Fitting In or Feeling Excluded: The Experiences of High School Students with Visual Impairments

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Structured abstract: *Introduction*: This study compares the experiences of high school students with visual impairments (that is, those who are blind or have low vision) in and out of school. *Methods*: Twelve visually impaired high school students completed the same in-the-moment survey seven times daily for seven consecutive days. The frequencies of their activities, interactions, and ratings of internal variables (fitting in, acceptance, loneliness, and enjoyment) were compared across three contexts: home, school, and other (neither home nor school) contexts. *Results:* Participants spent much of their time out of school alone at home. They rated leisure and structured recreation in "other" locations as their most enjoyable activities. Doing nothing at school was the least positively rated activity. Participants fitted in significantly less and felt significantly less accepted at school than elsewhere. A large proportion of school interactions involved receiving help; few involved giving help. Participants with additional disabilities reported more school social challenges than their peers who were only visually impaired. *Discussion and implications for practitioners:* This study highlights the subjective dimensions of choice in everyday life. The social impact of doing nothing at school provides an imperative for staff members to ensure that adolescents with visual impairments can participate in lessons. Staff may also need to facilitate opportunities for these students to reciprocate with peers. Adolescents with visual impairments highly value activities with friends out of home and, as with most adolescents, may need to lean on their families for assistance in this area until they can participate in such activities independently.

During adolescence, young people differentiate themselves from family and prioritize relationships with peers, primarily those they meet at school (Sylwester, 2007). Research shows that adolescents with visual impairments (that is, those who are blind or have low vision) can find mainstream school settings socially challenging (Rosenblum, 2000; West, Houghton, Taylor, & Kia Ling, 2004). Qualitative evidence shows that because students with visual impairments need additional supports to access the curriculum, they feel different from their peers and struggle to fit in and be treated in the same manner as other students (Plaskett, 2015; Worth, 2013). Although some visually impaired adolescents establish friendships (Rosenblum, 1998), others are lonely and isolated (Plaskett, 2015; Worth, 2013).

There is evidence that adolescents with disabilities have fewer opportunities to make choices in daily life than do their typically developing peers (National People with Disabilities and Carer Council, 2009). Adolescents with visual impairments have smaller social networks and participate less frequently in highly social activities (such as going out with friends) and more frequently in home-based activities than do typically developing peers. When they are outside of the home, they participate in more structured activities and rely more on family for travel assistance (Gold, Shaw, & Wolffe, 2010; Kef, 1997; Khadka, Ryan, Margrain, Woodhouse, & Davies, 2012; Kroksmark & Nordell, 2001; Sacks & Wolffe, 1998). Although evidence suggests that students with visual impairments feel different and may have trouble fitting in at school, no studies have compared their psychosocial experiences between school and nonschool settings. Csikszentmihalyi and Larson (1984) and van Roekel, Scholte, Engels, Goossens, and Verhagen (2015), who studied these experiences in typically developing adolescents, related them to the degree of choice and control adolescents had in the varying contexts of life.

The study described here was part of a larger study examining the social inclusion of high school students with visual impairments. *Social inclusion* encompasses both objective and subjective aspects of participation; that is, the extent to which students endow participation in relationships, friendships, or activities with a sense of belonging, acceptance, or value (Bossaert, Colpin, Pijl, & Petry, 2013). Having first examined experiences at school for these adolescents (Jessup, Bundy, Broom, & Hancock, 2017), we sought to compare their school experiences with those out of school. We focused on what students felt as they sat in class, socialized, or spent time alone or with family. Given the social implications of assistance at school, we also examined the amounts of help given and received in differing contexts.

Methods

This study was approved by the University of Sydney Human Research Ethics Committee. All participants and their parents provided informed consent. To capture experiences, we used Experience Sampling Methodology (ESM) (Hektner, Schmidt, & Csikszentmihalyi, 2007), a methodology that yields data about both objective and subjective aspects of experience by administering the same in-the-moment survey (ESM survey) repeatedly throughout a predetermined timeframe (a week, in this case). We developed and piloted an accessible survey application or app for iDevices (that is, mobile devices manufactured by Apple), the Participation in Everyday Life (PIEL) survey app (https://pielsurvey.org) as a data-collection tool (Jessup, Bundy, Broom, & Hancock, 2013).

