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University of Southampton

Faculty of Environmental and Life Sciences

School of Psychology

An exploration of school factors associated with eating disorder risk and the experience of supporting a friend with an eating disorder in secondary school: A systematic review and qualitative study on help-seeking and support.

Volume 1

by

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Thesis for the degree of Doctorate in Clinical Psychology

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Chapters 1 and 2 of this thesis have been prepared for submission to the *International Journal of Eating Disorders* (See Appendix J and K for submission guidelines).

Abstract

Adolescence is well-established as the peak period for the onset of eating disorders. It is hypothesised that the biological, psychological and social changes that occur during this critical developmental period make young people particularly vulnerable to external stressors. Throughout adolescence, young people navigate increasing independence from family, and friendships appear to play a central role in shaping their identities, self-esteem, and overall well-being. Given the significant amount of time adolescents spend in school, this environment serves as a key social setting where friendships are formed and maintained. Despite the anecdotal importance of both friendships and schooling environments in relation to eating disorders, little is known about how these factors shape the experience of individuals with eating disorders, or how they intersect to do so. The aim of this thesis is to examine how school environments can influence the risk of young people developing eating disorders, and to better understand the unique experiences of adolescents who have supported friends struggling with disordered eating. By exploring both the structural factors within schools, and the social dynamics of friendships, this research seeks to deepen our understanding of how these contexts shape the experience of having an eating disorder or supporting a friend with an eating disorder.

With such aims and scope in mind, two research investigations were conducted. The first chapter presents a systematic review of 18 studies investigating the relationship between school environments and the risk of developing an eating disorder. A synthesis of these studies was conducted and suggested that factors such as all-female schooling, high academic pressure, private-schooling, and a school's socioeconomic status may significantly contribute to the risk of developing an eating disorder. The synthesis highlights the impact of school culture, social comparisons, and performance-related stress on students' vulnerability to eating disorders. However, further intersectional analysis is needed to understand how these factors interact.

The second chapter employs a qualitative approach to examine the experiences of adolescents who maintained friendships with peers struggling with disordered eating. Semi-structured interviews with 15 participants, analysed using reflexive thematic analysis, generated key themes*: (1) Barriers to help-seeking: loyalty and fear (2) A culture of normalisation (3) What could have helped? Gaps in support & missed opportunities*, *and (4) The emotional impact on friends.* Although participant's accounts were retrospective, potentially introducing memory biases, findings suggest that, whilst peers often play a crucial role in eating disorder identification and support, they remain largely unsupported themselves.

Taken together, these chapters underscore the importance of holistic, education-based strategies to promote early intervention and mitigate eating disorder risk factors. Suggestions are made regarding enhanced mental health education and teacher training, structured support options for

individuals with eating disorders and the friends supporting them, and greater collaboration between healthcare and education systems.

Keywords: Eating disorders; anorexia nervosa; bulimia nervosa; school; friends; academic pressure; school support; disordered eating.

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Research Thesis: Declaration of Authorship

Print name: Naomi Law

Title of thesis: The Experience of Having a Friend with Disordered Eating at Secondary School: A Qualitative Study Exploring Help-Seeking Behaviour and Ongoing Support.

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: ..... Date: 30th July 2025

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Finally, I would like to acknowledge myself, for finding the strength to complete this thesis during one of the hardest chapters of my life. This thesis is dedicated to the 16-year-old version of myself who dreamed of becoming a Clinical Psychologist, and who committed her life to actualising that dream.

Definitions and Abbreviations

AN ..... Anorexia nervosa: An eating disorder characterised by severe restriction of food intake, an intense fear of gaining weight, and a distorted body image.

ARFID ..... Avoidant/restrictive food intake disorder: An eating disorder characterised by restrictive eating that leads to significant weight loss or nutritional deficiency, but without body image concerns.

BED ..... A clinically recognised eating disorder characterised by recurrent episodes of consuming large amounts of food in a short period, often accompanied by a sense of loss of control.

BMI ..... Body mass index: A measure of body fat based on weight and height, calculated as weight in kilograms divided by the square of height in metres.

BN ..... Bulimia nervosa: An eating disorder marked by cycles of binge eating followed by compensatory behaviours, such as purging or excessive exercise.

CP ..... Clinical psychologist: an expert or specialist in the branch of psychology concerned with the assessment and treatment of mental illness and psychological problems.

DE..... Disordered eating: a range of irregular eating behaviours and attitudes toward food, weight, or body image that may not meet the criteria for a clinical eating disorder but can still negatively impact physical and mental health. These behaviours can include restrictive dieting, binge eating, obsessive calorie counting, skipping meals, or using food to cope with emotions.

DSM-V ..... Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: A classification system used by healthcare professionals for diagnosing and categorising mental disorders.

DWCB ..... Disordered weight-control behaviours: Unhealthy methods of controlling weight, such as self-induced vomiting, use of laxatives or diet pills, skipping meals, fasting, or excessive exercise.

EAT ..... Eating attitudes test: A widely used standardised questionnaire to screen for symptoms and behaviours associated with eating disorders.

ED/EDs..... Eating disorder/eating disorders: A group of mental health conditions characterised by unhealthy eating behaviours and concerns about body weight or shape.

EDI ..... Eating disorder inventory: A self-report questionnaire used to assess psychological traits and symptoms related to eating disorders.

EDNOS..... Eating disorder not otherwise specific: A term previously used for eating disorders that do not meet the criteria for other specific disorders (replaced by OSFED in DSM-V).

NHS..... National Health Service: The publicly funded healthcare system in the United Kingdom, providing medical services, including mental health support, free at the point of use.

OSFED ..... Other specific feeding or eating disorder: A category in DSM-V for eating disorders that do not meet criteria for anorexia nervosa, bulimia nervosa, or binge eating disorder.

PICO..... Population, intervention, comparators, outcomes: A framework used to formulate research questions and develop systematic reviews.

PRISMA ..... The Preferred Reporting Items for Systematic Reviews and Meta-Analysis: A set of guidelines to ensure transparent and complete reporting of systematic reviews.

RTA..... Reflexive thematic analysis: A qualitative research method used for identifying, analysing, and interpreting patterns (themes) within data. Unlike structured thematic analysis approaches, RTA emphasises the researcher’s active role in theme development, allowing for flexibility and deep engagement with the data.

SES..... Socioeconomic status: A measure of an individual or group's economic and social position in relation to others, based on income, education, and occupation.

SWIM..... Synthesis without meta-analysis: A methodological approach used in systematic reviews when a meta-analysis is not feasible due to high heterogeneity in study designs, populations, or outcomes. Instead of pooling statistical data, SwIM provides a structured narrative synthesis of findings.

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Chapter 1: Bridging Chapter

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This chapter is not intended for publication

Rationale for the Thesis

Adolescence is commonly defined as a transitional developmental stage spanning from the onset of puberty to the assumption of adult roles (Forbes & Dahl, 2010). While traditionally spanning ages 10 to 19 (World Health Organization, n.d.), emerging research recognises its extension into the mid-20s due to shifts in education and psychosocial development (Sawyer et al., 2018). This broader definition is relevant to research on disordered eating, as vulnerability often continues into emerging adulthood.

Understanding the developmental stage of adolescence is crucial to comprehending the factors that influence young people's immediate well-being, and their long-term psychological outcomes (Hansen et al., 2019). Within psychological research, social contexts, such as the school environment and peer relationships, have emerged as two focal points. Schooling and friendships provide opportunities for cognitive and social development (Güroğlu, 2022; Kutnick & Kington, 2006), and contribute to the formation of coping mechanisms (Zheng et al., 2022) and self-esteem (Meškauskienė, 2017; Luijten et al., 2023). Examining the broader social context in which adolescent development occurs requires exploring schooling and friendships as both separate and interconnected influences. Schools serve as primary social arenas where peer interactions take place (Mollborn & Lawrence, 2019), shaping experiences of belonging, acceptance, and social identity (Osterman, 2000; Baek, 2023; Verhoeven et al., 2019). Within schools, positive peer relationships can enhance academic engagement (Liu, 2023; Tikkanen et al., 2024), whilst negative experiences can contribute to stress and anxiety (Moore et al., 2017; Yu et al., 2023). Given the profound impact of this intersection on both short-term adjustment and long-term psychological outcomes, further exploration is necessary to better understand how these influences interact, and how interventions can be designed to foster resilience, positive development, and social well-being.

This thesis explores how an adolescent's broader social environment, including school and friendship experiences, can impact the risk of developing an eating disorder. Chapter 2 explores the role that schooling may play regarding the risk of developing an eating disorder (ED). In Chapter 3, an empirical study offers a unique perspective on the experiences of friends who supported a peer with an ED during secondary schooling. By integrating these perspectives, this thesis strives to illuminate the complex interplay between educational settings, peer dynamics, and wider social narratives that may shape adolescent's experiences of EDs, and their development more broadly.

Theories of Adolescent Development

Examining developmental theories relating to this critical period may offer insight into how schooling and friendship can influence psychological outcomes for young people, and how they interact. Sullivan's (1953) interpersonal theory highlights the fundamental role of friendships in shaping self-concept and emotional security, arguing that peer validation is crucial for identity

formation during adolescence. Sullivan (1953) hypothesised that all psychological disorders can only be understood with reference to an individual's social environment. In the context of Chapter 2, in school settings, friendships can provide a buffer against academic stress and social exclusion, reinforcing feelings of belonging and self-worth (Berndt, 2004). However, peer interactions are also a major source of social comparison, particularly in relation to appearance and body image (Marcos et al., 2013; Lubbers et al., 2009), which can increase the risk of disordered eating behaviours if adolescents internalise unrealistic body ideals (Pinkasavage et al., 2015).

Erikson's (1959) psychosocial development theory postulates that adolescence is most notably a period of identity formation, during which individuals compare themselves to their peers, whilst simultaneously negotiating societal expectations. Erikson (1959) believed that adolescence is characterised by 'identity vs. role confusion', whereby the primary task for adolescents is to explore different roles, goals, and beliefs to develop a coherent self-identity. Adolescents often seek to explore different aspects of their identity through social relationships, and successfully navigating this stage leads to a strong sense of identity, whilst struggling with it can result in role confusion. This theory helps to explain why peer relationships are so formative; adolescents seek affirmation and belonging, often moulding their self-perception to the acceptance of their peers. In the context of Chapter 2, although psychosocial theory (1959) does not explicitly hypothesise about the impact of schooling, it recognises social institutions, such as schools, as key environments whereby identity formation occurs.

Vygotsky's (1978) social development theory emphasises that learning is inherently social, with cognitive and emotional development occurring through the interactions adolescents have, notably with peers and educators. Vygotsky (1978) hypothesised that learning and development are shaped by the cultural values, beliefs, and practices of the community in which the adolescent is raised. Vygotsky (1978) highlighted the importance of exploring the social sphere of schooling and the peer relationships that occur within this space to understand their influence on identity construction. Whilst positive friendships can foster academic engagement and psychological wellbeing, peer-related stress can have detrimental effects, particularly relating to body image and eating behaviours (Rancourt & Prinstein, 2010).

Many development theories from the 20th century have since waned in influence, as they are rarely explicitly tested in modern research (Miller, 2022). However, the key theoretical concepts that they introduced remain embedded in modern theorisation. Vygotsky's (1978) emphasis on culture, for instance, is central to current cognitive developmental research, with widespread recognition that cognitive skills emerge within sociocultural contexts (e.g. parents, peers, and media) (Jeong et al., 2022). However, theoretical development has not evolved as rapidly as the pace of empirical research. For example, despite growing acknowledgement of the importance of sociocultural contexts, the perspective that an adolescent is inherently embedded within their environment has not been thoroughly woven into existing frameworks (Choukas-Bradley et al., 2022).

Many classical developmental theories, including those of Erikson (1959), Vygotsky (1978), and Sullivan (1953), tend to theorise about schooling and peer influence in isolation, overlooking how they function as interconnected forces in shaping adolescent identity (Kunnen et al., 2019). They often overlook how school structures actively shape peer relationships, and, by extension, identity development (Roeser et al., 2000). Schools are not merely backdrops to adolescent friendship formation; they are active socialising agents that dictate who interacts with whom, how peer groups form, and what social hierarchies emerge (Way & Greene, 2006). Similarly, friendships play a crucial role in shaping the schooling experience, often reinforcing or challenging the social norms established within the school environment (Wentzel, 1998). The bidirectional nature of this relationship highlights the need to consider schooling and peer influence as intertwined factors, rather than separate influences.

Furthermore, these classical theories often neglect intersectionality, treating adolescent experiences as universal as opposed to shaped by gender, socioeconomic status, race, and cultural background (Carter & Seaton, 2024; Evans-Winters, 2021). Friendship experiences in schools are not homogenous. Students from marginalised backgrounds may experience exclusion, racialised peer interactions, or additional pressures to conform to dominant cultural norms that influence identity formation in ways not accounted for by these developmental models (Leath et al., 2019). Further, the relationship between schooling and disordered eating is not uniform, as research suggests that socioeconomic inequalities influence access to body-positive role models, mental health support, and extracurricular activities promoting healthy identity exploration (Larson et al., 2021). By failing to consider these intersecting variables, classical developmental theories risk misrepresenting the diverse challenges faced by adolescents in modern educational and social contexts. Given these limitations, this thesis argues that adolescent identity formation must be understood through a more intersectional lens that acknowledges how schooling and friendships are mutually reinforcing contexts, rather than separate developmental forces (Santos et al., 2019; Glennon et al., 2015). These limitations are further complicated by the rise of social media, which introduces new layers of identity negotiation and has reshaped the context in which identity formation occurs.

Changing Social Landscapes

One of the key challenges in interpreting the findings of this thesis is recognising that the experiences of adolescents in the present may differ significantly from those of the participants in Chapter 3, and those recruited to participate in studies included in Chapter 2. Firstly, the role that the media plays in adolescent identity formation has transformed drastically (Twenge et al., 2019; Avci et al., 2024). Earlier generations typically engaged with media through traditional formats, such as television, magazines, and early internet spaces. However, adolescents of today are deeply embedded in algorithm-driven social media ecosystems (Uhls & Greenfield, 2011). This shift will have notable implications for the psychological outcomes of adolescents, and it is worth questioning whether previous developmental theories are still relevant and applicable in modern times.

Bronfenbrenner's (1979) ecological systems model conceptualises adolescent development within nested environmental systems. Whilst Bronfenbrenner's (1979) original model emphasised proximal influences, such as family and school, contemporary scholars have argued that digital media has blurred the distinct boundaries of the proposed systems. For example, social media seems to have sped up the spread of cultural influences, with digital platforms now acting as influential channels for cultural exchange across all levels of ecological systems. Modern researchers have proposed the existence of 'virtual microsystems' to capture the interactive environments adolescent's experience online, although these spaces also reflect exosystem influences, as platform algorithms and moderation policies indirectly shape adolescents' online experiences (Navarro & Tudge, 2023).

Chapter 2 reflects this complexity: participants' school experiences were shaped by traditional peer interactions, yet their perspectives were also influenced by media narratives operating across multiple ecological systems. This raises a critical question: To what extent do classical psychological theories remain applicable to our understanding of adolescent development and how can we reconcile modern empirical findings with traditional theory? As discussed, there is a pressing need to update existing theories to better reflect the nuanced realities of contemporary adolescent experiences.

Further, the social environment of schooling has undergone significant transformations over the past decade (Eyles et al., 2017). Historically, cliques and social hierarchies were relatively rigid in schooling environments, with clear distinctions between social groups (Brown, 1990). However, contemporary research suggests that peer groups are now more fluid, as schools continue to encourage intersectionality and diverse extra-curricular involvement (Way et al., 2007). Erikson's (1959) theory postulates that adolescence is dominated by the identity vs. role confusion stage. As traditional social hierarchies dissolve, adolescents are afforded greater flexibility to experiment with different aspects of their identity, particularly in educational environments that promote inclusivity and self-expression (Meeus, 2011). However, this fluidity also introduces new challenges, as increased social mobility and exposure to diverse peer influences may lead to heightened uncertainty regarding identity, or prolonged periods of role confusion (Schwartz, 2001). Furthermore, the integration of digital peer networks into school environments means that adolescents are not only navigating social dynamics in physical spaces, but also in online contexts, whereby social comparison is amplified (Nesi et al., 2018). These shifts suggest that Erikson's (1959) model of identity development may need to be expanded to account for the complex, hybrid social environments in which modern adolescents construct their sense of self.

Finally, over the past decade, the United Kingdom education system has experienced significant shifts, intensifying the focus on academic performance. In 2014, a revised national curriculum was implemented, introducing more rigorous content across subjects and emphasising core academic disciplines (Deng, 2025). This reform aimed to raise educational standards, yet it also led to an overloaded curriculum, prompting concerns about rote learning and insufficient depth of understanding (Gibson, 2024). Notably, since the reform, there has been a reduction in arts education, with the proportion of students taking at least one arts GCSE falling by 35% since 2015 (Thomson &

Coles, 2024). Additionally, the education system's accountability framework has reinforced the focus on standardised testing. At the secondary level, GCSE examinations serve as high-stakes assessments that significantly influence students' futures (Jerrim, 2022). These changes may restrict students' opportunities to explore diverse interests and talents, which are crucial for holistic identity development.

Erikson (1959) argued that successful identity formation requires time for self-exploration. Educational shifts towards a greater emphasis being placed on performance affects adolescents' ability to explore identity freely, as they may feel pressured to align their identity with academic or career expectations early on (e.g., selecting career tracks in secondary school) (Putwain, 2009). Some students may struggle with ‘role overload’, attempting to balance academic success, extracurricular demands, and social expectations, which can exacerbate identity confusion and limit the ability to engage in free identity exploration (Luyckx et al., 2008).

Despite these changing landscapes, the psychological processes underpinning adolescent identity formation remain fundamentally relevant. For instance, although social media now extends and amplifies peer influence, this thesis demonstrates that the fundamental need for peer validation and belonging persists across generations (Meeus, 2011). Likewise, while academic pressures have intensified, adolescents today continue to grapple with balancing external expectations with personal identity exploration, much like the participants in Chapter 3 did, albeit under different structural conditions (Putwain, 2009). Understanding societal shifts and continuities in adolescent development allows for a more nuanced application of classic psychological theories to modern adolescent development, bridging historical theories with contemporary realities. To meaningfully explore how psychological processes interact with social contexts, this thesis adopts a philosophical framework that acknowledges both structural influences and individual experiences.

Ontology and Epistemology

This thesis is grounded in a critical realist ontological perspective, acknowledging that adolescent development is shaped by both objective social structures and subjective lived experiences (Bhaskar, 1978). Whilst schools and friendships exist as tangible realities, the ways in which adolescents navigate and interpret these environments are socially constructed, shaped by cultural narratives, and individual meaning-making processes (Lotte van Doesalaar et al., 2019). Epistemologically, this thesis adopts an interpretivist stance, recognising that knowledge about adolescent development is not fixed, or universal, but rather emerges through the nuanced exploration of subjective experiences (Guba & Lincoln, 1994). The combination of a systematic review and an empirical study reflects this approach, as it allows for a macro-level analysis of schooling environments and a micro-level understanding of friendship dynamics in the context of EDs.

Axiologically, this thesis acknowledges the researcher’s values and ethical considerations in studying adolescent wellbeing (Aliyu et al., 2015). As a White female with lived experience of

disordered eating, and professional experience in this field, my interpretations of the findings of this thesis were inevitably influenced by my background. In Chapter 3, my reflexive diary (Appendix K) highlighted the challenges I faced in managing my desire to support participants whose experiences had been like my own. I was required to reattune to my role as a researcher and move away from my desire as a clinician with lived experience to support participants. The dominance of positivist narratives within the field of Clinical Psychology (Breen & Darlaston-Jones, 2010) further complicated reflexivity. Whilst the notion of an objective and measurable truth is undoubtedly useful in the development of evidence-based treatments (Pope et al., 2000), I attempted to acknowledge the complexities of individual's experiences when considering the implications of this research. By integrating these philosophical perspectives, this thesis bridges structural influences with individual agency, allowing me to acknowledge both underlying social realities, and subjective experiences.

Conclusions

Both Chapter 2 and Chapter 3, though distinct in methodology, offer a cohesive story regarding the broader social context in which adolescent development occurs, highlighting the interconnected nature of educational experiences and peer relationships. Whilst schooling environments and friendships appear to offer a foundation for social learning, broader societal narratives and contemporary media appear to shape and reshape these experiences, particularly in relation to body image and eating attitudes and behaviours, both during and after the adolescent period.

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Chapter 2: An Exploration of what Characteristics of Schools are Associated with an Increased Risk of Eating Disorders: A Systematic Review.

by

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Abstract

Objective

Evidence suggests that characteristics of the school environment, or the type of school (e.g. gender composition, emphasis on academic achievement, private or public, urban or rural) may influence the risk of adolescents developing eating disorders (EDs). This review aims to synthesise existing research to identify school factors associated with an increased risk of developing an ED.

