

The Needs and Problems of Students with Visual Impairment

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ABSTRACT

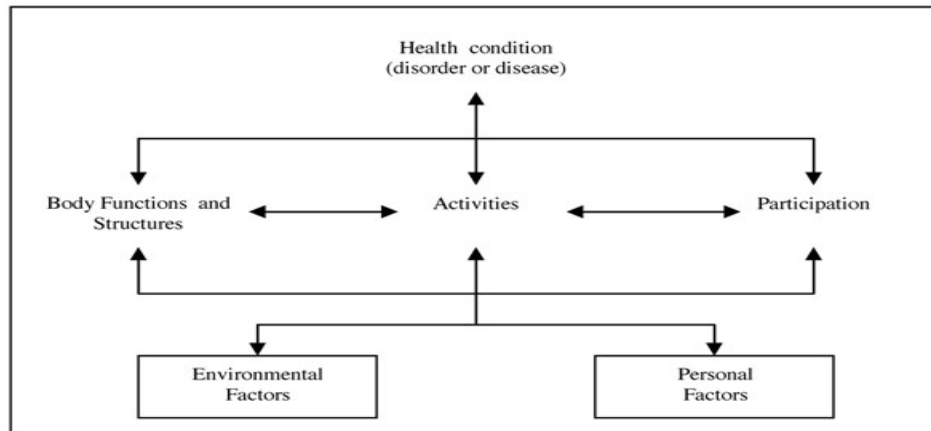
This study aimed to evaluate the needs and problems of students with visual impairment. This is a descriptive study with convenience sampling method. The population consisted of all students with visual impairment in Tehran, Iran. Subjects included 120 male and female students with visual impairment enrolled in Shahid Mohebbi school (for the male blind) and Narjes school (for the female blind) in academic year 2015-2016. The recruited instruments were interviews and Needs and Problems of Iranian Female Disabled Questionnaire. Reviewing the needs and problems of students with visual impairment in the areas of violence, commute, communication, leisure, education and employment, we realized their diverse needs and problems compared with normalpeers. Studying these areas takes a functionalistic approach to adapt services and plans to the needs of students with visual impairment. Of course, improving the services provided to people with visual impairment in accordance with the adaption of services to their needs paves the ground to build cooperation, reduce poverty, and enhance the quality of life for visually impaired students.

KEYWORDS: Students with Visual Impairment, Problems, Needs, Violence, Commute, Communication, Leisure time, Education.

1. INTRODUCTION

According to the World Health Organization (WHO), disability is a set of physical and mental disorders which keep a person from an independent individual and social life [1]. Among disabilities is visual impairment; in fact, visual impairment is one of the most common disabilities [2]. The World Health Organization (2011) reported that about 285 million people worldwide are visually impaired. Of this number, about 39 million people are blind and 246 million have low vision. Studies indicate that 1.2 per thousand children suffer from some form of visual impairment [3]. More than 90 percent of people with visual impairment live in developing countries [4]. Based on Iranian National Population and Housing Census (2006), the total number of the blind people in Iran is 94231 (Statistical Centre of Iran, 2006).

World Programme of Action notes that disability is caused by the disruption of the relationship between disabled people and their environment, occurring when the cultural, social and physical obstacles produce a lack of accessibility for people with special needs to different social systems provided for the normal ones [5]. Thus, visual impairment and its effects can be evaluated from multiple perspectives. One of the most common perspectives is the International Classification of Functioning (ICF) provided by WHO. This category includes three-dimensional concepts: “defects”, “activity”, and “participation” in which “disability” and “handicap” have been replaced by the terms “activity” and “participation” (Figure 1). ICF has placed its focus and attention on the environment in which one lives (cultural environment, social environment and the architecture of the environment) rather than the individuals themselves [6]. Therefore, we seek to follow ICF in studying violence, commute, communication, leisure, employment and education as personal and environmental aspects affecting students with visual impairment to achieve a functional approach to adapt services and plans to the needs of students with visual impairment.

