls' vulnerability suggests that trans-spectrum identities are being constructed as not only different, but potentially a cause for concern regarding other pupils' safety" (p. 6). **Working with parents:** **A/C:** Due to possible conflict occurring with parents, teachers believed that integrating conversations of gender identity subtly in curricula was more effective than giving it a specific focus in lessons (p. 6). **A:** "Some teachers felt that they "absolutely should" have conversations to allow a space for trans-spectrum young people to better understand their identities" (p. 6). **A:** "Much more support needs to be done to help parents understand trans spectrum identities" (p. 6). **A:** Teachers felt that there was "not enough of a conversation between the school community and the wider community" (p. 6) which makes it difficult for the work to be just done in schools. **Fears of getting it wrong:** **Con/K:** Fears of getting trans spectrum-inclusive practices wrong due to lack of knowledge and confidence (p. 6). **Con/C:** Teachers stated fears of impacting trans-spectrum young people when they were needing support. Difficulties expressed when student doesn't want their parent to know about their non-binary identity. Teachers' uncertainties around appropriate practice was exacerbated by concerns of parental perspectives. Teachers stated that they often felt uncomfortable due to these uncertainties (p. 6).	• Participating schools were likely ones with an existing interest in developing their practices of supporting trans-spectrum students, so findings may not be generalizable of other schools and teachers. Small sample size is also a related limitation. • The demographic was predominately White British, which was stated as a possible limitation of representation of participants. • The researcher's voice was present in the interviews, so the knowledge that was constructed is noted as different than if it was just participant constructed. Due to the researcher stating their non-binary identity, socially desirable responses could have been given by participants. • The exclusion of demographic information was noted as an additional limitation.

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Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
				Teachers desire training: **K/Con:** "Teachers felt that specific training around supporting trans-spectrum young people would be helpful as 'using common sense sometimes isn't even the right way and we definitely need training'" (p. 6). Teachers reflected a lack of professional development in the area to equitably meet the needs of students. This was reported to affect teachers' confidence (p. 7). **Putting intention into practice:** **A/K:** "Teachers believed that supporting trans-spectrum pupils through inclusive practice was important yet struggled to put this into action. Knowing how to facilitate trans-spectrum-inclusive practice was a key concern raised, with uncertainties around how discussions of gender identity should be approached with young people" (p. 7). **Con/K:** Teachers reported that they know policies and procedures, but don't feel confident putting into practice as there isn't much formal advice (author notes contradiction of evidence collected) (p. 7). **Reflecting on opportunities for proactive practice:** **A:** "Teachers felt that their school environments were generally inclusive but that trans-spectrum pupils may not experience school the same as other students" (p. 7). **A/K:** "Teachers' recognition that trans-spectrum pupils in their school feel victimized stands in contrast to their conception that 'there's nothing there' to warrant this feeling. This may be indicative of teachers having broadly defined conceptualizations of inclusion" (p. 7). **CCP:** Teachers reflect on bullying and state their school staff are good at calling out discriminatory language, but that students "often use transphobic language due to not understanding the weight of their words" (p. 8).	
Martino (2022) Canada	Educational workers comprising of teachers, administrators, educational assistants, and support staff in Canadian schools (n = 463). Gender demographics: Women/girl or Cisgender woman/girl 78% Gender minority 7%. Sexual orientation demographics: Heterosexual straight 68% Bisexual 7% Queer 5% Pansexual 5% Lesbian 4% Gay 3% Asexual 2% Questioning 0% Demisexual 0.5%. Age demographics: n/a	To discover levels of "awareness and understanding of trans-inclusive" policies by educators to discover how these policies were implemented in practice. Mixed-method design with focus on qualitative part of study. Data drawn primarily on the qualitative data component of the survey, where educators provided detailed comments about and insights into trans-inclusive policies. Significant analysis method/s: Thematic analysis and descriptive analysis. Quality of Study: 8/10	**K/CCP/:** Survey included Likert-scale demographic measures and open-ended qualitative responses.	**CCP/K:** "A total of 30% of the educator comments reflected an understanding of trans-inclusive policy as accommodating trans students, where being inclusive meant providing gender-free washrooms, having GSAs, and using affirmed pronouns" (p. 78). **K:** "A total of 14% of educator comments reflected an understanding of trans-inclusive policies as responding to individual trans students, or an individualized approach" (p. 79). **CCP/K:** "A total of 25% of the comments indicated a lack of support or intervention from administration, meaning that it was often up to the individual educator to enact the policy" (p. 80). Some expressed administration was ill-equipped, and staff needed further education. **CCP/K:** "Other educators commented that lack of intervention and support meant that not only was transphobic bullying not addressed in school, but individual staff had to take responsibility for educating themselves about trans inclusion" (p. 81). **A/CCP:** "Both educators' and administrators' religious beliefs and/or biases were identified as barriers, leading to trans youth not being supported in schools and to a lack of significant intervention" (p. 81). **K/A/CCP:** "Educators also attributed lack of support and intervention to administrators' lack of understanding of trans inclusion and gender diversity" (p. 82). **A:** "Simply lumping trans students under the 'LGBT or queer community umbrella' masks and obscures the 'widespread discrimination and exclusion against people of trans experience' and 'affirmed genders'" (p. 82). **A:** Concerns that children are too young to be exposed to conversation and learning about trans-inclusive policies (p. 85). **A:** "A notable minority of respondents (5%) outrightly rejected trans inclusion and expressed a degree of transphobia and cissexism that was troubling" (p. 85). **A:** "Educators indicated gaps in the policy related to the focus on accommodation and the need for more education on how to address gender diversity as part of the curriculum" (p. 86). **K:** Participants called for mandatory PD. **A:** "Some educators comments (7%) indicated that they considered their schools to be inclusive regardless of whether there was an explicit trans-inclusive policy" (p. 87).	• No author identified limitations were noted.

Table 2. Continued.