Participants

We recruited 12 visually impaired students (aged 13 to 17 [mean = 15] years, and an even gender mix), from 12 mainstream high schools in three Australian states. These students were recruited through sports, music, and education organizations, and had varying degrees of vision loss. Their level of vision impairment was based on the classification system of Blind Sports Australia. Three students had additional disabilities (Asperger

syndrome, endocrine disorder, late effects of cancer).

Data collection tools

Everyday Inclusion survey (ESM survey)

The in-the-moment survey asked about activities and social interactions (Jessup et al., 2017). Core questions included: What are you doing? With whom? Where? Do you feel lonely? and Are you enjoying yourself? If participants were interacting with someone, they were also asked: How were they interacting? To what extent did they feel they fit in and were accepted? How dependent on others did they feel? Were they helping someone? and Was someone helping them? "Help" was not defined by the researchers: the participants responded according to their perception of an interaction. Responses to loneliness, enjoyment, fitting in, and acceptance were scored on a 4-point scale. Responses to the degree of dependence on others were rated on a 3-point scale ("not at all" or "comfortably" or "too dependent"). The participants accessed the survey in the PIEL app with either the VoiceOver screen reader, text enlargement, or standard text. All the questions were identically formatted, requiring the participants to select one response from a list.

Interviews

In one-to-one semi-structured interviews, we asked participants about social inclusion at school. We also clarified any gaps in our understanding of the ESM responses by asking, for example, "On Wednesday at 2 p.m. you were doing nothing in class. Can you tell me more about doing nothing in class?" Since there were no free-text (that is, "please specify") options in the survey, we also asked participants to specify "leisure" or "extracurricular" activities and "other" responses.

Procedure

The participants could choose whether to use their own or a university-owned iDevice. The first author met with each participant to familiarize him or her with the PIEL app and the survey questions. At the end of that meeting, she activated the app to begin collecting data the following day. The app signaled participants once (randomly) within each two-hour interval during waking hours (Jessup et al., 2017) for seven consecutive days. If the participants did not respond to a survey within five minutes of the alert sound, it became unavailable until the following time interval. The survey responses were time-stamped and stored on the iDevices. At the end of the survey week, participants e-mailed their responses or returned the university-owned iDevices. The first author interviewed participants as soon as possible (one to two weeks) after receiving the data. She recorded and transcribed each interview (Jessup, Bundy, Hancock, & Broom, 2018).

Analysis

We created a "context" variable comprising three responses (school, home, or other) to the survey question "Where are you?" "Other" contexts, specified during the interviews, included church, shopping centers, and recreation venues. We created *Z*-scores for each participant on each internal variable so that each participant's overall mean on each variable was zero and each occurrence departed from zero in a positive or negative direction. Using

the Kolmogorov-Smirnov test, we determined these ESM data to be nonparametrically distributed. Therefore, to compare *Z*-scores for each variable across individuals and locations, we employed Friedman's ANOVA and Wilcoxon Signed Ranks post hoc tests. We then used Kendall's *tau-b* and biserial correlations to explore relationships among sociodemographic data and mean *Z*-scores for each variable in each context.

To examine helping interactions, we used the responses to the questions "Were you helping someone?" and "Was someone helping you?" A helping interaction was indicated by a "yes" to either question, and reciprocity was indicated by a "yes" to both questions.

Results

The mean return rate of completed surveys was 69% (range 49% to 94%). The total number of surveys completed was 401. Of these, 295 were completed out of school (245 at home, 50 in other locations), and 106 at school. Variations across contexts related to: the internal dimensions associated with the various activities and interactions, the ratio of help received to help given, and relationships between sociodemographic variables and internal variables.

Internal dimensions of activities and interactions

The greatest proportion of participants' waking hours was spent at home alone (38.4% of surveys). Their most frequent activities over the week were leisure at home (16.2%), working at school (15.0%), and watching TV or DVDs at home (10.7%). "Doing nothing" at school was the least positively rated activity of the week. Extracurricular activities at school, and leisure and established activities in other locations (neither home nor school), were the most positive.

