UWI

ST. AUGUSTINE CAMPUS

Awareness and knowledge of the use of low vision aids among Trinidad and Tobago Population

NAME OF RESEARCHER WITH QUALIFICATION: Ambika Gookool & Daniella Meighoo

AFFILIATION: Optometry Unit, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, St Augustine, The University of the West Indies

SUPERVISOR: MCOPTOM FIACLE Niall Farnon

SUBMISSION DATE: 21st May, 2021

ABSTRACT

Purpose: This research aims to determine how much the people of Trinidad and Tobago know about the use of low vision devices.

Method:

The methodology consisted of applying quantitative research [20] with the help of questionnaires [19]. The questionnaires were administered throughout Trinidad and Tobago at different optical stores. The questionnaires were given out to persons of ages 18 years and over with the exclusion of low vision persons and persons under the age of 18. The data collected was stored on a password-protected file on a password-protected computer. The timeframe was from the 12th February 2021 to the 20th May 2021. All of the data was gathered and analyzed using the Statistical Package for Social Sciences (SPSS) program and chi-square test. The research information shared was confidential and will not be discussed with anyone other than the researchers and it was secured in a password-protected laptop.

Results:

There were a total of one hundred and thirty-two (132) participants in this study. Fifty-seven percent(57%) were females whereas forty-three percent (43%) were male. Approximately twenty-four percent(24%) of the sample size were from the age group 18 to 30 years and age group 31 to 40 years. Twenty-two percent (22%)was from the age group 41 to 50 years, while approximately sixteen percent(16%) was from age group 51 to 60 years, however for the age group 61 to 70 years and over 70 years there were much lower values approximately eleven(11%) and four percent(4%) respectively. When the population was asked to describe a

low vision person, almost thirty-eight percent (38%) of the population gave the correct answer. Fifty-three percent(53%) understood the use of white canes amongst low vision persons. Fifty-nine percent(59%) of the population understood the duty of a guide dog and eighty-four percent (84%) understood that the guide dog shouldn't be distracted. Interestingly, twenty-four percent(24%) of the population thinks low vision person can't read whereas twenty-eight percent (28%)suggested that they use magnifiers to read. When the population was asked about telescopes approximately eighty-two percent(82%) didn't understand what telescopes are used for in low vision. Overall almost forty-nine percent(49%) of the population knew what low vision aids were whereas fifty-one (51%) percent of our tested sample did not know about low vision aids.

Conclusion: The public awareness of low vision aids is very important for low vision patients in Trinidad and Tobago. Educational approaches, as well as advertisements, should be done in an attempt to spread awareness throughout the country.

CHAPTER 1

1.0- Introduction

The World Health Organization (WHO) defines low vision as a person who has impairment of visual functioning even after treatment and/or standard refractive correction and has a visual acuity of less than 20/60 to light perception, or a visual field less than ten degrees from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task for which vision is essential[16] . Like any other impairment, certain devices can be used to assist individuals in their day to day functions. They can either be optical or electronic [13].

We discussed a few of the low vision aids and interpreted how much or how little the people in Trinidad understand by the use of these devices. After the necessary data was collected, how these devices are used in Trinidad compared to other different countries around the world was compared.

Every low vision device [13] is unique in its way as well as how it is used. For example, in one country, many people may understand that when a person is under the assistance of a guide dog [9], they would know that the dog is working and they would not disturb the person nor the dog but, in another country, people may think that it's a dog and would think that it is fine to pet it, which may lead to the dog losing its' concentration. The reality is that many people may not have the right judgement of what and why a person might need help from a dog.

We intend to identify what the population of Trinidad and Tobago understand by the use of low vision aids with the help of a questionnaire. The devices [13] that we would be focusing on are magnifiers, telescopes, a walking cane and a guide dog.

We decided that for our questionnaire, because of the recent COVID-19 pandemic affecting not only Trinidad and Tobago but the world at large, that once everything is under control, we visited different optical stores throughout Trinidad and asked the optometrists, to hand it out to their patients and to collect it back afterwards.

When comparing Trinidad and Tobago to the rest of the world, we want to expand on the lifestyle of low vision patients because this is another aspect that varies. Our goals are to firstly, recognize how much people know about low vision aids in Trinidad and Tobago and secondly, to use the data collected and compare this with the rest of the world.

1.1- Background

The leading causes of visual impairment [6] include retinal diseases such as age-related macular degeneration, diabetic retinopathy, hereditary dystrophies and glaucoma. Most of these causes have been linked to the ageing process and therefore, can often be found in older patients, however, there are also instances where they are found in young children.

Learning, educating and familiarizing oneself with how persons with low vision can increase their overall quality of life by using low vision aids like white cane, guide dogs, human guide and optical devices can play a vital role in society.

The white cane [7] was first invented after World War 1 in 1921 by an English man named James Biggs. The white cane helps low vision persons to get around safely by avoiding obstacles. The cane is held in the dominant hand and moved in a left to right pattern tapping on the floor.

A Guide Dog [9] is a trained dog used to help low vision individuals get around. This idea first came about in 1950, where a young Australian man named Dr.Arnold Cook lost his sight due to a rare disease and was introduced to the term in England with the Britain Guide Dog association. From then to now, guide dogs are still used in certain countries to assist the visually impaired.

A Sighted guide is another way by which the visually impaired person is escorted around. The visually impaired person holds the arm of the sighted guide, just above the elbow and follows their lead.

Low vision optical devices, i.e Low vision Aids [13] can be considered tools to assist with specific daily tasks.

The magnifiers are used for close up detailed viewing, for example, reading and sewing whereas the telescopes are used for more distant viewing, for example, spot reading, watching television or viewing a blackboard. With the help of this research, we can investigate and compare how these low vision devices are perceived in Trinidad and Tobago to the rest of the world.

1.2- Statement of the problem or Rationale of study / Motivation for the study

Why does this research need to be done?

According to an article [4] posted in the Journal of optometry (Public knowledge of low vision and blindness) in 2020, a study was concluded that the general public has limited knowledge of key concepts of visual health especially, low vision. Therefore, this research needs to be done to raise awareness and educate persons about low vision and the use of low vision aids. More knowledge and information obtained can lead to greater familiarity with the concepts and would allow the public to fully understand how these devices work as well as to reduce its social stigma.

This was achieved by giving out sample questionnaires containing 15 questions to persons 18 years and older. After the data was collected, a full analysis was done to determine how much or how little the citizens of Trinidad Tobago knows about low vision aids.

