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***“They think it’s helpful, but it’s not”: A qualitative analysis of the experience of social support provided by peers in adolescents with type 1 diabetes***

**Abstract**

*Background*

Adherence in type 1 diabetes has previously been found to be improved with effective social support. However, research has so far been unable to elucidate the effect of social support from peers in adolescents with type 1 diabetes, with studies concluding they may be both positively and negatively related to self-care and glycaemic control. The present study explores the experience of social support from peers in adolescents with type 1 diabetes using a qualitative methodology to address this lack of consensus in the literature, using the research question: “what is the meaning and experience of social support from peers in adolescents with type 1 diabetes?”

*Methods*

Semi-structured interviews using the Diabetes Social Support Interview schedule were employed. Twelve participants aged 15-18 were recruited from paediatric outpatient services. Transcripts were analysed using thematic analysis.

*Results*

Two overarching themes were noted within transcripts; *A Sense of Normality* and *“They Think It’s Helpful, But It’s Not”*. Overall, participants reported a desire for global support from peers, and explored how and why diabetes-specific support behaviours were more likely to be interpreted as harassing.

*Conclusions*

These findings suggest that diabetes-specific support may not always be advantageous in aiding adolescents to reach and maintain optimal self-care. In

addition, participants emphasise the acceptability of advice provided by peers with type 1 diabetes, making peer support and mentoring programmes an excellent candidate for future research.

### **Keywords**

Adolescent; Diabetes; Social support; Peer; Qualitative

### **Introduction**

Type 1 Diabetes (T1D) is an autoimmune disease of unknown cause precipitated by a gene-environment interaction, and is one of the most common chronic illnesses in adolescents [1]. T1D requires a complex management regime involving blood glucose monitoring and administration of insulin [2, 3]. Adherence to this demanding schedule has previously been found to be improved with effective social support [4]. Social support refers to the material and psychological resources afforded by interpersonal relationships [5], which is often delineated into four distinct subtypes:

- Emotional support; expression of love and caring.
- Instrumental support; practical, tangible assistance.
- Appraisal support; feedback allowing for self-evaluation.
- Informational support; provision of information or advice [6].

More recently, research has attempted to conceptualise the difference between received or enacted support, in which support is passed between social network members, and perceived support, where the network member believes support is available should it be required [7]. Both have been found to be influential in health, but are not interchangeable. Perceived support has been found to be most strongly linked to improved health outcomes [8], whilst received support can be associated with a sense of obligation, discomfort and dependence [9]. With this in mind, the matching hypothesis suggests the social support is most beneficial when

the category and quantity of support received is congruent with the recipient's needs and desires [10, 11]. Therefore, the present study focuses on received support.

Mounting evidence points towards the "*long arm of childhood*" [14] in health research, suggesting experiences in childhood and adolescence establish health trajectory into adult life [15, 16]. As children approach adolescence, they assume greater responsibility for their health behaviours [17]. In addition to this, strong peer relationships, which are a hallmark of adolescence [18, 19], emerge, with the opinions of peers take precedence over those of family members [20, 21]; milestones which may have consequences for health [17]. Substantial evidence suggests that peers hold the strongest influence in predicting adolescent health behaviour [22–26], with the norms and values of that network significant predictors of health behaviours [27]. It is therefore agreed that adolescence represents a stage in which a support network in flux is accompanied by crucial developmental tasks [15, 27, 28]. An adolescent living with a chronic condition, such as T1D, is presented with the additional task of maintaining effective self-care.