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McQuillan and Leininger (2021) USA	School employees (administrators, teachers and staff) across 80 US schools participating in gender-inclusivity professional development sessions (n= 1,425). Sexuality demographics: n/a Age demographics n/a	To gain understanding of beliefs of educators in a range of roles re gender inclusivity and their implementation plans post gender diversity training. Mixed-method design. Significant analysis method/s: Descriptive analysis, Linear Regression Analysis (Ordinary Least Squares [OLS] Regression) and Thematic/Content Analysis. Quality of Study: 5/5	**CCP:** Survey was created by the authors. **C:** Survey was created by the authors. **Con:** Survey was created by authors.	**K:** "95% of participants reporting they agreed or strongly agreed that the training was useful" (p. 162). **K/Con/CCP:** "Educators also responded favorably to feeling capable of discussing concepts related to gender expansive students with other faculty and staff, with 92% agreeing or strongly agreeing" (p. 162). **K/CCP/Con:** "Fewer participants indicated confidence about their ability to discuss these issues with parents (86%), but 92% responded positively indicating that they felt equipped to deal with issues related to gender in their school after the training" (p. 163). **CCP:** Regarding capability, the participants who said they were not teachers or administrators reported that they felt less capable of talking about transgender and gender-expansive issues (p. 163). **CCP/K:** "One of the most common implementations of new strategies after training was changing their classroom practices, with almost 30% of educators identifying ways to amend their practices in their open-ended responses about implementation. These classroom changes included asking about preferred names and pronouns and not lining students up by gender. Another 5% of educators noted they would expand their curriculum, either by including specific lessons or by incorporating materials that address gender-expansive identities in their class." "22% of educators noted they would be 'more aware' or 'more sensitive,' while 6% of responded they would improve their own communication in some way" (p. 165). **CCP:** The most "common implementation plan at the school-wide level was increasing. Access to school facilities, such as locker rooms and bathrooms (10%)" (p. 165). **K:** "17% of educators wanted more specific resources" and 19% wanted more time for training (p. 167)/ **K/A:** "About 5% of participants wanted to hear testimonials from students who identified as transgender" (p. 167).	• Due to not being a causal study, the researchers "were not able to report on changes in educators' agreement with statements or behaviors without the use of a control group and/or pretest." • Biased sample selection due to the schools or attendees in these trainings not being randomized. • Researchers were "not able to identify which participants received a 90-minute training and which received the two-day training" which possibly leads to variation in the beliefs and plans of participants. • It was "impossible to disentangle the effects of the facilitator from the actual training curriculum" due to being a single facilitator. • "The survey did not assess prior content knowledge or attitudes about gender-expansive people through a baseline pretest, both of which may have influenced agreement with the belief statements." • "The study was conducted using evaluation data from trainings in mostly urban and suburban Midwestern schools in one state" which could cause limited generalizability.

Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Riggs and Bartholomaeus (2015) Australia	Study 1: Heterosexual cisgender parents of a transgender child (n=60). Study 2: Mental health professionals, that is, counselors and psychologists (n=304). 28 respondents worked in Australian school settings, 16 qualified counselors, 12 psychologists. Sexuality demographics: 17 female, 11 male, all cisgender. Age demographics: n/a	To further define the role of school counselor and psychologist in supporting transgender students. To articulate the necessity of ongoing training for school counselors and psychologists. Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis, Analysis of Variance (t-tests) and Multiple Regression Analysis. Quality of Study: 8/8	**CCP:** Survey designed by the authors of that study (Riggs and Due, 2015) **A:** Survey adapted from the *Attitudes Toward Transgender Individuals Scale* (ATTIS; Walch et al., 2012) **A:** Survey adapted from the *Counselor Attitude Toward Transgender Scale* (CATTS; Rehbein, 2012) **Con:** Survey designed by the authors and was used to assess confidence in working with trans clients.	**K:** 25% had previously undertaken transgender specific training (p. 161). **Experiences of Parents of Transgender Children Study:** **A/CCP/K:** "Six of the participants who reported experiences with school counselors provided a negative account." Two of the counselors "appeared to have entirely discounted the possibility of a child being transgender" (p. 163). **A/CCP/K:** "A further two counselors appeared to suggest that a child's transgender expression should be responded to with behavior management techniques aimed at altering their gender expression" (p. 164). **K:** One counselor seemed to have no knowledge of transgender issues (p. 164). **CCP:** One counselor disclosed to other staff without consent (p. 164). **CCP:** Three counselors were reported on positively. One school counselor was helpful and directed parents to a hospital for medical and psychiatric support. Some were useful in providing reading material and referrals (p. 165). **Acceptance and Clinical Knowledge Among School Counselors and Psychologists:** **K:** The average score of "clinical knowledge was 48.33 (SD= 7.65), indicating that overall, the sample had fairly high levels of clinical knowledge about working with transgender people" (p. 165). **Con:** The average score "confidence in working with transgender people, the average score was 27.90 (SD = 2.27), indicating that overall, the sample was very confident in working with transgender people" (p. 165). **K:** "Female participants reported higher levels of accurate clinical knowledge (M = 48.92, SD = 8.72) than did male participants (M= 30.20, SD = 5.73), t = 3.097, $p=0.02$, $d=2.53$." **A:** "Similarly, female participants reported higher levels of acceptance of transgender people (M= 43.40, SD = 1.93) than did male participants (M= 38.35, SD = 2.23), t= 3.273, $p=0.03$, d= 2.42" (p. 165). **Con:** "Participants who had previously worked with a young transgender person reported more confidence in working with transgender people (M= 28.15, SD = 2.24) than did people who had not previously worked with a transgender person (M= 23.50, SD = 1.70), t= 2.633, $p=0.03$, d= 2.33" (p. 165). **A:** "More religious participants were less accepting of transgender people" (p. 166). **A/Con:** "There was a strong positive correlation between acceptance of transgender people and confidence in working with transgender people, r = .592, $p=0.01$. Participants who were more accepting were more confident" (p. 166). **K/Con:** "There was a strong positive correlation between accurate clinical knowledge about working with transgender people and confidence in working with transgender people, r = −0.609, $p=0.01$. Participants who had higher levels of accurate clinical knowledge were more confident" (p. 166).	• The findings are drawn on two small samples which were both not solely focused on the experiences with or of school counselors or psychologists. • The authors called for further tests on the data due to the second study utilizing factor analysis of existing measures.

(Continued)

Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings. Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Shelton (2018) USA	Teachers in US schools (n = 50). Gender demographics: 2% Transgender 98% Cisgender (Male 80%, Female 20%) Age demographics: n/a	To examine how "trans visibility" of a fellow teacher impacted upon the "understandings of and pedagogical approaches to the concept of gender." To explain the pressure of gender normativity on US teachers. Qualitative design: Unstructured interview, semi-structured focus groups and observations of participants' classes and informal interactions. Significant analysis method/s: Thematic analysis. Quality of Study: 9/10		**A/K:** Instances occurred where instructors either dismissed gender as relevant to their disciplines or reified gender norms through comments and assignments. For example, "I don't get to teach any gender stuff" (p. 306) was stated by Music teacher who believed that his curriculum didn't allow him to teach about gender. These teachers described themselves as being "invested in equality" (p. 307) but allowed gender norms to remain unconsciously hidden in class. **A/K:** Participants noted that simply in having a trans peer, they thought more about gender.	• No author identified limitations were identified.
Silveira and Goff (2016) USA	Certified music teachers teaching in US schools from Kindergarten to grade 12 (n = 612). Gender demographics: Male 32% Female 60% Transgender 0.2% Other 0.3% Not stated (n = 15) Age demographics: Mean age 39.1 years.	To measure attitudes of music teachers toward transgender individuals and school practices that support transgender students. Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis and Multiple Linear Regression. Quality of Study: 8/8	**A:** Survey contained a screening question, nine demographic questions, and 40 attitudinal statements related to attitudes toward transgender individuals, which were adapted (with permission) primarily from the *Attitudes Toward Transgender Individuals Scale* (Walch et al., 2012) with four items adapted from the scale used by (Eliason and Hughes, 2004).	**A:** "The overall mean scores of attitudes toward transgender individuals and attitudes toward supportive school practices were 2.11 (SD = 0.77) and 2.29 (SD = 0.63), respectively, suggesting fairly positive attitudes on average" (p. 149). **A:** "Men's attitudes were found to be slightly more negative on average toward students and supportive school practices" (p. 151). A: "No significant relationship between age or location for either attitude toward students or supportive school practices" (p. 152) **A:** 95.3% of participants indicated that 'either *strongly agreed* or agreed that "Teachers should never use slurs referring to a student's gender identity or expression" (p. 152). **A:** "90.2% of respondents indicated they either *strongly agreed* or *agreed* with the statement, 'It is the responsibility of school staff to stop others from making negative comments based on gender identity and expression'" (p. 152). **A:** "Individuals identifying as more liberal and female participants were more positive attitudes toward transgender students and inclusive practices" (p. 152).	• Self-selection bias has possibly occurred as only teachers of the "professional association" were asked to participate. • Caution has been warranted when interpreting these results as only a handful of states were represented in this study. • Validity of the results may also be affected due to respondents answering in a socially desirable manner. • Free responses were not included in the scale which has inhibited some participants from elaborating on their reasoning. • Although the survey was designed to measure teachers' attitudes, such measures cannot predict teachers' actual actions in the classroom.

definition for this concept (Mackie, Patlamazoglou, et al., 2023).

Context

This scoping review includes existing primary research studies that encompass the above concept within any primary and/or secondary school setting (e.g. primary, middle and secondary schools) around the world.

Search strategy

In accordance with JBI and PRISMA-ScR, a multi-step, comprehensive search strategy was conducted (e.g. preliminary searches were utilized to trial, and then adapt search terms and databases to ensure the most optimal and relevant results were achieved) (Page et al., 2021; Peters et al., 2020; Tricco et al., 2018). The following electronic databases were used for this review: EBSCOHost Megafile Ultimate, ERIC and SCOPUS, and the full electronic search strategy is documented in Table 1. The literature searches across all four databases were conducted on August 6, 2023, and various study designs were considered eligible if they were empirical in nature, peer-reviewed, with full text available online, and written in English. No filters were placed on date or geographical location of study. In addition, all empirical literature had to have thematic relevance to the research question. Although scoping reviews can include grey literature, this review only included peer-reviewed articles to minimize bias and maintain credibility in this often divisive, emerging field of study (Munn et al., 2022).

Screening procedure

All identified citations were screened using the PRISMA three-stage screening process. The first stage included exporting all identified citations into EndNote and remove duplicates. The second stage involved reviewing resultant titles and abstracts against the inclusion/exclusion criteria, with the third stage reading the full articles against the inclusion/exclusion criteria. References of the selected sources were reviewed and

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Table 2. Continued.

Reference and country	Study sample and significant demographics	Study aim(s), design, method(s) of analysis, and quality of study	Significant instruments and measures of study: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C) and confidence (Con)	Key findings Please note coding of concepts used: knowledge (K), attitudes (A), competencies, capabilities and/or preparedness (CCP), comfort (C), and confidence (Con)	Author identified limitations of study
Ullman (2017) Australia	Australian teenagers who are same-sex attracted and gender-diverse (n = 704). Age demographics: 14–18 years.	To examine school gender climate as a potential stressor for teenagers who identify as gender diverse and the degree to which teacher positivity can assist the connection of these students to school. Quantitative design: Cross-sectional online survey. Significant analysis method/s: Descriptive analysis, Pearson's Product-Moment Correlations, and Multiple Regression Analysis. Quality of Study: 8/8	**A:** Data was retrieved from the *Free2Be? National Survey of Sexuality and Gender Diverse Students.* **A:** Scale measures of the *Attitudes Toward School Survey (Department of Education and Early Childhood Development Victoria, 2006)* were included in research.	**A:** "Gender diverse students were significantly less likely than same-sex attracted, cisgender students to report that their teachers were 'openly positive about gender a-typicality or supportive of genderqueer or transgender people" (p. 283). **A:** "43% of gender diverse students reporting that their teachers were 'never' positive, compared to 28% of their peers" (p. 284). **A:** Gender diverse students' responses were negatively skewed, with almost double the number of students reporting low levels of teacher positivity than high (p. 284).	• Small sample size of participants created some restrictions on multivariate analyses. Because of this, further statistical modeling of direct and indirect effects of teacher positivity was unreliable. • As this study was only cross-sectional and relied on self-selecting convenience sampling, true causality of the relationships cannot be established.

included if they met the eligibility criteria. A narrative and visual description of the process was accompanied by the PRISMA-ScR flow diagram (Page et al., 2021; Tricco et al., 2018). Forward and backward searches were also conducted, with no additional citations included. This screening procedure can also be viewed in the PRISMA flow diagram below (Figure 1).

Quality appraisal

To determine the quality of included studies they were assesses utilizing the JBI online appraisal tools for qualitative studies and cross-sectional studies (Joanna Briggs Institute [JBI], 2020; Peters

