Female Students’ Orientation and Mobility In Kgatleng District In Botswana

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Abstract- The purpose of this study was to investigate the orientation and mobility of female students with visual impairment at two secondary schools in Kgatleng District in Botswana. The following research questions guided the study: How is the mobility of female students with visual impairment in the schools? How do female students with visual impairment interact to access different places in various environments? What factors enable or hinder the mobility of students with visual impairment? The study utilized a sample of six participants (four female students and two teachers) drawn from a total population of nineteen people; eleven teachers (11) and eight students(8) from the two schools. Interviews and observation were used to collect data which was thematically analysed. The study concluded that the absence of orientation and mobility instruction, femininity within the student factors and lack of public awareness on the importance of the life skills are the hindrances to the mobility of students with visual impairment that inevitably result in students’ total dependence on peers for their mobility. The study therefore makes recommendations to change the predicament of the students in the schools.

Key words: Botswana, female students, orientation and mobility, visual impairment

Introduction.

During the University of Botswana’s community service provision at inclusive mainstream schools in Kgatleng District, in Botswana, it was observed that all female students with visual impairment were being sight guided. They were totally dependent on their peers for their mobility. The interest to investigate female students’ orientation and mobility skills at the institutions in the area developed hence this study. The study, therefore, explores the orientation and mobility of female students with visual impairment at the schools in reference.

Orientation and Mobility

Autonomous movement and travel for people with visual impairment in any setting require two abilities that are symbiotic and correspondingly significant. Before moving from one place to another, a person with visual impairment needs to be environmentally aware of the space around him. Wiener, Welsh and Blasch(2010) refer to this process as orientation; the process of using all the body's senses to establish one's position and relationship to all other significant objects in the environment. In this case, one develops mental images of physical spaces, specific locations, geographical areas, or travel routes. The cognitive maps are updated as the individual perceives novel data and develops expanded concepts of the areas.

When one is well informed and aware of the ecological lay out, one can, through the process of mobility, confidently, safely and efficiently move from one place to the other. Orientation and mobility (O&M), is therefore a professional field dealing with systematic techniques by which individuals who are blind or who have low vision orient themselves to home, school, and community environments and move about independently (Fazz & Barlow, 2017).Orientation and mobility skills are, therefore, important life skills that are inextricably interrelated, interdependent and the two should therefore be integrated in a fluid manner. Both are reliant on precise perceptions resulting from the effective
interpretation of sensual clues into meaningful mobility information (Wiener et al, 2010).

**Benefits of orientation and mobility**

Orientation and mobility has significant benefits to people with visual impairment. In qualitative studies reviewed, (Wiggett-Barnard & Steel, 2008; Hocken, 2011; Griffin-Shirley & Bozeman, 2016), the use of mobility skills and various mobility aids bring psychological and social benefits that include enhanced self-confidence, better sense of protection, improved mental well-being, life satisfaction and acceptance of visual impairment. Other studies have reported that utilization of orientation and mobility aids and skills promote social facilitation by improving community participation, perceived social integration and social contacts (Camp, 2000; Long & Giudice, 2010; Wiener, Welsh & Blasch, 2010). In addition, the practice helps students remain orientated to given environments as a consequence, students are more confident, remain focused in their education and daily activities. When students are proficient in orientation and mobility, they become well informed of their environments. This leads to their independent mobility and consequently, being economically advantaged (Thabyak, 2017).

**Instructional strategies in orientation and mobility**

Itinerant and centre based programmes are the primary models of providing O & M services (Holbrook, Kamei-Hannan & McCarthy, 2017). Usually, instructional strategies may be guided by theories like theories of guided learning, unguided learning, discovery learning and Gardner’s theory of multiple intelligences to mention but a few (Wiener, et al, 2010). It is common to integrate theories during the execution of instructions. Specialists do not often stick to the norm because students have different sensory abilities, levels of instruction, needs and develop ambulatory skills in similar but different ways. Generally, mobility training is on one to one basis and is dependent on the level, degree of impairment and environmental requirements among others.