The distinction between friends (i.e. other adolescents in the social network who do not have T1D) and peers with T1D is a difficult one at this developmental stage [31]. Palladino and Helgeson [31] highlighted the changeable nature of adolescent friendships and state that it is difficult to determine peers from friends. As such, in the present study, the term peer denotes someone of the same approximate age, school year or social status, who appears within the social network, and includes peers both with and without T1D. Peers have been cited as providing support that is different from, but complementary to, the support provided by healthcare professionals and family members [30]. Despite this, it has been noted that far greater attention has been focused on family relationships than that provided

by peers in T1D. As such, a call for greater focus on the role of peers has been voiced, particularly given growing importance of peers in an adolescent's life [34]. It has been found that, during adolescence, appealing peers may become more important than maintaining self-care for adolescents with type 1 diabetes (AWT1D) [31]. It is unlikely to be a coincidence that as peer pressure peaks [35, 36], AWT1D display decreasing adherence, perhaps in exchange for peer acceptability [31]. As interest in achieving peer acceptance mounts, so does a desire for independence from parental influence. Previous research has shown that this combination of aspirations can influence daily choices in self-care [37].

Qualitative evidence suggests that AWT1D believe peers impact their self-care [31]. Peers are an important source of emotional support, with this support associated with a belief of improved adherence, glycaemic control, and well-being [34, 38]. However, the support provided may not always have positive outcomes. Dovey-Pearce and colleagues [39] found that AWT1D reported well-intentioned peers providing instrumental or informational support reinforced stigma, perceived as a threat to the self-concept of the adolescent in question. Stigmatisation has been found to reduce engagement with self-care [39], whilst ethnographic research has highlighted a desire for normality at times outpacing the need for self-care [40].

These findings raise the question of comparison between diabetes-specific and the global social support provided by peers, though the quantitative evidence here is unclear. Diabetes-specific support behaviours refer to support specifically targeted at improving self-care, such as monitoring for hypoglycaemia [31]. Global social support refers to the earlier outlined definition by House [6], and is support provided independently of T1D. Some studies have reported that peers of AWT1D do not offer diabetes-specific support, but that AWT1D would prefer an increase in

instrumental support whilst not calling attention to their diabetes status [41].

Emotional support via companionship is most commonly reported, with instrumental support only requested for diabetes-related emergencies [31]. Despite adolescents reporting more global support, no relationship could be identified between global support from peers and self-care behaviours cross-sectionally or longitudinally [42, 43], or with glycaemic control [42], when controlling for confounding variables [44]. In general, there therefore seems to be no relationship between global support and diabetes outcomes. However, studies fail to distinguish between the subtypes of global support, so it is difficult to elucidate whether differences exist within the subtypes as defined by House [6].

Diabetes-specific support provided by peers appears to produce more mixed results. Several studies have found no association between diabetes-specific support from peers and self-care [33, 45–47], whilst others have found evidence for a relationship. Of these, diabetes-specific support is predictive of improved adherence [48, 49], disease adaptation, and well-being [50]. However, not all studies showed a positive outcome. Diabetes-specific support has been found to moderate the relationship between diabetes-related stress and glycaemic control; as support increased, the relationship between stress and poor control grew stronger [33]. This may be due to problematic support provided by peers lacking knowledge concerning T1D and the importance of self-care. They may therefore not provide regular or consistent diabetes-related support, or may even have an influence that is detrimental to self-care [51]. Thus, it is difficult to conclude that peer involvement in specific self-care behaviours is beneficial in terms of health outcomes. The research into support provided by peers and health outcomes in AWT1D is, therefore, inconclusive.

### **Aims and objectives**

This study seeks to explore how social support provided by peers is experienced by AWT1D. Research has suggested that social support provided by peers may have different associations with health outcomes. As such, this study aims to address how support provided by peers is interpreted by the receiver as being supportive or unsupportive. This will be achieved through a qualitative, semi-structured interview.

### **Research question**

The qualitative research question is exploratory in nature, and as such is *“what is the meaning and experience of global and diabetes-specific social support provided by peers in AWT1D?”*

### **Methods**

#### **Design**

Semi-structured interviews were selected as this method allows flexibility and free expression of new information [52, 53].

#### **Participants**

Twelve participants were interviewed, short biographies for whom can be found in Supplementary Information. To protect anonymity, participants were allocated a pseudonym. Recruitment continued until data saturation was reached, as recommended [52, 54]. Data saturation was suspected at ten participants, and confirmed in a further two interviews. As research has shown that most studies can reach saturation with twelve participants [54], recruitment ceased.