Figure1: Interaction between ICF Components

1.1 Violence

WHO defines *violence* as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation. “Victims of violence are gravely at the risk of behavioral and psychological problems such as depression, alcohol abuse, anxiety, suicidal behaviors and problems related to reproductive health [7]. Recent global reports on disability suggest high physical violence towards people with disabilities as a major risk factor for health in this group [8]. Sobsey and Mansell in their study on 220 abused disabled children found that most of them were often abused by their family members or people close to them, mostly peers. They were also at the risk of abuse by those who provided services for their specific needs[9]. In another study, researchers examined childhood sexual-abuse prevalence among visually impaired men and women aged 18 - 65 years in Norway. The results revealed that the adults with visual impairment experienced more childhood sexual-abuse than the normal ones [10].

1.2 Commute

Commute can be a significant source of stress for many people, influencing temperament, health, and other aspects of psychological satisfaction [11]. Studies on the relationship between the built environment and health often focus on housing, transportation and living place features [12]. Mobility and communication obstacles prevent the full participation of individuals with disabilities in cultural and economic activities. These obstacles can be problematic when -due to the restrictions in activity and employment- cause problems and financial stress for the individual with visual impairment [13]. Studies suggest that an inappropriate transportation system is one of the obstacles to the employment of individuals with visual impairment. The results of a study [14]done in order to identify the needs of people with visual impairment in Canada, indicated that their main need was an easy access to transportation system and its related information. The researchers found that lack of information on services related to transportation, how to access it and where to find it limited the ability to live independently for visually impaired individuals [15].

1.3 Communication

According to WHO, participation in everyday activities is determined by the interaction between visual defects and the limitations in all activities in the field of individual characteristics and environmental features [16]. The ability to *communicate* effectively with others is essential for a good life quality. Communication among individuals with visual disorder and severe intellectual disabilities may be substantially endangered [17]. There is an internal relationship between sensory defect, mental and social functioning, and communication. It is well-documented that people with sensory impairment suffer from communication problems and reduced psychosocial functioning [18]. The results of a study on 316 adolescents with visual defect indicated that social networks for such adolescents are far smaller than their sighted peers [19]. Students with visual impairment due to several reasons suffer from some communication problems, including: negative attitudes of society toward individuals with visual impairment, extreme parental support and empathy [20], not receiving visual feedback on their behavior, lack of role models, lack of special visual skills, rejection and negative reaction from parents because the child with visual defect does not encourage them with a smile or direct eye contact, rejection by classmates for visual impairment, rejection due to low awareness about the games, short and self-centered talks, and lack of focus on group activities[21].

1.4 Leisure

Leisure time is defined as the allotted time for activities freely chosen, pleasurable in doing when not involved in self-care, school or work [22]. Although participation in leisure activities leads to positive self-esteem, sense of competence and higher academic achievement [23], leisure activities for young people with visual impairment is significantly different from their peer sighted ones. Youth with visual impairment have less social interaction with their friends and spend most of their time alone. They have limited activities, less independency, and constant company of parents. Leisure activities of youngsters with visual disorder can also be influenced by lack of access to convenient transportation, recreational facilities, information, and lack of qualified instructors and people who have positive expectations of them [24]. Low levels of leisure participation, at a young age, can bear horrible effects on one's motivation to participate in future activities [23]. Thus, the adaptation of the environment so that it could be congruent with the abilities of visually impaired people and supporting their continued participation in leisure activities, may play a significant role in maintaining their well-being, quality of life and life satisfaction in the future [25].

1.5 Education

The effects of defects in body organism are dual and contradictory. On the one hand, such defects weaken and harm body operations, which are seen as negative aspects. On the other hand, disruption in the functions of the organism stimulates other functions to compensate for the shortcomings and fix them, which are considered as the positive aspect [26]. 90% of individuals with visual impairment maintain sufficient vision to receive *education* and training in the use of visual and non-visual means, hence planning to train and evaluate the effectiveness of services for these people is justified [27].

The Expanded Core Curriculum (ECC) for the success of children and youth with visual impairment in school, community and workplace has paid attention to nine areas: Compensatory/Access Skills, Career Education, Independent Living Skills, Orientation and Mobility (O&M), Recreation and Leisure, Self-Determination, Social Interaction, use of Assistive Technology, and Sensory Efficiency skills [28].

To raise awareness and knowledge about the special requirements of visually-defected individuals and correct policy-making to provide services and improve their health, investigation and identification of the needs and problems of these people seems necessary. In addition, studies in this field are limited. Therefore, the purpose of the present study was to evaluate the needs and problems of students with visual impairment.