1.3- Aim or Purpose of the study

The purpose of this academic research study is to determine how much or how little the people of Trinidad and Tobago, from the age of 18, knows about the use of low vision devices. Since the information was gathered directly, from the aid of questionnaires as the instrument of study, the quantitative method [20] was used. The quantitative method allows us to test the hypothesis by collecting and analyzing the data collected. This explains why our research needs to be done because, to compare the information with the rest of the world, we must first need to disclose what nationals understand.

1.4- Specific objectives of the study

The purpose of this academic research study is to determine how much the people of Trinidad and Tobago, from the age of 18, knows about the use of low vision devices [13]. Other specific objectives for this research are:

• To perceive how low vision devices are used in Trinidad and Tobago

• To compare how the low vision devices are used in Trinidad and Tobago to the rest of the world

• To determine what can be done in the future to increase the public's awareness of low vision

1.5- Research questions

Considering the hypothesis is true, the following are questions that further surround the hypothesis are as follows:

- Why is it that in a country that has many low vision patients, the population has little information on the aids that they use?
- What are necessary actions that can be taken to increase the level of education about the use of low vision aids around the country?

1.6- Hypothesis

For this research project, the hypothesis is: The Trinidad and Tobago population have little to no knowledge on the use of low vision aids. With the help of the questionnaire and the data analysis from this proved whether this was true or not.

1.7- Significance of the study

This research is important because there are many low vision patients in Trinidad and Tobago. With this research, we recognized how much or how little people know about these patients, their lifestyle and the devices that they use to help them with their daily tasks. The information obtained from this research allowed us to plan in future how much more we need to educate the public on low vision patients.

1.8- Delimitation of the study

The main purpose of this study was to determine the awareness of low vision aids amongst the general public of Trinidad and Tobago. The targeted audience age group was 18 years and over however, non-nationals and low vision persons were exempted from this study. The participants were those who visited optical stores throughout the country in the South, Central, and North Trinidad. Each respondent was given the same questionnaire and this was used to determine the knowledge persons have on low vision aids.

1.9- Limitation of the study

- Research on this specific topic has not been previously done, therefore. accessing data and previous literature to make a comparison to our study was difficult.
- Participants reported that completing the questionnaire was time-consuming and they were hesitant when filling it out and this could have caused inaccurate results.
- The questionnaires had pictures that aid participants in answering the questions however, answers could have been given based on the picture and not their overall knowledge.
- Inability to control the environment since the responses depend on the time which is also dependent on conditions that occur during that specific period when the participant is partaking in the questionnaire
- There would be limited outcomes concerning the final data since the participants have limited options of responses in the questionnaire

1.10- Definition of terms

1. Low vision [15] - a person who has impairment of visual functioning even after treatment and/or standard refractive correction, and has a visual acuity of less than 20/60 to light perception, or a visual field less than ten degrees from the point of fixation.
2. Low vision aids [13] – These are devices used to assist low vision persons when performing their daily tasks. Examples are magnifiers for near reading and telescopes for distant reading.
3. Guide dog [9] - These are special dogs trained to assist low vision persons to get around the place safely.
4. Magnifiers [14] – These are optical devices that are used to make words bigger for reading
5. Telescopes [17] – This is an optical device used for spot or short term reading in the distance
6. White cane [15] – A walking stick use amongst low vision persons to walk around safely and to avoid bumping into objects
7. Glaucoma [6] – Glaucoma is a common eye condition that is caused by the build-up of pressure due to the accumulation of fluid to the front of the eye. This causes the optic nerve which is responsible to transmit messages to the brain to become damaged.
8. Age-related macular degeneration [6] – This is an eye condition in which occurs in older patients. The macular which is responsible for central vision becomes damaged leading to irreversible central vision loss.

9. Visual acuity – This is the measurement of how clear or sharp vision is at near and far by the use of a Snellen chart.
10. Diabetic retinopathy [6] - This a common eye condition that occurs in diabetic patients with high blood sugar levels. It causes damage to the blood vessels in the back of the eye leading to vision loss.

CHAPTER 2

2.0- LITERATURE REVIEW

Low vision aids [13] can be used to improve the overall quality of life of low vision patients (Firouzeh F, Shahid 2018). This was concluded in a study [21] done in Cheshmak LV centre in Malayer Iran. According to Firouzeh F Shahid with the help of questionnaires, the study showed that low vision aids not only improve quality of life it also increases independence as well as mental health. Although low vision aids can increase the quality of life for low vision persons many people have little knowledge about what is low vision. According to a study [4] done in Catalonia, Spain on participants 16 years and over. Authors Marta Lupón, Genís Cardona and Manuel Armayones spoke about 52% of 103 participants had no idea what low vision was whereas 97% had misconception on blindness. This, therefore, suggest that they would have limited knowledge of low vision devices also. This research project therefore would be focusing on analysing the awareness of low vision aids [13] in the Trinidad and Tobago population. Some low vision aids include a white cane, telescopes, magnifiers and guide dogs. According to authors Isaac Attia1 and Daniel Asamoah, a study [1] was done in the Akropong School for the Blind in Ghana on twelve students where they discussed the effectiveness and challenges on students using the white canes. One major challenge discussed was that the public was uneducated and didn't understand the significance of white canes. It was recommended that motor users as well as the rest of the public should be educated on how to handle individuals with visual impairment who uses white canes.
Guide dogs can be used as a form of motility, according to author Samantha Jaimungal a study [22] was conducted in Trinidad and Tobago amongst Low vision persons where a survey was done to determine the awareness and need for a guide dog.

Interestingly 56% of the population was interested in getting a guide dog however they have concerns about the denial of access into public spaces, transportation, afraid of the dog and the lack of laws to regulate the use of assistance dogs in T&T.

In conclusion, lack of low vision awareness has been an issue throughout different countries in the world however the solution is simple, the general public needs to educated and awareness needs to be spread. All low vision persons should be treated equally and not be identify base on their low vision aids [13].

CHAPTER 3

3.0- METHODOLOGY

3.1-Ethical consideration

This research was administered throughout Trinidad and Tobago. The timeframe was from the 12th February,2021 to the 20th May,2021. Before distributing the questionnaires, the research project needed to be ethically approved by the University of the West Indies. Since our target population was over 18 years, it did not require a subject or guardian's permission but it did involve the participants to sign a consent form given to us "by the UWI Ethics committee". After being approved, we visited the different businesses and got permission to hand out the questionnaires. There was no more than minimal risk involved in this. The individual's participation in this study was completely voluntary. The researchers agreed to maintain the confidentiality of the research records or data using password protected file on a password protected laptop, and all data will be destroyed in five years and this was also stated at the beginning of the questionnaires. There were no payments involved and the participants were not be compensated for their participation. There was no serious ocular disease detected during the project that had to be referred for further evaluation and management.