Methods

This review analysed data from 18 eligible studies, following a systematic search of three databases. Extracted data included study design, ED psychopathology, school type (as above) and outcomes. Studies were grouped by school type, their quality assessed using the QualSyst tool and a narrative synthesis (following Synthesis without Meta-Analysis guidelines) summarised findings and explored relationships between school characteristics and risk of developing an ED.

Results

Most studies used cross-sectional surveys and relied heavily on self-report measures. The synthesis revealed a higher risk of developing an ED in private and all-female schools, as well as schools with high academic pressure (e.g. top quartile in academic exam scores). Additionally, schools in higher-poverty areas or of lower socioeconomic status reported higher rates of EDs.

Discussion

School characteristics, such as private or same-sex schooling, were associated with an increased risk of developing an ED. However, the reliance on cross-sectional studies and limited consideration of confounding factors restricts causal inferences. Tailored interventions to mitigate risks are discussed, such as increased collaboration between educational and clinical providers. Future research exploring underrepresented settings, such as vocational schooling, and considering cultural and socioeconomic factors would offer broader insights.

Introduction

Eating disorders (EDs) are defined in the Diagnostic Statistical Manual of Mental Disorders (DSM-V [American Psychiatric Association, 2013]) as a cluster of behaviours designed to control weight, including Anorexia Nervosa (AN), Bulimia Nervosa (BN), Binge Eating Disorder (BED) and ARFID (Avoidant Restrictive Food Intake Disorder). These disorders are characterised by severe disturbances in eating behaviour, often accompanied by distorted thoughts and emotions surrounding food, body weight, and shape (American Psychiatric Association, 2013). They vary significantly in presentation, with some individuals engaging in restrictive eating (e.g., AN), binge-purge cycles (e.g., BN), or episodes of overeating (e.g., BED) (Fairburn & Harrison, 2003). Further, ARFID is distinct in that it is marked by a lack of interest in food, sensory sensitivities, or a fear of adverse consequences, such as choking or vomiting (Thomas et al., 2017; American Psychiatric Association, 2013).

Eating disorders are complex and multifaceted mental health conditions associated with serious physical and psychological health problems (Keski-Rahkoen & Mustelin, 2016; Ward et al., 2019). They are associated with the highest mortality rates among all psychiatric disorders, with AN posing the greatest risk (Arcelus et al., 2011). These disorders therefore present an especially critical public health challenge, with their associated economic burden already well-documented (Gatt et al., 2014) and prevalence rates continuing to increase globally in recent years (Silén & Keski-Rahkonen, 2022).

Adolescence is widely recognised as the peak period for onset of EDs (Swanson et al., 2011; Bulik, 2002; Kohn & Golden, 2001) as the changes that occur during this period heighten vulnerability to factors that may contribute to ED development (Treasure et al., 2020; Mora et al., 2022). Whilst substantial research has investigated the association between familial and individual risk factors and EDs (Culbert et al., 2015; Cascale et al., 2023; Allen et al., 2009), there has been growing recognition of the impact of wider environmental contexts, including schooling, on shaping the psychological outcomes of adolescents (Pilar & Brown, 2008; Chevalier & Feinstein, 2007). The average adolescent spends a substantial portion of their life in school, suggesting that school environments are crucial social contexts whereby identity, peer relationships and self-esteem are shaped (Brown & Larson, 2009; Konstantopoulos et al., 2011). Despite this, research regarding the contribution of specific school characteristics to the risk of developing an ED remains underexplored and poorly understood, leaving a significant gap in prevention efforts. In this context, school characteristics include the gender composition of schools, public or private-schooling, their geographical location, the emphasis placed on academic attainment, the socioeconomic status (SES) of the school, boarding school status and religious or vocational components (Government Services, 2016).

Theoretical Understanding of the Impact of Schooling

Several theoretical frameworks offer a rationale for understanding the role that school environments play in increasing the risk for the development of EDs. For example, social comparison theory (Festinger, 1954) has long been a central framework for understanding why children and

adolescents develop EDs (Bamford & Halliwell, 2009; Morrison et al., 2003; Hamel et al., 2012). This theory postulates that individuals evaluate themselves in relation to their peers, and such comparisons can lead to body dissatisfaction and disordered eating behaviours. Developmental theory (Erikson, 1959) suggests that adolescents are particularly susceptible to social comparison, as their sense of identity is still developing, and peer approval plays a central role in shaping their self-esteem (Pfeifer & Berkman, 2018; Degges-White, 2017). It is reasonable to infer that visible social stratification within schools, such as popularity hierarchies, may heighten pressure to conform to societal body ideals as a marker of social status. Additionally, weight-related bullying has consistently been linked with body dissatisfaction and disordered eating, further illustrating the role of social comparison on eating behaviours and attitudes (Eisenberg et al., 2010; Latner et al., 2007).

Furthermore, the stress-vulnerability model (Cooper, 2005) suggests that EDs are developed when external pressures, such as challenging social hierarchies or academic pressures, interact with individual predispositions. Schools are contexts whereby social comparison and academic achievement are emphasised (Dijkstra et al., 2008), and, as such, they may inadvertently foster conditions whereby environmental demands are heighted and therefore the risk of developing an ED is increased.

Current Understanding of the Impact of Schooling

A consistent finding in research relates to the risk of ED development being higher among students attending schools with heightened academic pressures (Alfoukha et al., 2019; Bould et al., 2016; Wilder, 2007). This has been attributed to high achieving academic environments appearing to foster perfectionist tendencies and stress, both of which are well documented risk factors for the development of disordered eating (Shroff & Thompson, 2006). In academic contexts, students with perfectionist traits may experience intense pressure to succeed, leading to attempts to manage their stress by exerting rigid control over their eating (Livet et al., 2023).

A school's SES also appears to play a crucial role in shaping ED vulnerability. Although schools generally do not have a fixed or allocated SES, a school's SES can be identified by the average socioeconomic profile of its student population and the level of funding it receives (e.g. tuition fees paid by higher SES families). Mackey & Greca (2007) found that students attending more affluent schools were more likely to engage in behaviours associated with bulimia and food preoccupied behaviours than their lower SES school counterparts. However, this study, much like other research in this area, relied solely on self-report measures, making it difficult to minimise bias and ensure reliable results. Contrastingly, broader research highlights that higher individual SES, as an isolated factor, can lead to an increased risk of ED development (Nevonen & Norring, 2004). This makes it difficult to disentangle whether the risk of developing an ED stems more from the schooling environment, broader social contexts, or their interaction. Further, Bould et al. (2016) found that adolescents attending private-schools reported higher rates of ED behaviours in comparison to their public-school

counterparts. However, students attending private-schooling are often from higher SES backgrounds, and private-schools are often socioeconomically affluent institutions, further complicating efforts to determine which specific factors contribute most to the risk of ED development. To date, research has not explored whether students from lower SES backgrounds, who are still able to attend private-school by beneficiary means, experience the same increased risk.

The gender composition of schools has also been investigated in relation to the risk of developing an ED. As ED rates appear to be disproportionately higher in female populations (Smink et al., 2012), research has primarily focused on examining the impact that all-female schooling has. Higher rates of disordered eating behaviours have been linked with attending all-female schools (Bould et al., 2016), with researchers hypothesising that same-sex school environments increase opportunities for direct social comparison, particularly in schools where there is a culture of academic competition or an emphasis on physical appearance (Guglielmi, 2011; Dijkstra et al., 2008). However, the relationship between school gender composition and risk of developing an ED is likely influenced by various confounding factors, such as peer dynamics and overall school culture, which require further investigation.

Research exploring how school characteristics can influence the risk of young people developing EDs is sparse, with studies predominantly focusing on the effectiveness of within-school prevention and intervention attempts (Rindahl, 2017; Berry et al., 2024; Grave, 2003), or ED prevalence (Vega Alonso, 2005; Zeiler, 2016). Given that adolescents spend their crucial developmental years in school, its impact on psychological well-being is theoretically plausible, and marks an interesting area for research. The relationship between schooling and the risk of developing an ED appears to be shaped by a variety of social and individual factors, however empirical research is yet to fully disentangle the complex interplay of environmental, cultural, and individual factors within educational settings (Barakat et al., 2023).

Aims and Scope

This systematic review synthesises existing literature regarding the relationship between school characteristics and the risk of developing an ED in adolescents. By integrating findings from a range of global studies, it aims to deepen current understanding of how broader environmental contexts can influence the risk of developing an ED and provide a comprehensive framework for understanding the role that schooling environments have in shaping the risk of developing an ED. Given the paucity of research in this area, this review includes studies that explored 'disordered eating' in addition to diagnosed EDs. Disordered eating was defined as a *'spectrum of problematic eating behaviours and attitudes towards food, weight, shape and appearance'* (American Psychiatric Association, 2013). It is hoped that this review will identify critical gaps in research, highlight future directions, and guide the development of both clinical and educational prevention and intervention strategies for young people experiencing EDs.

Methods

This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). The review protocol was registered on PROSPERO in August 2024 (registration number: CRD42024578273).

Search Strategy

An electronic search of three databases (PsycINFO, ERIC and MEDLINE) was conducted by a single reviewer (NL) to identify relevant studies, using the search terms shown in Table 1. No filters or date ranges were used to capture as many relevant studies as possible (DeLuca, 2008).

Table 1

Search Terms Ran Across All Databases

Search terms ran across all databases (PsycINFO, ERIC and MEDLINE)
(eating N1 disorder* OR anorexia OR bulimia OR binge eating OR eating disorder not otherwise specific OR EDNOS OR ARFID OR avoidant restrictive food intake OR other specified feeding OR OSFED OR eating disorder OR eating difficulty) AND (school N1 characteristics OR school environment OR school factors OR school features OR school qualit* OR type of school* OR private school OR state school OR faith school OR same sex school OR boarding school).

The initial search was completed on 14th October and repeated on 12th December 2024. A grey literature search was also conducted on 14th October 2024, using the same search terms, through two specialised databases: The King's Fund and OpenGrey. These databases were chosen as they provide high-quality, evidence-based reports and policy briefs that are not typically found in traditional academic journals. Reference lists of published papers were also manually searched to identify additional articles that met eligibility criteria.

The articles included in this review were limited to those written in English due to the time-consuming nature of translation and the short time frame available for completing the review. The decision to include or exclude studies was initially made based on the article title, then abstract, and finally the full-text article. Full inclusion and exclusion criteria are shown in Table 2.

This review included studies from a range of countries to ensure broader representation of school factors globally. However, the decision to include international studies required careful consideration of cross-cultural differences and structural variations in educational systems globally. For example, some studies included secondary school participants as young as 10 years old, whereas others defined secondary school as beginning at age 12 or later. Such variations required flexibility in how age ranges were defined within the inclusion criteria. These structural differences are important to consider when generalising findings or applying them to specific educational systems, such as the UK.

In determining eligibility criteria, only quantitative studies were included. This decision allowed for structured comparisons of measurable outcomes related to disordered eating across different school types. Whilst qualitative studies provide valuable insight into lived experiences, they were excluded due to methodological heterogeneity, which could have reduced the coherence of the systematic synthesis. Eligible studies included empirical, observational, or experimental designs that examined school characteristics and reported outcomes related to disordered eating behaviours among school-aged students.

Table 2

Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
1. Empirical studies (observational and experimental studies) employing quantitative methods 2. Peer-reviewed articles 3. Written in the English language 4. Available in full-text 5. Grey literature	1. Qualitative studies 2. Sample not including school-aged people (5 to 18 years old) 3. Review articles 4. Editorials, book reviews or commentaries 5. Study protocols

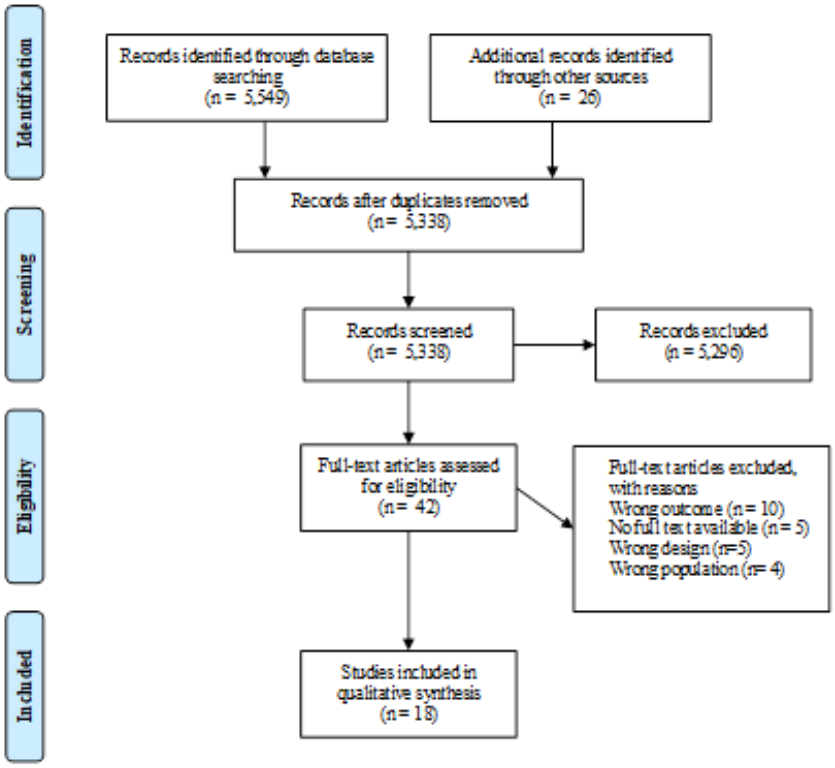
Study Selection

Studies were independently examined for eligibility by two reviewers (NL and AR) according to the PICOS criteria (population, interventions, comparators, outcomes, study) (Moher et al., 2010).

The process of study selection is summarised in Figure 1. One reviewer (NL) conducted an initial search and evaluated the title and abstract of each paper to determine its adherence to the inclusion and PICOS criteria. The full text of publications were obtained if they met inclusion criteria and unavailable full-texts were excluded. One reviewer (NL) assessed each full-text for suitability and a second reviewer (AR) blindly observed a portion of these full-texts (50% of included texts) and stated whether they agreed that the studies met the inclusion criteria. Cohen's kappa (Cohen, 1960) was calculated to determine interrater reliability, showing good agreement (95%) between total scores (κ=0.877, $p < .001$). One eligibility disagreement between reviewers was resolved through discussion, prompting clarification of the inclusion criteria to ensure consistency across all studies. It was agreed that, if consensus could not be reached, a third reviewer would review the individual article and determine eligibility (however, this was not needed). This process was facilitated by the Rayyan review software (Ouzzani et al., 2016) which enabled the removal of duplications and facilitated a secondary blind review.

Figure 1

PRISMA Flowchart



Note. Reasons for exclusion, in descending order, included outcomes irrelevant to research question (n=5), no full text available (n=5), wrong design (n=5. e.g. studies employing qualitative methods) and wrong population (n=3. e.g. samples consisting of adults not in full-time education).

Data Extraction

Relevant data was manually extracted from the included studies by one reviewer (NL) using an original summary table to enable easy comparison of study design, participant characteristics and study results. No automation tools were used. Study characteristics extracted included: author's name, year of publication, country of publication, sample characteristics (sample size, biological sex (noted if gender characteristics were included separately), age), study design, measure of eating disorder psychopathology used, variables of interest (eating disorder psychopathology and schooling type/characteristics), and main findings.

For the purposes of this review, ED psychopathology was classified as the psychological and behavioural symptoms associated with EDs, including, but not limited to, restrictive eating, binge eating, purging behaviours, and preoccupation with body image. This is in accordance with the DSM-V criteria for EDs (American Psychiatric Association, 2013) and encompasses disordered eating behaviours that do not meet full diagnostic criteria for specific EDs. School type/characteristics were categorised by the classifications provided in each study. These definitions ensured the extraction of relevant variables and a standardised approach to grouping.

Data Analysis and Synthesis

In line with the Synthesis Without Meta-analysis (SwIM) approach (Campbell et al., 2020), this review did not include a meta-analysis or a statistical assessment of heterogeneity. Inconsistent reporting of statistical data, such as effect sizes or standard deviations, was observed in the included studies, and authors were not contacted for missing data due to the time restraints of this project. Further, several studies measured different constructs (e.g., different disordered eating behaviours or psychopathologies). This posed a significant challenge to interpreting a potential meta-analysis, whereby combining results may be statistically unreliable or misleading (McKenzie et al., 2019). A narrative synthesis approach was chosen to ensure that conclusions were grounded in the specific aspects of the individual studies, as opposed to statistical aggregation.

Study Quality Assessment

The quality of eligible studies was assessed using The Standard Quality Assessment Criteria for Evaluating Primary Research Papers (QualSyst) (Kmet et al., 2004) (Appendix B), chosen for its ability to evaluate both qualitative and quantitative research across diverse methodological approaches (Kmet et al., 2004). QualSyst for quantitative research consists of a 14-item checklist and produces an overall quality score for eligible studies. It evaluates key aspects of study design and methodology, including the clarity of research questions, appropriateness of the study design, sample size, data collection methods, and statistical analysis techniques. The QualSyst tool has demonstrated strong inter-rater reliability and validity (Kmet et al., 2004).

A score from 0 to 2 is awarded to each item on the tool: 0 indicates the criterion was not met, 1 indicates partial fulfilment of the criterion, and 2 indicates full fulfilment of the criterion. After applying the checklist to each study, a summary score is calculated by adding the scores for each item and dividing the total by the maximum possible score (28 for all items scoring 2). The raw score is then converted into a percentage by dividing the obtained score from total possible score and multiplying by 100. This allows for easy comparison across studies.

The quality of a paper was assessed following Lee et al.'s (2020) framework in their use of this tool in their systematic review as; strong (summary score of >0.80), good (summary score of 0.71-0.79), adequate (summary score of 0.50-0.70) and limited (summary score of <0.50). This quality definition method was suitable as it offers a clear, standardised approach to assessing methodological rigor. The methodological quality was determined by one reviewer (NL) and a portion of studies (50%) were randomly selected using an online generator and blindly rated by a second reviewer (AR) to increase reliability. Cohen's kappa (Cohen, 1960) was calculated to determine interrater reliability, showing perfect agreement (100%) between scores (κ=1.000, $p < .001$).

Results

The search strategy retrieved 5,338 studies, after removal of duplicates (Figure 3). Following title and abstract screening, 42 articles remained. After full-text screening, 18 remained, and all studies scored above 0.75 on quality assessment (Kmet et al., 2014), meeting the threshold for 'good' and therefore being deemed eligible for inclusion; no disagreements required resolution (Table 3).

Brief Description of Studies

Of the 18 studies included, most utilised a cross-sectional design (n=15;83%), in addition to record-linkage studies (n=1;6%) and cohort studies (n=2;11%). The studies spanned various countries; United States (n=6;33%), United Kingdom (n=5;28%), Australia (n=2;11%), Spain (n=2;11%), Sweden (n=2;11%), Poland (n=1;5.6%), Taiwan (n=1;5.6%), Brazil (n=1;5.6%) and Israel (n=1;5.6%). The ages of samples ranged between 11 to 23 years old. Studies with samples older than 18 years utilised retrospective designs (n=2;11%). All studies reported the gender of samples, with most consisting of biological females (n=12;67%) and six studies (33%) including both biological males and females (33%) (Table 4).