#### **Interview Schedule**

Demographic characteristics (age, gender, method of insulin administration, glycated haemoglobin) were collected in addition to use of the Diabetes Social Support Interview [DSSI; 55]. The DSSI was selected as it is considered highly reliable, valid,

and is widely-used [56]. As this study was only examining the influence of peers, the section on family support was discarded.

The DSSI was originally written as a structured interview schedule producing quantitative data [55]. To adhere to the desired semi-structured design, the original open-ended questions were asked in conversational form to allow the participants to freely discuss their experiences and beliefs [57]. In order to produce qualitative data, the participant responses were analysed using inductive thematic analysis, without the use of quantitative coding.

### **Procedure**

Participants were contacted through two paediatric outpatient services in England. The time and location for the interview was determined by participants to maximise their comfort and free expression. The interview schedule was memorised in advance to allow full appreciation of the participants' replies [52]. Interviews were audio-recorded and transcribed by the same researcher to maintain anonymity.

### **Analytic framework**

Thematic analysis is a highly flexible framework following a systematised process [58], and so was chosen. Braun and Clarke [58] recommend a six phase procedure which was adhered to, adopting an inductive position. After becoming familiar with the data through transcription and reading, initial codes were generated by hand. Codes were then sorted into candidate themes and subthemes, which were then reviewed for their quality, internal homogeneity, and external heterogeneity. The remaining themes were then defined and named [58].



## Reflexivity

In terms of the personal narrative of the author, no direct experience of T1D is acknowledged. As such, the researcher's interpretation exists within the confines of her own life experience and should be considered imperfect.

## Ethics

Appropriate institutional and NHS ethics was achieved prior to the commencement of the study. Informed consent was obtained from all participants.

## Results

Two overarching themes were noted within transcripts; *A Sense of Normality and "They Think It's Helpful, But It's Not"* (see Figure 1).

### *A Sense of Normality*

The first theme concerns how participants used and interpreted the support provided by their peers. It would appear that global support was preferred over diabetes-specific support. Whilst diabetes-specific support was characterised as:

*"They [peers] don't really have anything to do with it, apart from reminding me, well, I class it is nagging. They probably feel it's nice and supportive but I don't, otherwise it's like a bit over controlling at times, a bit in-your-face."* Charlotte: 68

Preferred social support was explained as;

*Just listening really. (...) I (...) I, I, I don't know what she says back to me, I don't think she says much, but it's just listening to me moan and just shrugging her shoulders and saying 'well, that's life, isn't it?'"* Catherine: 280.

The primary role of peers appeared to be in the attainment and maintenance of what was perceived as "normal" adolescent behaviours.

*"... just not be 'the girl with diabetes' for a bit."* Isabelle: 216

*"...they always try to make me feel the same as everyone else."* Jessa: 182

A frequently mentioned source of support was seen in the capability of peers to downplay the seriousness of T1D, most often by presenting humour in self-care:

*“...I think the best thing they [peers] do is that they joke about it. I do like it, it makes everything (...) Just a bit of a joke and a bit of, a bit more funny, because sometimes with diabetes it’s just negatives, and there’s never really positives....”* Philip: 233

Although humour is not actively included in the typical typologies of support, the emphasis participants placed was on the capability of humour to soften the impact of self-care, which may relate to appraisal support. The idea of a “diabetes label” was raised frequently, but was easily dismissed when in the presence of peers:

*“It’s just nice to be (...) normal sometimes, to try to forget about it.”* Claire: 649

*“...not the girl who’s got diabetes (...) the girl who’s got the label on.”*

Charlotte: 882

This suggests that support provided by peers allows AWT1D to shed this “diabetes label” in a way which other social networks do not.