3.2- Research design

This research was based on a cross-sectional study. This allowed us to look at the variable which in this case is the participants' knowledge. We applied both descriptive and analytical research method. The research design and method this project was based on was the quantitative design, by using the method as questionnaires. Quantitative research[19] emphasizes specific things that can be measured and it relies on certain protocols. It analyzes variables, uses statistical controls and works across a larger number population. The advantages of using a quantitative design [20] include collecting accurate data since the information that would be obtained are reliable, quick data collection, because we are using questionnaires, and the elimination of bias because it offers no scope for personal comments. A method that was used on the questionnaires that were filled out, to help with the collection of data involved using an excel sheet and the options for the questions were lettered starting from A. The other questions that were either yes or no were recorded as 1 being yes and 0 being no in the excel sheet. The male/female question was recorded also with 1 being female and 0 being male.

The most important variable that was analyzed was patient knowledge. With the help of the questionnaire, we focused on what the public knows and not know about the use of low vision aids [13] . When calculating the sample size necessary to obtain enough information, we decided that the confidence level was 95% and the confidence interval was 0.5. With this, we used the population to calculate the sample size needed. There were not any direct benefits to the participants however it would benefit the low vision population because the general public would now be able to better understand the concept of how low vision aids works and how it impacts the low vision patients.

3.3- Study population

The decision was made to distribute the questionnaires amongst different optical companies around Trinidad. We intended to visit places in South Trinidad, Central and North Trinidad as well.

3.3.1- Study site or Area of study

We visited these companies, around areas such as, Point Fortin, San Fernando, Prince's town, Chaguanas and Port of Spain and the staff were asked to share the questionnaires to individuals over the age of 18 to participate and collect them back afterwards and we returned after one month to gather it. Point Fortin is the smallest borough in Trinidad and Tobago and it is located in the Southwest of Trinidad. It is in the county of Saint Patrick. San Fernando Borough was separated into County Victoria in 1988. Prince's town is also in Victoria County. Chaguanas became an official borough in 1990 but before that, it was part of Caroni County. Port of Spain is in the St George County.

3.3.2- Inclusion criteria

The inclusion criteria included:

- The participant being 18 years or older
- The individual is from Trinidad and Tobago

3.3.3- Exclusion criteria

The exclusion criteria involved:

- The participant is under 18 years
- The participant was not from Trinidad and Tobago
- If the participant had dementia
- If the participant was low vision

3.4- Sample size and sample technique

Sample size

The group of persons that we selected from the general population were people from the age of 18 years. We distributed a total of 400 questionnaires to different optical businesses in South, Central and North Trinidad. Overall, we visited seven different companies. Out of the 400 that were shared out, the number of completed questionnaires was 132. This would mean that the sample size is 132.

3.4.1- Sample size determination

The sample size was calculated using a sample size calculator, more specifically the Raosoft calculator [(23)]. We decided that the population size was 400, the margin of error we were willing to accept was 5% with a confidence level of 95% and the response distribution that we have hoped to achieve was 50%. When this was calculated, the recommended sample size for us was 197 but because of the inability to control the environment since the responses depend on the time which is also dependent on conditions that occur during that specific period when the participant was partaking in the questionnaire, the sample size that we got was 132 which was lower than expected.

3.4.2- Sampling technique

As previously mentioned, because we used questionnaires [20] to obtain the necessary information, bias was eliminated because it offered no scope for personal comments. The subjects that were selected was mainly based on their age because for this to occur, they had to be over the age of eighteen. Once they were over 18 and they voluntarily agreed to participate in the questionnaire, a copy together with the consent form was given to them.

3.5- Tests and instrument/equipment

The only test that was used in this research project was the questionnaire. It contained 15 questions in total. The questionnaires were distributed to different optical companies around Trinidad. The places of interest to us were companies in Point Fortin, San Fernando, Prince's town, Chaguanas and Port of Spain. A total of 400 questionnaires were given out and left for one month until we returned to pick them up. However, an individual had to be 18 years or older to participate in the questionnaire. Once all were collected back before we started the analysis on Statistical Package for Social Sciences (SPSS), we copied the information onto an excel sheet and the information for each question was carefully laid on onto the different excel sheets.

3.6- Data collection procedure

1. The purpose of collecting this data was to collect first-hand information from the public themselves to understand the level of knowledge or awareness they have on low vision aids. It provided information to determine whether the hypothesis "The Trinidad and Tobago population have little to no knowledge on the use of low vision aids" was true or false.

2. Questionnaires were used as the method to collect qualitative [(19)] data. The questionnaires were dropped out at Optical stores in South, Central, and North Trinidad and left there for two weeks before being picked up.

3. The optometrist at the optical stores was asked to give each patient a copy of the questionnaire to fill out and collect before they leave.

4. The questionnaire consisted of fifteen questions and three out of the 15 was where the public was asked to give their comments on a particular matter, this would be used as possible recommendations in the future.
5. The targeted audience was anyone from the public who was 18 years and over except non-nationals of Trinidad and Tobago and Low vision persons.
6. The questionnaires were then picked up after one month and the data was analyzed using graphical representation and the SPSS program with the help of the chi-square.

3.7- Data analysis

When all the data was collected, the information was first checked and then transcribed onto an excel spreadsheet where the responses for all the questions were laid out. After this was done, the analysis was performed using Statistical Package for Social Sciences (IBM SPSS) software version 270 for windows. The IBM headquarters [(24)] is found in Armonk, New York, United States. The chi-square test was administered to assess the relationship between age and gender. For each of the questions in the questionnaire, the test was also performed to evaluate the link between the question to the age and gender of the participants. The tables and graphs generated were used to analyze the data. The results were then tabulated.