Table 3

QualSyst Quality Appraisal Assessment for Articles

Author	1. Question / objective sufficiently described?	2. Study design evident and appropriate?	3. Method of subject/comparison group selection or source of information/input variables described and appropriate?	4. Subject and comparison group (if applicable) characteristics sufficiently described?	5. If interventional and random allocation was possible, was it reported?	6. If interventional and blinding of investigators was possible, was it reported?	7. If interventional and blinding of subjects was possible, was it reported?	8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?	9. Sample size appropriate?	10. Analytic methods described/justified and appropriate?	11. Some estimate of variance is reported for the main results?	12. Controlling for confounding?	13. Results reported in sufficient detail?	14. Conclusion supported by the results?	Total score (%)
Alonso et al. (2005)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Austin et al. (2013)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%
Bould et al. (2018)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%
Bould et al. (2016)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Partial	Yes	Yes	Yes	Yes	Yes	Yes	75%

Author	1. Question / objective sufficiently described?	2. Study design evident and appropriate?	3. Method of subject/comparison group selection or source of information/input variables described and appropriate?	4. Subject and comparison group (if applicable) characteristics sufficiently described?	5. If interventional and random allocation was possible, was it reported?	6. If interventional and blinding of investigators was possible, was it reported?	7. If interventional and blinding of subjects was possible, was it reported?	8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?	9. Sample size appropriate?	10. Analytic methods described/justified and appropriate?	11. Some estimate of variance is reported for the main results?	12. Controlling for confounding?	13. Results reported in sufficient detail?	14. Conclusion supported by the results?	Total score (%)
Dias et al. (2023)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%
Dyer & Tiggemann (1996)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Partial	Yes	Yes	Yes	Yes	Yes	75%
Fear (1994)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Kotwas et al. (2020)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Lesar et al. (2001)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%

Author	1. Question / objective sufficiently described?	2. Study design evident and appropriate?	3. Method of subject/comparison group selection or source of information/input variables described and appropriate?	4. Subject and comparison group (if applicable) characteristics sufficiently described?	5. If interventional and random allocation was possible, was it reported?	6. If interventional and blinding of investigators was possible, was it reported?	7. If interventional and blinding of subjects was possible, was it reported?	8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?	9. Sample size appropriate?	10. Analytic methods described/justified and appropriate?	11. Some estimate of variance is reported for the main results?	12. Controlling for confounding?	13. Results reported in sufficient detail?	14. Conclusion supported by the results?	Total score (%)
Limbert (2001)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Mensinger (2005)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Mueller et al. (2010)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%
Neumark-Sztainer et al. (1995)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Ogden & Thomas (1999)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%

Author	1. Question / objective sufficiently described?	2. Study design evident and appropriate?	3. Method of subject/comparison group selection or source of information/input variables described and appropriate?	4. Subject and comparison group (if applicable) characteristics sufficiently described?	5. If interventional and random allocation was possible, was it reported?	6. If interventional and blinding of investigators was possible, was it reported?	7. If interventional and blinding of subjects was possible, was it reported?	8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?	9. Sample size appropriate?	10. Analytic methods described/justified and appropriate?	11. Some estimate of variance is reported for the main results?	12. Controlling for confounding?	13. Results reported in sufficient detail?	14. Conclusion supported by the results?	Total score (%)
Stewart et al. (1994)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Partial	Yes	Yes	Yes	Partial	Yes	Yes	71%
Stump (1995)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%
Sundquist et al. (2016)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78%
Tiggemann (2001)	Yes	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Partial	Yes	Yes	75%

Note. A score from 0 to 2 is awarded to each item on the tool where (indicates the criterion was not met, 1 indicates partial fulfilment of the criterion and 2 indicates full fulfilment of the criterion). A summary score is calculated by adding the scores for each item and dividing the total by the maximum possible score. The raw score is then converted into a percentage by dividing the obtained score from total possible score and multiplying by 100.

Table 4

Data Extraction Results

			Sample Characteristics					Variables of Interest		Main Findings
Authors	**Year of publication**	**Country of publication**	**Sample size**	**Biological sex (noted if gender characteristics were included separately)**	**Age**	**Study design**	**Measure of eating disorder psychopathology used**	**Eating disorder psychopathology**	**Schooling type/ characteristics**	**Relationship between schooling and eating behaviours**
Alonso et al.	2005	Spain	N= 2,483	Mixed (all female-schools vs. coeducational schools)	12 years to 18 years	Cross-sectional	Eating Attitudes Test (EAT-40)	Dieting, oral control, food preoccupation, body image	Public-schooling and private-schooling, urban schools and rural schools	Private-school girls had a slightly higher risk of developing an ED than public-school girls (not statistically significant). Risk of developing an ED was higher in rural areas than urban areas for both genders.
Austin et al.	2013	United States	N= 18,567	Mixed	11 years to 14 years	Cross-sectional	Self-reported questions on behaviour	DWCB: vomit, laxatives, or diet pills for weight control	Socioeconomic status of schools	Higher DWCB rates were associated with schools in higher poverty areas, especially in boys.
Bould et al.	2018	United Kingdom	N= 3915	Mixed (all female-schools vs. coeducational schools)	14 years old & 16 years old	Population-based cohort study	Body Dissatisfaction Scale, McKnight Risk Factor Survey, Youth Risk Behavior Surveillance System, Development and Wellbeing Assessment	Weight and shape concerns, binge eating, fasting, purging, fear of weight gain	Same sex & coeducational schools, academic achievement of school,	Girls attending all-female schools at age 16 showed higher levels of disordered eating behaviours (compensatory behaviours such as fasting, purging, and binge eating) compared to girls in co-educational schools. Higher academic performance (top quartile in academic exam scores) was associated with lower rates of fasting and compensatory behaviours at DSM-V criteria levels in girls aged 16.
Bould et al.	2016	Sweden	N= 55,059	Female	16-20 years old (retrospective aspect of study)	Multilevel, record-linkage study	Clinical ED diagnosis from health records	Incidence of all diagnosable EDs	School gender composition, academic performance of school	Higher rates of ED among girls at schools with a high proportion of female students. Girls in schools with both high female student populations and high parental education levels faced the highest ED incidence, regardless of individual backgrounds.

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Dias et al.	2007	Brazil	N= 782	Mixed	14 years to 17 years	Cross-sectional	Eating Attitudes Test (EAT-26)	Dieting, bulimia, food preoccupation	Urban schools and rural schools	A majority of students with ED symptoms (66.5%) attended schools located in the urban areas of Caxias do Sul, compared to those in peripheral rural areas. While central school location showed higher instances of ED symptoms, this variable was not found to be statistically significant in the adjusted analysis.
Dyer & Tiggeman	1996	Australia	N= 142	Female	Average age of 15 years 5 months	Cross-sectional	Eating Disorders Inventory (EDI)	Body dissatisfaction, drive for thinness, bulimia	Private same sex and coeducational schools	Single-sex school girls preferred thinner body ideal and attractive figures compared to their coeducational peers, independent of actual BMI Higher scores in the same-sex school group on the Drive for Thinness and Body Dissatisfaction subscales, indicating greater body dissatisfaction and pursuit of thinness despite lower average BMI. In coeducational settings, popularity negatively correlated with ideal body shape preferences, while for single-sex schools, professional success emerged as a predictor of thin ideal endorsement
Fear	1994	New Zealand	N= 432	Mixed (all female-schools vs. coeducational schools)	14 years to 16 years	Cross-sectional	Eating Disorder Inventory (EDI), Figure Rating Scale, Work and Family Orientation Scale, Popularity Measure	Body dissatisfaction, drive for thinness, bulimia	Same sex and coeducational schools	High prevalence of dieting, binge eating, and body dissatisfaction across all schools. No significant differences in eating behaviours between all-female and coeducational school students, although coeducational students rated physical attractiveness as more important for popularity.

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Kotwas et al.	2020	Poland	N= 1,750	Female	15 years to 22 years	Cross-sectional survey	Eating Attitudes Test (EAT-26)	Dieting, bulimia, food preoccupation	School type (secondary, technical or vocational)	Higher prevalence of disordered eating in general secondary schools compared to technical or vocational schools. Lack of pocket money linked to lower eating disorder risk.
Lesar et al.	2001	USA	N= 465	Mixed	13 years to 19 years	Cross-sectional survey	Eating Disorder Examination Questionnaire (EDE-Q), Eating Disorder Inventory (EDI), Restraint Scale	Body dissatisfaction, drive for thinness, bulimia associated attitudes and behaviours, restraint	Private-schooling and public-schooling	Private-school students had significantly higher scores on Bulimia, Eating Concern, Restraint, Shape Concern, and Weight Concern scales (EDE-Q); Body Dissatisfaction and Drive for Thinness scales (EDI); and Restraint Scale. Female students scored significantly higher on all scales compared to male students, with private-school girls showing the highest risk for bulimia associated pathology.
Limbert	2001	United Kingdom	N= 647	Female	18-23 years old (retrospective study)	Cross sectional	Eating Disorder Inventory (EDI)	Body dissatisfaction, drive for thinness, bulimia	Same sex and coeducational schools	Higher body dissatisfaction and drive for thinness in students from single-sex schools compared to those from coeducational schools Slightly elevated bulimia scores among students from single-sex schools

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Mensinger	2005	United States	N= 866	Female	Average age of 16 years	Multilevel mediation model (cross-sectional	Eating Attitudes Test (EAT-26), modified Superwoman scale	Dieting, bulimia, food preoccupation, adherence to the Superwoman ideal,	Private-schooling, level of gender norms in school	Schools with high levels of conflicting gender norms were associated with higher disordered eating scores among female students. The Superwoman ideal mediated the relationship between conflicting gender norms and disordered eating, indicating that students in schools with high conflicting norms tend to adopt the Superwoman ideal, which in turn predicts disordered eating behaviours.
Mueller et al.	2010	United States	N= 11, 0863	Female	14-18	Multi-level modelling (cross-sectional)	Self-reported attempts to lose weight, measured by survey responses in the National Longitudinal Study of Adolescent Health	Peer weight-control behaviours, body size, social comparison	Public-schools and private-schools	Girls in schools with a "thinner" student body average (lower average BMI) were more likely to engage in weight-control practices. This effect was found to be weaker than the influence of similar peers but was still significant. Schools with a higher proportion of underweight girls saw increased weight-control behaviours across the student body, while schools with a higher proportion of overweight students saw a decrease in weight-control behaviours among their peers

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Neumark-Sztainer et al.	1995	Israel	N= 341	Female	Average age of 15 years 3 months (tenth grade)	Cross-sectional	Eating Disorders Inventory (EDI)	Body dissatisfaction, drive for thinness, bulimia	Middle-class, public secondary schools	A significant level of body dissatisfaction was observed, with girls desiring to weigh an average of 4 kg less than their perceived weight. 41.9% perceived themselves as overweight, while only 17.4% met the BMI criteria for being overweight. 47% were currently trying to lose weight and 73% had attempted weight loss at some point. Most participants used a combination of methods to lose weight, with 39% employing unhealthy techniques (e.g., skipping meals) and 23.2% using very unhealthy methods (e.g., fasting, vomiting, or laxatives).
Ogden & Thomas	1999	United Kingdom	N= 257	Female	13 to 16 years old	Cross-sectional	Restrained Eating (Dutch Eating Behaviour Questionnaire), Body Shape Questionnaire (BSQ), Body Distortion Scale (Silhouette rating)	Restrained eating, body dissatisfaction, ideal body perceptions, obesity stereotypes	Same sex and coeducational schools, private and comprehensive schools	Students from the higher-class school reported significantly higher levels of restrained eating compared to those from the lower-class school. Higher-class students demonstrated greater body dissatisfaction than their lower-class counterparts. Being from the higher-class school was a significant predictor of restrained eating, body dissatisfaction, and body distortion. Higher-class students placed more importance on physical appearance, which correlated with higher weight concern behaviours. Lower-class students and their families placed greater emphasis on family life, which was associated with lower levels of weight concerns.

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Stewart et al.	1994	United Kingdom	N= 160	Female	18+ (secondary school boarding matrons)	Cross sectional	Study designed questionnaire survey	Incidence of AN and BN	Boarding schools, size of school, school funding	78% of boarding school matrons reported coming across a student with AN or BN. AN was more frequently detected, despite BN being more common. One fifth of all-boys schools reported an eating disorder in school reports.
Stump	1994	USA	N= 325	Female	13-18	Multi-level modelling (cross-sectional)	Eating Disorders Inventory-2 (EDI-2), Personal Appearance Comparison Scale (PACS)	Body dissatisfaction, drive for thinness, bulimia, friendship influence on eating attitudes	Private-schooling, same sex and coeducational, boarding and non boarding	Higher eating disorder symptomology in boarding students than day students; students at single-sex schools scored higher on EDI measures than coeducational school peers. Older students had higher EDI-2 scores.
Sundquist et al.	2016	Sweden	N= 1,800,643	Mixed	Followed from 16 (born between 1972-1990)	Large-scale national cohort study	ICD-9 and ICD-10 inpatient and outpatient diagnostic codes.	Incidence of AN and BN	Academic achievement of school	High academic achievement was associated with increased risk of developing AN and BN in females and AN in males, but familial factors (genetics and shared environment) likely explain this relationship.
Tiggemann	2001	Australia	N= 261	Female	Average age of 16.1 years	Cross-sectional	Eating Disorder Inventory (EDI)	Body dissatisfaction, drive for thinness, bulimia	Same sex and coeducational schools, religious schools	Single-sex school students emphasized achievement more than coeducational students. Achievement was associated with a thinner ideal figure in single-sex schools but a larger ideal figure in coeducational schools. No significant difference between school types on body dissatisfaction or drive for thinness, although single-sex students had a stronger link between academic achievement and thinness.

Quality Assessment

All included studies received an assessment rating of 'good' (Lee et al. 2020), with scores of 0.75 (n=11;61%), 0.78 (n=6;33%) and 0.71 (n=16%). The quality assessment highlighted the use of reliable and valid instruments as a key strength of the included studies (e.g. seven studies utilised the Eating Disorder Inventory [EDI] [Garner et al., 1983]; four utilised the Eating Attitudes Test [EAT] [Garner et al., 1979]). Another strength was the use of comprehensive sampling, with only five studies having fewer than 500 participants (Dyer & Tiggeman, 1996; Stewart et al., 1994; Ogden & Thomas, 1999; Neumark-Sztainer et al., 1995; Fear, 1994). This increased the likelihood that samples were representative of wider populations, particularly in large-scale national cohort studies (Sundquist et al., 2016). Additionally, studies spanned nine different countries, therefore, the cultural and ethnic diversity of samples allowed for a nuanced understanding of how eating behaviours may very across populations.

However, the quality assessment revealed that confounding variables, such as socioeconomic and familial factors (which are known to affect risk of developing an ED [Cascale et al., 2023; Nevonen & Norring, 2004]), were often overlooked (Stewart et al., 1994; Fear, 1994). In these instances, guidance suggested a lower rating for item 11 of the QualSyst tool, and overall summary scores were lower. Additionally, many studies relied on cross-sectional designs (e.g. Kotwas et al., 2020 Dias et al., 2007) and longitudinal designs were underrepresented, limiting the ability to draw causal inferences. Three studies were longitudinal (Bould et al., 2018; Bould et al., 2016; Sundquist et al., 2016), though their reliance on retrospective or registry data may have limited the quality of findings.

Synthesis of Results

Following SwIM guidelines (Campbell et al., 2020), studies were grouped by school type (e.g., gender composition, private vs. public, boarding, SES, urban vs. rural, academic achievement, vocational, technical, and religious schooling) to examine their influence on increasing the risk of developing an ED. Table 3 provides a summary of the characteristics of each study, which are reported in detail in the narrative synthesis below. An effect direction plot was also used to visually examine and interpret the influence of school type on the risk of developing an ED (Figure 2).

Table 5

Development of Groupings

	Same sex school	Coeducational school	Private school	Public school	Boarding school	High SES status school	Middle SES status school	Low SES status school	Urban schooling location	Rural schooling location	High academic achievement	Vocational school	Religious school
Alonso et al. (2005)			x	x					x	x			
Austin et al. (2013)						x	x	x					
Bould et al. (2018)	x	x									x		
Bould et al. (2016)	x										x		
Dias et al. (2007)									x	x			
Dyer & Tiggemann (1996)	x	x	x										
Fear (1994)	x	x											
Kotwas et al. (2020)												x	
Lesar et al. (2001)			x	x									
Limbert (2001)	x	x											
Mensinger (2005)		x	x										
Mueller et al. (2010)			x	x									
Neumark-Sztainer et al. (1995)				x			x						
Ogden & Thomas (1999)	x	x	x										
Stewart et al. (1994)					x								
Stump (1995)	x	x	x		x								
Sundquist et al. (2016)											x		
Tiggemann (2001)	x	x											x

Figure 2

Effect Direction Plot for Included Studies

Study	Private school	Public school	Coeducational school	Same sex school	Low SES school[a]	High SES school[a]	Rural school	Urban school	Emphasis on academic achievement	Boarding school	Vocational schooling	Religious schooling
Alonso et al. (2005)	▲	▼		▲			▲					
Austin et al. (2013)					▲							
Bould et al. (2018)			▼	▲					▲			
Bould et al. (2016)				▲								
Dias et al. (2007)							▲					
Dyer & Tiggemann (1996)			▼	▲								
Fear (1994)			X	X								
Kotwas et al. (2020)					▼						▼	
Lesar et al. (2001)	▲	▼		▲								
Limbert (2001)			▼	▲								

Key

▲Indicates an increased risk of developing an ED.

▼ Indicates a decreased risk of developing an ED.

X Indicates no effect on the risk of developing an ED.

[a] SES is an abbreviation for socioeconomic status.

Gender Composition of School (Same Sex and Coeducational Schooling)

Nine studies examined the impact of school gender composition on the risk of developing an ED by investigating all-female schooling, yielding mixed results. These included five cross-sectional studies (Tiggeman, 2001; Ogden & Thomas; 1999; Limbert, 2001; Fear, 1994; Dyer & Tiggeman, 1996), one cohort study (Bould et al., 2018) and two record-linkage studies (Stump, 1994; Bould et al., 2016). Of these, four studies found higher incidences of EDs and disordered eating behaviours in all-female schools (Bould et al., 2016; Bould et al., 2018; Limbert, 2001; Stump, 1994). One study found that, in addition to higher incidences of EDs, higher levels of compensatory behaviours (e.g. fasting, binging, purging) were present in all-female schools (Bould et al., 2016). Bould et al. (2018) also found that girls attending all-female schools at age 16 showed higher levels of disordered eating behaviours compared to girls in co-educational schools. Another study (Limbert, 2001) found slightly elevated bulimia scores in all-female schools. Further, Stump (1994) found this trend to persist in all-female boarding schools, whereby all-female boarding school students scored higher on the EDI than their co-ed school counterparts. However, Fear (1994) found no significant differences regarding eating behaviours between all-female and coeducational students.

Two studies identified higher levels of body image concerns among students in all-female schools (Limbert, 2001; Dyer & Tiggemann, 1996). One study (Dyer & Tiggeman, 1996) observed a preference for thinner ideal body types, regardless of actual Body Mass Index (BMI), in all-female schools. However, these findings were not replicated in Tiggemann's (2001) study that found no significant differences regarding body dissatisfaction or drive for thinness between all-female and coeducational schools.

Whilst these findings highlight the complex interactions between school gender composition and risk of developing an ED, inconsistencies across studies raises questions about the influence of unmeasured variables, such as cultural or regional differences. Furthermore, no studies specifically assessed the impact of gender composition on eating behaviours in same-sex public-schools, leaving a gap in understanding within this educational context.

Private and Public-Schooling

The relationship between private versus public-schooling and the risk of developing an ED was explored in eight cross-sectional studies (Alonso et al., 2005; Lesar et al., 2001; Neumark-Sztainer et al., 1995; Ogden & Thomas, 1999; Stump, 1994; Mueller et al., 2010; Mensinger, 2005; Dyer & Tiggemann, 1996), suggesting that private-schooling increases the risk of developing an ED. One study (Lesar et al., 2001) found that private-school students had significantly higher scores on several subscales of ED psychopathology measures (e.g., Bulimia, Restraint, Shape Concern, and Weight Concern) than public-school students. Additionally, private-school girls exhibited a significantly

higher risk for bulimia associated psychopathology than their male counterparts and public-school peers. One study (Ogden & Thomas, 1999) identified significantly higher levels of restrained eating, body dissatisfaction, and body distortion in private-school students compared to students from public-schools.

Two studies (Neumark-Sztainer et al., 1995; Stump, 1994) identified a greater use of unhealthy, or very unhealthy, weight-loss techniques among private-school students. In contrast, one study (Alonso et al., 2005) reported only slightly higher ED risks in private-school girls compared to public-school girls, with differences that were not statistically significant.

Gender norms within schools also emerged as a factor influencing EDs. One study (Mensinger, 2005) examined the role of conflicting gender norms within schools and found that high levels of conflicting gender norms were associated with higher disordered eating scores. This relationship was mediated by adherence to the 'Superwoman ideal' (defined as the idea that women can 'do it all and have it all' [Martino & Laurino, 2013]); when private-school students internalised this ideal there was an increased risk of disordered eating behaviours.

However, two of the eight included studies are limited by smaller sample sizes (Dyer & Tiggemann, 1996 [n=142], Ogden & Thomas, 1999 [n=257]), with this potentially causing an increase in variability and a reduction in the reliability of findings, particularly when subgroup analyses (e.g., by gender or school type) are performed. Moreover, many of the studies are outdated, with four published over two decades ago (Neumark-Sztainer et al., 1995; Ogden & Thomas, 1999; Stump, 1994; Dyer & Tiggemann, 1996). This raises concerns about the relevance of their findings in the context of modern schooling environments and societal changes, such as shifting gender norms, advancements in mental health awareness, and evolving diagnostic criteria for EDs.

Boarding School Status

Two studies explored the impact of boarding schooling and found incidences of ED symptomatology to be higher in boarding schools. One study (Stewart et al., 1994) found that 78% of matrons in coeducational boarding schools reported encountering students with AN or BN, while 20% of all-male boarding schools reported at least one case of an ED in their school reports. Another study (Stump, 1994) found that boarding school students exhibited greater ED symptomatology than their day school counterparts. This study also reported that students at same-sex boarding schools scored higher on EDI measures than those at coeducational boarding schools.

Neither of these studies specifically stated the SES of the boarding schools included. However, given that boarding schools are generally privately funded, it is likely that these schools were of higher SES. The lack of clarity regarding the schools' SES in both studies does limit the ability to generalise

their findings, as SES is a key factor influencing both access to boarding schools and the likelihood of adolescents developing an ED.

