

The Impact of Visual Impairment on Perceived School Climate

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ABSTRACT

The current investigation examines whether visual impairment has an impact on a student's perception of the school climate. Using a large national sample of high school students, perceptions were examined for students with vision impairment relative to students with no visual impairments. Three factors were examined: self-reported level of happiness, perception of a positive school climate, and negative school affect. Results revealed no differences for the seeing and visually impaired students on self-reported happiness and perception of a positive school climate factors, however significant differences were found on the negative school affect factor. Additionally, gender was significantly related to the negative school affect factor.

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1. INTRODUCTION

The current investigation examines if students' perception of school climate is influenced by the presence of visual impairment. Because visual impairments, including full and partial visual impairment, are designated as low incidence disabilities, the frequency of the disability is low in the school-age population. As a low incidence disability category, it is rare that regular public schools educate students with visual impairments. Because the incidence of visual impairment is low compared to other disability categories, such as high incidence disabilities, there is a paucity of research concerning this category of students who are attending public schools.

Huurte, Komulainen, and Aro [1] found that sighted adolescents and those with visual impairments had similar levels of self-esteem as reported by self-ratings on questionnaire survey data. Further, the researchers found that interpersonal relationships were strong predictors of self-esteem for both sighted adolescents and those with visual impairments. Similar research on the importance of social support for students with visual impairments was also supported by Kef [2]. Litvack et al. [3] posit that students with disabilities benefit from interpersonal relationships with their nondisabled peers. These researchers found that nondisabled peers viewed students with disabilities more favorably when they had less severe disabilities, but learning about the students' disabilities positively impacted their perceptions of those students.

Likewise, Hess [4] found that students with visual impairments who reported having a positive school climate were less likely to feel stigmatized than did those who reported having a negative school climate. Interestingly, this study also found that measures of positive school climate and positive attitudes in the schools were highly correlated for students and teachers. Thus, for students with visual impairments, there was no significant social barrier in schools that had positive climates.

To assess school climate more specifically, Hung, et al. [5] researched samples of middle school students. In this line of research, three factors were assessed, including authoritative structure, student order, and student support to measure student emotional difficulties, conduct issues, and peer victimization. The

researchers found a negative relationship between authoritative structures and orderliness with emotional difficulties, conduct issues, and peer victimization. Thus, schools greater structure and order had fewer social and emotional issues reported. This line of research supports how different school settings can influence (for better or worse) social and emotional outcomes for all students.

2. CURRENT INVESTIGATION

There is a paucity of research examining the association of school climate with visual impairment. In the present study, it would be expected that the data would support the claim that students with full vision perceive a more positive school climate, while students with visual impairment perceive a more negative school climate. The goal of the research is to determine the relationship between these variables to support or reject such claims. This is the first know study to examine this relationship.

3. RESEARCH METHOD

3.1. Participants

Participants in the study included students in grades seven through twelve during the academic year ($n = 1,218$). Of those participants, only 11 respondents identified having visual impairment in the sample of data. For purposes of conducting statistical analyses, responses from 1,188 students were used. Students were omitted if they did not answer the questions used in the analysis. Participant's responses came from a national survey [6], it is likely that the results are representative of the true population and are generalizable.

Participants included $n = 550$ male and $n = 638$ female students. Table 1 summarizes the numbers of students analyzed according to grade level.

Table 1. Number of student respondents by grade level

Grade level	7	8	9	10	11	12
Number of students	172	191	196	218	206	205

As shown in Table 1, there was a relatively balanced distribution and number of respondents between the six different grade levels. Interestingly, descriptive statistics revealed that only eight respondents identified as blind. This included 6 male respondents and 2 female respondents. Thus, to attest to the low incidence of visual impairment, only 0.67% of the sample included respondents who identified as visually impaired (blind).