Home

Participants spent the greatest proportion of their week (61% of surveys) at home. Much of this time was spent alone, yet participants did not report feeling particularly lonely or that the experience was unenjoyable (see Table 1). The most frequent activities were leisure (much leisure was specified as playing games or "gaming" in the interviews), and watching TV or DVDs. All participants interacted with family, and 10 also interacted with friends. The majority of these friendship interactions were online or by telephone (talking or texting) and were slightly more enjoyable than family interactions (see Table 1).

Other locations

Participants spent the least amount of time (13% of surveys) in "out and about" contexts. Two participants (including one with additional disabilities) had no self-reports in "other" contexts. Travel and established activities (denoted as extracurricular on the survey) were the most frequent activities undertaken when participants were not at school or at home. These established activities, specified during interviews, included horseback riding and taking music lessons, participating in drama club and church youth groups, and playing goalball. Staff members in these contexts were associated with these activities. When out and about, participants felt least lonely and enjoyed themselves most with friends (see Table 1), and these friendship interactions were

Table 1
Most frequent activities and interactions across contexts—self-reports ($N = 401$), internal dimensions and interaction mode.

Context		Variable	Self-reports (%)	Lonely (*Z*-score)	Fit in (*Z*-score)	Accepted (*Z*-score)	Enjoying (*Z*-score)	How were you interacting?
School	Activity	Working	56.6 (15.0)	0.0	−0.1	−0.1	−0.2	—
		Talk or text	11.3 (3.0)	−0.5	0.4	0.2	0.7	—
		Nothing	8.5 (2.2)	0.7	−0.7	−1.0	−0.7	—
		Extracurricular	8.5 (2.2)	−0.3	0.2	0.6	0.8	—
School	Interaction	Friends	28.3 (7.5)	0.0	0.0	0.0	0.2	Person
		No one	16.0 (4.2)	0.6	NA	NA	−0.4	NA
		Staff	17.9 (4.7)	0.0	−0.6	−0.2	−0.4	Person
		Other students	37.7 (9.9)	0.0	−0.5	−0.6	−0.1	Person
Home	Activity	Leisure or gaming	26.5 (16.2)	0.0	0.5	0.5	0.2	—
		TV or DVDs	17.6 (10.7)	−0.1	0.3	0.2	0.2	—
		Nothing	12.2 (7.5)	0.4	0.3	0.4	−0.5	—
		Eating	11.2 (6.7)	−0.1	0.2	0.4	0.1	—
Home	Interaction	No one	62.9 (38.4)	0.2	NA	NA	−0.1	NA
		Friends	9.8 (6.0)	−0.1	0.3	0.3	0.4	Online (46%), phone (33%), person (21%)
		Family	26.5 (16.2)	−0.3	0.2	0.3	0.1	Person (97%), online (3%)
Other	Activity	Travel	40.0 (5.0)	−0.1	0.1	0.0	−0.1	—
		Extracurricular	22.0 (2.7)	−0.7	0.0	0.1	1.1	—
		Leisure or gaming	12.0 (1.5)	−0.5	0.6	0.4	1.2	—
		Talk or text	6.0 (0.7)	−0.3	0.0	−0.2	0.5	—
Other	Interaction	Friends	50.0 (6.2)	−0.7	0.3	0.1	0.8	Person
		Family	26.0 (3.2)	0.2	0.2	0.1	0.4	Person
		No one	20.0 (2.4)	0.2	NA	NA	−1.0	NA
		Staff	4.0 (0.5)	−0.3	0.2	0.1	0.7	Person

Self-reports column: figures in parentheses represent percentage of self-reports across all contexts. Higher *Z*-scores are in the direction of the construct being measured (that is, the more positive a *Z*-score, the greater the degree of loneliness, fitting in, acceptance, or enjoyment).

more enjoyable than friendship interactions at school. Participants felt slightly lonelier when interacting with family while out and about ($Z = 0.2$), than they did when interacting with them at home ($Z = -0.3$). Not interacting with anyone in these other contexts was the least enjoyable ($Z = -1.0$) context of the week.