et al., 2020), including utilizing the Mixed Methods Appraisal Tool version 2018 for mixed methods studies (Hong et al., 2018). These approaches are consistent with the methodology of scoping reviews, permitting for an explicit consideration of the risk and bias in the included literature, whole also permitting for all relevant empirical literature to be included in the comprehensive review and synthesis. To ensure the process was rigorous, quality appraisals were independently completed by both authors for each of the articles included in the final review, where any discrepancies were discussed, reviewed and agreed upon. The agreed quality appraisal scores are outlined in the results section (see Table 2).
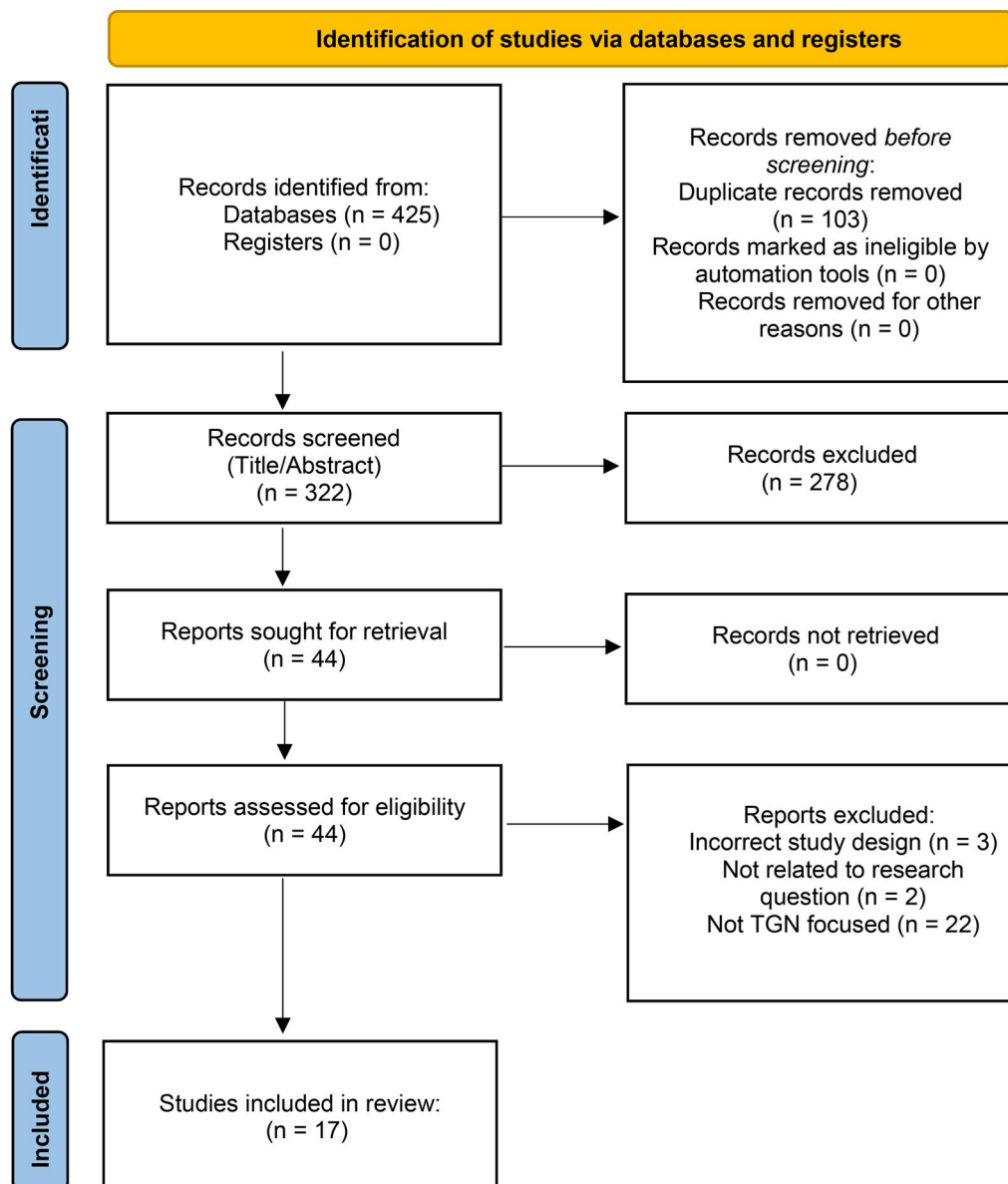
Identification of studies via databases and registers

Identification

Records identified from:
Databases (n = 425)
Registers (n = 0)

→

Records removed *before screening*:
Duplicate records removed (n = 103)
Records marked as ineligible by automation tools (n = 0)
Records removed for other reasons (n = 0)

Screening

Records screened (Title/Abstract) (n = 322)

→

Records excluded (n = 278)

Reports sought for retrieval (n = 44)

→

Records not retrieved (n = 0)

Reports assessed for eligibility (n = 44)

→

Reports excluded:
Incorrect study design (n = 3)
Not related to research question (n = 2)
Not TGN focused (n = 22)

Included

Studies included in review: (n = 17)

Figure 1. PRISMA flow diagram of review search for research question.

Data charting/extraction and analysis of items

A charting table (see Table 2) was developed to record key findings from the extracted data. Following JBI guidelines (Peters et al., 2020), the following data extraction criteria were charted: (1) reference; (2) country of study; (3) study sample size and significant demographics; (4) study aim(s), design, and methods of analyses; (5) key findings of studies (related to thematic concepts); and (6) author identified limitations.

To identify and map the evidence collected, Braun and Clarke's (2006, 2019) six-phase reflexive thematic analysis was applied to code and synthesize the data across studies.

More precisely, thematic analysis was drawn upon in "generating" and "defining" themes (Braun & Clarke, 2019, p. 593) resulting in three themes. Braun and Clarke (2019) encourage researchers to make use of their revised six-step guide[1] when engaging in thematic analysis, which was "applied flexibly" to capture the "uniting idea" for each theme (Braun & Clarke, 2019). This was discussed and agreed by both authors.

Thus, five key-concepts (with associated acronyms) were formulated in relation to the data collected: *Attitudes (A), Knowledge (K), Competencies Capabilities and Preparedness (CCP), Comfort (C)* and *Confidence (Con)*. As these concepts were often studied in an interrelated manner (e.g. as correlating variables), this review developed three themes covering the following: (1) Knowledge and confidence of caring school professionals toward TGN students; (2) Attitudes and comfort of caring school professionals toward TGN students; and (3) Competencies, capabilities and/or preparedness of caring school professionals toward TGN students. Utilizing these results, gaps in the literature were also analyzed and discussed.

Results

The four database searches were conducted on August 6, 2023. For the first stage of the screening procedure, 103 duplicate records were identified and removed, providing 322 articles. These article titles and abstracts were then screened with 278 studies excluded. If any uncertainties arose regarding eligibility criteria, both reviewers discussed these until a consensus was reached. This process resulted in a total of 44 studies meeting the eligibility criteria for full-text retrieval. These full texts were independently reviewed by both authors, and both authors confirmed eligibility for inclusion of the final 17 articles in this review, and the reasons for the 27 articles which were deemed not to meet the inclusion criteria. As a result,17 peer-reviewed articles were included upon the final review (see Figure 1).

To determine the quality of included studies they were assesses utilizing the JBI online appraisal tools for qualitative studies and cross-sectional studies (JBI, 2020; Peters et al., 2020). To determine the quality of the included studies, the JBI online quality appraisal tools for qualitative studies and cross-sectional studies (JBI, 2020; Peters et al., 2020), including utilizing the Mixed Methods Appraisal Tool version 2018 for mixed methods studies (Hong et al., 2018) were used. As outlined in Table 2, all empirical studies included in this review scored 75% or higher, and most were of excellent quality, with modest scoring for quality (6/8) given to only two studies (Burns et al., 2023; Gegenfurtner, 2021). No studies were excluded based on quality appraisal scoring.