3.2. Instrumentation

Data were obtained through the National Longitudinal Study of Adolescent Health. The statistical analyses were conducted via the Statistical Package for the Social Sciences (SPSS). Data had to be properly coded to ensure reliable statistical analyses were conducted. All data was coded according to the specification of the code book for the National Longitudinal Study of Adolescent Health was consulted by the researchers. Factors were computed for the following variables: happiness, positive school climate, and negative school affect. Variables that were used for the happiness factor included: just as good as other people, hopeful about the future, happy, and enjoyed life (Cronbach's $\alpha = .930$). Variables that were used for the positive school climate factor included: feel close to people at school, feel part of your school, happy at your school, teachers treat students fairly, and feel safe in your school (Cronbach's $\alpha = .842$). Variables that were used for the negative school affect factor included: trouble getting along with teachers, trouble paying attention, trouble getting homework done, and trouble with other students (Cronbach's $\alpha = .870$). To conduct the ANOVAs, the factors were analyzed to determine their relationships with three particular variables: visual impairment, biological sex, and grade level. Grade point average (GPA) was also analyzed in the ANOVA.

4. RESULTS AND ANALYSIS

Data includes was a mixture of continuous (the factors) and categorical (biological sex, visual impairment, grade level). ANOVA was considered the most appropriate analysis. Strong significant correlations do not exist between the three factors, ruling out a MANOVA analysis. All necessary conditions for conducting an ANOVA were met. ANOVA revealed that visual impairment was significantly associated with the students negative school affect factor, $F(1,1170) = 43.725, p = .005$. No significant findings were revealed for the happiness or the positive school climate factor. For the negative school affect factor, $F(17,$

1170) = 2.696, $p < .001$. Biological sex was also found to be significantly related to negative school affect, $F(1, 1170) = 1.29$, $p = .045$. Figure 1 demonstrates how the happiness differs between blind males and females.

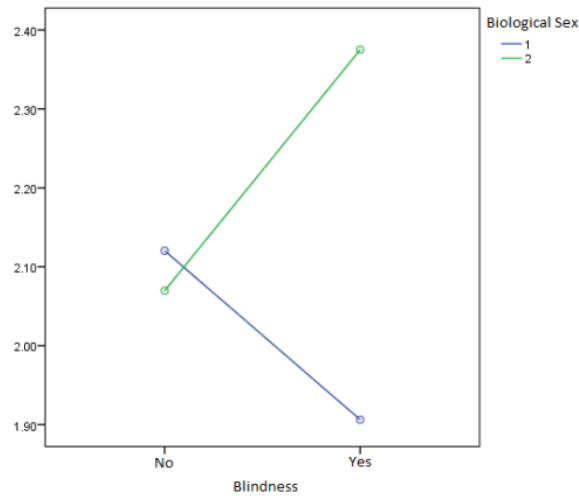


Figure 1. Differences in happiness between blind males and females

As indicated in Figure 1, sighted males and females appear to have nearly the same level of happiness, while blind females report a higher level of happiness relative to the vision impaired males. Just as Figure 1 demonstrated the influence of biological sex on happiness for vision impaired individuals, Figure 2 demonstrates how grade level influences happiness for vision impaired individuals.

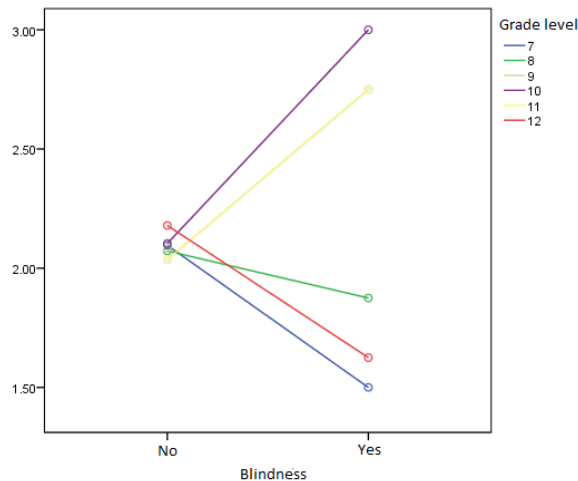


Figure 2. Differences in happiness between grade levels

As depicted in Figure 2, sighted students in all secondary grades had similar levels of happiness. However, for vision impaired students, happiness differed for each grade level. Middle school students (grade levels 7 and 8), as well as high school seniors, appeared to be report lower levels of happiness relative to other high school students. No data were available for ninth grade students.

The working hypothesis for the current investigation is that there is a relationship between status of visual impairment and students' perceptions of school climate. ANOVA analyses reveal a relationship between visual impairment and perceived school climate was significant, confidence intervals were examined. As evidence by the above data and the graphical depictions, it is clear that both grade level and biological sex may moderate the relationship between visual impairment and school climate.