#### *i. The Safety Net*

In addition to appraisal support, concepts aligned with instrumental support and diabetes-specific behaviours were also reported as advantageous and supportive, though only in restricted activities. These behaviours are outlined in the subtheme *The Safety Net*. Lewis describes his ideal supportive peer relationship:

*“...they would just let you get on with it and with the safety net of someone around who does know what to do [in a diabetic emergency].”* Lewis: 352

This idea was echoed by many participants. Whilst a clear preference for global support was demonstrated overall, there were a select few diabetes-specific behaviours which participants were prepared to accept from peers. These primarily

concerned the use of their peers as a “safety net” for when diabetic emergencies occurred:

*“I kind of rely on the (...) friends ...to (...) keep an eye on me. Just ‘cause they know me better (...) they know what to look for.”* Philip: 126.

*“She knows how I’m like when my sugars are low and when my sugars are high...I can relax a bit more...”* Panvi: 114

Specifically, knowing the procedures to correct hypoglycaemia was highlighted by many participants as a key support behaviour:

*“...I have got people around me who do know what to do [in the event of hypoglycaemia]...they carry stuff on them, just in case.”* Philip: 141

However, this concept of a safety net was finite, and clear limits were imposed on the knowledge that peers needed to have:

*“...they know to give me food [in the event of hypoglycaemia](...)I don’t think they need to know much else.”* Paul: 276

Participants were guarded in the amount of information they wished to disclose to peers, and many expressed a desire for a swift return to normality once knowledge was imparted:

*“Once I’ve told them how to help if I do have a hypo, I kind of (...) don’t want to think about it again. I just want to be me and them not to worry...”* Catherine: 582

*The Safety Net* is interpreted as an acceptable level of illness disclosure, divulged only with personal safety in mind.

### ***“They think it’s helpful, but it’s not”***

How well-intentioned support becomes perceived as nagging is not clear in previous research. It was, however, extremely salient for the participant group and was discussed at length with each. Many different behaviours could be construed as

nagging, and little agreement could be seen on what was or was not interpreted as pestering:

*“...it’s just having to constantly repeat yourself...”* Philip: 185

*“...first thing in the morning, it’s like ‘what’s your blood sugar?’ and I’m like ‘shut up, I haven’t tested yet!’...”* Catherine: 47

*“...when they’ll [peers] be like ‘Jessa, are you sure you’re allowed that’...treat me like a little kid or something.”* Jessa: 279

What was or was not interpreted as nagging was highly individualised, and specific behaviours could not be isolated. At its root appears to be a basic assumption that *“...they think it’s helpful, but it’s not”* (Catherine: 572); participants were aware that behaviours were well-intentioned, but were nevertheless perceived as unsupportive. Three levels of interpretation of behaviour were highlighted as potential lenses through which support is perceived as nagging; *Looking At You Like You’re Different, It’s Not Something You Can Understand Unless You Have It*, and *I’m Not A Kid Or Nothing*

i. *Looking At You Like You’re Different*

This subtheme concerns drawing the attention of others to their ‘difference’:

*“...I don’t want them knowing, looking at me, looking at you like you’re different.”*

Charlotte: 233

All participants spoke about the social problems presented by being an AWT1D, particularly the associated label and stigma that came with illness disclosure. Illness disclosure to peers was, therefore, contested. Whilst some participants saw the benefits of peers being aware of their T1D status in order to provide support in the case of emergencies, this did not always result in illness disclosure:

*“If I meet someone new I won’t tell them I’m diabetic...I don’t like it. I don’t want them to think of me as ‘Catherine the diabetic’ (...) or ‘that girl with diabetes.’” Catherine:*

643

The reasons for this lay in the reactions of peers after illness disclosure:

*“...you tell them and then it all changes. Constantly they give you the sympathetic look on their face, and it’s like ‘stop it!’” Jessa: 514*

It is this reaction of empathy and concern which participants stated was most likely to be related to a desire to disengage with self-care:

*“...I do feel sometimes like I just wanna (...) like, go out with my friends and she’ll [peer] be like ‘are you ok?’ all the time (...) So, sometimes it does feel tempting to just (...) get away from it all.” Isabelle: 632*

