Presence of Depression in Indian Blind Students

Sumeet Alagappan, 2009
Adviser: Richard Ryan, Ph.D.
Department of Clinical and Social Sciences in Psychology

Many depression studies have been conducted with blind geriatric patients, but most studies have not focused on younger subjects. For example, in the study “Association between visual impairment and depression in the elderly”, blindness was found to be positively correlated with depression. In “Detection of depression in patients with low vision”, a wider range of individuals with visual handicaps was studied. However, this study did not consider adolescents and young adults. Since such groups have not been tested for depression, it remains undetected and untreated. In hopes of filling this void, these blind students were interviewed and assessed by both qualitative and quantitative observations.

Purpose & Approach
The main purpose of this cross-sectional study was to explore the relationship between visual impairment and depression in Indian blind students. It was hypothesized that blindness would result in a high incidence of depression. A total of 164 students, 23 females and 141 males aged 13 to 25, were administered the Beck’s Depression Inventory (BDI – II), Bartheil’s Index, and a supplementary questionnaire that assessed basic demographics, the extent of the students interactions with others and specific questions dealing with activities of daily living. The participants of this study were from the all-boy school St. Louis Institute for the Deaf and the Blind in urban Chennai, India and the coeducational Askwith School for the Visually Handicapped in rural Tirunelveli, India. Depression was the primary dependent variable in this study. The variables of mean age, gender, degree of blindness, age of onset, rural or urban school, their independence and the involvement of family members were tested as possible predictors factors that cause of depression. This research did not only consider depression

but also the many other implications of being visually impaired and was conducted in hopes of learning more about this particular population.

Observations
The attitude the students held regarding various aspects of their lives were often shaped by their visual impairment. Gender differences, school attended, and degree of family involvement are a few factors that visibly impacted their outlooks on life. Despite their disability, their overall stance on life did not appear to differ substantially from those who are not impaired. There were both optimistic and pessimistic students but most were neutral in their approach, seemingly accustomed to their way of life. Many reported that they had gone through phases of despair at some point in their lives as a direct result of their handicap.

Certain responses to the query of whether blindness obstructed the students from the future they wished to have were particularly telling. Strikingly, one male student from Chennai claimed that he was pleased to be blind. When questioned further, he thoughtfully replied that if he had vision, he would have been wasting time watching television and surfing the Internet. However, due to his blindness, he was able to concentrate completely on his education. Responses like his were inspiring and unusual but introduced a new perspective to understanding the lives of blind individuals. This was an exception to most cases since very few members of this sample were satisfied to his extent by their visual impairments.

A comparison of students in the urban Chennai and the more rural Tirunelveli revealed that those in Chennai were more confident and driven than those in Tirunelveli. Of the students in Tirunelveli, the male students appeared dramatically more optimistic than the females. These
differences could be attributed to the influences of the regional culture in which they were raised. The education and opportunities available to those in the city are greater than those available to students in more rural locations. Government funding is generally higher for the city students as well, which may explain some differences in the availability of services. The belief that females are inferior to males still exists in rural parts of the country; therefore, they are generally more oppressed than males. This observation is limited, however, since female data from the all- male school in Chennai could not be collected. The female students in the rural school seemed unsure of their future and felt that they were not likely to go beyond high school. Even those who were planning on attending a college believed that due to their visual limitations, they would most likely be restricted to becoming a teacher at a blind school. A fairly large number of students in both schools stated that they wished to pursue a career in music or teaching. However, the responses in Chennai were much more varied than those in Tirunelveli. In Chennai, many students stated an interest in engineering and felt that they had more options. They often specified the degree they wished to attain. Even the younger students had a positive outlook regarding their future. Many students in Tirunelveli did not even have a response to the question and the few who did were geared toward teaching. They explained that they did not really know what else they could do given their condition. Signs of depression seen in these students could be attributed to their uncertain academic future and lack of choice.

When asked whether they believed they were a burden to their families, students generally responded that at this point in their lives, they felt like a burden regardless of their life goals. Those in Chennai were more certain that, although they considered themselves to be a burden presently, they would cease to be in the future when they could begin to financially support their family. The

students in Tirunelveli did not have such high hopes of attaining higher education and felt that their occupational options were limited to low paying fields. Most of the students acknowledged that their lives would have been significantly different if not for their visual impairment. They would have had more opportunities and would not have been completely closed off from fields they may have otherwise explored. During a group discussion, one student expressed a desire to pursue medicine but was immediately teased by his friends on how impractical his ambition was. Many of the older students explained that they would have been in college if they had vision. Some of the students were already in their early twenties and still in school. These were mostly students who became blind later on in life and had to adjust to the onset of the handicap. Therefore, they had to learn the basic necessities of living as a blind person and were placed in lower grade levels.