Central to the instructional strategies to use is the knowledge of the necessary skill areas for students with visual impairment to participate in orientation and mobility programmes. The skill areas include attention, sensory integration, behaviour, concept development, generalisation, problem solving, social skills, orientation strategies and mobility techniques (Holbrook, et al, 2017). Normally, an O & M curriculum is varied and teaches skills that are used throughout the students’ lives. The O & M specialist teaches formal O & M skills and collaborates with other members of the educational team to promote safe and efficient travel for students with visual impairment. Part of the learning is through natural learning which occurs along routes that are part of the student’s daily routine as he/she learns to attend to relevant environmental features along the route that enable him to maintain his/her line of travel, make changes in direction when needed, apply specific cane techniques at appropriate times, and eventually reaches his/her desired destination (Guth, et al, 2010). It is important that O & M specialists provide students with opportunities to familiarize themselves with diverse environments using various mobility aids because practice is the basis of distinct variances in skilled performance of tasks with substantial motor requirements. Practice can be made more effective with thoughtful consideration of the principles of learning. Students complete a sequence of steps as they learn any skill, and instruction should vary according to the stage of learning.

Holbrook et al (2017) posit that the mobility aids may be low tech or high tech; this is dependent on the economic capability of a given country. The long cane remains the principal mobility device the students with visual impairments use for travelling across a wide range of environments. Students should be taught how to use it very well. Alongside the devices, students need to be taken through most of the essential aspects such as eccentric viewing, visual modeling, scanning, spatial updating, cognitive mapping, point of information and many others (Long & Giudice, 2010; Jacobson, 2013). In line with some theories that support O & M training, cognizant of the occurrence of natural learning should be taken as students construct their own knowledge through social milieu.

**Acceptance of the orientation and mobility rationale**

Orientation and mobility, as an entity, is one of the unique skills identified as a related educational service in the 1997 regulations governing the implementation of Individuals with Disabilities Education Act (IDEA) (IDEA, 2004; Holbrook, Kamei-Hannan & McCarthy, 2017). Related services
are supportive services required to assist a person with visual impairment to be independent, productive, self-reliant, improve the quality of life or alleviate the inconveniences in life (Chitey, 2017). The related services to be offered to a student are determined by assessment results. Every student is subjected to formal or informal assessment depending on the prevailing situation. Orientation and mobility, being one of the related services, follows a similar procedure. Students are offered orientation and mobility training based on their needs as may be stipulated in the assessment report or based on the decision/observations of the orientation and mobility specialist. It is of great importance and beneficial to the student if the rationale for orientation and mobility is accepted. After assessment that determines eligibility for inclusive education services, (Heward, 2014), a student, in the company of caretakers, is guided through the assessment report and agreement is reached on whether the O & M rationale is accepted. A student needs to make an informed decision on the matter that binds all the parties.

Theoretically, Davis (1989) posit the Acceptance Model (AM) helps in accepting and using a program. The model, developed from the theory of reasoned action, clarifies user acceptance of a given exercise basing on the perceptions of the student. It offers a basis with which one traces how external variables influence belief, perception, and intention to continue with the exercise. This model could help in explaining and predicting the behavior of the client in orientation and mobility. Davis (1989) and Bandura (1997) are of the view that the model suggests that self-efficacy determines a student’s intention to utilize orientation and mobility techniques. In this case a client is given to understand that the use of orientation and mobility techniques would greatly enhance his or her mobility.

**The feminist theory**

The Feminist Theory has numerous variants that include liberal, radical, socialist, cultural, feminism, womanist and Marxism hence the differing views about gender equality (Bem,1993). There is, however, concordance on the views of core feminism that all humans are equal and, as a consequence, all people should have the same educational and work opportunities (Pheko, Dioka & Batsalelwang, 2018). In this respect, both female and male students are expected to be taught orientation and mobility techniques because their common humanity supersedes their procreative differentiation. If female and male students are not different, then they should not be treated differently under the law, they should all be taught orientation and mobility, (Wiener et al, 2010), because gender is now understood to be a social status, a personal identity, and a set of relationships across all humanity. Syllogistically, both female and male students are expected to independently, safely and efficiently move from one place to the other. The paucity of research on orientation and mobility in Botswana and observation of female students being dependent on sighted guides for their mobility influenced the decision to investigate the mobility of female students at the schools. The following research questions guided the research:

1. How is the mobility of female students with visual impairment in the schools?
2. How do female students with visual impairment interact to access different places in various environments?
3. What factors enable or hinder the mobility of students with visual impairment?

