

What is Essential is Invisible to the Eye: Intimate Relationships of Adolescents with Visual Impairment

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Published online: 1 January 2012
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Abstract We examined the development of intimate relationships in 180 adolescents with visual impairment (VI) and 533 sighted peers. Adolescents with VI reported a later age at the time of first falling in love, dating, and entering into a romantic relationship. However, between-group differences in the timing of first sexual intercourse were not significant. In addition, similar numbers of adolescents from both groups had experiences with falling in love and having romantic relations at the time of assessment. The two groups differed in the criteria for mate selection, and emotional maturity was more important for young people with VI than for their sighted peers while the reverse was found for physical attractiveness and material resources of potential partners. Finally, the two groups did not differ in the perceived quality of their present romantic relationship.

Keywords Sexual behavior · Adolescence · Romantic relationships · Visual impairment · Germany

The Development of Intimate Relationships

Dating and forming romantic attachments are an integral part of adolescents' social development [1]. However, adolescents with visual impairment may have more difficulties with developing intimate relations than their sighted peers. First, they have fewer opportunities to form romantic relationships than their sighted peers as a result of spending more time alone [2]. Second, at social gatherings, adolescents with severe visual impairment cannot look around to see who might be of interest [3]. Third, adolescents with visual impairment often encounter negative reactions from peers with regard to physical attractiveness and their suitability as a mate [4, 5]. Fourth, individuals with visual impairment show higher levels of depressive symptoms and loneliness than their sighted peers [6]. Finally, parental overprotection might be more widespread and restrict opportunities to develop romantic relationships [7].

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In fact, studies reported that adolescents with visual impairment had fewer dating experiences [2, 8] and a delayed age at first intercourse than sighted peers [5, 9]. Nonetheless, a recent study found that adolescents with visual impairment reported a significantly higher rate of sexual debut than adolescents with no disabilities [10]. However, this result was based on adolescents from mainstream schools where severe forms of disability may be uncommon.

Less is known about the timing of other intimate behaviors, such as entering into the first romantic relationship. Thus, our first research question asks about the timing of four aspects of development of romantic relations (falling in love, dating, forming a romantic relationship, having sexual intercourse) in adolescents with and without visual impairment.

Men are the typical initiators of sexual activity. This is based on traditional gender roles [11]. Thus, visual impairment may be a stronger barrier for building intimate relations in male than in female adolescents because severe visual impairment limits the ability to see who might be of interest and to initiate contacts [3]. Nonetheless, two studies did not support this suggestion; possibly because levels of visual impairment were low [10] or the study had low test power [2]. Thus, the second research question asked whether male adolescents with visual impairment show a larger delay of building intimate relationships than their female peers.

Criteria for Mate Selection

Studies not specific to vision loss have found three criteria for mate selection, namely material resourcefulness (e.g., high income), psychological maturity (e.g., dependability) and physical attractiveness (e.g., good figure) [12–14]. However, individuals who are blind are not able to see whether another person is physically attractive. It has been found that physical attractiveness of a mate was more important for sighted adults than for adults who are blind [13]. Material resourcefulness was also more important for sighted adults, possibly because of better opportunities for the acquisition of material resources [13]. As adults with visual impairment scored lower on the importance of attractiveness and material resources than sighted adults, the results might indicate that they are generally less demanding [2]. If this was the case, psychological maturity would also play a lesser role in their mate selection. Nonetheless, individuals with visual impairment may even be more likely than sighted peers to prefer partners with high levels of psychological maturity, for example due to being more dependent upon others [15]. In our third research question, we ask whether the results of the previous study with blind adults [13] are replicated in adolescents with visual impairment. In addition, we ask whether psychological maturity is more or less important for adolescents with visual impairment than for their sighted peers.

In our fourth research question we ask for differences between blind adolescents and those with low vision. Individuals with low vision are better able to evaluate the attractiveness of other persons. They may also have better opportunities than blind individuals for accumulating material resources. This may lead to higher aspirations with regard to attractiveness and material resources of romantic partners.

Quality of the Present Intimate Relationship

As adolescents with visual impairment seem to have less opportunity on the dating market than sighted peers [4, 5], it may be more difficult for them to find someone who satisfies their needs very well. In addition, visual impairment may impair the quality of the communication with the romantic partner [16]. These factors may lead to lower quality of the

intimate relationship. In fact, lower relationship quality [16] and higher divorce rates [17] have been observed in older adults with visual impairment. However, as young people with visual impairment take more time to find a romantic partner [8], they may finally find someone who satisfies their needs very well. We ask in our final research question whether perceptions of the quality of the present romantic relationship differ between adolescents with and without visual impairment.