2. METHOD

This is a descriptive study, and the statistical population included all male and female high school students with visual impairment in Tehran, Iran, 2015-2016. 120 students were selected by convenience sampling. For data collection, Needs and Problems of Iranian Female Disabled Questionnaire [29] was used in face-to-face interviews conducted by trained interviewers. The questionnaire contains 82 items, including two sections of "Reviewing the Current Situation" and "Questions Concerning the Needs and Problems". In the section "Questions Concerning the Needs and Problems", the questionnaire measures areas such as violence, communication, marriage, commute, leisure, economy, employment and education. Its Cronbach alpha reliability is 76%, and its content validity has been confirmed by experts [30]. After receiving a permission from Tehran Organization for Exceptional Education, and coordinating with the principals of Shahid Mohebbi School for the Male Blind and Narjes School for the Female Blind, 120 students (70 males and 50 females) were selected based on the criteria for inclusion and exclusion and by getting the consent of the subjects and their parents (including parents' written and informed consent), the interview and questionnaire distribution among students with visual impairment was conducted by both male and female researchers. Before the implementation of the study, the required permit was obtained from the Ethics Committee of University of Social Welfare and Rehabilitation Sciences (USWR), Tehran, Iran. All subjects were informed of either the nature, purpose or the confidentiality of study results. Subjects were also assured that whenever they wanted they could be excluded from the study, that there is no force or insistence in participation, the subjects' identity and information would remain confidential, and the obtained results would be provided to individuals and institutions with the consent of each and every individual of the groups. Inclusion and exclusion criteria included: 1. being a high school or college student; 2. Being 14 - 20 years old; 3. Lack of severe physical and psychological problems (based on file content); 4. Willingness to participate; 5. Written and informed consent from parents and students; and 6. Have an average IQ (based on file content). The procedure consisted of face-to-face interview, reading each of the items of Needs and Problems of Iranian Female Disabled Questionnaire, and recording given oral answers by trained interviewers. The questionnaires data were collected for final analysis and were analyzed using descriptive statistics.

3. FINDINGS

The findings of the present study are provided in two sections: 1. Demographic information; and 2. Priority needs of students with visual impairment.

Out of 120 students with visual impairment, 52 females had an average age of 16.84% and 48 males an average age of 17.52%. All the students were single. Most of the girls were first grade high school students (50%), while most of the boys were in pre-university grade (42%). All the students were humanities majors. 57.7% of the girls and 35.4% of the boys had their primary education in normal schools. Also, 34.6% of the girls had exceptional education at junior high school, while 31.3% of the boys were educated at exceptional elementary, junior high and high schools. Their parents mostly were poorly educated (fathers=51%; mothers=53%) or had a diploma (fathers=15.8%; mothers=18.8%).

The severity of visual impairment among the subjects was for the most part at an average (31%), or very severe (24.8%) level. The most common cause of visual impairment among them was hereditary diseases (63%), ironically 76.2% of the parents were kin. The most common incidence time of visual impairment was birth time (72.3%) (The age ranges of 0-5 years). The maximum time of visual impairment was 10-15 years (42.6%) and 15-20 year (39.6%). The most applied assistive devices by students with visual impairment were reed (34.7%) and glasses (29.7%).

None of the students in this study were employed and had no source of income other than the allocated governmental salary received from the State Welfare Organization (SWO). All the students were kept under governmental protection and 92.1% of the parents or care-takers had jobs, 61.4% of them had private houses; the average income of the parents or care-takers was between 7 - 10 million Rials* (46.5%), and the average costs of these students was between 1.5 – 2 million Rials monthly (37.6%).¹

The average monthly costs of the household head was 10 million Rials or more (61.4%). 83% of the students were protected by different insurances (16% under Health Insurance, 54% under the Social Security Insurance, and 13% under Armed Forces Insurance). None of them had supplement insurance. 83% of the students had living parents. Most of the families had 4 members (28.7%). 65.3% of the services they got were educational services being received for 5-10 years. 91.1% of the students had not been paid any amount of money for the services they got. Furthermore, 52.5% of the students did not consider the services they got adequate in terms of quantity (52.5%), or quality (65.3%).

74.3% of the students did not have an illness or disability except visual impairment. 81% of them had a history of progressive visual impairment. Only 32% of students' family members had visual impairment and 76.2% of parents had consanguineous marriage.