**Methodology**

This study adopted an interpretative phenomenological analysis (IPA) paradigm because the study is based on individual students’ life experiences and the chosen paradigm has systematic commitment to the exploration of personal lived experiences (Tomkins, 2017). In addition, the objective of IPA is the understanding of lived individual experiences and the exploration of the manner in which the individual female students with visual impairments make sense of their personal orientation and mobility experiences. The qualitative research approach was used since this type of approach adapts to an interpretative phenomenological true-to-life methodology to the world (Babbie, 2012; Denzin & Lincoln, 2017). In other words, it is a process of intensive inquiry with a goal of in-depth understanding of a social or human problem from multiple perspectives. This means that qualitative investigators study aspects in natural settings, attempting to make sense of or interpret phenomena in terms of the meanings participants bring to them.

The specialist special education teachers for learners with visual impairment and female learners


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with visual impairment at two secondary schools in Kgatleng District were the population of the study. The selection of the schools was guided by the fact that they are the only secondary schools that enroll students who are totally blind in the district and country as a whole. The sample, which was purposefully chosen, comprised of four female students with visual impairment and two specialist special education teachers (one female and one male). The participants were selected because they were thought to be well-informed about the topic that was being investigated. The inclusion criteria for students was that they must have been at one of the two schools for at least six months and they must be female with no light perception while for teachers to be included, they needed to have a minimum of three years’ teaching experience as special education teachers at either of the two schools.

**Data collection**

In the process of data collection, researchers took cognisance of biases that could compromise the quality of the findings. Bracketing and recording information actually observed or verbatim quotes characterized the collection of data. Data collection from six participants (five females and one male) was done with the help of unstructured interview guides and observation. The type of interview guide was chosen to allow participants to openly share their lived experiences with regards to mobility techniques without necessarily restricting them to specified questions. In addition, (Ritchie, Lewis, Nicholls & Ormston, 2014), in-depth interviews allow personal histories and experiences to be understood as well as different viewpoints to be heard. Non participant observation of students’ mobility techniques was done over a period of two weeks. This was meant to allow students to routinely move from one place to another without being conscious of the observation exercise. Field notes were written down without being noticed.

**Data analysis**

Research questions guided data analysis and it was done alongside data collection in line with Rubin and Babbie’s (2011) assertion that data analysis begins the moment one sets foot in the field. Researchers corroborated the data through cross-checking data from unstructured interviews and observation. This was meant to search for recurring themes in the data. The writing embraced a descriptive style of writing so that the finest experiences of students’ mobility could be captured and direct quotes included when relevant. It was critical for the qualitative researchers to ensure that data analysis accurately corroborates the opinions and experiences of the study participants.

**Ethical consideration**

Ethical issues regarding permission to conduct the research were formally done as well as issues of participants consenting to their involvement following explanations that helped them understand the purpose of the study. Anonymity, privacy, volunteering, withdrawal and choice to answer some questions or were all addressed before the start of the study.

**Findings**

Integration of data collected from interview sessions and observations of female students with visual impairment yielded a number of themes.

**Poor mobility**

From the observations conducted in the school, the students have poor mobility. Four of the eight female students (including the four students who did not take part in the research) observed generally showed peculiar walking steps and gait. One student stoops her head while another irregularly shakes her head from side to side. When a student moved from one desk to another or to a water point within close proximity, it was a spectacle. The two special education teachers interviewed confirmed that it was a serious challenge to help female students because of the norm. Female students in the study schools were known to be heavily dependent on others and care less about their independent mobility hence their poor mobility.