Socioeconomic Status of School

The socioeconomic status (SES) of the school and the risk of developing an ED was explored in three cross-sectional studies (Austin et al., 2013; Neumark-Sztainer et al., 1995; Stewart et al., 1994). All studies found that the SES of the school influenced the prevalence of EDs among students. These studies were all conducted in developed countries, as defined by Human Development Indexes (Sagar & Najam, 1998; Lind, 2019; United Nations Development Reports, 2025). Findings should therefore be interpreted cautiously, as significance and interpretation of SES indicators can vary substantially between countries at different development levels.

One study (Austin et al., 2013) reported higher rates of disordered weight control behaviours, such as the use of vomiting, laxatives, or diet pills, among students attending schools in higher-poverty areas. This association was particularly pronounced in male students. Two studies found distinct patterns in schools with middle to higher SES. One study (Stewart et al., 1994) reported that schools with higher SES (defined by greater resources and funding) identified more cases of AN, but fewer cases of BN compared to schools of lower SES. Additionally, higher SES schools were more likely to detect and report ED cases. Another study (Neumark-Sztainer et al., 1995) examined middle-class cohorts and found significant levels of body dissatisfaction and dieting behaviours, with nearly half the sample actively trying to lose weight. Unhealthy or very unhealthy weight-loss behaviours, such as fasting or laxative use, were reported by 39% and 23.2% of participants, respectively. However, as previously stated, what is perceived to classify as ‘higher’ or ‘lower’ SES will vary according to a countries level of development, as high SES in a developing nation may still fall below the poverty threshold in a developed nation, while low SES in a wealthier nation may still afford access to basic healthcare, education, and social services that are scarce in lower-income regions. There is currently no standardised approach to comparing SES across multi-country studies (Psaki et al, 2014), limiting our ability to interpret or draw conclusions about the relationship between SES and outcomes relating to EDs.

Urban and Rural Schooling Location

Two studies examined the impact of urban versus rural schooling location on the risk of developing an ED, yielding mixed results. One study (Alonso et al., 2005) found that the risk of developing an ED was higher among students in rural areas compared to those in urban areas, across both genders. Another study (Dias et al., 2007) reported that 66.5% of students with ED symptoms attended schools in urban areas. However, while urban school location was associated with higher instances of ED symptoms, this association was not statistically significant after adjusting for variables

such as body image dissatisfaction and maternal education. Whilst both studies provide valuable insights into the relationship between school location and the risk of developing an ED, conclusions are limited by a lack of variance in study designs (both studies were cross-sectional and utilised the EAT-40).

Academic Achievement of School

Three studies (Bould et al., 2018; Bould et al., 2016; Sundquist et al., 2016) examined the relationship between school-level academic achievement (AA) and the risk of developing an ED, yielding mixed results. One study (Bould et al., 2018) operationalised AA by using academic exam scores and found that, in an all-female school, higher academic performance (top quartile in academic exam scores) was associated with lower rates of fasting and compensatory behaviours at DSM-V (American Psychiatric Association, 2013) criteria levels. Another study (Bould et al., 2016) operationalised AA as a school's overall academic ranking. This study found female students attending schools with a high proportion of academic success faced increased rates of EDs. This association persisted even after controlling for individual-level factors, such as socioeconomic background.

Another large-scale national cohort study (Sundquist et al., 2016) operationalised AA by using the aggregate final grades of all students within the school. However, choosing to define AA in this way may not accurately reflect the actual emphasis on AA within the school. For example, if the aggregate grades are lowered by a small subset of underperforming students, other important aspects relating to AA, such as the curriculum or academic interventions, may be overlooked. Researchers found that female students attending schools with high AA were at an increased risk for developing BN, and both genders were also at an increased risk of developing AN.

However, AA was defined differently across all studies, with these variations complicating the ability to directly compare results and interpret underlying patterns in the data. Conclusions drawn regarding this topic may vary depending on which dimension of AA is being examined.

Vocational and Technical Schooling

Only one study examined the impact that vocational schooling has on the risk of developing an ED, suggesting that vocational schooling may reduce the risk of developing an ED. This cross-sectional study (Kotwas et al., 2020) used the EAT to compare female students attending either general, technical or vocational schools. Disordered eating behaviours were more prevalent among students in general secondary schools compared to those in technical or vocational schools. The authors noted that general secondary schools had higher academic and social pressures compared to vocational and technical schools. The impact of vocational schooling is evidently a sparse area of research, and it is important that future research in this area also considers potential confounding

variables, such as SES or global cultural differences, as these factors may also contribute to the risk of developing an ED.

Religious Schooling

One study (Tiggemann, 2001) investigated the impact of attending a school with religious affiliation (Catholic schooling) by examining a range of school characteristics, including religious and same-sex schooling. This cross-sectional study found that students in same-sex, religiously affiliated schools placed greater emphasis on achievement, which was associated with higher rates of EDs. This study did not explicitly investigate whether it was the same-sex characteristic or the religious affiliation characteristic that impacted the risk of developing an ED, therefore no direct, statistically significant evidence was found linking a school's religious affiliation in isolation to the risk of developing an ED.

Discussion

This review aimed to develop the understanding of how school environments can influence the risk of young people developing an ED. Following a systematic search, 18 studies were reviewed for their quality and suitability, and findings relating to variables of interest were extracted and synthesised. The narrative synthesis grouped and analysed the following schooling characteristics across the selected studies: (A) gender composition of school, (B) private and public-schooling, (C) boarding school status, (D) socioeconomic status of school, (E) urban and rural schooling location, (F) academic achievement of school, (G) vocational and technical schooling and (H) religious schooling. The findings suggest that specific school characteristics may play a significant role in increasing the risk of adolescents developing an ED. Notably, higher rates of disordered eating behaviours and unhealthy weight-control practices were observed in private and all-female schools. Schools that prioritised academic attainment, and schools that were of higher SES, were similarly linked to an increased risk of ED development, although, findings in these areas were less consistent, highlighting a need for further research to offer clarity.

Interpretation of Findings

The findings of this review can be interpreted through the lens of existing theories that seek to understand the development of EDs in adolescents, particularly those emphasising the role of social comparison and the internalisation of societal ideals (Festinger, 1954; Fitzsimmons-Craft et al., 2012; Garner & Garfinkel; 1980). This review found that studies examining private-schooling reported elevated levels of disordered eating behaviours, notably among female students. Previous research has found that private-school environments are often characterised by a culture of perfectionism and peer

comparison: two well-documented risk factors for ED development (Wade et al., 2016; Fitzsimmons-Craft et al., 2012).

This review also supports existing literature that postulates SES is a significant risk factor for the development of EDs, though its influence operates differently between low and high SES school environments. In lower SES schools, high rates of ED behaviours were observed (Austin et al., 2013). However, Lesar et al. (2001) and Ogden & Thomas (1999) found the same to be true for higher SES schools, where greater levels of dieting behaviours and body dissatisfaction were observed. Tuluhong & Han (2023) have previously highlighted that financial hardship can lead to chronic psychological stress, potentially manifesting in unhealthy dieting behaviours, such as emotion-driven and reward-related eating. Stress-vulnerability models propose that external stressors, such as food poverty and food insecurity, may interact with individual vulnerabilities to increase the risk of developing an ED (Cooper, 2005). For example, adolescents in lower SES schools may develop patterns of binge eating during periods of food availability, followed by restriction during scarcity (Hazzard et al., 2017). Contrastingly, social comparison theory (Festinger, 1954) offers a compelling framework for understanding the elevated risk of developing an ED in higher SES schools. Bucchianeri et al. (2016) suggested that affluent students often engage in critical self-evaluation against peers who embody idealised beauty standards, increasing the risk of developing an ED.

Importantly, cultural ideals relating to thinness, although often associated with higher SES, appear to be pervasive and may also intersect with stressors in lower SES environments. Young people in lower SES schools do not appear to be immune to societal pressures regarding body image, yet may also lack access to psychological interventions available in higher SES school environments. The 'Dual-Pathway Model of ED Development' (Stice et al., 1996) provides a useful lens for interpreting these dynamics, as it highlights how sociocultural pressures and emotional distress converge to heighten the risk of developing an ED. Structural inequality in lower SES contexts could amplify these pathways, highlighting the need for targeted interventions.

One notable paper in the review, Austin et al. (2013), reported that disordered weight control behaviours were more prevalent among students attending schools in higher-poverty areas, with this association being particularly pronounced in male students. Research increasingly suggests that adolescent boys, particularly those from disadvantaged backgrounds, may engage in harmful weight control behaviours in response to both cultural pressures to achieve a lean or muscular physique and structural stressors associated with economic hardship (Nagata et al., 2019; Burke et al., 2023). However, few studies disaggregate outcomes by gender, and even fewer consider how structural inequities, such as poverty, racism, sexuality or gender identity, may mediate ED risk. The inclusion of Austin et al. (2013) in this review highlights a critical gap in the literature regarding how gendered and socioeconomic contexts influence both the prevalence of disordered eating and the effectiveness of school-based interventions.

Findings regarding same-sex schooling, whereby body dissatisfaction and thin-ideal internalisation were higher than in coeducational settings (Limbert, 2001; Dyer & Tiggeman, 1996), similarly underscore the impact that the schooling environment has on the risk of developing an ED. However, these findings diverge from those of Tiggemann's (2001) study, which reported no significant differences between same-sex and coeducational schools in ED behaviours. Similarly, Davey et al. (2011) found no significant differences in ED symptomatology between women who had attended same-sex or coeducational schools. However, those from same-sex schools demonstrated a stronger preference for thinner body types. Contextual factors, such as individual peer group dynamics, or wider school culture, may moderate the impact of school gender composition on the risk of developing an ED. Barakat et al. (2022) supported this perspective, noting variability in ED prevalence based on sociocultural school influences, regardless of school gender composition. Such discrepancies in findings highlight the need for further research to account for these variables.

Despite the gender composition of schools being widely examined in this review, the role of specific gender norms within school environments appeared to warrant further investigation. Mensinger (2005) identified the 'Superwoman ideal' as a significant mediator of the risk of developing an ED in females attending private-schools, suggesting that the dual expectations of academic attainment and adherence to traditional feminine values may create a uniquely stressful environment. These findings align with broader literature that highlights how gender role conflicts and societal expectations contribute to the risk of developing an ED (Murnen & Smolak, 1997; Gustafsson et al., 2011).

Additionally, this review found that schools prioritising academic success were linked to an increased risk of developing an ED. However, definitions of academic achievement varied across studies, complicating direct comparison. Interestingly, while results indicated that a greater emphasis on academic achievement within schools was associated with an increased risk of developing an ED, Bould et al. (2018) found that high academic performance was associated with lower rates of compensatory eating behaviours (e.g. fasting, purging, laxative misuse). It could be hypothesised that an emphasis on academic achievement may not universally increase the risk of developing an ED and may even correspond to more positive health outcomes in some contexts. However, further investigation is needed to determine the exact unmeasured factors contributing to these findings. Wang and Eccle (2012) found that supportive environments that promote positive mental-wellbeing can buffer stress-related psychological vulnerabilities, raising the question of whether such protective factors within school settings could be extended to ED-related behaviours.

The impact of schooling location (urban versus rural) also yielded mixed results. Whilst Alonso et al. (2005) found a higher risk of developing an ED in rural schools, Dias et al. (2007) found no statistically significant differences based on school location. Broader research suggests that individuals living in urban locations are more likely to be exposed to media promoting thin ideals (Swami &

Todd, 2022), and that individuals living in rural locations may experience a lack of access to specialised mental health care (Hahn et al., 2024). It is possible that regional cultural factors, such as community norms or media exposure, may moderate the relationship between school location and EDs. However, given that only two studies in this review focused on school location (Dias et al., 2007; Alonso et al., 2005), findings must be interpreted cautiously and there is a clear need for further research in this area to develop hypotheses.

Finally, vocational schooling emerged as a notably underexplored area in this review, with only a single study examining their impact on the risk of developing an ED. Vocational schools, characterised by their focus on practical skill development as opposed to academic achievement (United Nations Educational, Scientific and Cultural Organization, 2001), may present fewer environmental stressors that are linked to the risk of developing an ED. A vocational schooling environment could potentially mitigate the interaction between external pressures and individual vulnerabilities that are emphasised in the stress-vulnerability model (Cooper, 2005). Further, from a social comparison perspective (Festinger, 1954), vocational schooling may promote a school culture that emphasises skill, as opposed to appearance-based evaluations. However, this theory remains speculative and warrants further investigation to clarify its implications.

Strengths and Limitations

This systematic review was developed to address the current scarcity of research synthesising the impact of schooling on the risk of developing an ED. The inclusion of findings from a variety of studies, across diverse settings, offers valuable insights. The narrative synthesis approach was chosen to accommodate the heterogeneity of study designs, populations, and measures included in research, and enabled the integration of findings that may not be directly comparable through statistical meta-analysis.

However, several limitations must be acknowledged, particularly concerning the methodologies of the included studies. Several studies included in this review employed cross-sectional study designs, limiting the ability to make causal inferences. This is a common critique in the field of ED research, as noted by Stice (2016), who emphasised the need for longitudinal studies to understand the developmental trajectories of factors associated with an increased risk of developing an ED.

An absence of intersectional analysis also limits investigations and the consequent ability to draw conclusions. For example, the combination of gender, SES, and cultural background could lead to unique experiences of stress that contribute to disordered eating behaviours. However, these nuances are lost when these factors are examined in isolation. Broader literature highlights that the interaction between gender and SES often reveals disparities in access to mental health care (Yu, 2018; Patel et al., 2011). However, this dynamic was not addressed in the reviewed studies. This was compounded further by a quality assessment revealing that several studies overlooked the impact of

confounding variables, such as SES, gender, or cultural background. The lack of consideration for global differences in this area of research is of concern, as the definition and classification of key variables are likely to differ across countries. For instance, while the International Classification of Diseases Tenth Revision (ICD-10 [World Health Organisation, 1992]) and DSM-V (American Psychiatric Association, 2013) serve as global diagnostic tools for EDs, their adoption and application can differ depending on the region, healthcare system, and cultural context. As a result, what is classified as disordered eating may vary between countries.

Clinical Implications

This review underscores the need for tailored interventions to address the unique challenges posed by specific school environments. Findings support prioritising interventions in high-risk school environments, such as private and same-sex schools. Furthermore, interventions may need to be adapted to account for the distinctive challenges that exist within individual school environments. For instance, findings from this review suggest that students in all-female schools may be more vulnerable to social comparison and gendered expectations. These considerations may be crucial for designing targeted prevention and support initiatives, which could include strategies to foster self-esteem and promote body positivity

This review also highlights the importance for clinicians working with adolescents with EDs to consider the schooling environment in their attempts to understand and formulate the young person's difficulties, alongside adapting interventions in consideration of this. For example, if a young person is attending a school with a high level of academic pressure, clinicians might explore how stress related to academic performance is affecting their relationship with food. Additionally, Clinical Psychologists could play a critical role in both supporting adolescents directly and collaborating with schools to promote environments that prioritise emotional well-being alongside academic success. This could involve providing psychoeducation to school staff, advocating for systemic changes to reduce academic pressures, or contributing to school-wide mental health initiatives. On a broader level, Clinical Psychologists could also engage in public health campaigns or policy advocacy to address societal factors that perpetuate unrealistic academic and body image expectations, fostering healthier environments for all young people.

Directions for Future Research

Firstly, this review predominantly included studies conducted in high-income countries, notably the US and European nations. Sociocultural factors, such as body ideals and relationships with food, vary significantly across cultures (Galfano & Swami, 2013). Therefore, future research should aim to broaden its geographic scope to explore these relationships in non-Western and lower-income countries, and to more explicitly examine how cultural diversity within school environments may

influence the risk of developing an ED. This would provide a more comprehensive understanding of how school characteristics interact with cultural or socioeconomic factors to influence the risk of developing an ED. For example, it would be interesting to explore whether cultural norms have the capability to moderate the relationship between school type and the risk of developing an ED.

Additionally, this review identified a notable gap in research regarding the impact of vocational schooling. Preliminary findings suggest that students in these environments may experience lower levels of appearance-related pressure. However, future research is warranted to investigate how the unique characteristics of vocational schooling, such as its curriculum, or peer dynamics, may contribute to or protect against EDs. Further, this review did not include any studies that explored the impact of school characteristics on BED or ARFID. This may reflect the paucity of research examining these disorders, particularly as ARFID is a relatively new diagnosis introduced to the DSM-V (American Psychiatric Association, 2013). Future research should therefore prioritise investigating how school environments may influence the development and recognition of BED and ARFID to address this gap in research.

Finally, there is a clear need for more robust methodologies in ED research. Longitudinal studies would enable researchers to track the development of EDs over time and identify periods of heightened vulnerability during a student's educational journey. Researchers should also strive to take a more systematic approach in addressing confounding variables, ensuring that findings provide clearer insights into the complex interplay between sociocultural and individual factors influencing the risk of developing an ED.

Conclusions

The exploration of how specific school characteristics may contribute to adolescents developing EDs is a critical area of research that has important implications regarding both prevention and intervention. The findings of this review highlight that schools characterised by higher levels of AA, the SES status of a school, and all-female schooling may inadvertently foster environments that heighten the risk of ED development. By identifying these characteristics, this review provides a foundation for considering how educational interventions can be tailored to address the unique challenges posed by different school environments, and for clinicians to consider the individual's specific school environment to support improved outcomes. Future research is needed to build upon these findings, particularly regarding the role of vocational schooling and how the relationship between school characteristics and the risk of developing an ED varies across different social, cultural, and geographical contexts.

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Chapter 3: The Experience of Having a Friend with Disordered Eating at Secondary School: A Qualitative Study Exploring Help-Seeking Behaviour and Ongoing Support.

by

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Abstract

Objective

This study explores the experiences of adolescents who maintained friendships with peers experiencing disordered eating during schooling. It aims to explore friend's help-seeking behaviours, experiences of school, and the long-term psychological impact. Given their close proximity, friends appear well-positioned to recognise early signs and seek help on behalf of their peers. However, they remain an under-explored population in research.

Methods

A qualitative design utilising reflexive thematic analysis was employed. Fifteen participants, aged 21–30, who maintained friendships with individuals experiencing disordered eating during school, were recruited via voluntary response sampling. Semi-structured interviews were transcribed verbatim and analysed using an inductive, open-coding approach to identify key themes.

Results

Themes included (1) *barriers to help-seeking: loyalty and fear*, whereby participants described a fear of betrayal and lack of awareness; (2) *a culture of normalisation*, influenced by familial attitudes and the influence of online media; (3) *what could have helped: gaps in support and missed opportunities,* highlighting inadequate mental health literacy and an absence of trusted adults; and (4) *the emotional impact on friends*, with participants reporting increased body consciousness and food-related anxieties persisting into adulthood.

Discussion

Friends were found to play a pivotal, yet unsupported role in recognising and responding to EDs. Participants reported that their schools lacked resources, and systemic barriers discouraged help-seeking. Findings underscore the need for enhanced mental health education, structured support for friends, and teacher training to facilitate early intervention. However, as accounts were retrospective, they may be influenced by memory bias or shaped by later reflections.

Introduction

Disordered eating (DE) encompasses a range of unhealthy eating behaviours and attitudes that can significantly impact physical and mental health (McVey et al., 2003). It is particularly prevalent among young people, with approximately 22% of adolescents affected globally (López-Gil et al., 2023). When persistent, these behaviours can escalate into diagnosable eating disorders (EDs), including Anorexia Nervosa (AN), Bulimia Nervosa (BN), and Binge-Eating Disorder (BED) (American Psychiatric Association, 2011). These conditions are among the most debilitating mental health issues for adolescents, often leading to disruptions in education (Hellings & Bowles, 2012), cognitive impairments relating to malnutrition (Rylander et al., 2020; Hemmingsen et al., 2020), relationship difficulties (Broberg, 2001; Lukas et al., 2022), and long-term mental health difficulties (Herpertz-Dahlmann, 2009; Johnson et al., 2002; Steinhausen, 2009). Prolonged DE may also cause secondary medical complications, including cardiovascular issues (Casiero & Frishman, 2006; Buzanello-Donin, 2025), gastrointestinal damage (Santonicola, 2019; Riedlinger et al., 2020), and infertility (Freizinger et al., 2010).

Early detection and intervention are critical to prevent DE from becoming a chronic condition (Hay et al., 2012; Kalindjian et al., 2021), with research suggesting that early intervention can mitigate the long-term consequences of DE (Koreshe et al., 2023) and increase the chance of a full recovery (Treasure et al., 2020). However, many young people do not seek, or receive, timely support. This may be due to perceived stigma (Doley et al., 2017; Roehrig & McLean, 2010), lack of awareness from supporters (Leavey et al., 2011; Cahcelin, 2001), or structural barriers within educational and healthcare systems (Regan et al., 2017; Johns et al., 2019; Ali et al., 2020).