Even though the eligibility criteria did not restrict studies based on geographical location, only six countries were represented (see Table 2). Eight studies were conducted in the United States of America (USA), five in Australia, and one in Canada, Germany, South Africa, and United Kingdom (England) respectively. Additionally, although no date restrictions were set, the included articles were all published in the last nine years, the earliest in 2015 and the most recent in 2023.

Study size and demographics

Sample sizes ranged from seven participants in Mackie, Lambert, et al. (2023) to 1,425 participants in McQuillan and Leininger's study (2021). The mean sample size across the 17 studies equated to 311.52 participants per article. Demographics about the participants were

captured and presented differently across the studies, with some articles collecting in-depth information such as age ranges, sexuality, and gender (Bartholomaeus et al., 2017; Burns et al., 2023), compared to others who chose to not seek such detail, deeming it not purposeful to their study (Markland et al., 2023; McQuillan & Leininger, 2021).

Five of the studies focused on the perspectives gained from school psychologist and/or school counselors (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Bowers et al., 2015; Mackie, Lambert, et al., 2023; Riggs & Bartholomaeus, 2015), and five solely investigated data obtained from school teachers (Bartholomaeus et al., 2017; Burns et al., 2023; Mangin, 2022; Markland et al., 2023; Shelton, 2018; Silveira & Goff, 2016). Pre-service teachers were the single focus in Gegenfurtner (2021), and were also researched in Bartholomaeus et al. (2017) alongside registered teachers. Both primary and secondary/elementary caring professionals were represented across the 17 studies; however, professionals who worked within secondary/elementary environments have been more frequently researched. Additionally, three studies (Francis, 2023; Martino et al., 2022; McQuillan & Leininger, 2021) retrieved and investigated data from other school professionals besides teachers, including educational administrators, managers, assistants, and support staff. Silveira and Goff (2016) exclusively investigated music teachers' attitudes toward TGN students, and Mangin (2020) dedicated their study on the perspectives of school leaders and/or principals. Only two articles contained data reported by teenagers/students (Francis, 2023; Ullman, 2017), with Ullman (2017) being the only study that asked for such data without also collecting the self-reports of school professionals. For further details regarding captured demographics of samples please refer to Table 2.

Study design and methodology

Nine studies were cross-sectional in nature, six were qualitative, and two utilized a mixed methods design (see Table 2). Various forms of data analysis methods were applied across the studies, including descriptive analysis (e.g. measure of central tendency), analysis of variance utilizing t-tests and one-way ANOVAs, bivariate correlations, Pearson's product moment correlations, linear regression analysis, chi-square tests of association, thematic analysis and interpretative phenomenological analysis. Main aspects of the studies' design and analysis techniques can be viewed further in Table 2. When charting, analyzing, and in the end synthesizing the study information under the three main themes, including meeting the objectives of this scoping review, quantitative, qualitative and mixed methods data were not reported separately. Rather, the authors charted, analyzed, and synthesized the data and the findings in relation to the research question collectively, which is a possible limitation to this study.

Knowledge and confidence of caring school professionals toward TGN students

Over half of the articles in this review provided information on caring school professionals' knowledge and/or confidence levels regarding working with TGN students (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Bartholomaeus et al., 2017; Bowers et al., 2015; Burns et al., 2023; Francis, 2023; Mackie, Lambert, et al., 2023; Markland et al., 2023; McQuillan & Leininger, 2021; Riggs & Bartholomaeus, 2015). Francis (2023) found that many teachers and school managers displayed limited understanding of TGN expression and identity, and had limited knowledge on cisgenderism or transphobia. Martino et al. (2022) stated that only 30% of school educators made comments that reflected understanding of trans-inclusive policies (e.g. using affirming pronouns and secondary school teacher participants had limited knowledge of such policies and inclusive practices. In particular, Markland et al. (2023) found that the number one concern for teachers regarding supporting TGN students was not knowing how discussions about gender identity should be approached with young people and their parents. However, in Riggs and Bartholomaeus' (2015) study on school psychologists, clinical knowledge using descriptive statistics was averaged at 48.33 (SD = 7.65), indicating that the overall sample had fairly high levels of clinical knowledge about working with trans people.

All articles that inquired into participants' university/graduate programs discovered that there was a general lack of TGN specific training (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Bowers et al., 2015; Burns et al., 2023; Mangin, 2020). For instance, only 2% of school psychologists surveyed in Ausloos et al. (2022) indicated that they received specific education on TGN issues in their graduate programs, and 78% of teachers in the study by Burns et al. (2023) stated that they have received no training on how to teach about gender diversity. This deficit in education is also evident in Mangin (2020), as all school leader participants disclosed that they required further professional development to gain knowledge on how to properly support TGN students, with many staff often relying on the parents of TGN students for their initial source of knowledge.

Relatedly, many participants across the studies indicated that they require further professional development to assist in increasing their TGN knowledge and educational practices (Agee-Aguayo et al., 2017; Markland et al., 2023; Martino et al. 2022; McQuillan & Leininger, 2021). Agee-Aguayo et al. (2017) found that 43% of their participants (psychologists working with TGN students) had engaged in professional development since completing their graduate programs, and Ausloos et al. (2022) discovered that school counselors who engaged in professional development outside of graduate training increased their knowledge about TGN students and issues. Mangin (2020) reported that, unfortunately, TGN education is often limited to a single session for school educators. Optimistically, after TGN specific training, 92% of educators in McQuillan and Leininger's (2021) study shared the belief that they felt capable of discussing concepts related to gender expansive students with other staff, with 86% indicating that they felt confident to discuss these issues with parents. After attending this training (ranging from 90 min to two-day sessions) almost 30% of participants amended their classroom practices, 5% noted that they would expand their curriculum to include TGN content and 22% of the educators noted they were "more aware or more sensitive to" TGN issues (McQuillan & Leininger, 2021, p. 165).

Five studies discussed caring professionals' confidence in working with TGN students

(Bartholomaeus et al., 2017; Bowers et al., 2015; Burns et al., 2023; Markland et al., 2023; Riggs & Bartholomaeus, 2015), with most of the studies finding that the more experience and knowledge the staff member had with TGN issues, the more confident they felt. For example, data collected on school psychologists revealed that those who either had greater acceptance, more clinical knowledge or more experience working with a young trans person reported higher levels of confidence working with this cohort of students (Riggs & Bartholomaeus, 2015). Although Bartholomaeus et al. (2017) stated that teachers expressed higher confidence when they had either: a positive attitude or comfort level toward TGN students; a friend or family member who was TGN; or knowledge of the *Safe Schools Coalition*, the study found that direct teaching experience of TGN students did not seem to help teachers feel more confident. Burns et al. (2023) study found that 17% of teachers did not feel confident teaching about gender related issues, whereas teachers in Markland et al. (2023) stated that a lack of knowledge or fear of negatively impacting a TGN student when intervening could affect teachers' professional confidence. These teachers reported that they often knew policies but had a lack of confidence putting strategies into practice, especially when students did not want their parents to know about their non-binary identity (Markland et al., 2023).