**Physical environment**

The physical environments of the schools for the students have corridors that are bordered by deep dangerous trenches for students with visual impairment. There were no hand rails observed anywhere in the two schools to help students in their mobility. The route to the hostels for female students at one of the two sites was blocked as the home economics department where it passes through has been fenced for security reasons. Students have to jump trenches using alternative routes to go to their hostels.

**Overprotection**

One of the pillars for the immediate past long term vision for Botswana is being a compassionate and caring nation (Republic of Botswana, 1997). Batswana exercise the value in many ways that
include caring for the needy. This act results in over protection which denies the students with visual impairment an opportunity to at least naturally teach themselves. Two of the interviewed students shared that just like at school, family members do not allow them to do anything at their homes and are normally confined to their rooms. This makes them to even fail to ask for guidance over the location of a particular place if they wanted to go there by themselves.

Personal identity

Three out of the four students with visual impairment interviewed expressed concern on how the public would perceive them moving around with the help of white canes. They were of the views that their use of the canes would make the public identify them by their devices.

I do understand that mobility techniques can benefit me but I cannot imagine my becoming the centre of attraction bumping into obstacles. Everyone else could just be focusing their eyes on me. In the end, people may identify me as a white cane lady. I would not want that.

Similarly, two other students stated that they would rather play a low profile by being quietly sight guided around instead of attracting everyone’s attention when there is an incident. One exemplified that in one of the schools she attended; she was referred to as a four eyed girl for using sun glasses. That was some kind of stigmatizing on the part of the student and vowed to remain out of the spot light to make sure nothing of that sought is experienced again.

Personal beauty

All the four students interviewed were concerned about their personal beauty. They shared that being presentable comes first as ladies. They would not, consequently, want to appear clumsy when using some of the orientation and mobility techniques:

Using lower and upper body protective techniques in public as though one is driving an imaginary car is not appealing for a lady. Just like if I am carrying a rigid white cane and I am in the bus what happens? Just attracting unnecessary attention. If I fall down and bruise my face or arms as a lady, that would be a disaster, men would avoid me, ...hahahaa... (laughs).

Restricting socialization

The four students interviewed are of the view that orientation and mobility leaves them isolated. The students feel secure, confident and loved in the company of fellow students. As long as their peers are around, they would rather be together chatting and helping one another in so many ways. Students indicated that they lead lives like any other person and need peers for various reasons. One student stated that:

I depend on my peers and others in the school. It is difficult for me to show that I do not need the assistance of my peers then the next moment I need their help. It is better I am with them whenever they are available.

Acceptance of the rationale for orientation and mobility

The students had different experiences and onsets of visual impairments. Two of the respondents have congenital blindness while the other two adventitiously acquired the visual impairment. The ones who have had the impairment from childhood were knowledgeable about the importance of orientation and mobility and have rudiments of O & M having been taught at reception years ago. Currently, all the students stated that they have not had any talk on why they need to learn the techniques of O & M.

Absence of orientation and mobility instruction

Observations conducted over a period of two weeks witnessed no mobility instruction of any sought. Interviews of the two specialist teachers confirmed that orientation and mobility was not conducted because school management over loaded special education teachers with high teaching loads. One of the two teachers interviewed stated that:

Mobility instruction is trick in the sense that neither the students nor the school authorities value the exercise. As a life skill, it would not appear on the time table with other academic subjects. Arrangements with students need to be made for the instruction to be done outside school teaching time.

One of the two specialist teachers emotionally suggested that negligence was coming from higher authorities for failing to provide directional leadership. The respondent stressed that he (and other
special education teachers) were not certified orientation and mobility instructors and as a consequence, they have limits on how far they can go in terms of instructing the learners in the discipline. Besides, little was being done to facilitate the practice in schools as priority is given to traditional academic subjects.

**Discussion**

This study was guided mainly by the three research questions that include: How is the mobility of female students with visual impairment in the schools in Kgatleng District in Botswana? How do female students with visual impairment interact to access different places in various environments? What factors enable or hinder the mobility of students with visual impairment? This section, therefore, discusses the findings synonymous with the research questions.