Help-Seeking Behaviour

Attempts to understand help-seeking behaviour for EDs point to various psychological and social factors. The ‘Health Belief Model’ (Rosenstock, 1974) suggests individuals are more likely to seek help when they view their condition as severe and believe treatment will be effective. However, the ego-syntonic nature of EDs, whereby disordered behaviours and thoughts are perceived as congruent with one’s identity, can lead to denial regarding illness severity (Akey et al., 2013; Tipton et al., 2021). When help is sought, it is commonly initiated by others. Ciao et al. (2023) found that 60% of adolescents reported parents were the first to identify their eating difficulties and seek support. Further, literature suggests that social support is the most important facilitator to help-seeking, with encouragement from significant others aiding the resolution of treatment ambivalence (Ali et al., 2017; Gulliver et al., 2010).

Research has examined the role of family, teachers, and coaches in facilitating help-seeking (Le Grange et al., 2010; Erriu et al., 2020; Yager & O’Dea, 2005; Knightsmith et al., 2014; Jones et al., 2005), demonstrating that timely intervention can promote recovery. However, the unique position of

friends to support help-seeking remains underexplored. Nicula et al. (2022) found that friends strongly influence help-seeking decisions for adolescents with an ED, and Ali et al. (2020) found that adolescents with BED often prefer seeking help from friends over professionals. However, research is yet to specifically examine whether friends possess the knowledge and awareness necessary to take direct action in seeking help for a friend.

The Impact on Friends

In the context of EDs, the impact of peer relationships are often examined through a lens of social comparison theory (Festinger, 1954; Morrison et al., 2003; Bamford & Halliwell, 2009), postulating that DE arises as individuals compare their bodies and weight control practices to peers, striving to match or exceed perceived ideals. This theory (Festinger, 1954) hypothesises that observing a friend's disordered behaviours may create pressure to adopt similar habits. Friends of those with EDs are more likely to develop their own unhealthy behaviours and attitudes to eating (Eisenberg & Neumark-Sztainer, 2010; Eisenberg et al., 2005; McCabe et al., 2010). Further, peer discussions regarding weight are strongly associated with individual dieting attempts (Woelders et al., 2010), and such conversations have been linked to increased body dissatisfaction, a key predictor of DE (Mills et al., 2016; Shannon et al., 2015). However, less is known about how maintaining a close relationship with someone experiencing DE may impact the individual over time.

The Role of School

Adolescents spend more time in school than in any other context (Eccles & Roeser, 2011), therefore it is likely that this setting may influence the experience of both adolescents with EDs and their friends. Teachers and staff appear to be excellently positioned to observe early physical and behavioural signs of DE, and to provide timely support (McVey et al., 2003; Shaw et al., 2010). However, research shows that school staff's knowledge and confidence regarding EDs is inadequate (Yager & O'Dea, 2005), and as little as 7% of adolescents indicate that they would approach a teacher for help regarding their eating difficulties (Knightsmith et al., 2013).

When timely recognition and support occurs in schools, the opportunities for consistent observation have been found to improve recovery rates (Campbell & Peebles, 2014). Recent national policy initiatives have emphasised the importance of improved mental health support for young people in schools. The Five Year Forward View for Mental Health (NHS England, 2016) and the NHS Long Term Plan (NHS England, 2019) both emphasise the role of schools in promoting mental-wellbeing and ensuring timely identification and support for emerging issues. In line with these goals, mental wellbeing was incorporated as a mandatory component of Relationships Education in schools from 2020 (Department for Education, 2020), and efforts have been made to equip school staff with Mental Health First Aid training (Department of Health and Social Care, 2017).

Aims

Given the pivotal role that peers may play in initiating help, it is essential to explore how they understand and navigate school-based pathways to support. This research aimed to capture the unique experiences of individuals who maintained a friendship with someone with DE throughout their schooling. We sought to develop a nuanced understanding of barriers to help-seeking, the support that friends received, and the lasting impact of friend's experience. It is hoped this will contribute to the development of more effective and compassionate approaches to ED prevention, intervention, and peer support.

Methods

Ethics

This study received ethical approval from the University of Southampton Ethics Committee (ERGO ID: 90871) (Appendix G).

Positionality

A reflexive thematic analysis (RTA) (Braun & Clarke, 2019) was chosen due to its alignment with the study's contextualist epistemology and its recognition of the researcher's active role in meaning-making (Braun & Clarke, 2022). Reflexive thematic analysis offered the flexibility to explore a diverse range of participant perspectives while still enabling rich, nuanced interpretation. Alternative approaches, such as Interpretative Phenomenological Analysis (IPA) and Grounded Theory, were not pursued due to their limited applicability to the study's broader focus and their incongruence with the epistemological position adopted (Cena et al., 2024).

This research adopts a critical realist ontology and interpretivist paradigm, aiming to *'deny objectivity and focus on the intersubjective realm'* (Woolgar, 1988; Shaw, 2010), and a contextualist epistemology, which *'views knowledge, and the human beings who created it, as contextually situated, partial and perspectival'* (Braun & Clarke, 2022). By embracing contextualism, this study acknowledges the multifaceted nature of participant's experiences and explores how broader contextual factors may have shaped them.

Reflexivity Statement

In this study, researcher subjectivity is regarded as an analytical tool rather than a limitation (Gough & Madill, 2012). The main researcher sought to capture the meaning that participants had made by their experiences, whilst acknowledging their role in the meaning-making process (Braun & Clarke, 2022). As a Trainee Clinical Psychologist, their interest in ED research stemmed from their

experience of receiving treatment for an ED. Additionally, they have worked in NHS ED services prior to conducting this research. These experiences will have undoubtedly informed their interpretations and consequent theme generation. To enhance reflexivity, they maintained a reflective diary to engage with subjectivity and track their own self-awareness (Silverman, 2022) (Appendix K). During the analysis phase, the supervisory team met to discuss and refine the interpretations of codes and themes.

Participants and Recruitment

Participants were required to be between 21 to 30 years, as individuals over the age of 21 were more likely to have completed formal. An upper age limit of 30 was selected in line with evidence suggesting that autobiographical memory for adolescence begins to decline in middle adulthood (Levine et al., 2002; Beckett et al., 2001). This limit was set to help reduce the risk of memory bias and increase the reliability of participant accounts. Additionally, input from a public involvement group also guided this decision. Following a call within the School of Psychology for individuals with experience of having a friend with DE during schooling, a 20-minute online focus group was held with three individuals (aged 21, 26 and 30) who had supported friends experiencing during school. They suggested that their memories of this experience would remain accurate until approximately age 30.

Individuals whose friends experienced DE that did not reach clinical levels, or met diagnostic criteria without a formal diagnosis, were eligible. Many adolescents meet ED criteria but never receive a formal diagnosis (Smink et al., 2012), therefore this enabled us to widen the scope of the study and capture a broad range of experiences. Participants whose friends were still struggling with DE were eligible, if these issues had been present during schooling.

Sample size decisions were guided by the concept of information power (Malterud et al., 2016). Recruitment continued until the researchers were satisfied that they had collected in-depth, open data that aligned with the studies aims. Several participants reflected on having multiple friends with EDs and how these experiences differed, which enhanced information power.

Demographic Information

Fifteen individuals were interviewed, aged between 21 and 30 years of age (mean=26.4). All identified as female (n=100%); no males volunteered to participate. One participant resided in Sweden; the remaining were based in the UK (n=93.3%). Twelve of the 15 participants identified as White British (n=80%), one as ‘Indian’, one as ‘British Indian’ and one as ‘Half-White, Half-Latina’. Two participants completed their secondary education outside of the UK: one in Sweden and one in Dubai. The remaining 13 participants attended school in the UK.Twelve attended ‘State Schools’ (n=80%), two ‘Private-schools (n=13.3%)’, and one attended a ‘Grammar School’ (n=6.7%). Twelve participants were in full-time employment (n=80%), one in part-time employment (n=6.7%), and two

were full-time students (n=13.3%). Nine participants had achieved a 'Degree or Higher Degree' (n=60%), six had achieved '2+ A levels/VCEs or equivalent' (n=40%), and one participant had achieved '1 – 4 O levels/CSEs/GCSEs (any grades) or equivalent' (n=6.7%).

Procedure

Voluntary response sampling was used to recruit participants via an advertisement posted on Facebook (Appendix E) (including in ED carers groups and research interest groups). Interested individuals read a Participant Information Sheet (Appendix D), recorded consent (Appendix C), and completed a Qualtrics survey (Appendix H) to determine eligibility and record demographic information. They also completed the 'Eating Disorders Knowledge Scale', a 20-item non-standardised, unvalidated measure (Appendix I) (Willoughby & Sivyer, n.d.) to confirm they had experienced having a friend with an ED during school. Volunteers scoring over 10 were invited to participate.

Participants were offered in-person interviews. However, all opted for online interviews (conducted one-to-one, via Microsoft Teams). The research team collaboratively developed a semi-structured interview guide, utilising their personal and professional experiences. This focused on the following areas: spotting the signs, understanding of the ED, help-seeking behaviours and personal impact. Feedback from the PPI group informed revisions, specifically to improve the relevance of questions. The interview guide (Supplementary Material B) was used flexibly, in addition to probing from the researcher and ad-hoc open-ended questions, to ensure that any new topics raised could be explored. Additionally, the guide was adapted slightly to account for the online format by including more explicit check-ins around participant comfort and comprehension, and efforts were made to build rapport despite the limitations of a virtual environment.

Data Analysis

The main researcher transcribed the interviews verbatim, and a reflexive thematic analysis was conducted, guided by the principles outlined by Braun & Clarke (2019; 2006; Byrne, 2022). Description of each phase and actions taken are recorded in Table 1.

Table 1

A Description of Each Analytic Phase and Actions Taken

Analytic Phase	Description	Actions
1. Data familiarisation	- Familiarising with the data and immersing oneself in the data - Initial searches for meaning	- Transcription of audio-video files - Reading and re-reading the date

Analytic Phase	Description	Actions
		- Recording initial thoughts about meanings
2. Initial code generation	- Generating of initial codes to organise the data, attending to each data item	- Labelling and organising data items by groups based on meaning via comments function on Microsoft Word
3. Generating initial themes	- Sorting of codes into initial themes - Identifying the meaning of and relationship between the initial codes	- Recording themes, their meanings, and defining properties via an original Excel Spreadsheet (See Supplementary Material C for evolution of codes, themes and sub-themes)
4. Review of themes	- Identifying coherent patterns in the data - Re-reading and reviewing the entire data set as a whole	- Ensuring adequate data to support each theme - Re-working codes and themes and collapsing themes
5. Theme defining and meaning	- Identifying the stories being told within each theme - Considering the broader store of the data in relation to the research aims	- Moving between the data and proposed themes to ensure a coherent story
6. Producing the report	- Providing a rich and interesting account of the story told within and across themes	- Revisiting the research aims to ensure these are met - Offering interpretation on the meaning of themes

An inductive, open-coding approach was utilised to ensure that themes were grounded in the data. Initial coding was facilitated using the ‘comments’ function in Microsoft Word (Braun & Clarke, 2021). Following this latent coding process, codes were grouped surrounding a ‘central organising concept’ (Braun & Clarke, 2013), with the potential for multiple codes to be given to the same

text. The research team collaboratively reviewed excerpts and refined themes. For each theme, quotes, based on thematic relevance and participant significance, were selected for inclusion in the report.

Analysis

Themes

The themes and sub-themes that were developed from the analytic process are listed in Table 3.

Table 3

List of Themes and Sub-Themes

Main themes	Sub themes	Example quotes
Barriers to help-seeking: loyalty & fear	Avoidance as protection	P5: "I was worried about getting in trouble or getting her in trouble. If her dad had found out, I don't think it would have been particularly helpful. I worried about what would happen once it was out. I also knew that if I told someone without her consent, she would have been really upset, and I think she would have panicked about the consequences."
	Spotting the signs	P1: "Back then, it just seemed like something that was part of life…this pressure to be thin or look a certain way. I didn't notice anything was wrong because she had always been so thin."
A culture of normalisation	Dieting as the household norm	P13: "Both her mum and her sister were, like ridiculously skinny as well. Like, sorry, that's really mean way of saying it. I would say potentially both her mum and sister had eating disorders as well."
	The influence of the media	P11: "There was a lot at our age about looking a certain way and being a certain way. And wanting to be skinny. In magazines, TV, and all of this stuff at the time. That was just normal and made you think that's what you should look like."
What could have helped? Gaps in support and missed opportunities	Unmet needs in the school system	P6: "If you were different in any way, you were pushed aside. There was a lot of casual homophobia, sexism, and racism that the teachers didn't address. It felt like we were on our own."
	The importance of mental health literacy	P3: "I think schools need more education and awareness. Teaching that it's not normal to go all day without eating, and explaining that this behaviour is actually problematic."
	The role of adults	P10: "It would've helped if there was a counsellor, or someone separate from the teaching staff who we could talk to."

The emotional impact on friends	Echoes of influence	P2: "I became much more aware of food and my body- almost too aware. I started to focus on calories and the 'right' foods, influenced by both my mum and my friend's habits. For a long time, I had an unhealthy relationship with food, feeling like I needed to control every bite. It wasn't until later that I realized how damaging that was."

Barriers to Help-Seeking: Loyalty and Fear

This theme captures the internal and relational factors that inhibited participants from seeking support for their friend.

Avoidance as Protection. Participants described navigating a tension between wanting to support their friend and fearing unintended negative consequences. This often prevented them from seeking help. Two participants voiced their concerns that seeking help would have felt like a 'betrayal':

> P12: "I think it was just like we didn't want to feel like we were outing them or telling on them or exposing them because we didn't want them to feel like we had betrayed them, even though we just wanted to help."

In addition to perceiving help-seeking as 'disloyalty', P4 spoke of her worry that seeking further intervention may worsen her friend's mental health:

> P4: "I knew that if her parents found out they wouldn't be very supportive and it would probably just make things worse for her mental health wise."

However, avoidance was not simply driven by a fear of betrayal but also functioned as a strategy to maintain stability for their friend. P2 highlighted an unspoken understanding that steering clear of sensitive topics helped preserve stability:

> P2: "We stuck together, did homework, and prepared for exams together. I think that routine and consistency may have helped her in some way, even if we didn't talk about her issues directly."

P14 described a similar unspoken rule existing within her friendship group:

> P14: "It was more like we were just sort of aware that there were certain, like, no-go areas for talking about things with her. We would never talk about food or her weight. We just wanted to carry on as normal and thought that might help."

Participants' hesitations may have been influenced by societal stigma surrounding eating disorders, which framed them as private issues and discouraged open discussion.

Spotting the Signs. For many participants, help-seeking at the time was hindered by a lack of awareness that their friend's behaviour was unhealthy. P15 recognised her friend was struggling, but understood little beyond that:

> P15: "I don't think I necessarily knew that that's what it was, but I just remembered talking to my parents and saying, like, I don't think that she's OK, but I'm not really sure why."

It is unclear whether P15's limited understanding about EDs stemmed from her young age, or a lack of information, however, she did not understand their complexity until reflecting on her friend's struggles retrospectively:

> P15: "At the time, I thought eating disorders were primarily about disliking your body and wanting to change it. I didn't understand the psychological aspects or the extent of the physical damage they could cause. I knew that it had something to do with body image, but I didn't grasp the depth of the problem, such as the potential for stopping periods or the long-term damage it could do. Looking back, I realize how naive my understanding was."

When friends continued to perform well academically, the severity of their symptoms were further masked:

> P9: "She was so clever... her academic ability overshadowed how difficult the rest of school was for her. And we didn't notice how unwell she was because all of her grades were still great."

For participants whose friends' difficulties developed gradually, spotting the signs proved more difficult. Vandereycken & Van-Humbeeck (2018) suggested that early signs of an ED can be easily overlooked by peers if they progress slowly. However, as the impact of participant's friends' illness became more salient, they described feeling confronted with the severity of the situation. P5 described:

> P5: "We always noticed she didn't eat. That's just who she was. But around Year 10 or Year 11, she ended up in the hospital twice, and that's the first time we were like 'oh this isn't right'… we didn't understand anything until she was in hospital. Then we realised how bad it was".

P5 described that, had she been better equipped to recognise her friends struggle in the early stages, she may have sought help earlier:

> P5: "If we'd had more knowledge and awareness about eating disorders, we might have been able to notice the signs earlier and talk about it or try and help her."

A Culture of Normalisation

Disordered eating behaviours and attitudes appeared to be normalised within participants' sociocultural contexts, thereby obscuring the recognition of such behaviours as problematic.

Dieting as a Household Norm. For several participants, attitudes towards food and body image present within their household informed their wider understanding of EDs. This occurred, firstly, through the observation of family members' own DE patterns:

> P9: "It's interesting because my mum also had an eating disorder, but it wasn't like anorexia like that, it was more binge eating. So, I was familiar with the idea of unhealthy relationships with food."

In instances whereby dieting and weight consciousness were a household norm, DE was not seen as a warning sign of an underlying mental health need, but as positive behaviour, as P13 describes:

> P13: "My mum would sometimes compare me to my friend, saying, 'You should look like her,' and I remember hearing similar things with my friends and things their mums would say. So their mum's would say like you need to be thin because, you know, boys like you being my thin."

Direct comparisons, made by a parental figure, are likely to have impacted participant's abilities to identify the problematic behaviours of their peers. P13 proceeded to share:

> P13: "Over time I stopped thinking about what my friend was doing bad and more like something that I needed to be doing too."

In contrast to accounts of negative familial experiences, parents sometimes offered a protective role against the behaviours of participants friends becoming normalised. P3 explained:

> P3: "My mum wouldn't allow us to have scales in the house and stuff. And I think that sort of made me a bit aware of a thing about how checking your weight a lot isn't healthy."

The Influence of the Media. As participants attended school between the years 1995 and 2004, their experiences of media ideals and consumption reflect that period and may differ from present experiences. However, all participants described a pervasive diet culture in the media that blurred the line between 'normal' body dissatisfaction and serious conditions:

> P2: "It was mainly like in the media and stuff with regards to like just talking about what it was like for women and stuff, like sort of like so many celebrities being like size zero. It was like that was how everyone should look."

Participants acknowledged that the pressure to conform to observed idealised body types led to increased body dissatisfaction:

> P3: “The messaging we get from shows like 'Love Island' and social media about what an ideal body looks like contributed so much to how I felt about my own body. I didn't look like that, and it made me feel like I needed to lose weight.”

Further, four participants described that their understanding of what an ED truly entailed was informed by the internet and/or social media. P6 described:

> P6: “I would see somebody on TV or someone on TV mentions anorexia or whatever and I think that was probably part of where my perception of anorexia or an eating disorder came from. It means you just don't eat.”

Participants reflected that the influence of diet and celebrity culture in early internet spaces created an environment whereby EDs were normalised and even sensationalised. However, P6 also proceeded to reflect on how social media has changed and the protective role that it holds the potential for:

> P6: “So if you compare it to now for example in the media like everyone is very about the body positive movement and like calling out like really unrealistic beauty standards or calling out like unhealthy relationships with food. I feel like that was really different to the time that we were growing up.”

What Could Have Helped? Gaps in Support and Missed Opportunities

Participants navigated complex, emotional situations in the absence of sufficient guidance. Notably, the school environment was identified as a significant missed opportunity for early intervention and support.

Unmet Needs in the School System. Ten participants described a school environment whereby they were left to navigate their struggles independently. Teachers were seen as disconnected, with five participants describing them as unapproachable in various ways:

> P1: “The school wasn’t very supportive. They didn’t really help with anything, even when my dad passed away. That made it hard for me to believe they’d care about what was going on with my friend.”

As participants reflected on their schooling experience, they speculated on the reasons that teachers seemed ill positioned to offer support:

> P6: "I think her academic ability kind of overshadowed how difficult the rest of school was for her. I think like when you're in school, if you're doing okay in terms of the grades, then maybe the teachers don't quite notice how tricky everything else is."

However, accounts of school expanded beyond problematic experiences with individual staff members to the existence of a culture of conformity and a lack of adequate pastoral care:

> P6: "I think it's more about the culture in the school. I think my school was huge. My secondary school particularly was a really big school. Like everyone in the area. It was a big melting pot of lots of things going on, so you didn't always feel like you could kind of go to teachers because you didn't always feel like you were a person within that school. It was just like, 'oh, there's all these pupils".

The perception of school as a rigid environment whereby pressure to conform was prioritised above seeking help appeared to be a clear barrier to help-seeking behaviour.

The Importance of Mental Health Literacy. The need for increased mental health education in schools was widely discussed. Participants described how they would have benefitted from accessing more information about EDs:

> P3: "I needed more education and awareness. Teaching that it's not normal to go all day without eating and explaining that this behaviour is problematic. We had a class called PSHE, where we were supposed to talk about things like health, but it wasn't really emphasised."

Participants called for increased mental health education in schools, with one participant suggesting that this should be integrated into the curriculum. Participants speculated that greater education could have fostered more open conversation. However, they acknowledged that meaningful change would require systemic shifts to acknowledge student-wellbeing as an essential part of education:

> P1: "I think if the school had a more holistic approach, recognising that students aren't just there to get grades but also to learn life skills, it would've helped. But realistically, that requires funding and a shift in priorities."