School

Participants completed 26% of surveys at school. The most frequent school activities (see Table 1) were: working, talking, doing nothing, and extracurricular. Extracurricular activities included participating in choir, 10-pin bowling, Student Leadership Council, and taking an excursion. The loneliest and least enjoyable activity of the week was doing nothing at school. In their interviews, the participants described *school social inclusion* as the experience of not being overlooked by peers or staff members and having their needs met (Jessup et al., 2018). They

Table 2
Mean *Z*-scores of internal variables across contexts.

Variable	School (S) Mean (*SD*)	Home (H) Mean (*SD*)	Other (O) Mean (*SD*)	ANOVA	*p*	Post hoc comparisons
Enjoying	−0.11 (0.30)	−0.04 (0.23)	0.36 (0.54)	$\chi^2 = 2.40$	.37	
Fit in	−0.38 (0.38)	0.22 (0.44)	0.22 (0.31)	$\chi^2 = 9.41$	.004	S < H & O
Accepted	−0.37 (0.33)	0.29 (0.46)	0.11 (0.23)	$\chi^2 = 5.28$	.05	S < H & O
Lonely	0.03 (0.36)	0.05 (0.25)	−0.27 (0.44)	$\chi^2 = 4.52$	.12	

Fit in: H vs. S ($Z = -2.192$, p = .014); O vs. S ($Z = -2.366$, p = .008).
Accepted: H vs. S ($Z = -2.310$, p = .010); O vs. S ($Z = -2.197$, p = .016).

described *doing nothing* at school as a waste of time. "Doing nothing" occurred when they could not participate in class because the content or teaching methods were inaccessible.

The participants' most frequent interactions (see Table 1) were with peers (other students or friends). Not interacting with anyone at school was the loneliest context of the week. Participants felt they fit in least with school staff members and felt accepted least by other students. Interactions with friends presented few variations in internal dimensions. Participants fit in less with friends at school ($Z = 0.0$) than at home ($Z = 0.3$) or in other locations ($Z = 0.3$). In their interviews, the participants said they categorized a peer as a fellow student or friend according to whether they spent time together outside of class.

Table 2 shows the mean *Z*-scores for each internal variable across locations. Friedman's ANOVA showed a statistically significant difference in fitting in, $\chi^2(2) = 9.41$, $p = 0.004$, and acceptance, $\chi^2(2) = 5.28$, $p = 0.05$, across contexts. We conducted a post hoc analysis using Wilcoxon signed-rank tests (Bonferroni corrected, significance level set at $p < 0.0167$). This analysis revealed a significant difference in mean *Z*-scores between fitting in at home and at school ($Z = -2.192$, $p = .014$) and fitting in at school and other locations ($Z = -2.366$, $p = .008$). There was a significant difference in mean *Z*-scores for acceptance at home and at school ($Z = -2.310$, $p = .010$) and for acceptance at school and in other locations ($Z = -2.197$, $p = .016$). Participants reported fitting in and feeling accepted more out of school than at school. There were no significant differences in mean *Z*-scores for enjoyment or loneliness in and out of school.

Help received and given

Table 3 illustrates the variations in helping interactions across contexts. The ratio of help received to help given was much greater in, than out of, school. Participants received nearly five times as much help at school as they gave. Out of school, both at home and in other locations, they received about twice as much help as they gave.

Relationships between sociodemographic and internal variables

Table 4 illustrates the relationships between sociodemographic and internal variables across contexts. These variables are gender, grade, the presence of an additional disability, and vision classification.

Table 3
Helping interactions.

Variable	Out of school (home) *n*(%)	Out of school (other) *n*(%)	In school
All interactions	91	40	89
Receive unreciprocated help	15 (16)	12 (30)	32 (36)
Giver of unreciprocated help	Family, friends	Friends, family	Staff, students, friends
Too dependent*	0	1	4
Giver of help—too dependent	N/A	Family	Staff, friends
Give, reciprocate help	8 (9)	7 (18)	7 (8)
Help given to	Family, friends	Friends	Students, friends
Ratio unreciprocated : give help	1.9:1	1.7:1	4.6:1

*Interactions in which participants responded "too dependent" to the question, "How dependent on others were you?"