Orientation and mobility is a rare and unique life skill of some significant magnitude whose benefits to people with visual impairment need not be over emphasized. The non-instruction of students in the discipline is a serious anomaly as it denies students an important aspect that has lifelong consequences. The obtaining situation is degenerating as Habulezi (2016) had reported some orientation and mobility instruction at one of the schools. The practice is contrary to the tenets of Botswana’s Vision 2036 that seek to emphasis empowering all citizens through education with production to attain prosperity for all (Republic of Botswana, 2016). The knowledge of the essence of orientation and mobility is of profound importance because knowledge is power. Guth et al (2014) advise that teachers should, at whatever level, instruct students in foundational knowledge and provide them with experiences that are a requirement for the orientation and mobility processes. For this to be successful, students must be motivated to feel encouraged as this may help them mentally and physically display the much needed basic readiness. The key is to guide students on the need to embrace the O & M rationale and willingly put in practice mobility skills taught or naturally acquired (Wiener et al, 2010).

The roots of the poor mobility of students lie deep within the socialization desires of female students with visual impairment to always prefer to be in the company of peers (Cooper, 2006). The students need to know that peers in their lives will not be there forever. At some point in time, each one of them will be on their own and meet the wrath of this land. Therefore, students with visual impairment must be helped to balance up and take practical priorities that have positive bearing in their lives (Thabyak, 2017). The practical skills theoretically on offer meant to equip all Batswana are worthwhile and need to be implemented and taken advantage of. Even in the absence of mobility instruction, natural learning can be an option and students are teachers on their own who can build on their experiences or solicit for information from other students about their environment. Griffin-Shirley and Bozeman (2016) posit that direct experience is the most important source of self-confidence because the high self-confidence it instills helps a student successfully attempt a similar activity in future.

The practice of over protection signifies a general lack of public awareness and education regarding orientation and mobility. This is aggravated by female students’ resistance and illusion of the use of O & M techniques and devices to avoid looking fun or clumsy. The foregoing is synonymous with one feminist view that woman is defined mainly through her appearance which she would always want to cultivate because her looks to some extent determine the confidence, social status and consciousness of self as it is believed that beauty carries a premium (Anderson & Petrie, 2006; Thanuskodi, 2013).

At a school that has students with visual impairment, Thabyak (2017) advocates for the construction and maintenance of learning environments which are physically and psychologically conducive for every student so that opportunities are fair and equitable to all regardless of the gender or socio-economic statuses of the students. To the contrary, the physical environments of the two schools where the study took place are not appropriate for the practice of orientation and mobility. Corridors are bordered by dangerous deep trenches that are a danger to students with visual impairment. There are only two secondary schools at the moment in the country that cater for students who are totally blind and situations of this nature are least expected considering the government’s commitment to providing the best possible service to all its citizens (Republic of Botswana, 2015).

**Conclusion**

Orientation and mobility is an extremely important life skill because it provides techniques and
skills that promote safety and independence in the lives of people with visual impairment. Despite its importance, its instruction to students with visual impairment is non-existent at the schools of the study. It is clear that the absence of orientation and mobility instruction, femininity within the student factors and lack of public awareness on the importance of the life skills are the hindrances to the mobility of students with visual impairment that inevitably result in students’ total dependence on peers for their mobility.

**Recommendations**

Botswana has ambitious aspirations of prospering its citizens through education and empowerment. To attain the set targets, top management in charge of inclusive education in the Department of Special Support Services should rise to the occasion and facilitate quality inclusive educational services. The public should importantly be educated on the need to provide students with opportunities to practice orientation and mobility techniques and skills. Government should also construct and maintain learning environments which are physically and psychologically conducive for the independent mobility of students with visual impairment. There is need, too, to find a way of motivating the female folk to intrinsically engage in the O & M exercise either through counseling or some other way. Traceable floor strips could be made on the floors to key school areas to simplify students’ navigation.

**References**


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