CHAPTER 4

4.0- RESULT

Question 0

Gender

- Male
- Female

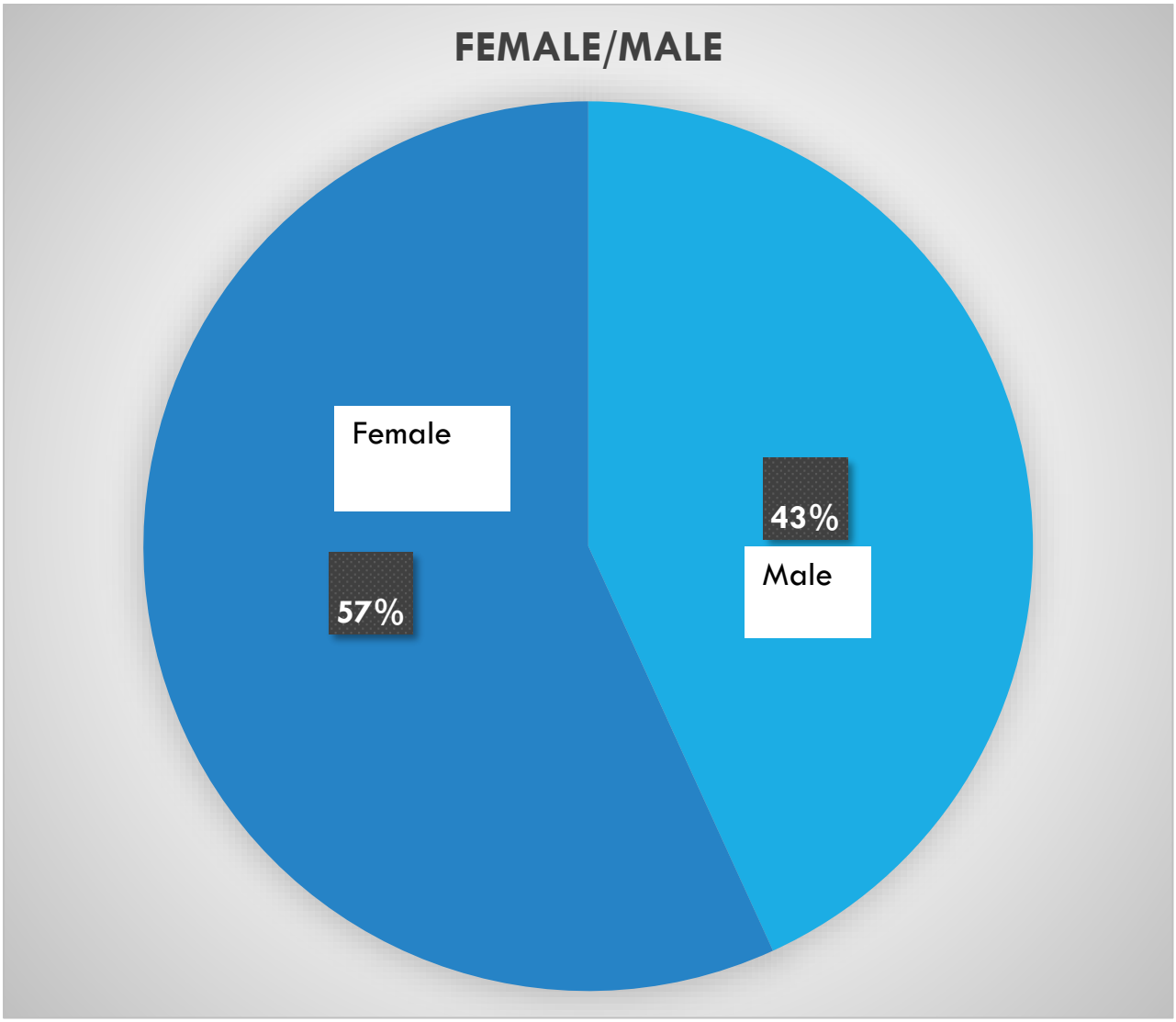

Figure #1- showing the responses in percentages for question #0.

It can be seen that this question had a higher percentage of females than males

Question 1

Age

- 18 – 30
- 31 – 40
- 41 – 50
- 51 – 60
- 61 – 70
- 70+

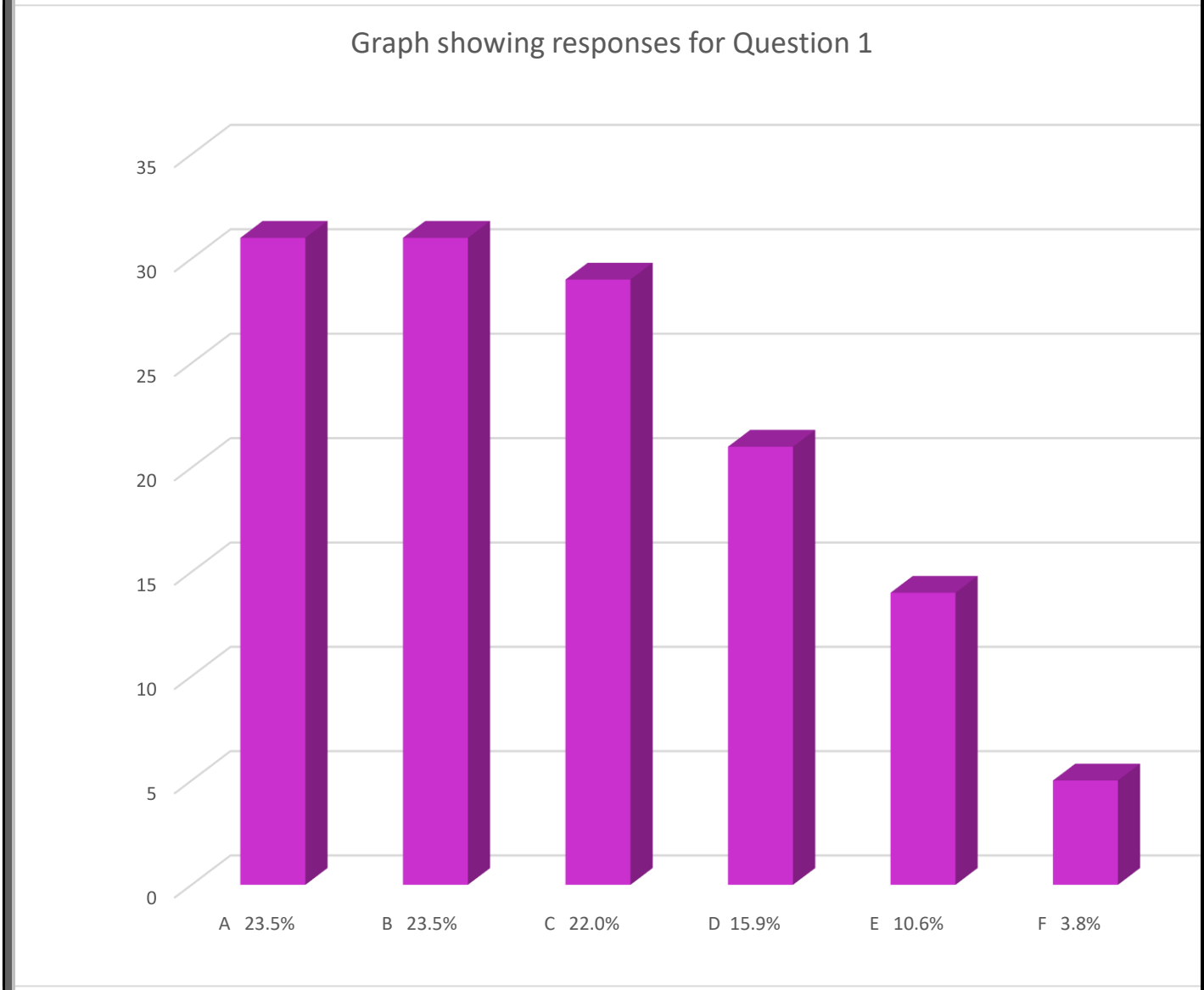

Figure #2 – showing the responses for question #1.