Trusted adults. Participants reflected on the absence of designated, confidential figures and spaces within schools. Without an adult figure facilitating conversations regarding emotional wellbeing, many felt that their struggles, and those of their friends, remained unspoken:

> P9: "I think it would have been helpful to sort of check in with someone that had a lot of knowledge around it and have sort of those confidential open conversation."

Participants suggested that a more proactive role from adults could have been beneficial. They described how they may have felt more able to seek help if a trusted adult had initiated conversations:

> P7: ‘I think schools should make it clearer what support is available. I had no clue what would happen if I spoke to a teacher. I didn’t know the process for getting help. Schools could make it clear: “We have support available for this. If you’re struggling, talk to the school nurse,’ or have signposting to charities or something like that. It would help to know what to expect.”

When a trusted adult was present and supportive, this made a significant difference:

> P7: "There were counsellors at school and things like that were sort of supporting her with eating at lunch and sort of checking in on her and things like that. I think that really helped her just get by at school.”

The Emotional Impact on Friends

Participants described significant psychological and behavioural effects because of their experience. As participants recalled their experiences, they also recounted how they themselves became increasingly aware of their own eating habits:

> P4: “I became much more aware of food and my body. Almost too aware. I started to focus on calories and the 'right' foods. Because I was influenced by my mum and my friend’s habits. For a long time, I had an unhealthy relationship with food, feeling like I needed to control every little bite. It wasn’t until later that I realised how damaging that was.”

P9 described how her friend imposed strict rules relating to food on to her:

> P9: “She’d put a lot of morals on what I should eat because I was quite tall and quite strong and a bit fatter.”

Echoes of influence. Just as familial attitudes appeared to have shaped participant’s relationships to food, it appears that maintaining these friendships also contributed to rigid food beliefs and body dissatisfaction. For many, these thought patterns persisted well beyond adolescence. These early experiences were even regarded as placing them at risk for developing EDs personally:

> P9: “I do think for myself, it could have actually been a danger zone for developing a restrictive eating disorder.”

No participants described developing clinical levels of difficulty because of their experience[1], however, their time supporting their friend was perceived to have left a lasting mark on their relationship to food.

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[1] Based on participants’ self-reported reflections during semi-structured interviews; participants reported no formal clinical assessments were conducted, nor was professional help reported or accessed.

General Discussion

EDs in adolescents are rising at an alarming rate (Pastore et al., 2023). Given the heightened importance of peer relationships during adolescence, whereby friendships play a central role in shaping identity and behaviour (Erikson, 1959; Sullivan, 1953), this study sought to illuminate the nuanced experiences of individuals who maintained friendships with peers experiencing DE during schooling. This discussion contextualises the findings within broader literature, considers practical implications for clinicians and educators, and evaluates the study, whilst proposing directions for future research. Key findings suggested that friends struggled to recognise problematic behaviours, and that they faced emotional, relational, and structural barriers to help-seeking.

The Experience of Help-Seeking

Participants detailed the complexity of maintaining friendships with individuals experiencing DE, noting that their desire to shield friends from perceived threats lead them to avoid seeking support. Given that social stigma appears to deter adolescents with EDs from seeking help (Williams et al., 2018), it likely also discourages their friends from doing so. The barriers that friends described mirrored those faced by individuals with EDs, such as a 'fear of being judged' (Wall et al., 2024) and a lack of knowledge about available resources (Ali et al., 2017). In the context of EDs, peer relationships often take precedence over authority figures (Ali et al., 2020), however this study highlights that peer support alone may be insufficient. Some participants suggested that they lacked the knowledge to recognise their friend's ED, while others, although aware of it, felt uncertain about how to provide support.

Findings support literature that suggests the glamorisation of EDs in mainstream media makes it difficult to distinguish unhealthy behaviours (Suhag & Rauniyar, 2024). Further, dieting discussions were described as common in school and home settings, and, at times, unhealthy behaviours were reinforced by family members and peers. Shroff and Thompson (2006) found that peer relationships significantly influence body image and eating behaviours, increasing the risk of young people internalising disordered eating patterns from friends. Such risks may be further compounded by the intergenerational transmission of body dissatisfaction, with research showing that parental attitudes and behaviours can heighten vulnerability to DE in young people (Rodgers & Chabrol, 2009). This may reflect a 'contagion effect', whereby attitudes and behaviours regarding eating spread within social groups, reinforcing or amplifying them (Allison et al., 2014).

The Schooling Experience

Various aspects of the schooling experience appeared to impact participant's willingness to seek help for their friend and themselves. Key factors included the school culture, relationships with

teachers, mental health literacy, and a lack of confidential spaces. Jessiman et al. (2022) identified four interdependent dimensions that shape a school's culture: structure and context, organisational and academic, community and safety, and support. This study did not explore which of these posed the greatest barrier to help-seeking for participants, highlighting a worthwhile area for future research.

In schools whereby mental wellbeing was not openly discussed, participants reported feelings of isolation and uncertainty about how to support their friend. This lack of dialogue appeared to reinforce the perception that such issues were inappropriate to disclose. Social norms theory (Perkins & Berkowitz, 1986) offers a valuable lens here, proposing that individuals conform to perceived social expectations; in environments where vulnerability is stigmatised, help-seeking may be inhibited.

It is important to note that two participants in this study completed their secondary education outside of the UK (in Sweden and Dubai), introducing a small degree of cultural variation. Whilst their experiences largely aligned with UK-based accounts, contextual factors may have shaped their responses (Gordon et al., 2010). Notably, one participant described a more open cultural discourse regarding mental health in Sweden, whereas the participant educated in Dubai highlighted a stronger sense of stigma and fewer visible support structures within the school environment. These variations highlight the importance of recognising how educational and cultural settings can intersect to influence help-seeking behaviours and perceptions of EDs.

A Lasting Impact

Having a friend with an ED shaped participant's own relationship to food and body image, with many participants reporting heightened awareness of calorie counting, restrictive eating, and body dissatisfaction that extended into adulthood. Research has shown that caregiving for individuals with EDs can lead to psychological distress (Awad et al., 2008; Kızılırmak et al., 2016), and friends' dieting behaviours can predict increased body dissatisfaction years later (Jones, 2004). This study builds on these findings, highlighting the lasting impact of supporting a friend with an ED, and underscoring the need for better support for both individuals.

The long-term impact of these friendships may be especially pronounced due to adolescence being a critical period of personality development, marked by heightened sensitivity to environmental influences (Raufelder et al., 2021; Ronald et al., 2019; Tetzner et al., 2022). It would be valuable to explore whether similar long-term effects would be observed in adults, and future research could aim to determine protective factors against such effects.

Strengths and Limitations

This study's strength lies in its reflexive, qualitative approach, enabling an in-depth exploration of the perspectives of friends, an under-researched group in ED literature. Several processes enhanced

the credibility of findings, such as supervisory oversight and reflexive journaling (Braun & Clarke, 2006). However, participant validation, particularly of transcript coding, could have further strengthened rigor (Birt et al., 2016).

Further, this study's relatively homogeneous sample, consisting of females describing female friends in Western cultures, may have reduced information power by limiting the diversity of perspectives captured. Whilst this gender and cultural focus is common in ED research (Scutt, 2022), it limits the transferability of the findings to more diverse populations. However, this study does offer a rich account of experiences within female friendships in Western contexts and how these influence responses to EDs.

The decision to offer and subsequently conduct interviews online may have influenced the depth or tone of participant disclosure, given the absence of in-person rapport and non-verbal cues (Bauman, 2015). However, online interviews also offered benefits, including increased accessibility, reduced participant burden, and the opportunity for participants to speak from familiar environments- factors that may have enhanced openness and comfort in discussing sensitive topics (Villiers et al., 2022).

Finally, whilst relying on retrospective accounts may introduce memory biases (Lalande et al., 2008; Aldrovandi, 2009), it also likely reduced participant distress. It is worth noting that the recollections presented may not fully reflect the experiences of adolescents today, given the shifts in perceptions on mental health issues within schools and in broader societal discourses (Jessiman et al., 2002). Nonetheless, evidence suggests that EDs appear to remain prevalent, yet largely unidentified, in schools (López-Gil et al., 2023; Dias et al., 2023)

Directions for Future Research

This research highlights the need to explore whether similar experiences occur across different cultural or gendered contexts. Eating disorders manifest differently across populations, with cultural factors shaping perceptions of illness, help-seeking behaviours, and peer relationships (Gordon et al., 2010). Future studies should aim to adopt an intersectional approach, recruiting from schools with higher levels of diversity or recruiting from social media platforms frequented by varied demographic groups.

Secondly, evidence shows that informal carers often feel unprepared, unsupported, and emotionally burdened (van Husen et al., 2025; Lin et al., 2015). This study highlights that the support needs of friends are pervasive yet often overlooked. Participant's experiences appeared to shape their eating behaviours and attitudes well into adulthood, however, longitudinal research is required to understand what mitigates or exacerbates these long-term effects.

Finally, several participants noted that early social media platforms normalised DE. However, some also noted the emergence of recovery-oriented narratives in contemporary digital spaces.

Investigating whether shifting online discourses have altered help-seeking behaviours or facilitated more positive recovery trajectories could provide valuable insights for intervention efforts.

Implications

Implications will be guided by Bronfenbrenner's 'Ecological Systems' theory (1994). At the individual level, clinicians and educators should collaborate to enhance their knowledge and confidence in working with EDs. Clinical psychologists are ideally positioned to offer training and supervision to guide schools in supporting these populations (Knightsmith, 2015).

At the microsystem level, participants called for integrating mental health education into curriculums and fostering trusting staff-student relationships. Many participants felt ill-equipped to identify EDs or seek help, a gap research suggests could be addressed through school-based mental health education initiatives (Koreshe et al., 2023; Knightsmith et al., 2013). At the exosystem level, improved teacher training and access to specialised resources are essential. Teachers play a crucial role in early intervention, yet many lack confidence or resources to effectively support students (Knightsmith et al., 2014). Training programmes focused on ED recognition, such as those offered by 'Family Mental Wealth' (n.d), could improve schools' ability to intervene.

At the macrosystem level, societal norms regarding dieting were recognised as significantly influencing participant's understanding of their friend's struggles. Studies estimate that 97% of adolescents access at least one social media platform (Plackett et al., 2023), yet only 52% of secondary school teachers teach students to critically analyse social media content (IFF Research, 2023). Participants stressed that simply showing image-editing techniques is insufficient (Vahedi et al., 2018); instead, interventions should support students in understanding the influence of online content (Thompson & Stice, 2001).

Finally, regarding the chronosystem, it is important to consider the changing societal, economic, and political trends since participants attended school. Since the early 2010s, awareness of mental health in schools has increased, notably with the promotion of a 'Whole-School Approach' in The Five-Year Forward View (NHS England, 2016). Continuous research to assess and develop effective interventions in line with societal changes is crucial.

Final Considerations

This study offers a nuanced exploration of the experiences of friends of individuals experiencing DE during their school years, highlighting the complexities of help-seeking behaviours, the role of schooling, and the long-term psychological impact. Importantly, the study emphasises the need for systemic changes in schools to improve mental health literacy and to increase access to confidential spaces. Moving forward, research should continue to investigate the long-term impact on

friends and examine the evolving role of digital media in help-seeking to offer more effective support for adolescents experiencing DE, and those within their friendship circles who seek to help.

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Supplementary Material

Supplementary Material A: Search Terms and Results

PsycInfo:

Title OR Abstract Search: (eating N1 disorder* OR anorexia OR bulimia OR binge eating OR eating disorder not otherwise specific OR EDNOS OR ARFID OR avoidant restrictive food intake OR other specified feeding OR OSFED OR eating disorder OR eating difficulty) AND (school N1 characteristics OR school environment OR school factors OR school features OR school qualit* OR type of school* OR private-school OR state school OR faith school OR same sex school OR boarding school).

Search results: 4,932

Search limited to English and academic journals and duplicates removed: 201

ERIC:

Title OR Abstract Search: (eating N1 disorder* OR anorexia OR bulimia OR binge eating OR eating disorder not otherwise specific OR EDNOS OR ARFID OR avoidant restrictive food intake OR other specified feeding OR OSFED OR eating disorder OR eating difficulty) AND (school N1 characteristics OR school environment OR school factors OR school features OR school qualit* OR type of school* OR private-school OR state school OR faith school OR same sex school OR boarding school).

Search results: 13

Search limited to English and academic journals and duplicates removed: 3

OVID:

Title OR Abstract Search: (eating N1 disorder* OR anorexia OR bulimia OR binge eating OR eating disorder not otherwise specific OR EDNOS OR ARFID OR avoidant restrictive food intake OR other specified feeding OR OSFED OR eating disorder OR eating difficulty) AND (school N1 characteristics OR school environment OR school factors OR school features OR school qualit* OR type of school* OR private-school OR state school OR faith school OR same sex school OR boarding school).

Search results: 604

Search limited to English and academic journals and duplicates removed: 32

Supplementary Material B: Interview Topic Guide

THESIS INTERVIEW SCHEDULE

1. Could you tell me a bit about your friend that experienced disordered eating?
   - *How did you meet?*
   - *What type of things did you do together?*
   - *What is your friendship like now?*
   - *What were they like?*

SPOTTING THE SIGNS

2. What were the first signs you noticed in your friend that they might be experiencing disordered eating?
- *Physical changes, personality changes, social changes? When did these changes occur?*
3. Was there a specific moment you can recall realizing that your friend was unwell?
4. At the time, what was your understanding of disordered eating?
   - *Where did you develop this understanding?*
   - *Upon reflection, what do you know now that you did not at the time?*
   - *At the time, were there any parts of your friends disordered eating that you did not understand?*

UNDERSTANDING OF THE EATING DISORDER

5. If your friend shared that they were having difficulties with eating, what factors do you think contributed to your friend developing or maintaining disordered eating behaviours?
   - *Which of these do you think was the most important?*
   - *Was there anything that they did not share with you but that you observed?*
6. How did your friend manage school life?
   - *Who was aware at school? Were teachers aware? Were other students aware? How did these individuals become aware of what was happening?*
   - *How did they manage specific aspects of school life, such as mealtimes, P.E and break times?*
   - *Were there any other specific aspects of school life that had to change for them?*

HELP-SEEKING BEHAVIOURS

7. Did you turn to anyone to seek help for your friend?
   - *If so, who did you turn to?*
   - *What was the response to you seeking help?*
   - *If you do not seek help, why not? Who do you think would have been the best person to turn to at the time?*
8. Did your friend experience any barriers in seeking help?
   - *What would have made it easier for your friend to seek help and access support?*
9. Did you experience any barriers in seeking help for your friend experiencing difficulties?
   - *What would have made it easier for you to seek help and access support?*

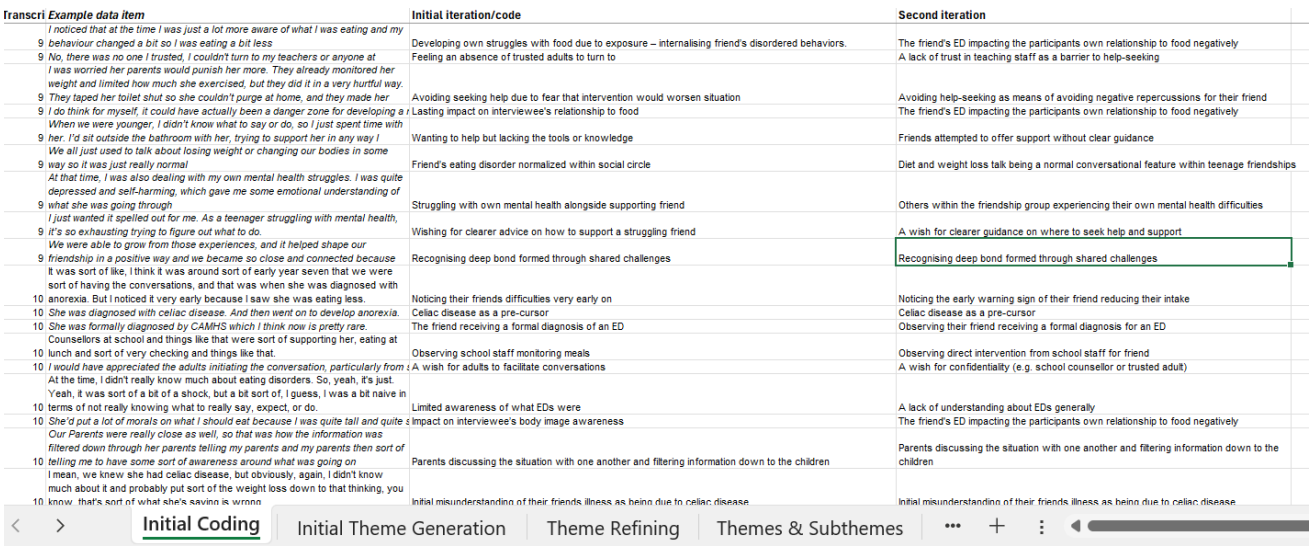
PERSONAL IMPACT

10. How did your friends' difficulties impact you at the time?
    - *Was there any positive or negative changes you observed?*
11. Did your relationship to feed, eating and exercise change because of your friends' difficulties?
    - *If so, what could have prevented this change?*
    - *Was your friend aware of these changes?*
12. What do you think your role was in supporting your friend?
    - *What do you think they perceived your role to be?*
    - *Were there any specific things you did to help support your friend? Were these successful?*

Any other comments or reflections on experience?

Supplementary Material C: Evolution of Codes, Themes & Subthemes (example screenshots of Excel coding book)

Page 1. Initial coding



Transcri	*Example data item*	Initial iteration/code	Second iteration
9	*I noticed that at the time I was just a lot more aware of what I was eating and my behaviour changed a bit so I was eating a bit less*	Developing own struggles with food due to exposure – internalising friend's disordered behaviors.	The friend's ED impacting the participants own relationship to food negatively
9	*No, there was no one I trusted, I couldn't turn to my teachers or anyone at*	Feeling an absence of trusted adults to turn to	A lack of trust in teaching staff as a barrier to help-seeking
9	*I was worried her parents would punish her more. They already monitored her weight and limited how much she exercised, but they did it in a very hurtful way. They taped her toilet shut so she couldn't purge at home, and they made her*	Avoiding seeking help due to fear that intervention would worsen situation	Avoiding help-seeking as means of avoiding negative repercussions for their friend
9	*I do think for myself, it could have actually been a danger zone for developing a*	Lasting impact on interviewee's relationship to food	The friend's ED impacting the participants own relationship to food negatively
9	*When we were younger, I didn't know what to say or do, so I just spent time with her. I'd sit outside the bathroom with her, trying to support her in any way I*	Wanting to help but lacking the tools or knowledge	Friends attempted to offer support without clear guidance
9	*We all just used to talk about losing weight or changing our bodies in some way so it was just really normal*	Friend's eating disorder normalized within social circle	Diet and weight loss talk being a normal conversational feature within teenage friendships
9	*At that time, I was also dealing with my own mental health struggles. I was quite depressed and self-harming, which gave me some emotional understanding of what she was going through*	Struggling with own mental health alongside supporting friend	Others within the friendship group experiencing their own mental health difficulties
9	*I just wanted it spelled out for me. As a teenager struggling with mental health, it's so exhausting trying to figure out what to do.*	Wishing for clearer advice on how to support a struggling friend	A wish for clearer guidance on where to seek help and support
9	*We were able to grow from those experiences, and it helped shape our friendship in a positive way and we became so close and connected because*	Recognising deep bond formed through shared challenges	Recognising deep bond formed through shared challenges
10	It was sort of like, I think it was around sort of early year seven that we were sort of having the conversations, and that was when she was diagnosed with anorexia. But I noticed it very early because I saw she was eating less.	Noticing their friends difficulties very early on	Noticing the early warning sign of their friend reducing their intake
10	*She was diagnosed with celiac disease. And then went on to develop anorexia.*	Celiac disease as a pre-cursor	Celiac disease as a pre-cursor
10	*She was formally diagnosed by CAMHS which I think now is pretty rare.*	The friend receiving a formal diagnosis of an ED	Observing their friend receiving a formal diagnosis for an ED
10	Counsellors at school and things like that were sort of supporting her, eating at lunch and sort of very checking and things like that.	Observing school staff monitoring meals	Observing direct intervention from school staff for friend
10	*I would have appreciated the adults initiating the conversation, particularly from*	A wish for adults to facilitate conversations	A wish for confidentiality (e.g. school counsellor or trusted adult)
10	At the time, I didn't really know much about eating disorders. So, yeah, it's just. Yeah, it was sort of a bit of a shock, but a bit sort of, I guess, I was a bit naive in terms of not really knowing what to really say, expect, or do.	Limited awareness of what EDs were	A lack of understanding about EDs generally
10	*She'd put a lot of morals on what I should eat because I was quite tall and quite*	Impact on interviewee's body image awareness	The friend's ED impacting the participants own relationship to food negatively
10	*Our Parents were really close as well, so that was how the information was filtered down through her parents telling my parents and my parents then sort of telling me to have some sort of awareness around what was going on*	Parents discussing the situation with one another and filtering information down to the children	Parents discussing the situation with one another and filtering information down to the children
10	I mean, we knew she had celiac disease, but obviously, again, I didn't know much about it and probably put sort of the weight loss down to that thinking, you know, that's sort of what she's saying is wrong	Initial misunderstanding of their friends illness as being due to celiac disease	Initial misunderstanding of their friends illness as being due to celiac disease