Attitudes and comfort of caring school professionals toward TGN students

Only two studies in this review did not include data related to the themes of attitude or comfort toward TGN students (Ausloos et al., 2022; Mangin, 2022). Overall, school psychologists and/or counselors held positive attitudes toward students who identify as TGN (Agee-Aguayo et al., 2017; Bowers et al., 2015; Riggs & Bartholomaeus, 2015). Agee-Aguayo et al. (2017) found that 100% of school psychologists believed that TGN people are entitled to an equal education compared to cisgender students, and 93.7% of the psychologists surveyed stated that they "would not be bothered by working directly with a transgender student" (p. 157). Interestingly, a slightly higher

number of participants (96.7%) stated that they would be comfortable if a TGN student came out to them about their gender. The study by Bowers et al. (2015) produced the greatest amount of data relating to psychologists working with TGN students, finding that participants with one to five encounters with TGN youth in their job endorsed significantly higher affirming attitudes compared to those who had never had any working experience with TGN students. For instance, 83.7% of participants reported that they were either *willing* or *very willing* to address the needs of TGN students in their school (Bowers et al., 2015). In Mackie, Lambert, et al.'s (2023) qualitative study, some psychologists said that they would often pathologize trans presentations before meeting with the student, believing they were out of their depth due to the "complexity" (p. 12) of the case.

Being the only study that solely utilized student only responses, Ullman (2017) found that gender diverse students were significantly less likely than same sex attracted or cisgender students to state that their teachers were "openly positive about gender atypicality or supportive of genderqueer or transgender people" (p. 283). Furthermore, results from this study indicated that 43% of TGN students reported that their teachers were "never" positive, compared to 28% of their peers in the study (Ullman, 2017, p. 284). The article by Silveira and Goff (2016) on school music teachers' attitudes and supportive school practices toward TGN students discovered that teachers held "fairly positive" attitudes on average, with 90.2% of respondents indicating that they either strongly agreed or agreed that "It is the responsibility of school staff to stop others from making negative comments based on gender identity and expression" (p. 152). Similarly, most educational staff surveyed in Martino et al. (2022) held positive attitudes toward TGN students, with only 5% of respondents outrightly rejecting TGN inclusion and expressing degrees of transphobia and cisgenderism that was "troubling" (p. 85). Similar forms of anti-TGN attitudes were also displayed by a small minority of participants part of qualitative studies, including blaming TGN youth for creating confusion and more work for teachers (Francis, 2023), or

believing that TGN students pose a threat to others such as cisgender girls in school bathrooms (Francis, 2023; Markland et al., 2023). Overall, Markland et al's (2023) study reports that teachers generally thought that their school environment was inclusive toward TGN students, but that these same teachers believed that TGN students "may not experience school the same as other students" (p. 7). Although this study noted that teachers believed that inclusive practices were important, teachers reported often feeling uncomfortable due to uncertainties around appropriate practices and negative parent interactions in relation to TGN student issues (Markland et al., 2023). Interestingly, the school leaders in Mangin's (2020) study felt that having TGN students was a "growth" and "learning opportunity" (p. 275), but in contrast, only 5% of participants in McQuillan and Leininger's study (2021) of school employees wanted to hear testimonials from TGN students' experiences at school. Although teachers were seen to be generally supportive of policies that advocate for TGN students, Burns et al. (2023) discovered that implementation of these policies was low. This may indicate possible limitations in schools' capacities to uphold policies and procedures to properly support TGN students.

Although data is limited, caring school professional attitudes toward TGN students do not seem to vary in relation to their ethnicity, age, or highest degree earnt (Bowers et al., 2015); however, females have been found to report more positive attitudes or levels of acceptance toward TGN students than do male respondents (Bowers et al., 2015; Riggs & Bartholomaeus, 2015; Silveira & Goff, 2016). Additionally, participants who identified with more liberal/left leaning politics or were less religious reported more positive attitudes and comfort levels toward TGN students (Gegenfurtner, 2021; Martino et al. 2022; Silveira & Goff, 2016).

Competencies, capabilities and/or preparedness of caring school professionals toward TGN students

The articles captured within this theme either examined factors associated with caring professionals' competence, capabilities and/or

preparedness when working with TGN students (Agee-Aguayo et al., 2017; Ausloos et al., 2022), or captured related data when exploring the perspectives, experiences or strategies implemented by such staff in educational contexts (Francis, 2023; Mackie, Lambert, et al., 2023; Mangin, 2020, 2022; Markland et al., 2023; Martino et al., 2022; McQuillan & Leininger, 2021; Riggs & Bartholomaeus, 2015). Validating and affirming agency of TGN identities, advocating for and "queering" (p. 10) specific gender-related needs and spaces (e.g. uniform, bathrooms, etc.), providing suitable, safe support for individual cases (e.g. giving agency to TGN students, providing reading materials and referrals to external agencies, etc.), were endorsed by many school professionals as competent practices when working with TGN youth (Mackie, Patlamazoglou, et al., 2023; McQuillan & Leininger, 2021; Riggs & Bartholomaeus, 2015). Likewise, Mangin (2022) stated that strategies such as using more inclusive, gender neutral language and classroom practices, affirming students' gender expression (e.g. clothing and use of preferred name) and exposing students to literature and learning experiences related to TGN topics, were all forms of competencies that positively influenced the lives of TGN students. Additionally, child-centered approaches that kept TGN students' needs as the central tenant of decision-making was reported by school principals/leaders as a positive strategy (Mangin, 2020).

Studies reported that increased exposure to TGN students or a personal relationship/connection with a TGN individual may subsequently increase the competency of caring professionals' working with TGN populations (Ausloos et al., 2022; Mackie, Lambert, et al., 2023). Ausloos et al. (2022) also discovered that counselors who took part in TGN postgraduate training, were more likely to self-report higher levels of competency, including employing necessary support strategies (e.g. academic, career and social/emotional) toward TGN students. Relatedly, Mackie, Patlamazoglou, et al. (2023) discovered that counselors were more likely to engage with external professional services when they felt that their own skills or competencies were inadequate to holistically support TGN students. Although

participants from this study stated the importance of linking-in external agencies, there is the risk that deliberately avoiding counseling TGN students may inhibit professionals from fully developing their gender identity counselor competency (Ausloos et al., 2022).