34.7% of the students reported their health conditions as good or very good, 40.6% average, and 23.8% bad or very bad. 47% of the students reported a generally good or very good, 23% moderate and 30% bad or very bad idea about their life satisfaction. Only 46.5% of the students exercised during the week.

44.6% of the students attended various associations for the blind, 28.7% of them were members of cultural or sports associations, 59.4% went to parties and celebrations, 41.6% used recreational centres, 87% attended educational classes, and 77.2% went to public events along with family members. Based on what both male and female students with visual impairment reported, 41.6% of the families asked for their feedbacks on decision-makings (21.8% sometimes and 35.6% never). 62.4% of the students reported very good relationship with their family members, 32.7% normal, and 4.9% indifferent. 40% of the students reported indifferent relationship with people, 39.6% normal, and 17.8% very good. Finally, 55.3% of the students described their dependence on others as low, and 30.7% as moderate.

Table1: The most Common Needs of Students with Visual Impairment

| | | |
|---------------------------|--|-------------------|
| Education | -Society education to create positive attitudes about people with visual impairment; -Vocational education in specific fields; -Training in the use of assistive devices. | 80% 57% 56% |
| Training in school | - The need for special facilities such as books for people with visual impairment; -Healthy children training in schools to get acquainted with the issues and problems of people with visual impairment; - Training school principals and personnel to work with students with visual impairment. | 86% 86% 82% |
| Financial needs | - Financial needs for daily living; - Providing other expenses. | 83% 70% |
| Rehabilitation | - Educational services; - Vocational Rehabilitation Services; - Counseling and social work. | 75% 60% 56% |
| Leisure-time | -The need for a place for sports and recreation for people with visual impairment; - The need for funding for the use of recreational and sports facilities; - Existence of special equipments in places of recreation and sporting. | 71% 71% 70% |
| Communication | - Raising awareness of others to the capabilities as well as the limits of people with visual impairment; - An attitude and without pity from others; - Raising awareness in the field of how to communicate with people with visual impairment. | 89% 80% 77% |

*36,000 rials equal 1 dollar

Table2: The most Common Problems of Students with Visual Impairment

| | | |
|---------------------|--|-----|
| Violence | - Mockery; | 47% |
| | - Teasing and harassment. | 46% |
| Education | -Lack of access to educational resources and facilities in ordinary schools; | 70% |
| | - Restrictions in books, resources and educational materials. | 69% |
| Commute | -Inappropriate sidewalks and public places; | 88% |
| | -Inadequate public transportation services adapted to the requirements of people with visual impairment. | 83% |
| Leisure-time | -Financial difficulties for the use of recreational and sports facilities; | 29% |
| | - Lack of suitable places for people with visual impairment to spend leisure time. | 25% |

4. DISCUSSION

A quick review of the students' demographic information reveals that most students with visual impairment had the experience of attending one or two educational degrees in either normal or exceptional schools / schools for people with visual impairment. On the one hand, students who attended normal schools reported much more educational problems as compared to those who attended exceptional school for students with visual impairment. On the other hand, 86% of the visually defected students stressed that normal children should get acquainted with the problems of people with visual impairment, which shows the need to pay attention to ordinary schools and to provide instructions for normal students to study alongside students with visual impairment. These findings are consistent with study of Askari et al(31) that shows one of the needs of people with visual impairment; understand their condition from family and community and support from them. Furthermore, the students with visual impairment in Tehran who are attending schools for the blind, due to visual impairment, only can choose humanities and some limited technical fields, and are forbidden to choose science.

The important point is the cause of visual impairment (63% hereditary diseases) and its duration (72.3% since birth) which shows the necessity of preventive medical interventions to prevent severe visual impairment in the future. Furthermore, 31.7% of the students had a visual impairment with moderate severity, and 81.2% of students reported their non-progressive visual impairment. So it seems that many of these students maintain sufficient vision to receive education and training in the use of visual and non-visual means, and adaptive skills to increase their independence(27). This fact can be applied in educational programs, the provision of education, and the social acceptance of students with visual impairment. 76.2% of the parents of students with visual impairment were kin which shows the necessity of considering the issue of prevention of visual impairment through encouraging non-consanguineous marriages.