Within this, one participant explicitly highlighted the sick role:

*“...it’s like they see me as a disabled, ill person all the time, rather than as their friend.” Catherine: 875*

#### *ii. It’s Not Something You Can Understand Unless You Have It*

This occurred especially when receiving advice, sympathy and reminders from peers who had no experience of T1D:

*“I don’t think it’s something you can [understand] (...) unless you have it.” Lewis: 181*

*“...comments from people who don’t have a clue what, what it’s about.” Philip: 349*

This subtheme reflects participants feeling that a fundamental “difference” existing between the participants and their peers facilitates an in-group/out-group mentality.

Participants viewed their T1D as a difference, which resulted in the creation of an in-group mentality based in shared experiences of T1D:

*“...there’s some other people in my school that are, that are diabetic...I used to go sit with them in a room and do my injections and that was alright because (...) they’d know how it felt to have to inject (...) and that was nice.”* Panvi: 215

*“...it’s like you share something so big. You’ve experienced the same things; ‘have you done this?’ ‘yeah, I’ve done this’ and you can have a good old laugh, ‘cause you know there’s always a funny story that follows a hypo! (laughs)”* Jessa: 532

It is perhaps unsurprising that adolescents with access to those with shared experiences drew on these friendships for support. However, alongside the group identity came one of “outsiders”, manifested itself in a belief that those without T1D could never understand:

*“Living with it is just different and (...) even if you know all the facts, which a lot of people don’t (...) having it is different. Like, even Michelle [girlfriend], even though I know she knows most about me and about diabetes, she still doesn’t really know what it’s like for me, really.”* Philip: 134

This coalesced in resentment at unsolicited advice provided by those without T1D, often fuelled by advice which was inaccurate:

*“...it’s a bit ridiculous, how people react.... ‘cause they’re like ‘oh you’re not meant to eat this, not meant to eat that, blah, blah, blah, blah’ (...) like misconceptions and things like that.”* Catherine: 698

Support appeared to be more readily received when it came from an in-group member, and more likely to be dismissed when from an out-group member. This was not only associated with general diabetes-specific support, but also in the case of diabetic emergencies for some:

*“So (...) I’m open with them, but (...) like, I wouldn’t necessarily trust them to take care of me if I was proper ill, you know?”* Charlotte: 200

Therefore, diabetes-specific support provided by an out-group member was rejected due to a lack of understanding, both of appropriate self-care and of the experience of T1D:

*“...they don’t understand, sort of, how much work it is to maintain and how much extra work it is...it really annoys me when people are not aware...It’s not fair that they can make judgements about you.” Philip: 117*

iii. *“I’m Not a Kid or Nothing”*

Participants regularly emphasised that managing T1D was their responsibility and that they were keen to prove their capability of doing this successfully:

*“I got diabetes when I was 12 and I, sort of, just tried to keep it independent since....it’s always been my thing, I just like to keep control of it.” Panvi: 8*

This desire to manage T1D successfully appeared to be associated with a sense of maturity and responsibility. Reliance on others appeared to be construed as juvenile, whilst successful self-care was reflective of their status as emerging adults, particularly in older adolescents:

*“I’m not a kid or nothing and I can just take care of it, so I do.” Lewis: 12*

It is potentially this determination to prove their worth as capable young adults that leads to a rejection of diabetes-specific support provided by peers. However, despite assertions that the main motivator for independence was maturity, for some participants, their reasons for achieving self-sufficiency were still related to a desire to be “normal”:

*“...you can’t just rely on other people. It’s always been the fact you can’t be seen as not being normal and safely keep it to yourself, you keep independent.” Lewis: 16*

*“...it’s more just being independent and just getting on with it and I don’t, I don’t, I don’t want people to be recognising me as ‘diabetic kid’ or whatever.” Philip: 95*

Therefore, for some participants, it is possible to conclude that even in striving for independence, a primary motivator is not to prove themselves as capable adults, but as “normal” adolescents.