Methods

Sample

Data were collected in the third wave of the Marburg Study on Vision Loss (MARVIL). This study is focused on developmental tasks of adolescents with and without visual impairment, such as building peer relations and preparation for a career [18]. The study recruited 6th to 11th graders from three German secondary schools for young people with visual impairment and from six secondary schools for sighted students. Because a portion of the adolescents with visual impairment came from boarding schools, some of the sighted adolescents were also drawn from this kind of school.

Students who were still enrolled at school were re-contacted at the one- and two-year follow-up. In addition, students who had newly entered the assessed classes at wave 2 and wave 3 were included in the study. All participants were from the highest school track that qualifies students for university. After informed consent from parents and adolescents had been received, the students answered a questionnaire in their classes. The average response rate was 87% at each wave.

The present sample consists of 712 adolescents ($M = 15.82$ years, $SD = 2.20$); 180 of them were young people with visual impairment. Sixty-three adolescents with visual impairment were blind (visual acuity of less than 20/400, or corresponding visual field loss to less than 10° , in the better eye with best possible correction). The others had low vision which is visual acuity of less than 20/60, but equal to or better than 20/200 or corresponding visual field loss to $<20^\circ$, in the better eye with best possible correction [19].

Adolescents with visual impairment were, on average, older, more likely to be of male gender and to have parents with lower educational attainment than sighted students (Table 1). Thus, we used these variables as control variables in the following analyses.

Measures

Timing of Steps of Intimate Relationship Development

We asked with single-item indicators whether the respondents had already fallen in love, dated, formed a romantic relationship, and had sexual intercourse (1 = yes, 0 = no). If they answered affirmatively, the respondents were asked at which age these events had occurred for the first time.

Criteria for Mate Selection

We used a modified version of an item list for mate selection by Hill [12–14, 20]. Items that would not make sense for adolescents were excluded (e.g., differences between own

Table 1 Sample characteristics

Variable	Total sample		Visual impairment		Sighted		Test for between-group differences <i>F</i> (1,712)
	<i>M</i> (%)	<i>SD</i>	<i>M</i> (%)	<i>SD</i>	<i>M</i> (%)	<i>SD</i>	
Age (years)	15.88	2.20	17.22	2.23	15.34	1.98	72.04***
Female gender (%)	.51		.42		.54		8.68**
Boarding home (%)	.22		.18		.23		2.23
At least one parent completed the highest school track (%)	.58		.38		.64		39.30***
Blind (%)			35				
Low vision (%)			66				
Congenital visual impairment (%)			83				
Had already fallen in love (%) ^a	89		85		90		2.68
Had already dated (%) ^a	66		51		71		10.83***
Had already a romantic relationship (%) ^a	66		58		68		2.18
Had already sexual intercourse (%) ^a	30		24		32		.72
Importance of criteria for mate selection ^a							
Material resourcefulness	2.83	.63	2.71	.66	2.86	.61	6.58*
Physical attractiveness	3.10	.75	2.83	.81	3.20	.71	25.39***
Emotional maturity	3.82	.36	3.88	.28	3.80	.38	4.36*
Partnership quality ^{a,b}	28.83	5.15	28.30	5.32	29.11	5.04	.95
<i>N</i>	712		180		532		

* $P < .05$, ** $P < .01$, *** $P < .001$

^a The between-group differences controlled for effects of age, gender, and parental education

^b This information was available from 75 adolescents with visual impairment and from 142 sighted peers

and partner income at present). The adolescents answered how important 21 aspects are for their selection of a partner for a long-term romantic relationship. Sample items were “He/she is career-conscious”, “He/she is faithful”, and “He/she is good looking” (1 = unimportant, 4 = important).

Quality of the Present Romantic Relationship

The German version of the Relationship Assessment Scale was applied to adolescents who were in a romantic relationship at present [21, 22]. It consists of 7 items that are answered with a five-point Likert-scale. A sample item was “How well does your partner meet your needs?” (1 = not well, 5 = very well). In the present study, Cronbach’s alpha was .92.

Sociodemographic Variables

Age, gender, highest educational attainment of parents, visual impairment (1 = no, 2 = low vision, 3 = blind), being in an intimate relationship at present (1 = yes, 0 = no) and whether the present girlfriend/boyfriend attends the same school as the respondent (1 = yes, 0 = no) were assessed with single-item indicators.

Results

Table 1 shows that adolescents with visual impairment were less likely to have dating experiences than their sighted peers. However, the two groups did not differ in the percentages of having fallen in love, having experienced the first romantic relationship, and having had intercourse.