This chart shows that option A and B had the highest number of responses while F had the lowest

Question 2

How would you describe a person who has low vision?

- A person who always wears glasses
- Elderly citizens
- Persons who vision can't be corrected with glasses or spectacles
- None of the above

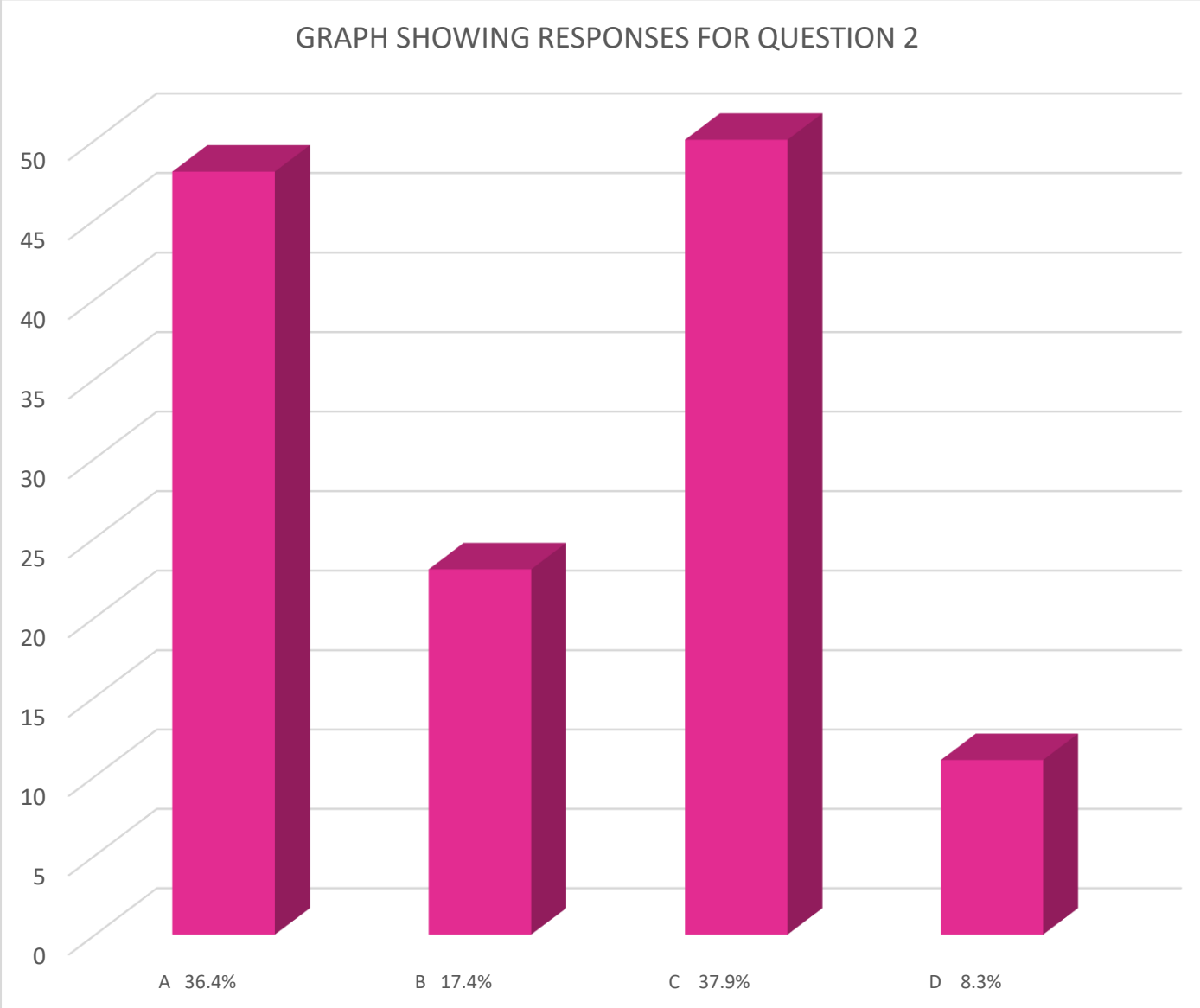

Figure #3- showing the responses for question #2

This chart shows that option C had the most responses and D had the least

Question 3

Which of the following statements below best describes your view on people who are partially or legally blind?