Agee-Aguayo et al. (2017) found that school psychologists' who self-reported positive attitude toward TGN students, were more likely to describe themselves as being prepared to address TGN issues. Interestingly, as these participants reported preparedness increased, their evaluation of their school district's preparedness tended to fall. This study also highlighted that 54% of the participants felt that their education had not sufficiently prepared them to assist TGN youth in school settings. McQuillan and Leininger (2021) gathered data in relation to school employees (e.g. administrators, teachers, and other staff) and found that 92% felt capable of discussing concepts related to gender expansive students with other faculty and staff, with the same percentage of respondents stating that they felt equipped to deal with TGN issues in school. It should be noted that fewer participants felt competent in discussing these issues with their students' parents, and that participants who were not administrators or teachers did not feel as equipped to deal with TGN issues (McQuillan & Leininger, 2021).

Several studies in this review reported the incompetencies of some educational staff toward TGN students. Martino et al. (2022) highlighted that a lack of competent intervention and support meant that transphobic bullying was often not addressed in school environments. For example, teachers in Markland et al. (2023) study stated that their school staff were good at addressing discriminatory language and explained that transphobic language only occurred due to students not knowing the "weight of their words" (p. 8). This study highlighted how many educational staff did not competently intervene due to the cisnormative culture of their school. Furthermore, Francis (2023) stated that staff often failed to recognize TGN youth as being the targets of victimization, and that TGN students often felt let down by their teachers' practices (e.g. having to "apologise and forgive" their aggressor/s).

Discussion

This scoping review sought to bring together existing empirical literature and highlight the knowledge and dispositions of caring professionals in school settings regarding TGN students. The findings from this review highlight recommended TGN affirming interventions, support mechanisms, and protective factors needed to support and promote optimal educational outcomes, including optimal health and wellbeing for TGN students. The findings of this review indicated five main concepts apparent in the literature in response to the research inquiry: (1) attitudes; (2) knowledge (3) competencies, capabilities, and preparedness; (4) comfort; and (5) confidence of caring professionals in school settings toward TGN students. Across the articles, studies on participants' attitudes had been studied most frequently, with participants' preparedness being explored the least.

Aside from the small minority of participant outliers, the results indicate that caring school professionals seem to possess positive attitudes toward TGN students (Agee-Aguayo et al., 2017; Bowers et al., 2015; Riggs & Bartholomaeus, 2015). As world estimates of youth who identify as TGN have risen over the past decade (Franks et al., 2023; Rider et al., 2018; Telfer et al., 2015; Winter et al., 2016), and TGN youth have been found to experience more difficulties (including discrimination and harassment) at school than cisgender youth (Agee-Aguayo et al., 2017; Bartholomaeus & Riggs, 2017; Becerra-Culqui et al., 2018; Hatchel et al., 2019; McBride & Neary, 2021; National LGBTI Health Alliance, 2021; Strauss et al., 2017), this observation is encouraging as it suggests that TGN students have a network of adults with whom they can interact, and receive support from.

Although the attitudes of caring school professionals toward TGN students are generally high, the findings from this review indicate that many staff do not have the depth of knowledge to understand the scope of the issues TGN students face, and therefore, often lack confidence or do not feel comfortable addressing them (Agee-Aguayo et al., 2017; Francis, 2023; Mangin 2022; Markland et al., 2023; Martino et al., 2022).

All caring professionals must be aware of the possibility that TGN students are present in their schools, and need to be mindful of their unique social, mental health, educational, and environmental needs. As stated in previous research by McGuire et al. (2010), school professionals can unintentionally contribute to the negative life experiences of TGN students by omitting simple acts such as recognizing and using preferred names and/or pronouns. Additionally, as the presence, implementation or upholding of TGN inclusive practices and policies was generally lower, or even absent, compared to staffs' intended attitudinal levels of TGN support (Burns et al., 2023), there is a possible requirement to investigate the overall schools' capacity to implement and support the needs of both staff and TGN students. Parallel to this, and as expressed in Burns et al. (2023), TGN-inclusive practices and polices deliver best when there is a "greater focus on diversity and inclusivity in the national curriculum" (p. 551) in turn informing the learning and teaching material in the classrooms (Bedford et al., 2023).

A general lack of TGN-affirming graduate training was discovered in this review (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Bowers et al., 2015; Burns et al., 2023; Mangin, 2020), with many school staff opting to undertake additional professional training to meet the needs of their TGN students (Agee-Aguayo et al., 2017; Markland et al., 2023; Martino et al., 2022; McQuillan & Leininger, 2021). If anything, this review highlights the need for more specific TGN education in graduate programs (Burns et al., 2023), as research suggests that attaining training and knowledge about TGN issues and practices increases the likelihood that school professionals will more effectively advocate for TGN students (Graybill et al., 2009). Likewise, increased professional development in the areas of TGN understanding and inclusive practices is imperative for caring school professionals, as TGN students self-reported wellbeing has been found to be influenced by positive interactions and practices by school staff (Jones et al., 2016; Kelley et al., 2022; Ullman, 2017, 2022). Collectively, the call for further TGN-affirming school practices, policies, teaching and learning material with increased

focus on diversity and inclusivity in the national curriculum, including further and mandated TGN-competence, confidence and comfort-inducing training both at initial-teacher education level and for those in-service, highlight the very need for both a whole-of-school approach to supporting TGN students (Bartholomaeus & Riggs, 2017), including systemic changes within the often hostile socio-politico-medico climate surrounding and informing school settings and alike (Brömdal et al., 2024).

From a demographic perspective, men's attitudes/levels of acceptance and clinical knowledge toward TGN students rated lower than that of women (Bowers et al., 2015; Riggs & Bartholomaeus, 2015; Silveira & Goff, 2016). These findings are in line with past research reporting that men hold greater anxiety about, and investment in, the binary systems and gender order of society that women, resulting at times in greater transphobic behaviors and attitudes (Nagoshi et al., 2008; Norton & Herek, 2013; Riggs & Sion, 2017). Likewise, utilizing a gender-transformative lens (United Nations Population Fund [UNFPA], 2023), this review highlights that although somewhat improving, cisgenderism is still highly institutionalized in school settings. For instance, the inclusive improvements that staff often reported (e.g. non-gendered bathroom spaces and activities, and use of preferred names and pronouns) frequently disrupted binary practices that entrench their day-to-day lives (Mackie, Patlamazoglou, et al., 2023; Mangin 2022; McQuillan & Leininger, 2021; Riggs & Bartholomaeus, 2015).

Although 17 articles were captured in this review, limited data still exists considering the wide scope of the search criteria, as well as the recent nature of the articles collected. First, only a small proportion of the total data reviewed captured insights from TGN students themselves (Francis, 2023; Ullman, 2017), highlighting a fundamental gap in the literature. Parallel to this, some studies (Agee-Aguayo et al., 2017; Bartholomaeus et al., 2017; Francis, 2023; Gegenfurtner, 2021; Markland et al., 2023; McQuillan & Leininger, 2021) chose to capture either limited or no information on participants' gender, even though their field of research focused on gender diversity. Future studies that explore these demographic differences could assist research in this field of study.