Despite being under insurance coverage, the average monthly income of 83% of the heads of household was lower than the average costs of each student with visual impairment in one month (earning between 7 - 10 million Rials as compared to the high cost of 10 million Rials per month), which reflects the poverty of the families. Also, nearly half of the students did not report satisfaction with the quality and quantity of services they got. So, it is necessary to review the related rules and have a regular assessment of the service-providers to the students with visual impairment.

A comparison of the *priority needs* of the studied students reveals the importance of various fields. For example, society education to create positive attitudes about people with visual impairment is the first priority need of students with visual impairment in the area of professional education and training in the use of assistive devices. This research finding is in line with study of Sharifian-Sani and colleagues [29]which examined the needs and problems of girls and women with physical-motor disabilities with a higher percentage of the need for education.Also in the field of training in the use of assistive devices for students with visual impairment, this study is consistent with studies{32,33}.As regarding the need of communication with others, the first priority for students with visual impairment is raising awareness of others to their capabilities and limits, as well as attitude without pity from others. This finding is in line with the results of Sharifian-Sani[29] and Sharifi[30] which examined the needs and problems of students with physical-motor disabilities in aspects of communication, leisure, violence and commute with further changes in the percentage of students with visual impairment. However, for the third priority (the need to communicate), in contrast to the results of the two mentioned studies, studied students need others to be aware of how to interact with them. In explaining this, it can be said that most people are linked together through non-verbal communication (93%) and only 7% of each communication is verbal or through language [34]. Since people with visual impairment do not enjoy this large share of connections (non-verbal communication), the ability of others to communicate with them is somehow problematic. Therefore, in communicating with people with visual impairment, such delicate points should be considered.

Regarding the need for training in school, the first priority is the need for special facilities such as books for people with visual impairment. Healthy children should get training in schools to get acquainted with the issues and problems of people with visual impairment, as well as school principals and personnel to work with students with visual impairment. This is the next priority of the studied population. The findings of the present

study regarding these three priorities was inconsistent with study of Sharifian-Sani and colleagues [29] which indicated urban architectural barriers and fitness of physical environment as the first priority for women and girls with physical-motor disabilities. To explain these differences, it can be said that students with visual impairment in the mentioned study were enrolled in schools for people with visual impairments that are architecturally-friendly in accordance with their needs, so they feel less priority needs in this field. But women with physical-motor disabilities in the study of Sharifian-Sani and colleagues [29] were mostly active in public places and schools, causing more problems for people with special needs. In other words, the architecture of public places in Iran is not compatible to the required standards for people with disabilities. But the architecture of special Schools persons with visual impairment was compatible to required standard. Also, the research findings were consistent with study Parhoun et al[32] which was an assessment of ordinary teacher training needs and its relationship with hearing-impaired children in exceptional schools. The results of Parhoun study showed that regular teachers and the liaisons of students with hearing impairment had inadequate knowledge and poor performance associated with students with hearing impairment. Parhoun et al[32] in another study assessed the educational needs of students with hearing impairment in normal schools, indicating that they clearly require teachers who can teach students with hearing impairment and schools equipped with facilities for people with hearing impairment, which is in consistence with the present study. Therefore it seems necessary that relevant organizations develop programs to train people specializing in the education of students with sensory impairment (deaf and blind) and provide implementation facilities in schools.

In the case of leisure, the first priority was the need for a place for sports and recreation for people with visual impairment. The second priority was the need for funding for the use of recreational and sports a facility which was in line with study of Sharifiet al[30], except for its order of priorities. It seems people with visual impairment, as compared to other people with special needs, according to their disability and the subsequent deprivation from seeing many natural and unnatural attractions are in need of other types of leisure.

In the field of rehabilitation, the need for educational services was the first priority of male and female students with visual impairment. In the study of Sharifian-Sani and colleagues [29], the first priority of girls and women with physical-motor disabilities was the need for physical rehabilitation aids. In the present study, the need for vocational rehabilitation services, counselling and social work were respectively the second and third priority needs of male and female students with visual impairment, which was not in line with the findings of Sharifian-Sani [29]. It seems, this difference is due to the type of disability, which means that educational services are more necessary for students with visual impairment as compared to rehabilitation aids. So, the separation of people with disabilities and accurate identification of their needs is very important in planning.