However, there are clearly other influences which also impact the perception and acceptance or rejection of support. As one participant states:

*“I don’t think it’s even actually any difference between the two [support & nagging], it’s more how I’m feeling when they say it. (...) Like, if I’m feeling like they’re getting at me, then even if they said something that was a reminder, I think I take it as nagging.”* Charlotte: 71

Nagging is therefore likely to be a multidimensional construct related to factors such as the T1D status of the support provider, the presence of peers or others without T1D, their desire for independence, and mood of the support receiver.

## **Discussion**

The role played by peers in health outcomes in AWT1D remains ambiguous. Whilst qualitative studies have found that AWT1D state peers influence their self-care [5–7], quantitative evidence is unclear. Few studies have sought to investigate the relationship between social support from peers and T1D outcomes in adolescents. Of these, two concluded that global support was unrelated to health outcomes [9, 10]. Interestingly, diabetes-specific support has been found to be related to both poorer glycaemic control [12] but better adherence [13]. The research into social support from peers and health outcomes in AWT1D is, therefore, inconclusive. Thus, a qualitative research study was proposed which sought to better understand the experience and meaning of the support provided by peers. Two overarching themes were noted; *A Sense of Normality and “They Think It’s Helpful, But It’s Not”* (see Figure 1).



Through the overarching theme of *A Sense of Normality*, participants spoke of the role of support provided by peers in achieving and maintaining a typical adolescent life. This may be explained through symbolic interactionism, in which the self-concept is maintained through social relationships [59, 60]. This suggests that AWT1D use social support from peers for the attainment and maintenance of what they perceive as a “normal” adolescent identity, in which they participate in activities they believe to be typical for their age, as opposed to behaviours related to T1D. Dovey-Pearce *et al.* [39] suggested the impact of diagnosis and self-care on the self-concept of AWT1D can be devastating, requiring integration of the sick role within their personal identity. This effect may be moderated by maintenance of the pre-diagnosis self-concept through peer relationships, allowing for continuation of normality and sense of self [40]. A need to maintain a coherent identity and a “normal” social life was cited by as being the most influential factor in the active choice to disengage with self-care [40]. This is a consistent finding in literature into AWT1D, though rarely sufficiently explained beyond peer pressure [61–66]. Previous research has suggested a requirement of balance, in which both engagement and avoidance are active process allowing for effective coping with the effects of diagnosis on the self-concept [39]. Self-care has been found to be highly dependent on social context, where self-management behaviours are only enacted when perceived as achievable and socially acceptable [40]. Indeed, in the present study, concepts aligned with diabetes-specific support was confined to the subtheme of *The Safety Net*, restricted to diabetes-related emergencies only.

Conversely, the very behaviours outlined as supportive in care guidance [67] were highlighted by participants in the theme “*They Think It’s Helpful, But It’s Not*” as those which constitute nagging, and were also related to a desire to non self-manage.

This was explained in depth through the three subthemes “*Looking At You Like You’re Different*,” “*It’s Not Something You Can Understand Unless You Have It*” and “*I’m Not a Kid or Nothing*.” Through “*Looking At You Like You’re Different*,” it is seen that rejection of supportive behaviour may be due to a sense of difference. By enacting diabetes-specific support, peers are reinforcing a difference between them and the receiver. This difference is incorporated into the self-concept almost immediately after diagnosis [39], negatively impacting the self-concept and creating stigma, which may be reinforced by diabetes-specific support. Indeed, AWT1D have previously been found to state that even peers enquiring after their welfare felt stigmatising [68]. This perception of difference may encourage non-adherence, in which AWT1D attempt to regain the “normal” self-concept via non self-management. Thereby, receiving unsolicited diabetes-specific could contribute towards poorer glycaemic control, as seen in previous research [69].