Home

There was a strong negative relationship between the presence of additional disability and loneliness (see Table 4) at home. Participants with additional disabilities felt less lonely at home than did their peers who were only identified as being visually impaired. There were moderate negative relationships between grade level and in-the-moment enjoyment. Participants in higher grades enjoyed themselves less at home. There were moderate positive relationships between fitting in and enjoyment, and fitting in and acceptance. Participants who felt they fit in enjoyed themselves more and felt accepted. There were no significant correlations with other variables.

Table 4
Relationships between sociodemographic and internal variables.

Location	Variable	Gender	Grade	Addis	Visclas	Fit in	Accepted	Lonely	Enjoying
N/A	1. Gender	—							
	2. Grade	−.36	—						
	3. Addis	.19	.84*	—					
	4. Visclas	.10	.14	−.38	—				
School (n = 12)	5. Fit in	−.09	.37	−.86*	.11	—			
	6. Accepted	.21	.33	−.45	−.30	.28	—		
	7. Lonely	.06	−.07	.88*	−.09	−.46*	−.11	—	
	8. Enjoying	−.14	.36	−.65*	.00	.57**	.24	−.56**	—
Home (n = 12)	5. Fit in	.23	−.35	.51	−.07	—			
	6. Accepted	.11	−.23	.54	.13	.52*	—		
	7. Lonely	−.36	.23	−.76*	.39	−.27	−.30	—	
	8. Enjoying	.35	−.43*	.49	−.25	.41*	.38	−.28	—
Other (n = 10)	5. Fit in	−.05	−.22	.83*	−.05	—			
	6. Accepted	−.30	−.26	.01	−.08	.05	—		
	7. Lonely	.63**	−.22	.72	−.58*	−.05	.05	—	
	8. Enjoying	−.82**	.61**	−.52	.24	−.09	−.05	−.41	—

Addis = additional disability, 0 = no, 1 = yes; Visclas = Blind Sports Australia classification system (B1, B2, B3), higher score equating with better vision; in all measures, higher scores are in the direction of the construct being measured; *$p \leq .05$, **$p \leq .01$.

Table 5
Interactions by additional disability status (percentage of self-reports).

With whom	School VI (n = 9)	School addis (n = 3)	Home VI (n = 9)	Home addis (n = 3)	Other VI (n = 8)	Other addis (n = 2)
No one	15	18	64	58	12	38
Family	0	0	24	34	21	38
Friends	33	18	11	8	62	35
Other students	33	47	0	0	0	0
Staff	18	18	0	0	6	0

VI = visually impaired; addis = additional disability.

Other locations

The other locations context was the only one in which there was a gendered and vision-level relationship (see Table 4). Males enjoyed themselves more and felt less lonely than did females. The two participants with additional disabilities (the third participant provided no data in this context) fit in more than did their peers who were only identified as being visually impaired. Participants with better vision felt less lonely than did their peers with less vision.

School

There were strong relationships between the presence of additional disabilities, fitting in, and loneliness (see Table 4). Participants with additional disabilities were more likely to feel lonely, not enjoy school, and to report not fitting in than did participants who were only identified as being visually impaired. There were moderate relationships between fitting in and enjoyment, and fitting in and loneliness. Participants who felt they fit in enjoyed themselves more and reported feeling less lonely. There were no significant correlations with gender or grade and internal variables. A significant correlation between grade and additional disability (r_b = .84) reflected a sampling issue.

Lastly, because of the less positive school experiences of participants with additional disabilities, we compared the nature of their interactions with those of their peers who were identified as only being visually impaired. Table 5 shows that although both groups spent a similar proportion of their time at school interacting with staff members and peers, the peer mix differed. The three participants with additional disabilities had fewer interactions with peers they categorized as friends. Out of school, the two participants with additional disabilities spent relatively less time with friends and more time alone or with family.