Typically, the students interacted well, closely bonded and protective of one another. There were normal skirmishes (clarify what a normal skirmish is), but in general the students were very close. The older students at the school helped to look after and assist the younger children and newly impaired students. In Tirunelveli for example, the older girls helped care for the nursery students. Also, most of the students grew up with each other. In Chennai, most known each other since the first grade and in Tirunelveli many started nursery school together. Since most of them lived on the school campus from such young ages, they reported that they felt safer and happier at school than at home. For them, the school was their home and sanctuary. The students felt most comfortable when they fit in with others and could understand what their peers were going through. At school, the students could relate to one another easily.
since they were united by blindness. However, when away from the school, they felt isolated from the sighted society. Several of the students mentioned that they did not blend in with other kids in their neighborhood and reported looking forward to coming back to school.

The schools instituted a mealtime system where the partially sighted students would distribute the food to the completely blind students. They were responsible for their own dishes and stored them in their own designated locations. When walking from one destination to another, many times a student who was affected with partial blindness would lead the group while the others would hold on to one another. In this way, they could get to places safely and in groups. Newer students were assisted in this manner as well. Once a student was adjusted to the environment, they said that they confidently walked alone.

The classroom setting for younger students was commonly in a U-formation with the teacher in the front and center. This way, the teacher was able to reach all of the students easily and assist in learning the basics of the subject. The U-formations proved accessible for blind teachers as well. For older students, the tables were in rows since they were more independent and did not need continual assistance. For most of the class, a teacher would dictate from textbooks and the students would copy it in Braille into their own notebooks. They would then study these notes. For math they used small plastic or metal pieces with raised dots on the surface that represented different numbers when placed in different positions.

The students were very well behaved in their classes. Since they had to base their learning on what they heard, they could not afford to fool around as they would be unable to write notes. Most of them focused on what the teacher was instructing and would ask questions or request repetition. Even when the teacher had to leave the class, the students remained seated and conversed responsibly. This could be explained by how their safety depended on being responsible and aware of their surroundings. If they acted foolishly and did not pay attention to guidelines, the consequences could be detrimental.

Teachers were exceptionally friendly toward the students. They were very approachable and supportive of the students. This was surprising since most schools in India are generally strict; punishments are severe and students have many assignments that must be complete. However, in the blind schools, the teachers were more lenient and assistive rather than austere and demanding. This may have been because they wanted to make the students’ experiences in school positive and ensure that they did not go through more stress than necessary. The teachers themselves were often blind and were thus very understanding. In many cases, they were even former students of the same school.

The degree of influence and involvement that the families had with the blind students varied as well. While many students claimed that their parents were very supportive, there were other instances where this was not the case. One individual who did not live at the school was both blind and mentally challenged. He said that whenever his family left the house, they would lock him up alone at home. He was noticeably upset about his situation. There were other cases where students said the opposite and reported that their parents took more care of them than their sighted siblings. Yet most of the students said they were treated equally as sas their siblings. One student disclosed openly that he had been depressed and suicidal in the past. However, the support his family provided helped him overcome that stage in his life. He said that he was currently very content and that this was mainly due to the encouragement he had received at such a crucial point in his life. His family worked with him on becoming accustomed to life with blindness as a blind person, and he eventually learned how to cope with his blindness.

Many of the students reported that their parents are blood related, often first or second cousins. This close genetic relation between parents may have resulted in the blindness of their offspring. Some siblings attended the school together. Marrying close relatives is becoming less common in India but does still exist. In the uneducated and poor regions, these marriages occur more frequently. This may be due to a lack of awareness of the risks associated with intrafamilial marriage.

Most of the adult family members worked in low-income jobs. The effect of this was more apparent in the rural school. Many family members could not afford to visit the student on a regular basis due to their financial limitations and many students were shabbily dressed. Even personal talking watches were rare in this school. To tell time, the students often depended on the rare student who had a watch or asked a teacher. Most of the students in Chennai had these watches. One student who did not have one said that he would get one only when his parents could afford it. The students had few possessions outside of their basic essentials and they carried very little pocket money.

In India clothing is generally washed by hand on a daily basis and hung up to dry during the day. In Chennai, the students were responsible for washing their own clothing. When asked how they could identify their own clothing, they replied that either they left their clothes hanging in their own rooms to dry or had a specific spot that they would always use. This way, they would not confuse their clothing with those of others. To match colors they would either have their clothing marked in some way or have a sighted person help them.

A typical classroom for grades nine and higher in Tirunelveli, India. For lower grade levels, the tables tended to be organized in a U-shape, with fewer students, to optimize student-teacher interaction.
The students could identify who had passed them in the hall or on the grounds. It was surprising when the students could detect the unfamiliar scent of sunscreen and immediately ask who it was. Similarly, the students could determine if a passerby was female from the smell of jasmine flowers that are worn on the head almost every day by Indian women. In the male-only school, they would quickly assume that the flower scent was from a female teacher. Even when individuals walked into a class quietly, there were students who acknowledged their presence.