This is further examined in “*It’s Not Something You Can Understand Unless You Have It*.” Here, diabetes-specific support was more likely to be accepted if the provider also had T1D. Indeed, peer mentoring has been found to improve diabetes outcomes in AWT1D via increased acceptability of advice and improvement in health literacy [70–73]. A further explanation may lie in the phenomena of identity fusion [74]. Identity fusion occurs from the merging of personal and group identity, in which the boundary between the personal and social self becomes porous, promoting strong relational ties [74]. According to the principle of extended identity fusion, this can occur with individuals who have no personal relationship, but for whom a salient shared quality presents a sense of cohesion which facilitates pro-group behaviour [74]. When applied to these findings, AWT1D may experience extended fusion with others with T1D, and may therefore experience advice and diabetes-specific support as in-group

behaviours which will serve to better represent the group identity. Such experiences have been found in ethnic and shared value groups [74], and have been investigated in family and military social integration [75]. It is logical to conclude similar incidents may be present in illness identity. Further research into the concept of identity fusion in AWT1D is therefore warranted.

However, the consequence of this appeared to be increased rejection of diabetes-specific support when provided by peers without T1D, particularly when these behaviours were unsolicited. Research has highlighted the need for AWT1D to have mastery over diabetes-related discussions and social resources in peer relationships. Schur *et al.* [76] acknowledges the potential for peers to provide normative experience, on the condition that the support offered is in line with requirements. Indeed, Meijer *et al.* [77] highlight the continual need for renegotiation of friendship boundaries in adolescents with long-term health conditions, reflective of the changing nature of self-care and support needs. This is reflective of the matching hypothesis of perceived and received support [12, 13]. The boundaries between support and nagging within this population are likely in continual flux due to changing levels of mastery, which may exacerbate perceptions of nagging and an excess of perceived support. With this in mind, the provision of invisible support [14] may be particularly beneficial, wherein support is provided without the awareness or acknowledgement of the support receiver [12, 13]. Invisible support has been found to negate the negative impact of received support, with the smallest increases in distress [12]. However, a literature review did not reveal any research assessing invisible support within this population, though it has been associated with increased self-efficacy in adults with Type 2 diabetes [78], and no research assessing the impact of

perceived vs received support in AWT1D. Further investigation is therefore recommended.

A final explanation for the perception of nagging lies in the third subtheme of "*I'm Not a Kid or Nothing*," in which participants explored a desire for independence in their self-care. With parental relationships, supportive behaviours during the achievement of autonomy are frequently seen as nagging [79–81], perceived as implying that they are incapable of achieving optimal self-care alone [82]. This has also been seen in one previous study into social support from peers [83] though it was not fully explored. It is possible that the same consequences of parental support are applicable in support provided by peers; that received support is perceived as an implication of failure [80, 82]. Indeed, previous research has highlighted that adolescents see self-care as personal, which increases perception of support as interference [84]. This association may explain the limiting of acceptable diabetes-specific support to emergency situations only; participants believe that they are able to manage their diabetes without support in all situations except these. This is potentially associated with typical adolescent development. Adolescence is characterised by attaining autonomy and establishing an adult identity [85]. A key element of this is demonstrating capability and responsibility as a maturing young adult at home and school [86]. It is therefore unsurprising that adolescents feel pressure to prove themselves as capable in their management of a long-term condition.

### **Limitations**

Previous research has shown that disease duration is influential in crucial psychosocial variables such as adjustment [41, 87–89], and thereby may also impact the experience of social support from peers provided. Consideration of time since

diagnosis may allow deeper understanding of how perceived support may change over time.

### **Conclusion**

These findings suggest that skills such as discussing diagnosis, conducting self-care in public, and requesting support when required, would all be beneficial. At present, AWT1D appear reticent to engage in these behaviours due to a fear of burden and stigmatisation. There is potential that addressing this fear of stigma may increase self-care [83]. In addition, these results emphasise the acceptability of advice provided by peers with T1D, making mentoring programmes an excellent candidate for future research.

### **Ethical Approval**

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Figure 1. Overarching and sub-themes derived from thematic analysis of semi-structured interviews with adolescents with type 1 diabetes.