Discussion

Our findings agree with those of earlier researchers (Gold et al., 2010; Khadka et al., 2012; Kroksmark & Nordell, 2001; Sacks & Wolffe, 1998) that adolescents with visual impairments spent large amounts of time in socially passive activities (alone or with family). In this current study, the participants reported either no interactions, or interactions with family, in 64% of their surveys over a week, and in much (89%) of their time at home. The most frequent activity of the week was home-based leisure. Despite virtual communication technologies, visually impaired

adolescents are still spending much of their time out of school alone. For these participants, digital technology seemed to provide another avenue for largely solitary activity, such as gaming and watching TV and DVDs—although, to balance this assertion, one participant said he spent a lot of time gaming during the week to improve his hand-eye coordination and to help his gaming with friends on the weekends.

A comparison of our data with those of van Roekel et al. (2015) suggests that adolescents with visual impairments have fewer social interactions in a typical week than do their sighted peers. Van Roekel et al.'s. adolescents averaged 39% of their time alone, 22% with family, 37% with peers (friends and classmates), and 2% with others. Our participants averaged 45% of their time alone, 20% with family, 30% with peers, and 5% with staff members.

Sacks and Wolffe (1998) noted that adolescents with visual impairments required a great deal of time and assistance to complete their schoolwork, which seems to still be true. Thirty-six percent of school interactions involved participants being helped. What is also concerning is that these participants had fewer opportunities to reciprocate help at school than they did elsewhere. They received nearly five times as much help there as they gave. During adolescence, in contrast to childhood, perceptions of competence, mutuality, and reciprocity become more important to the establishment of friendships (Schnorr, 1997; Sylwester, 2007). When adolescents transition to high school, new friendships often need to be established. This creation of new relationships might be more difficult for visually impaired adolescents if they are regarded by peers as needing help frequently without having opportunities to give help. Visually impaired adolescents may not be aware that their peers receive relatively less help than they do, they may unduly emphasize helping as a requirement of friendship (Palmer, 2006), or they may not distinguish between altruism and friendship (Schnorr, 1997; West et al., 2004). Alternately, since stereotypes of people with disabilities portray them as needing rather than giving help, others in the school community may not ask these adolescents for help.

The participants felt they fit in least during the survey week when they were interacting with adults and other students at school. However, in the interviews they described social inclusion at school as not being overlooked and as having their needs met in this area. Our results showed that adults and other students provided the bulk of help to meet these students' needs. These helping interactions occurred at a developmental stage in which adolescents with visual impairments typically want to decrease their dependence on others, particularly on adults. Although our ESM survey did not distinguish between the adults at school, other researchers have found that teachers' aides or paraeducators are regarded by visually impaired adolescents as their biggest barriers to school social inclusion (Arndt, Lieberman, & James, 2014; Khadka et al., 2012; Whitburn, 2013; Worth, 2013). Our results may reflect this tension.

Although being helped at school seemed to create tension, doing nothing at school was also a barrier to social inclusion. It was the loneliest and least enjoyable activity of the week, and it was rated more

negatively than doing nothing at home. Doing nothing at home can be a choice, but it seems doing nothing at school is beyond the participants' control, imposed when they cannot access lesson content. This finding is important. Such lack of activity is rarely captured in activity diaries or interviews, yet it has a very negative effect. Competence is also important to peer acceptance. It is difficult to appear competent when one is effectively sidelined in lessons and there is little opportunity to "shine."

Extracurricular activities rated more positively than did schoolwork for fitting in and enjoyment. Schools may be able to harness extracurricular activities as means for students with visual impairments to fit in, share interests, and reciprocate with peers (Jessup, Cornell, & Bundy, 2010; Rosenblum, 2000). Reciprocity is not necessarily the return of identical help, but it can be "in kind" help in another form. It can take time to get to know other people and when to call on them for help. Less structured out-of-class activities hone in on shared interests and abilities and provide "getting to know you" time.