 People who are partially or legally blind always use a white cane to get around

 People who are partially or legally blind cannot do things by themselves

 People who are partially or legally blind can drive

 None of the above

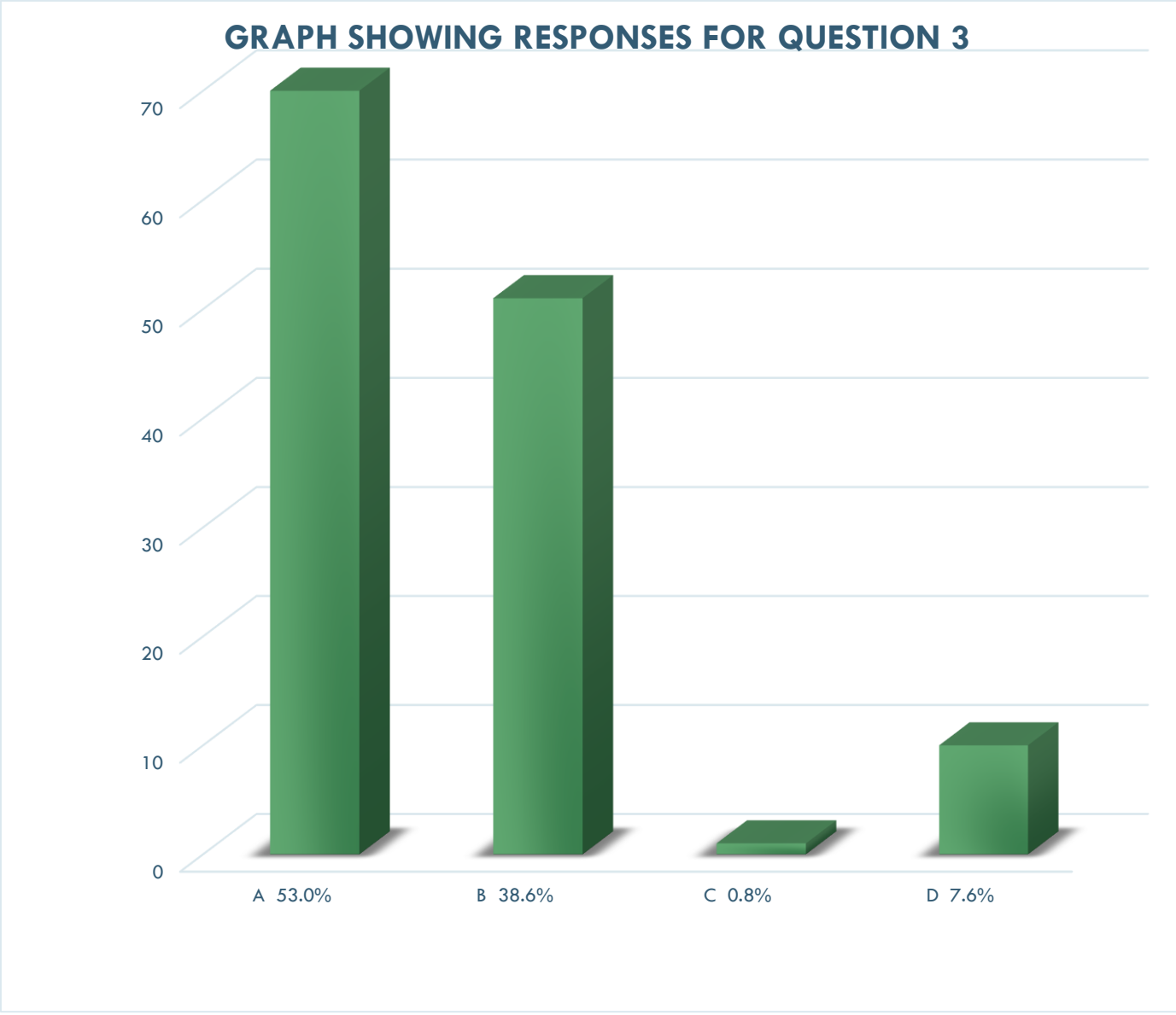

Figure #4- showing the responses for question #3

This chart shows that option A had the majority of the responses while C had the minority.

Question 4

How do people who are blind or can partially see get around?

☐ White cane
☐ A person guiding them
☐ A dog guiding them
☐ None of the above

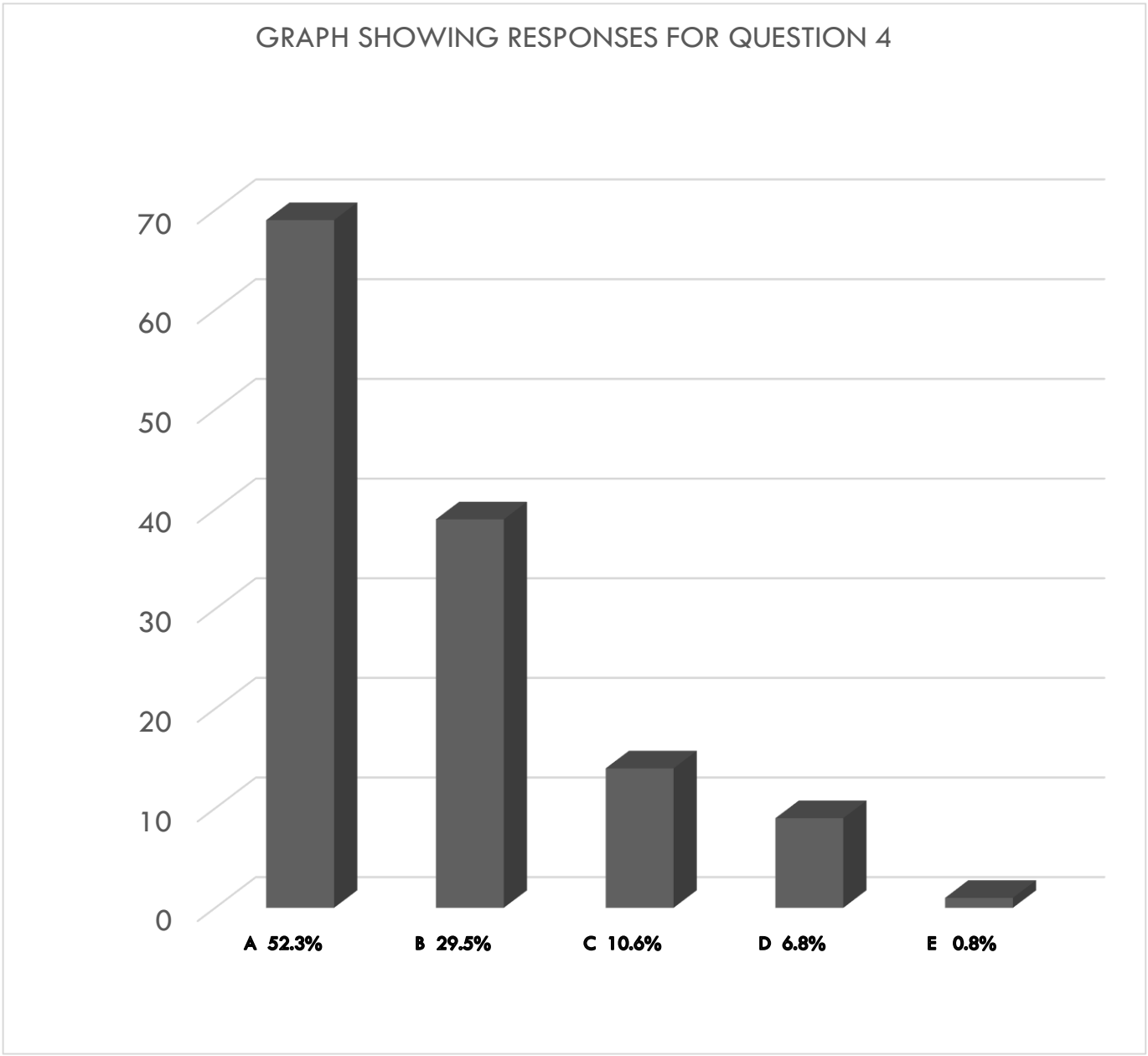

Figure #5- showing the responses for question #4

As seen in the chart above, option A had the most responses and E had the least.