Initial Coding | Initial Theme Generation | Theme Refining | Themes & Subthemes

Page 2. Initial theme generation

	Code	Description/Interpretation	Proposed Theme
2	A wish for confidentiality	Desire for privacy when discussing concerns with trusted adults, reflecting fear or sensitivity around ED-related discussions.	Barriers to Help-Seeking
3	A wish for clearer guidance on where to seek help and support	Desire for structured resources to navigate help-seeking processes.	Barriers to Help-Seeking
4	Feeling it unnecessary to help-seek as friend was already accessing professionals	Belief that professional help was sufficient, reducing personal responsibility for intervention.	Barriers to Help-Seeking
5	The friend's ED impacting the participant's own relationship to food negatively	Exposure to a friend's ED influencing the participant's eating behaviors or self-perception.	Barriers to Help-Seeking
6	Feeling unaware of where to seek support and guidance	Uncertainty about where to turn for help when supporting a friend with an ED.	Barriers to Help-Seeking
7	Avoiding help-seeking as means of avoiding negative repercussions for their friend	Fear that seeking help would worsen their friend's situation or cause harm.	Barriers to Help-Seeking
8	Perceiving that help-seeking would lead to external judgement for their friend	Concerns that getting help would result in their friend being judged or stigmatized.	Barriers to Help-Seeking
9	Avoiding seeking help due to concerns about betraying their friend's trust and harming their trusting relationship	Fear of damaging the friendship acting as a barrier to help-seeking.	Barriers to Help-Seeking
10	The perception that intervention would not prove effective	Doubt about the effectiveness of seeking professional help leading to inaction.	Barriers to Help-Seeking
11	The perception that seeking help would overstep an unspoken boundary	Feeling constrained by social or personal expectations that discourage intervention.	Barriers to Help-Seeking
12	Uncertainty about how to best offer help and support	Feeling unsure about how to effectively help a friend struggling with an ED.	Barriers to Help-Seeking
13	Avoiding help-seeking as means of avoiding upsetting their friend	Fear that seeking help might distress or anger their friend, leading to avoidance.	Barriers to Help-Seeking
14	Young age as a barrier to help-seeking	Feeling unequipped or lacking the authority to seek help due to being young.	Barriers to Help-Seeking
15	Previous negative experience of help-seeking from school preventing them from seeking help for their friend	Past failures in receiving support leading to reluctance in future help-seeking efforts.	Barriers to Help-Seeking
16	A lack of trust in teaching staff as a barrier to help-seeking	Feeling that teachers were not reliable or supportive, leading to reluctance to seek help.	Barriers to Help-Seeking
17	Concerns or fears about 'getting support wrong'	Fear of handling the situation incorrectly preventing action.	Barriers to Help-Seeking
18	Fear of peers finding out about the friend's ED	Concern that social stigma or judgment from peers would arise if the ED was widely known.	Barriers to Help-Seeking
19	Consideration but hesitation in informing parents	Struggling with the decision of whether to involve parents due to concerns about consequences or privacy.	Barriers to Help-Seeking
20	The perceived impact of the family on the development and maintenance of friends ED	Families playing a role in shaping attitudes towards food, body image, and self-worth.	Family Influence and Parental Role
21	Observed parental moral framework regarding food as 'good or bad'	Parents reinforcing rigid food rules that may contribute to disordered eating patterns	Family Influence and Parental Role

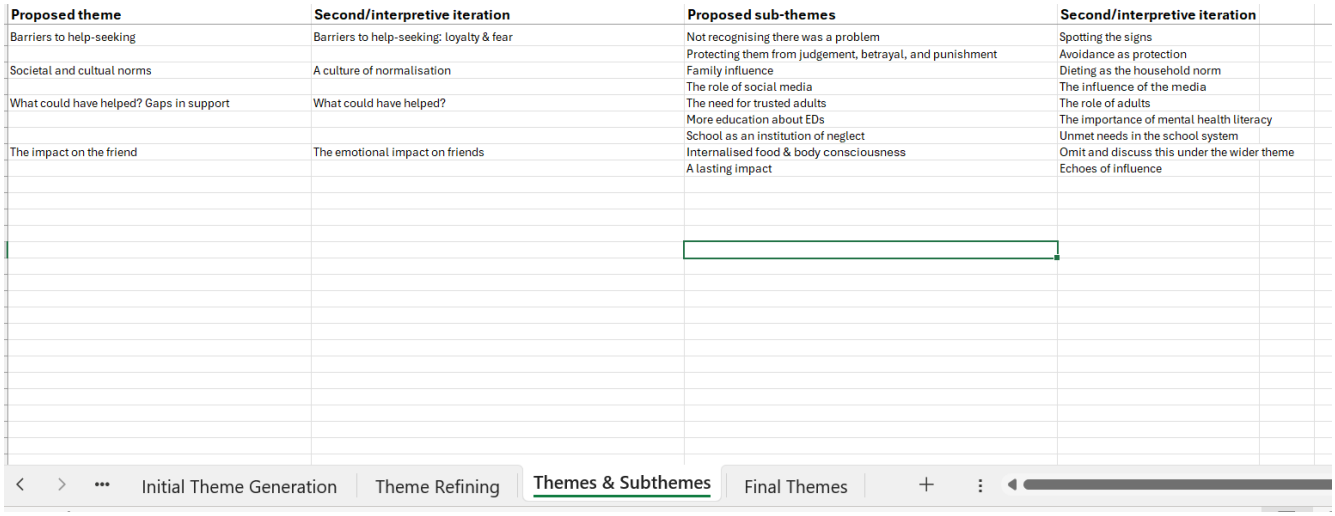
Initial Coding | Initial Theme Generation | Theme Refining | Themes & Subthemes

Page 3. Theme refining

Proposed Theme	Codes within theme	Moving/Amalgamation of Themes	Potential subthemes
Barriers to Help-Seeking	A wish for confidentiality	Amalagamate with what could have helped	
	A wish for clearer guidance on where to seek help and support	Amalagamate with what could have helped	
	Feeling it unnecessary to help-seek as friend was already accessing professionals		
	Feeling unaware of where to seek support and guidance	Amalagamate with what could have helped	
	Avoiding help-seeking as means of avoiding negative repercussions for their friend		Avoidance as protection
	Perceiving that help-seeking would lead to external judgement for their friend		Avoidance as protection
	Avoiding seeking help due to concerns about betraying their friend's trust and harming their trusting relationship		Avoidance as protection
	The perception that intervention would not prove effective		Avoidance as protection
	The perception that seeking help would overstep an unspoken boundary		Avoidance as protection
	Uncertainty about how to best offer help and support	Amalagamate with what could have helped	
	Avoiding help-seeking as means of avoiding upsetting their friend		Avoidance as protection
	Young age as a barrier to help-seeking		
	Previous negative experience of help-seeking from school preventing them from seeking help for their friend		

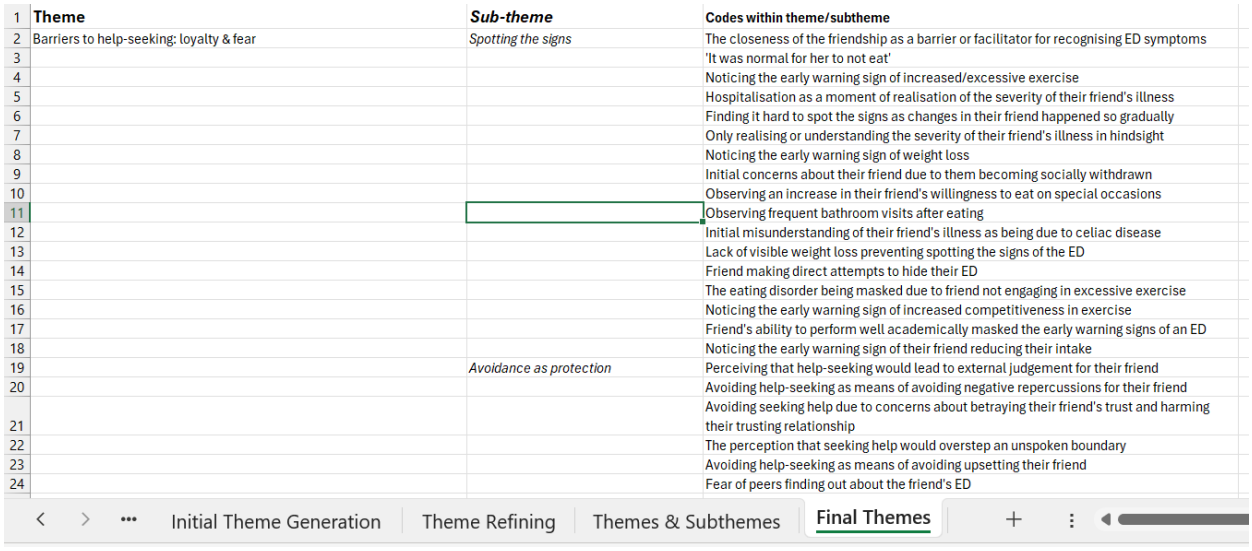
Initial Coding | Initial Theme Generation | Theme Refining | Themes & Subthemes

Page 4. Further refining of themes and subthemes



Proposed theme	Second/interpretive iteration	Proposed sub-themes	Second/interpretive iteration
Barriers to help-seeking	Barriers to help-seeking: loyalty & fear	Not recognising there was a problem	Spotting the signs
		Protecting them from judgement, betrayal, and punishment	Avoidance as protection
Societal and cultual norms	A culture of normalisation	Family influence	Dieting as the household norm
		The role of social media	The influence of the media
What could have helped? Gaps in support	What could have helped?	The need for trusted adults	The role of adults
		More education about EDs	The importance of mental health literacy
		School as an institution of neglect	Unmet needs in the school system
The impact on the friend	The emotional impact on friends	Internalised food & body consciousness	Omit and discuss this under the wider theme
		A lasting impact	Echoes of influence

Page 5. Final themes, subthemes and codes



	Theme	*Sub-theme*	Codes within theme/subtheme
2	Barriers to help-seeking: loyalty & fear	*Spotting the signs*	The closeness of the friendship as a barrier or facilitator for recognising ED symptoms
3			'It was normal for her to not eat'
4			Noticing the early warning sign of increased/excessive exercise
5			Hospitalisation as a moment of realisation of the severity of their friend's illness
6			Finding it hard to spot the signs as changes in their friend happened so gradually
7			Only realising or understanding the severity of their friend's illness in hindsight
8			Noticing the early warning sign of weight loss
9			Initial concerns about their friend due to them becoming socially withdrawn
10			Observing an increase in their friend's willingness to eat on special occasions
11			Observing frequent bathroom visits after eating
12			Initial misunderstanding of their friend's illness as being due to celiac disease
13			Lack of visible weight loss preventing spotting the signs of the ED
14			Friend making direct attempts to hide their ED
15			The eating disorder being masked due to friend not engaging in excessive exercise
16			Noticing the early warning sign of increased competitiveness in exercise
17			Friend's ability to perform well academically masked the early warning signs of an ED
18			Noticing the early warning sign of their friend reducing their intake
19		*Avoidance as protection*	Perceiving that help-seeking would lead to external judgement for their friend
20			Avoiding help-seeking as means of avoiding negative repercussions for their friend
21			Avoiding seeking help due to concerns about betraying their friend's trust and harming their trusting relationship
22			The perception that seeking help would overstep an unspoken boundary
23			Avoiding help-seeking as means of avoiding upsetting their friend
24			Fear of peers finding out about the friend's ED

Appendix A: QualSyst Quality Assessment Tool (Kmet et al., 2004)

Table 1. Checklist for assessing the quality of quantitative studies

Criteria		YES (2)	PARTIAL (1)	NO (0)	N/A
1	Question / objective sufficiently described?				
2	Study design evident and appropriate?				
3	Method of subject/comparison group selection or source of information/input variables described and appropriate?				
4	Subject (and comparison group, if applicable) characteristics sufficiently described?				
5	If interventional and random allocation was possible, was it described?				
6	If interventional and blinding of investigators was possible, was it reported?				
7	If interventional and blinding of subjects was possible, was it reported?				
8	Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?				
9	Sample size appropriate?				
10	Analytic methods described/justified and appropriate?				
11	Some estimate of variance is reported for the main results?				
12	Controlled for confounding?				
13	Results reported in sufficient detail?				
14	Conclusions supported by the results?				

Appendix B: Consent Form

CONSENT FORM

Study title: The experience of having a friend with disordered eating at secondary school: a qualitative study exploring help-seeking behaviour and ongoing support.

Researcher name: Naomi Law, Kate Willoughby & Katy Sivyer

ERGO number: 90871

Version Number: 3

Date: 10th May 2024

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet Version 2 (8th March 2024) and have had the opportunity to ask questions about the study.	

I agree to take part in this study and agree for my data to be used for the purpose of this research project.	
I understand my participation is voluntary and that I may withdraw from the study up to 7 days following my interview for any reason without my participation rights being affected. After this point, I understand that this will not be possible.	
I understand that I may be quoted directly in reports of the research but that any information that may identify me, or any other individual, will be anonymised.	
I understand that taking part in the study involves audio or video recording which will be transcribed and the recording destroyed as set out in the participation information sheet.	
I understand that this research pertains to a sensitive topic and that I may be asked to discuss previous difficult experiences.	
I understand that any information collected by the researchers will be kept confidential.	

Please note that by recording your name below you are providing consent to participant in this student.

Name of participant (print name)……

Date……..
…….

Name of researcher (print name)……

Signature of researcher …….

Date……
……..

Appendix C: Participant Information Sheet

University of Southampton

Participant Information Sheet

Study Title: The experience of having a friend with disordered eating at secondary school: a qualitative study exploring help-seeking behaviour and ongoing support.

Researcher: Naomi Law, Katy Sivyer, Kate Willoughby

ERGO number: 90871

Version Number: 10th May 2024, Version 3

You are being invited to take part in the above research study. To help you decide whether you would like to take part or not, it is important that you understand why the research is being done and what it will involve. Please read the information below carefully and ask questions if anything is not clear or

you would like more information before you decide to take part in this research. You may like to discuss it with others, but it is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

This research is being conducted as required by the University of Southampton for completion of the Doctorate in Clinical Psychology Programme. This study will investigate the experiences of people who had a friend experiencing disordered eating during their time at secondary school. It is hoped that the study may lead to a deeper understanding of the barriers young people face in seeking help regarding disordered eating and what may contribute to more timely and effective support.

Why have I been asked to participate?

You have been asked to take part in this study as you have self-identified that, during your time at secondary school, you had a friend who experienced disordered eating.

What will happen to me if I take part?

You will be asked to complete a survey to provide demographic details and contact details. On this survey you were express whether you would like to be contacted via email or via telephone to arrange an interview. You will be offered either a face-to-face appointment at the University of Southampton if you are local to Southampton (within an 11 mile radius), or an online video appointment. After reading this information sheet, you will be asked to sign and return a consent form via email.

The interview is anticipated to last approximately 1 hour. If it is in person, it will take place in a private room at the University of Southampton. If it is held remotely, it will be conducted via Microsoft Teams and you will be emailed a link prior to the interview. Each interview will loosely follow an interview guide and will be audio recorded using an audiotape if in person and via Microsoft Teams if held remotely. Interviews will be transcribed verbatim from audio.

Are there any benefits in my taking part?

The information obtained in this study will help the researchers to better understand the barriers that adolescents experiencing disordered eating and their friends, face regarding seeking help and support. It aims to improve our understanding of the level of awareness and access to information for young people relating to disordered eating and explore how support services can become more accessible to young people experiencing similar things to your friends. By way of saying ‘Thank You’ for your participation, you will also be offered a £25 ‘LovetoShop’ voucher.

Are there any risks involved?

As part of the interview, we may discuss experiences you have had previously relating to having a friend experiencing disordered eating. This may be an emotional topic for you and may cause you to reflect on difficult past experiences. If you do experience psychological or emotional discomfort prior to, during, or after the interview we will be able to signpost you to national charities for additional support as follows. If you change your mind about taking part in the study, you can remove your data from the study up to 7 days following your interview. After this point, it will not be possible.

BEAT Eating Disorders

A national charity supporting all individual's effected by eating disorders. You may find the following webpages from this organisation helpful:

https://www.beateatingdisorders.org.uk/get-information-and-support/support-someone-else/services-for-carers/

https://www.beateatingdisorders.org.uk/get-information-and-support/support-someone-else/tips-for-supporting-somebody-with-an-eating-disorder/

Telephone: 0808 801 6770

Email: help@beateatingdisorders.org.uk

Samaritans

A 24/7 telephone listening and support service.

Telephone: 116 123

Email: jo@samaritans.org.uk

What data will be collected?

A demographic questionnaire will be completed and an interview will be video recorded and transcribed. This only applies to online interviews. In person interviews will be recorded via a tape recorder. We will not collect direct personal information; however, we will be asking you to discuss your own experiences of having a friend during your time at school who was experiencing disordered eating and about your thoughts and feelings regarding this.

Once the recording is transcribed it will be deleted immediately. This anonymised transcription will be stored on a secure university network and password protected. Within the transcriptions no names nor other identifying information will be used that may identify individuals and a non-identifiable code will be used to determine who is talking. Transcripts will then by analysed via a computer software named NVivo.

Will my participation be confidential?

Your participation and the information we collect about you during the research will be kept strictly confidential. This means that the discussions you have during your interview will be confidential. Data will be stored within secure University networks in a password protected folder and recordings will be deleted once transcription occurs. As soon as these audio recordings are transcribed, they will be destroyed. You may be quoted directly in reports of the research, but any identifying information will be anonymised.

Only members of the research team and responsible members of the University of Southampton may be given access to data about you for monitoring purposes and/or to carry out an audit of the study to ensure that the research is complying with applicable regulations. Individuals from regulatory authorities (people who check that we are carrying out the study correctly) may require access to your data. All these people have a duty to keep your information, as a research participant, strictly confidential.

Do I have to take part?

No, it is entirely up to you to decide whether to take part. If you decide you want to take part, you will need to sign a consent form to show you have agreed to take part.

What happens if I change my mind?

You have the right to change your mind and withdraw within a 7 day period of completing the study without giving a reason and without your participant rights being affected. You can withdraw from this study by contacting Naomi Law at nsl1e19@soton.ac.uk. If you withdraw from the study, we will keep the information about you that we have already obtained for the purposes of achieving the objectives of the study only.

What will happen to the results of the research?

Your personal details will remain strictly confidential. You may be quoted directly in reports of the research, but any identifying information will be recorded using pseudonyms. Research findings made available in any reports or publications will not include information that can directly identify you without your specific consent.

These results will be written up as part of the Doctorate in Clinical Psychology. There may be opportunities for these results to be published in the future. If you wish to receive a summary of the results, then please record your preference via Qualtrics.

Where can I get more information?

Student Researcher: Naomi Law, nsl1e19@soton.ac.uk

Supervisor: Katy Sivyer, k.a.j.sivyer@soton.ac.uk

Secondary Supervisor: Kate Willoughby, k.willoughby@soton.ac.uk

What happens if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researchers who will do their best to answer your questions. Their contact details are as follows:

Student Researcher: Naomi Law, nsl1e19@soton.ac.uk

Supervisor: Katy Sivyer, k.a.j.sivyer@soton.ac.uk

Secondary Supervisor: Kate Willoughby, k.willoughby@soton.ac.uk

If you remain unhappy or have a complaint about any aspect of this study, please contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, rgoinfo@soton.ac.uk).

Data Protection Privacy Notice

The University of Southampton conducts research to the highest standards of research integrity. As a publicly-funded organisation, the University has to ensure that it is in the public interest when we use personally-identifiable information about people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use information about you in the ways needed, and for the purposes specified, to conduct and complete the research project. Under data protection law, 'Personal data' means any information that relates to and is capable of identifying a living individual. The University's data protection policy governing the use of personal data by the University can be found on its website (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page).

This Participant Information Sheet tells you what data will be collected for this project and whether this includes any personal data. Please ask the research team if you have any questions or are unclear what data is being collected about you.

Our privacy notice for research participants provides more information on how the University of Southampton collects and uses your personal data when you take part in one of our research projects and can be found at http://www.southampton.ac.uk/assets/sharepoint/intranet/ls/Public/Research%20and%20Integrity%20Privacy%20Notice/Privacy%20Notice%20for%20Research%20Participants.pdf

Any personal data we collect in this study will be used only for the purposes of carrying out our research and will be handled according to the University's policies in line with data protection law. If any personal data is used from which you can be identified directly, it will not be disclosed to anyone else without your consent unless the University of Southampton is required by law to disclose it.

Data protection law requires us to have a valid legal reason ('lawful basis') to process and use your Personal data. The lawful basis for processing personal information in this research study is for the performance of a task carried out in the public interest. Personal data collected for research will not be used for any other purpose.