Participants with additional disabilities were more likely not to feel as though they were included or fit in, and they reported feeling lonelier at school than did their peers with vision impairment as their only disability. They had fewer friendship interactions at school and felt significantly less lonely at home, even though much of this time was spent alone. Our finding supports those of de Verdier (2016), who found that students with additional disabilities have a less positive experience of school than do their peers with vision impairment alone. This finding is concerning, since the majority of students with visual impairments have additional disabilities. More research is needed with these young people.

Kroksmark and Nordell (2001) noted that adolescents with visual impairments participated more frequently in more established and less spontaneous out-of-home activities than did their sighted peers, and that they relied more on their families for transport. Our results show the subjective value of these established and less-spontaneous activities: arguably the most freely chosen of the week. These activities are important to identity development and resilience (Jessup et al., 2010). Parents may need encouragement to persevere in paying for or providing transport to such activities until their visually impaired adolescents, as nondrivers, can take up these responsibilities independently. It may take this group longer to master independent travel as compared to their sighted peers if alternate transportation options are limited.

Unsurprisingly, the participants felt lonelier when they were with family outside of the home than they did when they were at home. Most adolescents prefer the company of peers to family, parents in particular, in these contexts (Csikszentmihalyi & Larson, 1984; Sylwester, 2007). It seems possible that loneliness with family out of the home reflects the participants' preference for peers and a somewhat reluctant dependence on family in these contexts. We could extrapolate our results to suggest that adolescents with visual impairments (like most adolescents) would prefer for their parents to provide transportation (and financial support) but to stay in the background when out of the home. Our research may have simply illuminated the age-old dilemma

faced by visually impaired adolescents (Uttermohlen, 1997), that of balancing need for help with the desire for autonomy and independence.

Limitations

These data are from a small sample. We need to be cautious about generalizing beyond this group of participants. The time lag between the participants' ESM responses and their interviews may have affected their recollection of some activity details. As previously noted, this group of participants had a lower proportion of students with additional disabilities than is represented in this population of adolescents. Since participants were self-selected, more students may be struggling at school than is represented here. Students who were struggling may have felt unable to cope with the burden of participation in a research project.

Conclusion and implications for practice and future research

High school students with visual impairments feel they fit in less often and are less accepted at school than they are elsewhere. They also feel that they have few opportunities to show competence in a school setting. Similarly to Csikszentmihalyi and Larson (1984) and van Roekel et al. (2015), these results can be conceptualized in terms of choice. Most high school students have little choice over curriculum content and classroom companions. However, the nature of visual impairment means that visually impaired students have even less autonomy and choice in the classroom than do their sighted peers: they are more dependent on the actions of others to access the curriculum. Being helped created social tensions. However, being overlooked and doing nothing when peers were otherwise engaged was a lonely and apparently miserable experience for students with visual impairments. This problem is not new; our study has simply quantified an issue that has challenged visually impaired students for decades and has highlighted the porous boundaries between social and academic inclusion. Schools could become more socially inclusive by ensuring that each of their students has discreet access to lesson content. Students may feel too shy, embarrassed, or powerless to speak up in the moment when they are doing nothing. Sensory disability can be less obvious than physical disability: lack of access is perhaps more difficult for others to identify. If the lack of sensory accessibility in school were reframed in terms of loneliness and social isolation, it might be given the priority it requires.

Educators have traditionally had challenges with supporting students with visual impairments and additional disabilities in inclusive settings (Sacks & Silberman, 1998). It is clear that further research is needed into how best to support them socially. These students may have even fewer choices in their everyday lives than do their peers with visual impairments alone.

Activities outside of class, which rated most positively, involve a relatively greater degree of choice than do in-class activities. Leisure, extracurricular, and established activities contribute to identity development and resilience, a finding that should encourage parents to persevere in their support of such activities until their adolescents with visual impairments can be more independent.

It would be useful to replicate this study with a larger and randomly selected

sample of students with visual impairments from varying educational settings. It would also be useful to replicate this ESM study with a group of typically developing high school students. Van Roekel et al.'s (2015) study focused only on loneliness, and Csikszentmihalyi and Larson's (1984) study, though more comprehensive, is dated.

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