Because some adolescents had not yet experienced the assessed events, we computed Cox regression analysis [23]. Vision status, gender, parental educational attainment, and the interaction term of vision status and gender were included as predictor variables. Vision status and gender were centered before computing the interaction term in order to avoid problems with multicollinearity [24]. Age at the time of first falling in love, first dating, first entering into a romantic relationship, and first having intercourse were used as dependent variables.

Adolescents with visual impairment reported a higher age at which they first fell in love ($B = -.30$, $\text{Exp}(B) = .74$, $P < .01$), dated ($B = -.36$, $\text{Exp}(B) = .70$, $P < .001$), and experienced their first romantic relationship ($B = -.22$, $\text{Exp}(B) = .80$, $P < .05$). Visual impairment reduced the probability of falling in love, dating, and forming a romantic relationship by 26, 30, and 20%. However, no between-group differences were found for age at first sexual intercourse ($B = -.09$, $\text{Exp}(B) = .91$, $P < .54$).

The median age at the time of first falling in love was 13 years for sighted adolescents and 14 years for adolescents with visual impairment. Sighted adolescents stated dating and formed their first intimate relationship at a median age of 14 years as compared to 15 years in adolescents with visual impairment. The median ages at the time of first intercourse were 17 years in sighted adolescents and 18 years in adolescents with visual impairment.

The second research question asked whether differences between the time of building intimate relationships of adolescents with and without visual impairment would be stronger in male than in female adolescents. There was only one marginally significant interaction effect of vision status and gender on the timing of the first romantic relationship ($B = .40$, $\text{Exp}(B) = 1.67$, $P < .06$). Separate Cox regressions for female and male adolescents showed that male adolescents with visual impairment reported a later age at the start of their first romantic relationship than sighted males ($B = -.39$, $\text{Exp}(B) = .68$, $P < .01$). No such delay was found for female adolescents with visual impairment ($B = -.05$, $\text{Exp}(B) = .95$, $P < .76$).

We also tested whether the timing of the four assessed events differed between adolescents who are blind and those who have low vision. There were no statistically significant differences.

The third research question focused on criteria of mate selection. An exploratory factor analysis with Varimax rotation found a three-factor solution. The first factor (7 items) described the importance of providing material resources (career-conscious, high social status, providing financially secure future, high education, intelligent, wealthy, and ambitious/diligent). The second factor (3 items) characterised physical attractiveness of the partner (attractive face, fine figure, and good looking). The third factor (4 items) described emotional maturity of the other person (dependable, faithful, honest, and kind). Cronbach's α 's were .82 (material resourcefulness), .91 (attractiveness), and .77 (emotional maturity).

ANCOVA's showed that the importance of the three criteria varied significantly between adolescents with and without visual impairment (Table 1). Physical attractiveness and material resourcefulness were more important for sighted adolescents than for adolescents with visual impairment. However, the reverse was true for emotional maturity.

Regarding our fourth research question, we tested whether the criteria of mate selection of blind adolescents differed from those with low vision. There was one significant difference. Physical attractiveness was less important for blind respondents ($M = 2.67$) than for respondents with low vision ($M = 2.92$; $F(1,179) = 3.96$, $P < .05$).

Next, we analyzed the quality of the intimate relationship of adolescents with and without visual impairment. A higher percentage of adolescents with visual impairment (41%) than of sighted adolescents (27%) reported that they had a present romantic relationship ($F(1,679) = 6.18$, $P < .02$). The perceived quality of the intimate relationship did not vary by vision status (Table 1). This was also true when comparing adolescents who were blind and who had low vision.

We had also asked all respondents whether their romantic partner attended the same school as they did. From the group who had a romantic partner at present, 51% of respondents with visual impairment and 31% of their sighted peers answered this question affirmatively ($F(1,264) = 9.41$, $P < .002$). Because adolescents with visual impairment attended schools for students with visual impairment, this result indicates that the majority of those who had a romantic relationship had a partner who was also visually impaired.

Discussion

Young people with visual impairment fell in love, dated, and experienced their first romantic relationship later than their sighted peers. However, the two groups did not differ in the timing of the first sexual intercourse. Physical attractiveness and material resources of potential partners were more important for mate selection of sighted adolescents than for their peers with visual impairment. However, the reverse was true for emotional maturity. In addition, both groups reported a similar quality of their intimate relationship.

Our results on the time of first falling in love and dating are in line with previous studies [2, 8]. As dating experiences were reported slightly less often by adolescents with visual impairment than being in a romantic relationship, our results indicate that some adolescents with visual impairment may skip dating. For example visual impairment restricts the use of places for dating that are typical for sighted adolescents, such as pubs [25]. Because many adolescents with visual impairment were in a romantic relationship with a student from their school, they often use the school context for coming into closer contact. Several factors may have contributed to the observed high frequency of couples with both partners being visually impaired. First, this trend was probably based on the proximity to these students at their school. Second, adolescents with visual impairment are less likely to use places for dating that are typical for sighted adolescents [25]. Finally, these students may expect that partners with visual impairment are most likely to satisfy their emotional needs.