Another aspect of this study was related to male and female visually impaired students' problems in the areas of violence, education, commute and leisure. In the field of violence, most problems were related to teasing and harassment, which was not in line with study of Sharifian-Sani and colleagues [29] which had the problem of neglect and aggressive behaviour as the priority needs. What can be said to explain this difference is that students with visual impairment spend much of their time in school or with other students, while, the population of Sharifian-Sani, and colleagues (women and girls with physical-motor disabilities) spent most of their time at home or outdoors. Hence, the probability of neglect or aggressive behaviour from family members or society towards people with physical-motor disabilities as compared to students with visual impairment is much greater. Moreover, this finding is inconsistent with the findings of Kvam[10] which shows a problem of sexual abuse among people with visual impairment, as well as, the study of Jones[34] which reveals the existence of physical and sexual violence against disabled children. One of the most likely explanations for this inconsistency can be cultural differences. In Iran, in most cases, people refuse to express their problems and needs due to certain cultural reasons, including cases of physical violence or sexual abuse. For this, it is unlikely that underreporting of these issues reflects the absence or low levels of such cases.

In the field of educational problems, lack of educational resources and facilities in ordinary schools, and restrictions in books, resources and materials, respectively ranked first and second educational problems of male and female students with visual impairment. This is not in line with study of Sharifian-Sani and colleagues [29], in which movement and commute were top priority problems for girls and women with physical-motor disabilities. This difference in findings is likely due to the different circumstances of students with visual impairment and women and girls with physical-motor disabilities. Because the research population of the present study were enrolled in boarding schools, forcing them to work and stay in schools, as compared to women with mobility impairment, have fewer opportunities to participate in economic or social events and activities. Hence, fewer problems they had in terms of commute. Also, it can be noted that due to the nature of visual impairment and the inability to use ordinary books and educational supplies, more need for books or special educational facilities for visually impaired people is felt.

Inappropriate sidewalks, public places and transportation system fitted for the circumstances of people with visual impairment were the first and second priority problems related to the commute issue which was in line with study of Sharifi [30], and Sharifian-Sani[29] except for their order of priority. In the study of Sharifian-Sani and colleagues [29], the first priority was the traffic problem and inappropriate public transport

according to the conditions and needs of the individual with impairment, and the next priority was inappropriate sidewalks and streets. This finding was inconsistent with study of Gold and Simson [14] which studied the needs of people with visual impairment in Canada. The researchers found that the major problem of people with visual impairment in Canada was the lack of information about services related to transportation and easy access to it. In explaining the difference, it can be stated that Iran and Canada are different in terms of development and urban architecture. So, this is likely the cause of differences in priority problems of people with visual impairment in the two countries.

Finally, in the field of problems relating to leisure, financial problems for the entertainment and sports and lack of suitable places to spend leisure ranked first and second respectively. In the study of Sharifian-Sani and colleagues [29] and Sharifi [30], as regarding to the problems related to leisure, lack of commuting services specific for the use of leisure and entertainment venues was the primary problem of disabled women and female students. The second priority problem in that study was financial problems for the use of recreational and sports equipment and places. In explaining the inconsistency of problems relating to the leisure time of students with visual impairment, as compared with physically handicapped people, it can be suggested that there are much more recreational places for people with physical-motor disabilities. Due to commuting problems, there are certain restrictions in visiting such places. However, visually defected students are not equipped with facilities for people with visual impairment.

5. CONCLUSION

Reviewing the problems and needs of students with visual impairment in the areas of violence, commute, communication, leisure, education and employment, we realized their diverse needs and problems compared with normal people. Studying these areas takes a functionalistic approach to adapt services and plans to the needs of students with visual impairment. Of course, improving the services provided to people with visual impairment in accordance with the adaptation of services to their needs provides the grounds to build cooperation, reduce poverty, and improve their quality of life.

Among the limitations of this study was that it didn't focus on adults with visual impairment. It is recommended that future studies be done recruiting larger sample sizes and more comprehensive samples to increase the generalizability of the findings. Another limitation was the low number of samples as a result of face-to-face interviews, and reading the items of the Questionnaire by trained interviewers to write down oral answers which was a time-consuming process. Another recommendation of this study is the assessment of the conditions of students with visual impairment and other people with special needs by rehabilitation teams through planning supported by relevant governmental and non-governmental organizations and agencies.

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