Scribing for a student during a midterm exam was an informative experience. It was interesting to see how a relatively simple task for a sighted person was so much more difficult for the blind. For multiple-choice questions, they had to remember the auditory input they received for each choice before making a decision. If they needed to clarify a section, it had to be restated for them. Keeping everything on the page in the head is definitely a challenge. However, it is a system they are used to. For essay questions, they would dictate the answer and a scribe would write it. They could then ask the scribe to reread any questions they wanted to modify. If they chose to skip questions to revisit later, they had to be told which ones they had missed. For a sighted person it would be much easier to just flip through and add anything they might have left out.

A mock exam was conducted with the students to see whether they could accurately identify three common Indian coins and two paper bills. The methods used by the students to aid in identifying them correctly varied. Some students completed the test with coins of which they could not tell, recognize. They used the concept of comparing relative sizes. Those with partial vision moved to where there was more light in order to see better. Some students smelled the money. Others dropped the coins on the table to hear the varying degrees of heaviness and were able to make conclusions based on the sounds. Similarly, some tapped the coins against the table. It was truly devastating to hear students confidently provide incorrect responses, or surprising was how clueless some of the students were when it came to identifying money. One student was convinced that a note he held up in his hand was valued at 1 rupee. However, I replied that there was actually a 10 rupee note. Others, mainly the partially blind students, were extremely fast in stating their answers. Other students would openly state that they could only identify either coins or notes but not both. Although some did seem to have misconceptions if their responses were incorrect, others were visibly disappointed with themselves if they missed just one or two.

Data Analysis

The mean age of the students in this study was 16.12 years. The participants of this study were students; therefore, this number is appropriate. In the Chennai School, students from 7th grade to 12th grade were considered to be adequate. The score for all students between 0-13 is considered minimal, 14-19 is considered mild, 20-28 is defined as moderate, and 29-63 is considered severe depression. This can be adjusted based on the sample however.3 The BDI-II result with a mean value of 4.62 is in the minimal range according to the recommended scoring. In this sample, the scores ranged from 0.26. A floor effect may have occurred where many individuals showed little to no depression that even those who had found it were undetectable.4 High levels of depression were believed to exist in the sample, but they were only detected in blind individuals. Barbets Index is scored on a scale of 0-100 with higher numbers correlating with higher reports of independence.5 Although it is used quite commonly with people suffering from severe disabilities, it is not highly sensitive as those who go up in increments of 5 and thus it is difficult to get the exact numerical response that the respondent may wish to express. Barbets’ Index Give a result of 88.47 out of 100, which is relatively high. This may be considered a ceiling effect since very few people reported that they were dependent on others. They felt that the tasks assessed in Barbets’ Index were uncomplicated.

To compute the three options that children with siblings chose regarding their perception of the attention that they received compared to their siblings. The first contrast (cont1) compared feeling ignored with perceiving equal attention as siblings. The second contrast (cont2) compared feeling ignored with perceiving more attention than siblings. The results indicate that perception of parent attention compared to siblings significantly accounts for 7.9% of the variance in depression scores, F(2, 127) = 4.97, p < .01. Specifically, feeling ignored compared to their siblings versus perceiving receiving an equal amount of attention as their siblings, perceived higher depression scores among girls on this sample, r(127) = 3.30, p = .001. Moreover, perceiving more parent attention compared to siblings as opposed to perceiving an equal amount of attention also predicted higher depression scores, r(127) = 10.7, p < .001. Comparing children who felt ignored and children who perceived more parent attention did not significantly predict depression scores. No other variable significantly accounted for variance in children’s depression scores.6

Conclusion

Although conclusive decisions cannot be made purely from the results of this study, it could be used as a stepping-stone in the quest for a better evaluation of depression in blind students. Although several individuals showed high levels of depression, the overall sample did not. This may be a result of having such young people respond; they may not have a clear understanding of what depression involves. Perhaps in the sheltered schools they attend, depression is not present. When they enter the real world, however, they will face challenges they had not planned for. Both the BDI-II and Barbets’ Index were useful tools in analyzing the impact of visual impairment on depression. The way that blind students live is very different from how typical ones do. Also, there is a lack of little sense of unity among students and staff, the structure of school life, their optimism, their interactions with other family members and future ambition are all defining aspects of their life. Their entire prospective of life was influenced dramatically by their blindness.

Acknowledgements:

The authors would like to thank the students, Meenakshi Sundari Palanirajan, Richard M. Ryan, P.D., Nicole Legate, the principals, staff and students of St. Louis Institute for the Deaf and the Blind and the Aski School for the Visually Handicapped, Amrita Alagappan, Sivagurum Alagappan, M.D., Subbulakshmi Palanirajan, Palanirajan Thandavaranay, Loganathan Thandavaranay, Guru Trikulanathan, M.B.B.S., Sarah G. Farrow.

References