Question 5

What do you think the guide dog is doing?

- Going for a walk
- Helping the partially blind woman cross the street
- Keeping the woman company
- Protecting the woman
- None of the above

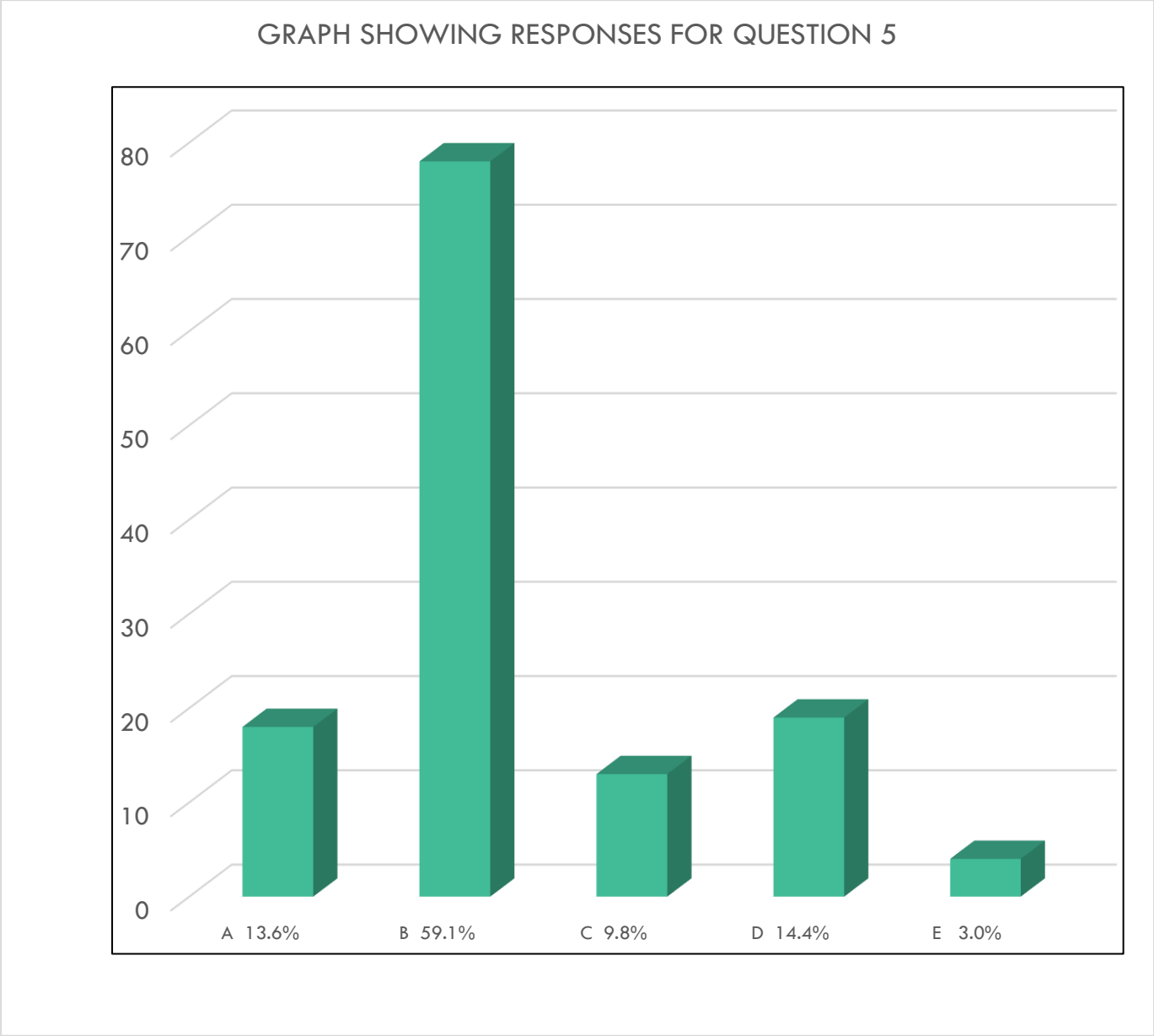

Figure #6- showing the responses for question #5

This shows that B had the most responses and E had the least.

Question 6

In the situation where you see the guide dog with its owner, what should you do?

- Go up to the dog and pet it
- Talk to the dog and give it tasty treats
- Take the harness from the owner and give the dog commands
- Allow the dog to get by safely without any distractions