A variety of analysis methods were also utilized across the review, incorporating different combinations of the pre-mentioned themes. Only a limited number of articles used the same themes/measures as the independent and dependent variables, while also applying the same type of analysis technique. Therefore, even though studies used similar themes as measures, the ways in which they were formulated resulted in a range of findings. For instance, analysis of variance demonstrated that participants who had increased exposure to TGN people reported more positive attitudes toward TGN individuals (Bartholomaeus et al., 2017; Bowers et al., 2015; Gegenfurtner, 2021), and participants who knew a TGN person personally reported feeling more confident working with TGN students or youth (Bartholomaeus et al., 2017; Gegenfurtner, 2021; Riggs & Bartholomaeus, 2015). However, it should be noted that there were some inconsistencies across the studies, such as the contradictory finding by Bartholomaeus et al. (2017), which states that direct experience does not seem to help school-teachers feel more confident in their practice with TGN students.

Limitations

There are several limitations to the current scoping review. For example, this review could have been more comprehensive if reference list screening and grey literature were included, and with no focus on empirical, peer-reviewed, and English-only articles part of the inclusion criteria (Munn et al., 2022). Furthermore, as this review examined TGN as a whole, the unique nuances that exist within this grouping have not been able to be explored. Although these steps were taken to ensure rigor and accessibility, these eligibility criteria may have inadvertently resulted in relevant literature being excluded. Similarly, if the empirical study did not differentiate findings unique to TGN students, articles exploring caring professionals' knowledge and dispositions in school settings regarding LGBTQIA + students were excluded, again resulting in pool of articles

potentially overlooked as the T in the acronym was non-distinguishable. As previously stated, both qualitative and quantitative studies were analyzed and recorded together under concept themes. Although the process of mixed methods analysis was intentional, the authors note that the reporting method utilized in this review is possibly a limitation, as qualitative and quantitative studies have inherently different analytical methods that could result in bias or cause a lack of methodological rigor when synthesized as one.

By gathering and analyzing the literature together under key characteristics, this study has identified focus areas/topics and suitable methodologies for future research. For example, although the research captured has been peer-reviewed and explores a variety of themes/factors related to caring professionals' working relationship with TGN students, these findings, presently, have not been extensively examined and corroborated. Additionally, even though a range of concepts/themes (e.g. attitudes; knowledge; competencies, capabilities, and preparedness; comfort; and confidence) have been explored across quantitative studies, the ways in which they have been tested (as either dependent or independent variables using different forms of analysis) has resulted in varied findings (comprehensively listed in Table 2). To gain a better understanding of this data, further research applying statistical techniques such as multiple regression analysis is recommended so that the multivariable relationships of themes/concepts can be further explored.

Finally, to ensure a more accurate representation of participant populations in future studies, probability sampling is recommended to minimize sampling and social-desirability bias that has possibly occurred in most of the articles included in this review (Punch & Oancea, 2014). Inclusion of ethnographic research in classrooms and longitudinal studies which evaluate the effectiveness of professional development and graduate programs is also highly recommended. These qualitative research methods could also be utilized with forms of quantitative measurements, including more studies that capture the perspectives and lived experiences of TGN students.

Conclusion

In conclusion, this scoping review has provided a comprehensive synthesis of what is currently known in the literature about caring school professionals' knowledge and dispositions regarding TGN students. As literature suggests that school staff are highly influential on TGN students' self-reported wellbeing and overall feelings toward school climate (Jones et al., 2016; Kelley et al., 2022; Ullman, 2017, 2022), it was imperative that an initial review was conducted to examine, summarize and disseminate relevant research findings.

The 17 articles included in this study indicate that caring professionals hold mostly positive attitudes toward TGN students; however, men seem to possess lower positive/affirming attitudes toward, and knowledge about TGN identities and inclusive practices (Bowers et al., 2015; Riggs & Bartholomaeus, 2015; Silveira & Goff, 2016). Additionally, evidence from a range of articles indicate a general lack of TGN knowledge and graduate training, leading to many of the participants having to undertake further professional development to strengthen their understanding and practices pertaining to TGN students and how best to support them (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Bowers et al., 2015; Burns et al., 2023; Mangin, 2020).

Data collected across the articles demonstrate a range of competencies and capabilities of caring professionals toward TGN students in schools, including: validating and affirming agency of TGN identities; advocating for, and "queering" specific gender-related needs and spaces; exposing students to TGN literature and educational experiences (Bedford et al., 2023); and providing safe, supportive, and individualized care to TGN students (Agee-Aguayo et al., 2017; Ausloos et al., 2022; Francis, 2023; Mackie, Lambert, et al., 2023; Mangin, 2020, 2022; Markland et al., 2023; Martino et al., 2022; McQuillan & Leininger, 2021; Phillips et al., 2024; Riggs & Bartholomaeus, 2015). The research indicates that some caring professionals lack competent inclusive intervention and support strategies, such as not knowing how to successfully identify and manage TGN discrimination in a dominantly cisgenderist and cisnormative school culture.

Caring school staff also require regular professional development opportunities, and need to be assisted in improving and enacting inclusive policies and practices that promote supportive and safe environments for all student cohorts. It is therefore imperative that school staff engage in ongoing TGN affirming education to allow for an increased understanding of TGN concepts and inclusive school practices. Considering this, future research is needed on TGN staff education, including the content coverage and applicability of past and current pre and postgraduate programs to monitor and better improve outcomes. Relatedly, the findings encourage all caring school professionals to critically reflect on their own attitudes and beliefs (even if involuntarily attained), with a view to better understand, act upon, and hopefully reduce, negative attitudes and behaviors toward TGN young people (Gegenfurtner, 2021). Further use and research utilizing the *School Counselor Transgender Intersex Advocacy Competence Scale (SCTIACS)* (Simons, 2019), would assist educational staff and stakeholders to self-reflect and assist them in learning how to advocate for gender minority students, and for students born with variations of sex characteristics and intersex traits (Brömdal et al., 2021).

Note

1. This six-phased guide of thematic analysis consists of (1) familiarizing yourself with your data; (2) generating initial codes; (3) generating (initial) themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report (Braun & Clarke, 2019, p. 593).

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Ethical statement

Although this article does not contain any studies with human participants or animals performed by any of the authors, the Australian Association for Research in Education's *Code of Ethics* was adhered to ensure that the scoping review was conducted in an ethically sound manner (Australian Association for Research in Education [AARE], 2014).

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