For the purposes of data protection law, the University of Southampton is the 'Data Controller' for this study, which means that we are responsible for looking after your information and using it properly. The University of Southampton will keep identifiable information about you for 10 years after the study has finished after which time any link between you and your information will be removed.

To safeguard your rights, we will use the minimum personal data necessary to achieve our research study objectives. Your data protection rights – such as to access, change, or transfer such information - may be limited, however, in order for the research output to be reliable and accurate. The University will not do anything with your personal data that you would not reasonably expect.

Your data will be pseudonymised through key-coding and removal of personal identifiers. This means you may be indirectly identifiable via recordings, however privacy risks are reduced by making it difficult to identify individuals. Access to recording will only be made available to the immediate research team. All recordings will be transcribed and then deleted.

If you have any questions about how your personal data is used, or wish to exercise any of your rights, please consult the University's data protection webpage (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page) where you can make a request using our online form. If you need further assistance, please contact the University's Data Protection Officer (data.protection@soton.ac.uk).

Thank you for taking the time to read this information sheet and for considering taking part in this research study.

Appendix D: Debriefing Form

Debriefing Form

Study Title: The experience of having a friend with disordered eating at secondary school: a qualitative study exploring help-seeking behaviour and ongoing support.

Ethics/ERGO number: 90871

Researcher(s): Naomi Law, Kate Willoughby and Katy Sivyer

University email(s): nsl1e19@soton.ac.uk

Version and date: 10th May 2024, Version 3

Thank you for taking part in our research project. Your contribution is very valuable and greatly appreciated.

Purpose of the study

The aim of this research was to explore the experiences of individuals who had a friend experiencing disordered eating whilst at secondary school. We aimed to explore five specific areas relating to the experiences of friends:

- Their experiences of spot the signs of disordered eating when they were at secondary school and their friend was unwell.
- Their understanding of disordered eating during their time at secondary school
- Their help-seeking experience at the time their friend was experiencing disordered eating

- Their perception of their role in supporting a friend with disordered eating whilst at secondary school
- The impact upon the participant themselves during their time supporting a friend with disordered eating at secondary school.

The study aimed to fill a gap in psychological research by exploring the potential role for friends of those with an eating disorder to seek help for and offer ongoing support to their friends during their time at secondary school.

It is expected that every participant's experience will be unique and that this will depend on several factors, including the nature, strength, and length of the friendship in your interview. Your data will help to develop the understanding of what facilitates adolescent aged children in accessing effective support within schools or more broadly whilst experiencing disordered eating and my secondarily help the researchers to better understand the needs of friends of individual's experiencing disordered eating and the support that may benefit them.

Confidentiality

All the information collected during interviews will be kept strictly confidential, it will not be shared with anyone other than the research team responsible. You will be allocated a unique identification number which will be put on all transcripts of the interview and will therefore make them anonymous. All the information we collect about you as part of this study will be kept in a secure place only accessible by the named researchers. The overall results of this study will be written up in a report and you will remain anonymous in this report. If you would like to receive a summary of the results of this study, please contact the researchers involved.

Further support

If taking part in this study has caused you discomfort or distress, please reach out and talk to friends or family members or you can contact the following organisations for support:

BEAT Eating Disorders

A national charity supporting all individual's effected by eating disorders. You may find the following webpages from this organisation helpful:

https://www.beateatingdisorders.org.uk/get-information-and-support/support-someone-else/services-for-carers/

https://www.beateatingdisorders.org.uk/get-information-and-support/support-someone-else/tips-for-supporting-somebody-with-an-eating-disorder/

Telephone: 0808 801 6770

Email: help@beateatingdisorders.org.uk

Samaritans

A 24/7 telephone listening and support service.

Telephone: 116 123

Email: jo@samaritans.org.uk

Further reading

If you would like to learn more about this area of research, you can refer to the following resources:

Galloway, L. L. (2014). Exploration of friendship experiences in adolescent eating disorders.

Federici, A., & Kaplan, A. S. (2008). The patient's account of relapse and recovery in anorexia nervosa: a qualitative study. *European Eating Disorders Review*, *16*(1), 1-10. https://doi.org/https://doi.org/10.1002/erv.813

Gustafosson, J.-E., Allodi Westling, M., Alin Åkerman, B., Eriksson, C., Eriksson, L., Fischbein, S., Granlund, M., Gustafsson, P., Ljungdahl, S., & Ogden, T. (2010). School, learning and mental health: A systematic review.

If you have any concerns or questions about this study, please contact Naomi Law at nsl1e19@soton.ac.uk who will do their best to help.

If you remain unhappy or would like to make a formal complaint, please contact the Head of Research Integrity and Governance, University of Southampton, by emailing: rgoinfo@soton.ac.uk, or calling: + 44 2380 595058. Please quote the Ethics/ERGO number which can be found at the top of this form. Please note that if you participated in an anonymous survey, by making a complaint, you might be no longer anonymous.

Thank you again for your participation in this research.

Appendix E: Study Advertisement

DID YOU HAVE A FRIEND WITH DISORDERED EATING WHILST AT SECONDARY SCHOOL?

University of Southampton
ERGO ID: 90871

PARTICIPANTS NEEDED!

When you were at secondary school, did you have a friend that struggled with their eating behaviours or thoughts around food? Are you over 16 and under 30?

If so, we are inviting you to partake in an interview about your experience.

- **The interview will take around an hour to an hour and a half**
- **Can be online or at the University of Southampton**
- **You will receive a £25 'LovetoShop' voucher as a thank you**

This research is being conducted by Naomi Law, a Trainee Clinical Psychologist at the University of Southampton, under the supervision of Dr. Katy Sivyer & Dr. Kate Willoughby

CONTACT:

If you would like to take part, or want more information about the research, please email:
nsl1e19@soton.ac.uk

This study will end by September 2025.

Please follow the below link to learn more about this study:

https://qualtricsxmmqzf2t46y.qualtrics.com/jfe/form/SV_6haBXE238rc M1ZI

Or use the following QR code:

ERGO Number: 90871

Appendix F: Ethical Approval

University of Southampton

ERGO II – Ethics and Research Governance Online https://www.ergo2.soton.ac.uk

Submission ID: 90871
Submission Title: The experience of having a friend with disordered eating at secondary school: a qualitative study exploring help-seeking behaviour and ongoing support.
Submitter Name: Naomi Law

Your submission has now been approved by the Faculty Ethics Committee. You can begin your research unless you are still awaiting any other reviews or conditions of your approval.

Comments:

- All seems in order, just a couple of minor comments that don't require re-review.
    1. For your study poster, participants might find it easier if you create a shorter URL to follow in case they can't scan the QR code or click the link. TinyURL can be a good option for this.
    2. Make sure you accept all tracked changes and delete comments (e.g. debrief and gatekeeper document).

    Good luck!

Click here to view the submission

Appendix G: Demographic Questionnaire

Demographic Questionnaire:

Study Title: The experience of having a friend with disordered eating at secondary school: a qualitative study exploring help-seeking behaviour and ongoing support.

Ethics/ERGO number: 90871

Researcher(s): Naomi Law, Kate Willoughby and Katy Sivyer

University email(s): nsl1e19@soton.ac.uk

Version and date: 10th May 2024, Version 3

Participant Information Number:

Date:

1. **What is your date of birth?**

Day ☐☐ Month ☐☐ Year ☐☐☐☐

2. **What is your age?**

Age ☐☐

3. **What do you consider to be your gender?**

Woman ☐
Man ☐
Transgender ☐
Non-binary/non-conforming ☐
Prefer not to respond ☐

4. **What is your country of birth?**

_____

(Please record in space above)

5. **What is your ethnicity?**

White

English / Welsh / Scottish / Northern Irish / British ☐

Irish ☐

Gypsy or Irish Traveller ☐

Any other White background, please describe

Mixed / Multiple ethnic groups

White and Black Caribbean ☐

White and Black African ☐

White and Asian ☐

Any other Mixed / Multiple ethnic background, please describe

Asian / Asian British

Indian ☐

Pakistani ☐

Bangladeshi ☐

Chinese ☐

Any other Asian background, please describe

Black / African / Caribbean / Black British

African ☐

Caribbean ☐

Any other Black / African / Caribbean background, please describe

Other ethnic group

Arab ☐

Any other ethnic group, please describe _____

6. **Please record below your current employment status**

Full-time student ☐

Part-time student ☐

Full-time employment ☐

Self-employed ☐

Part-time employment ☐

Full time freelancing ☐

Unemployed (looking for work) ☐

Unemployed (not looking for work) ☐

Inability to work ☐

7. **Which of the below qualifications do you hold? Tick every box that applies if you have any of the qualifications listed. If your UK qualification is not listed, tick the box that contains its nearest equivalent.**

1 – 4 O levels/CSEs/GCSEs (any grades), Entry Level, Foundation Diploma ☐

NVQ Level 1, Foundation GNVQ, Basic Skills ☐

5+ O levels (passes)/CSEs (grade1)/GCSEs (grades A* – C), School Certificate, 1 A level/2 – 3 AS levels/VCEs, Higher Diploma ☐

NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma ☐

Apprenticeship ☐

2+ A levels/VCEs, 4+ AS levels, Higher School Certificate, Progression/Advanced Diploma ☐

NVQ level 3, Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma ☐

Degree (for example BA, BSc), Higher degree (for example MA, PhD, PGCE) ☐

NVQ level 4 – 5, HNC, HND, RSA Higher Diploma, BTEC Higher Level ☐

Professional qualifications (for example teaching, nursing, accountancy) ☐

Other vocational/work-related qualifications ☐

Foreign qualifications ☐

No qualifications ☐

8. Please answer the following questions in relation to eating behaviours you noticed in your friend:

1. Constantly restricting the amount of food that they eat.	Yes	No	Unsure
2. Linking the amount of exercise that they do to how much food they have eaten.	Yes	No	Unsure
3. Putting lots of effort into their body image.	Yes	No	Unsure
4. Going on a diet.	Yes	No	Unsure
5. Having 'cheat' days where they eat lots of unhealthy food.	Yes	No	Unsure
6. Avoiding food related activities with others, like going for lunch with friends.	Yes	No	Unsure
7. Being a 'picky' eater (not liking many different types of food).	Yes	No	Unsure
8. Exercising regularly.	Yes	No	Unsure
9. Going straight to the toilet after eating.	Yes	No	Unsure
10. Giving/throwing away all of their food.	Yes	No	Unsure
11. Being overweight for their age.	Yes	No	Unsure
12. Becoming vegetarian or vegan as a result of certain beliefs about eating animal products.	Yes	No	Unsure
13. Very sensitive to comments about their body.	Yes	No	Unsure
14. Unable to control the amount of food they eat.	Yes	No	Unsure
15. Thinking they are more overweight than they actually are.	Yes	No	Unsure
16. Always eating healthy food.	Yes	No	Unsure
17. Regularly exercising till they are exhausted	Yes	No	Unsure
18. Having an unhealthy diet.	Yes	No	Unsure
19. Using laxatives after eating (used for constipation to loosen stools or increase bowel movements).	Yes	No	Unsure

20. Being sick after eating on a regular basis.	Yes	No	Unsure

9. Please could you briefly describe the nature of your relationship with the individual who experienced eating difficulties

_____

_____

_____

(Please record in space above)

10. What type of school did you and the individual who experienced eating difficulties attend?

Please tick all that apply:

Privately funded school ☐

State school (publicly funded) ☐

Same-sex school ☐

Academy ☐

Grammar school ☐

Faith school ☐

11. What is your name?

12. What is your email address?

13. **What is your telephone address?**

14. **Do you prefer to be contacted by telephone or email? This is to allow the interviewer to contact you to arrange the interview.**

Telephone ☐

Email ☐

Appendix H: Eating Disorders Knowledge Scale (Non-standard, unvalidated measure)

21. Constantly restricting the amount of food that they eat.	Yes	No	Unsure
22. Linking the amount of exercise that they do to how much food they have eaten.	Yes	No	Unsure
23. Putting lots of effort into their body image.	Yes	No	Unsure
24. Going on a diet.	Yes	No	Unsure
25. Having 'cheat' days where they eat lots of unhealthy food.	Yes	No	Unsure
26. Avoiding food related activities with others, like going for lunch with friends.	Yes	No	Unsure
27. Being a 'picky' eater (not liking many different types of food).	Yes	No	Unsure
28. Exercising regularly.	Yes	No	Unsure
29. Going straight to the toilet after eating.	Yes	No	Unsure
30. Giving/throwing away all of their food.	Yes	No	Unsure
31. Being overweight for their age.	Yes	No	Unsure
32. Becoming vegetarian or vegan as a result of certain beliefs about eating animal products.	Yes	No	Unsure
33. Very sensitive to comments about their body.	Yes	No	Unsure
34. Unable to control the amount of food they eat.	Yes	No	Unsure
35. Thinking they are more overweight than they actually are.	Yes	No	Unsure
36. Always eating healthy food.	Yes	No	Unsure
37. Regularly exercising till they are exhausted	Yes	No	Unsure
38. Having an unhealthy diet.	Yes	No	Unsure
39. Using laxatives after eating (used for constipation to loosen stools or increase bowel movements).	Yes	No	Unsure
40. Being sick after eating on a regular basis.	Yes	No	Unsure

Appendix I: Example of Reflective Log

Reflective Log

Date: 23rd September

Time: 12:00pm

Location: Microsoft Teams

Transcript: 1

First Impressions:

This participant seemed somewhat apprehensive at the start. As someone who has navigated eating disorder services both as a service user and a clinician, I recognise how daunting it can be to discuss personal experiences- especially for the first time, and with a stranger! However, once I clarified the purpose of the research and how their data would be used, I noticed a visible shift in their comfort level. That said, I found it challenging to keep them focused on discussing their own experiences rather than those of their friend. This made me reflect on how conversations around eating disorders often blur the line between personal and external narratives, which may indicate just how intertwined these experiences become.

General Notes:

The participant's insight into the difficulty of seeking help during the summer holidays was particularly striking. This highlighted a structural gap in support systems- something I have seen clinically but also understand personally. When routines and points of contact disappear for extended periods, struggles can intensify unnoticed. I also noted how social media was a recurring theme in their account. Having observed its evolving role both in my own experience and in clinical settings, I reflected on how much has changed since my own engagement with services. While social media is now more embedded in young people's lives, its influence- whether as a trigger, a source of comparison, or even a place of support- has been a longstanding factor. I anticipate this theme will continue to emerge in future interviews, reinforcing how deeply digital landscapes shape modern experiences of eating disorders.

Reflections:

Going into this interview, I felt a mixture of excitement and apprehension. As a researcher, I wanted to ensure that my questions facilitated rich, meaningful insights. Yet, my background as a former service user added a layer of personal investment. I found myself balancing between professional curiosity and personal resonance, being mindful not to project my own experiences onto the participant's narrative. Overall, the interview raised some valuable themes, and I feel encouraged by the depth of insight emerging. I'm eager to see how these themes develop across future interviews.

Appendix J: Journal Submission Guidelines for Chapter 2

Following discussion within the supervisory team, minor exceptions have been made to ensure that this thesis report is also in accordance with the University's thesis recommendations:

1. Word count requirements: it has been agreed that for the purpose of thesis submission, this chapter may exceed the journal's word limit as the content is relevant to the thesis requirements. At point of submission, the manuscript will be edited to meet word count criteria.

Review	Systematic Reviews, Meta-Analyses, and Scoping Reviews	7,500	Structured 250 words	Key Points/Summary (2-4 bullet points reflecting the key points of the study)

Submission Checklist: Adapted from PRISMA 2020 checklist

Section and Topic	**Item #**	**Checklist item**
TITLE		
Title	1	Identify the report as a systematic review. The Title includes one or two keywords to optimize search engine discoverability of the article. Writing Articles for SEO
ABSTRACT		

Abstract	2a	See the PRISMA 2020 for Abstracts checklist. The Abstract is structured and is a recommended maximum of 250 words. Using the headers “Objective,” “Method,” “Results,” and “Discussion,” the Abstract concisely summarizes the article. The Abstract includes at least three of the manuscript’s identified keywords.
Keywords	2b	Keywords are provided that capture relevant core concepts. Keywords may be single words (“health”) or short multi-word terms (“health services utilization”). The Editor recommends at least five keywords.
Public Significance	2c	The Public Significance statement (< 70 words) explains why this research is important. It is written in plain English for a general, educated public.
INTRODUCTION		
Rationale	3	Describe the rationale for the review in the context of existing kno wledge.
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the r eview addresses.
METHODS		
Eligibility c riteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.
Information sources	6	Please include a seach of the unpublished (“grey”) literature (e.g., search Proquest, Google Scholar, Scopus, etc.). Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted. The search date must be within 6 months of the submission date.

Search strategy	7	Present the full search strategies for all databases, registers and web sites, including any filters and limits used. Do not limit the initial search to the English-only literature. If you must ultimately exclude non-English language articles (e.g., due to inability to retrieve full texts, language barriers, etc.), create a reference list of all non-English language articles you excluded and upload the reference list in a supplemental file with your submission.
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.

Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.
	13d	Describe any methods used to synthesize results and provide a ratio nale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identif y the presence and extent of statistical heterogeneity, and software package(s) used.
	13e	Describe any methods used to explore possible causes of heterogen eity among study results (e.g. subgroup analysis, meta-regression).
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.
Reporting bias assess ment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).
Certainty as sessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.
RESULTS		
Study selecti on	16a	Describe the results of the search and selection process, from the number of records identified

		in the search to the number of studies included in the review, ideall y using a flow diagram.
	16b	Cite studies that might appear to meet the inclusion criteria, but whi ch were excluded, and explain why they were excluded.
Study charact eristics	17	Cite each included study and present its characteristics.
Risk of bias in studies	18	Present assessments of risk of bias for each included study.
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical hetero geneity. If comparing groups, describe the direction of the effect.
	20c	Present results of all investigations of possible causes of heterogeneity among study results.
	20d	Present results of all sensitivity analyses conducted to assess the rob ustness of the synthesized results.
Reporting bia ses	21	Present assessments of risk of bias due to missing results (arising fr om reporting biases) for each synthesis assessed.

Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evid ence for each outcome assessed.
DISCUSSION		
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.
	23b	Discuss any limitations of the evidence included in the review.
	23c	Discuss any limitations of the review processes used.
	23d	Discuss implications of the results for practice, policy, and future re search.
OTHER INFORMATION		
Registration and protocol	24a	Provide registration information for the review, including register n ame and registration number, or state that the review was not regist ered.
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.
	24c	Describe and explain any amendments to information provided at re gistration or in the protocol.
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.
Competing in terests	26	Declare any competing interests of review authors.

Availability of data, code and other mat erials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.

Appendix K: Journal Submission Guidelines for Chapter 3

Following discussion within the supervisory team, minor exceptions have been made to ensure that this thesis report is also in accordance with the University's thesis recommendations:

1. Word count requirements: it has been agreed that for the purpose of thesis submission, this chapter may exceed the journal's word limit as the content is relevant to the thesis requirements. At point of submission, the manuscript will be edited to meet word count criteria.

Registered Report	Stage 2: Completed studies as described in a Stage 1 Registered Report. See IJED's Stage 2 guidelines.	4,500	Structured 250 words	Data Availability Statement IRB Statement Key Points/Summary (2-4 bullet points reflecting the key points of the study) ≤ 4 figures/tables

1. Original Article - Submission Checklist

2. Keywords are provided that capture relevant core concepts. Keywords may be single words ("health") or short multi-word terms ("health services utilization"). The Editor recommends at least five keywords.

3. The Title is short and includes one or two keywords to optimize search engine discoverability of the article. **Writing Articles for SEO**

4. The Abstract is structured and is a recommended maximum of 250 Using the headers "Objective," "Method," "Results," and "Discussion," the Abstract concisely summarizes the article. The Abstract includes at least three of the manuscript's identified keywords.

5. The Public Significance statement (< 70 words) explains how the proposed novel approach(es) or (solutions) will advance the field. It is written in plain English for a general, educated public.

6. The Introduction describes how the study builds upon prior research, addresses specific knowledge gaps, and promises to advance the field. The introduction specifies whether the study is hypothesis-generating or hypothesis-testing (if the latter, testable hypotheses are stated).

7. If applicable, the Method section states where the study was preregistered.

8. The Method section describes how participants were recruited, over what time; and what inclusion/exclusion criteria were applied.

9. The Method section supports the choice of study measures with relevant reliability and validity information.

10. The Method and Results sections conform to the **IJED Statistical Reporting Guidelines** and the **Statistical Reporting Checklist**.

11. The Method section attests that ethical approval was obtained and names the entity providing the approval; else, if applicable, it explains why the research was exempt from ethical review and approval.

12. The sample description conforms to the **IJED Demographic Variables Reporting Guidelines** and includes age (required) and sex or gender (required), and where possible, socioeconomic status and race and (Depending on the study design, the sample should be described in Method or Results.)

13. The Discussion offers a balanced interpretation of study findings; includes a section on strengths and limitations; recommends future studies; and describes clinical or policy implications (if applicable).