The observed differences between groups (male, female; grade levels; not vision impaired, vision impaired) may be impacted by the limited number of individuals in the current sample identifying as having a visual impairment. However, because the three factors appeared to be highly correlated, differences are unlikely to be found if factors or variables are omitted from future analyses.

5. DISCUSSION

The present study found that visual impairment does impact students' perceptions of negative school climate. Potential problems with the study included a low sample size for respondents who identified as vision impaired. Because only eight participants identified as vision impaired, this may have impacted the effect sizes and significance of relationships between variables and factors.

Based on the analyses, it is difficult to draw concise results. Though there is a general relationship between the factors and visual impairment, there are no strong relationships between individual factors and visual impairment, as well as individual factors with other variables. Visual impairment is a low incidence disability, so small sample representations are unavoidable [7].

It is unlikely that there are alternative explanations for the findings presented in the current study. These findings are consistent with recent research suggesting that when visually impaired students attend public school, there are many additional challenges for these students to overcome [5],[8]. These challenges include academic challenges as well as peer and teacher perceptions and pre-existing expectations.

Since the population of visually impaired students attending public schools is growing, the results of this investigation have policy implications for building and district administrators in the local school districts. Mechanism must be in place for visually impaired students to participate fully in the educational opportunity. Beyond the "logistics" of schooling, however, the current study results suggest that efforts may be needed to ensure that the school's embrace the social, emotional, and psychological needs of all students, and specifically visually impaired students. While visually impaired students reported no significant differences on personal affect and school culture questions, visually impaired students endorsed higher on some of the negative climate questions. Specifically of interest is the higher endorsement of responses indicating differences in "getting along with other students". Is it possible that students who are visually impaired are more vulnerable to bullying and harassment from their same-aged peers? If these students are having a more difficult time getting along with peers, more counseling and mentoring maybe needed for these individuals so that they can navigate these person-related difficulties as well.

A major future question that failed to be addressed by the present study was how grade point average is impacted by visual impairment and perceptions of school climate. Future lines of study should address this question, as well as readdress the data in the current study. Because the current data were surveyed during the first wave of the [6] data collection, perhaps a primary data collection can support different findings due to the current support for inclusion for students with disabilities in general education settings [9]. However, the current sample of visually impaired students all attended public school. These students attendance of a public school may have impacted the lack of significant findings [2],[3]. Another future line of research could examine if differing levels of severity of visual impairment, including a range of visual impairment to complete visual impairment, moderates what students report about their experiences. The present study only included self-reports of the presence of visual impairment, but not severity. Perhaps severity of visual impairment influences the relationship between visual impairment and school climate.

6. CONCLUSION

The current investigation adds to the paucity of research on the experiences of visually impaired students in public education. Results are consistent with other recent research, however, the outcome of this investigation suggest potential psycho-social issues may exist for students who are visually impaired that are not being reported by same-aged peers. In addition to the negative affect differences revealed, visually impaired male students reported lower levels of happiness relative to visually impaired females. The findings of the current investigation suggest that as a greater numbers of visually impaired students enroll in public schools, more school psychologists are needed. Additionally, these results reinforce the existing need for school psychologist and school counselors, as well as trained administrators, actively involved in helping students with visual impairments to have positive school experiences. While the current investigation was based on a limited number of students identified as visually impaired, the small sample is representative of the proportion of visually impaired students found in public schools.

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Benjamin Schade, M.Ed. earned his B.A. in psychology from Lock Haven University and his M.Ed. in intervention services from Youngstown State University, where he is currently studying school psychology. His research interests include school climate, bullying and cyberbullying, and improving outcomes for students with disabilities. He serves on several committees for the College of Graduate Studies at YSU and is Vice President of the school psychology student organization.



Karen Larwin, PhD. acquired her Ph.D. from Kent State University in Evaluation, Measurement, and Statistics in 2007. She currently serves as a professor at Youngstown State University. Dr. Larwin has participated as the evaluator on multiple federal and statewide grant supported projects over the past decade. Her primary teaching focus is in the area of research methods, quantitative methods, evaluation, and measurement. She is currently a Chair for the American Evaluation Association's Quantitative Methods: Theory and Design TIG.