Although our study estimated a 1-year delay of the first sexual intercourse of adolescents with visual impairment, this difference did not reach statistical significance. This may have been based on low statistical test power because two-thirds of the respondents had not yet had sexual intercourse [23].

Regarding our second research question, we found limited evidence for stronger delay of building intimate relationships in male adolescents with visual impairment as compared to their female peers. Gender differences were probably reduced by the fact that the majority of adolescents with visual impairment formed romantic relations with peers who were also visually impaired. In this case, the timings of romantic events of male and female adolescents with visual impairment are closely linked.

The third research question addressed criteria for mate selection. Similar to research on blind adults [13], we found that physical attractiveness and material resources played a smaller role for adolescents with visual impairment. The greater importance of “inner values” for adolescents with visual impairment supports a popular saying that what is essential is invisible to the eye. Nonetheless, emotional maturity was of greatest importance to adolescents with *and* without visual impairment.

With regard to the fourth research question we found lower importance of attractiveness for blind adolescents than for those with low vision. This result probably indicates that students with low vision had sufficient visual abilities for perceiving the attractiveness of mates. Because all of our respondents had serious levels of vision loss we may not have been able to detect more differences. Note that Kef and Tielen [8] also found rather small differences between adolescents who are blind those with low vision.

Regarding our final research question, we found that the quality of intimate relationships did not differ between adolescents with and without visual impairment. At least two factors may explain the mismatch between our results and those from a study with older adults [16]. First, the older adults from the former study had age-related vision loss. A newly emerging vision loss may have more negative effects on relationship quality than visual impairment that was already obvious before forming the relationship. Second, Strawbridge [16] found the largest impairment of relationship quality when asking the sighted spouse. Sighted partners might perceive the quality of the intimate relation more critically than individuals with visual impairment, for example, because of the need to provide support. Unfortunately, we could not collect data from the romantic partners of our respondents.

Limitations and Conclusions

Some limitations of the present study deserve mention. First, our results cannot be generalized to students with visual impairment from integrated schools. An older study had reported that students in special schools for the blind dated earlier and more frequently than their peers who had been integrated into mainstream schools [26]. Second, all respondents came from the highest school track. Because adolescents from low school tracks are more likely to have additional disabilities [27], they may have worse conditions for forming romantic relations. Third, only adolescent self-report data were available.

Despite these limitations, several conclusions can be drawn from the present study. First, adolescents with visual impairment start later than their sighted peers with falling in love, dating, and forming a romantic relationship. However, they catch up, at least as long as they attend special schools for students with visual impairment. Second, adolescents with visual impairment are not less selective than their peers with regard to criteria for mate selection. To the contrary, they rate emotional maturity of a potential partner as more important than their sighted peers. Third, there is no evidence of lower quality of the romantic relationships of adolescents with visual impairment.

Which practical conclusions can be drawn from the present study? Early sexual debut is a risk factor for healthy adolescent development [1] and adolescents with visual impairment tend to catch-up with their sighted peers. Thus, it may not be necessary to counteract the later timing of the development of intimate relationships in adolescents with visual impairment. Nonetheless, the average catch-up leaves the question of whether some young people might remain unsuccessful in forming romantic relations. These individuals may benefit from being encouraged to go out and meet people of their own age and from being

taught the social skills needed for establishing social contacts. Second, as between-group differences in the timing of intimate relations are small, we conclude that sex education for students with visual impairment should start as early as for their sighted peers.

With regard to research needs, future studies should compare the development of intimate relationships of adolescents from different school types (e.g., mainstream school versus special school for students with visual disabilities, different school tracks). In addition, they should include a broader range of levels of visual impairment. Finally, research is needed on factors that help young people with visual impairment to develop romantic relations. For example, motivational factors (e.g., self-efficacy beliefs) and competences (e.g., conversational skills) may play a role. Social factors should also be considered, such as beneficial contexts for coming closer to others, and availability of advice by parents, peers, teachers, counsellors, or the internet. One might suggest that these factors are exactly the same for people with and without visual impairment. However, we found evidence that dating may play a lesser role in establishing romantic relations for young people with visual impairment. Similarly, compensatory skills would be needed when the adolescent is not able to perceive the subtle visible expressions of interest of possible contact partners.

Acknowledgment The present study was supported by a grant of the German Research Council (grant Pi291/9-1).

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