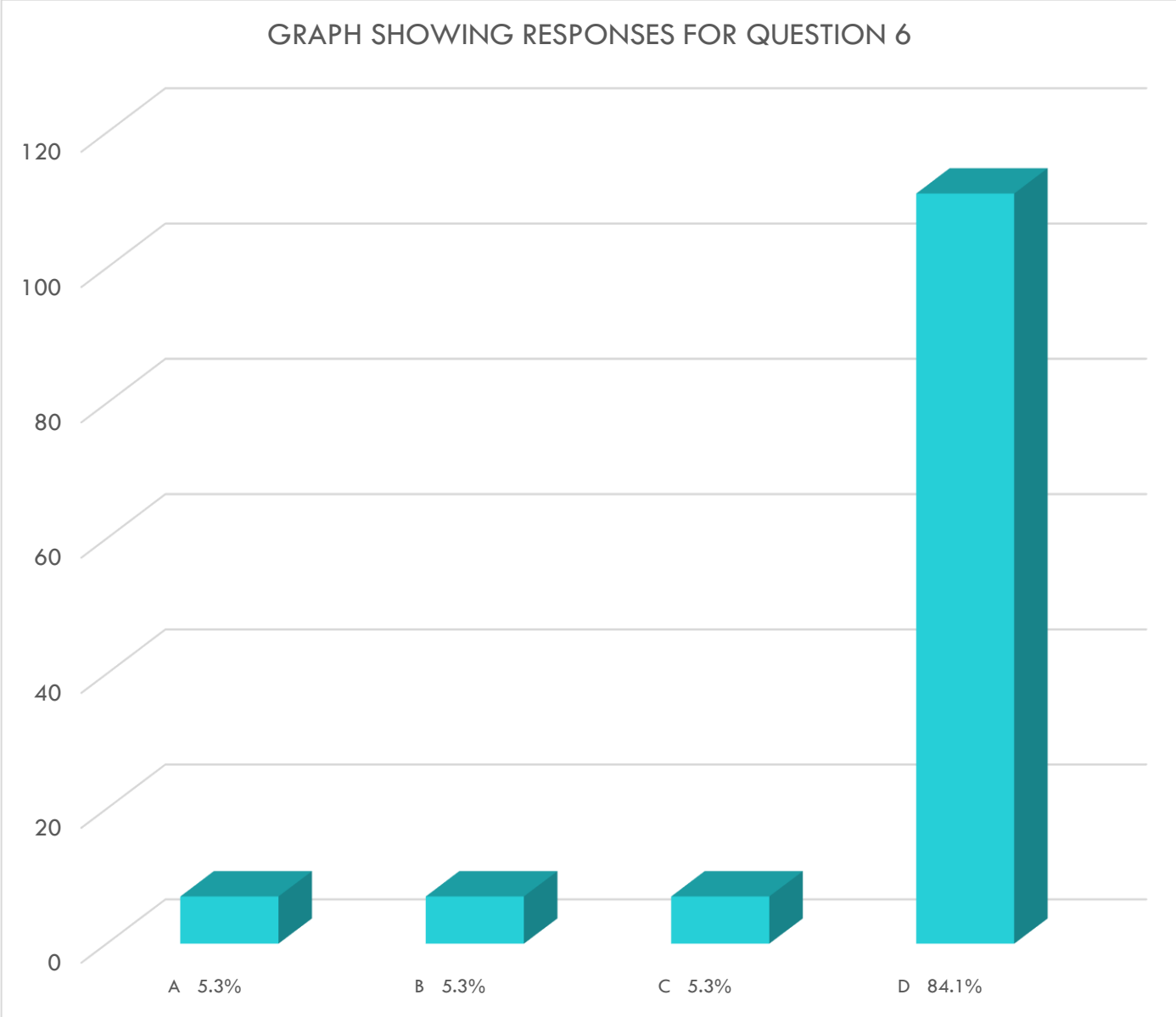

Figure #7- showing the responses for question #6

Option D has the majority of the number of responses for this question.

Question 7

How do you think a partially blind person reads their books?

- They can't read
- With the help of devices such as magnifiers
- Their family members read their book to them
- With the help of electronic devices
- None of the above

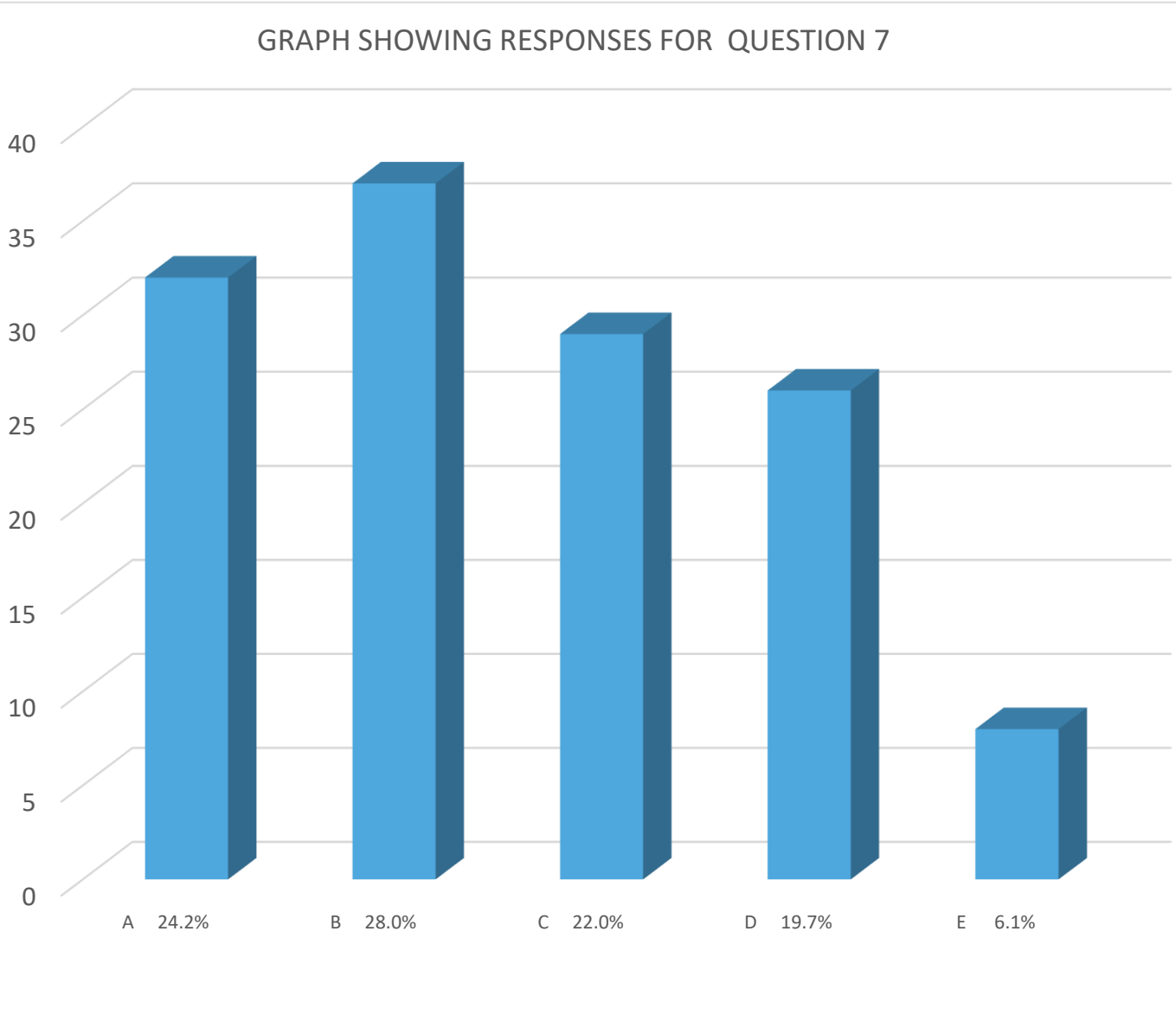

Figure #8- showing the responses for question #7

The chart above shows that option B had the majority of the responses but E had the minority

Question 8

Why do you think she is using the telescope?

- To help her when reading
- To assist her while watching television
- To look at the stars in the sky
- None of the above

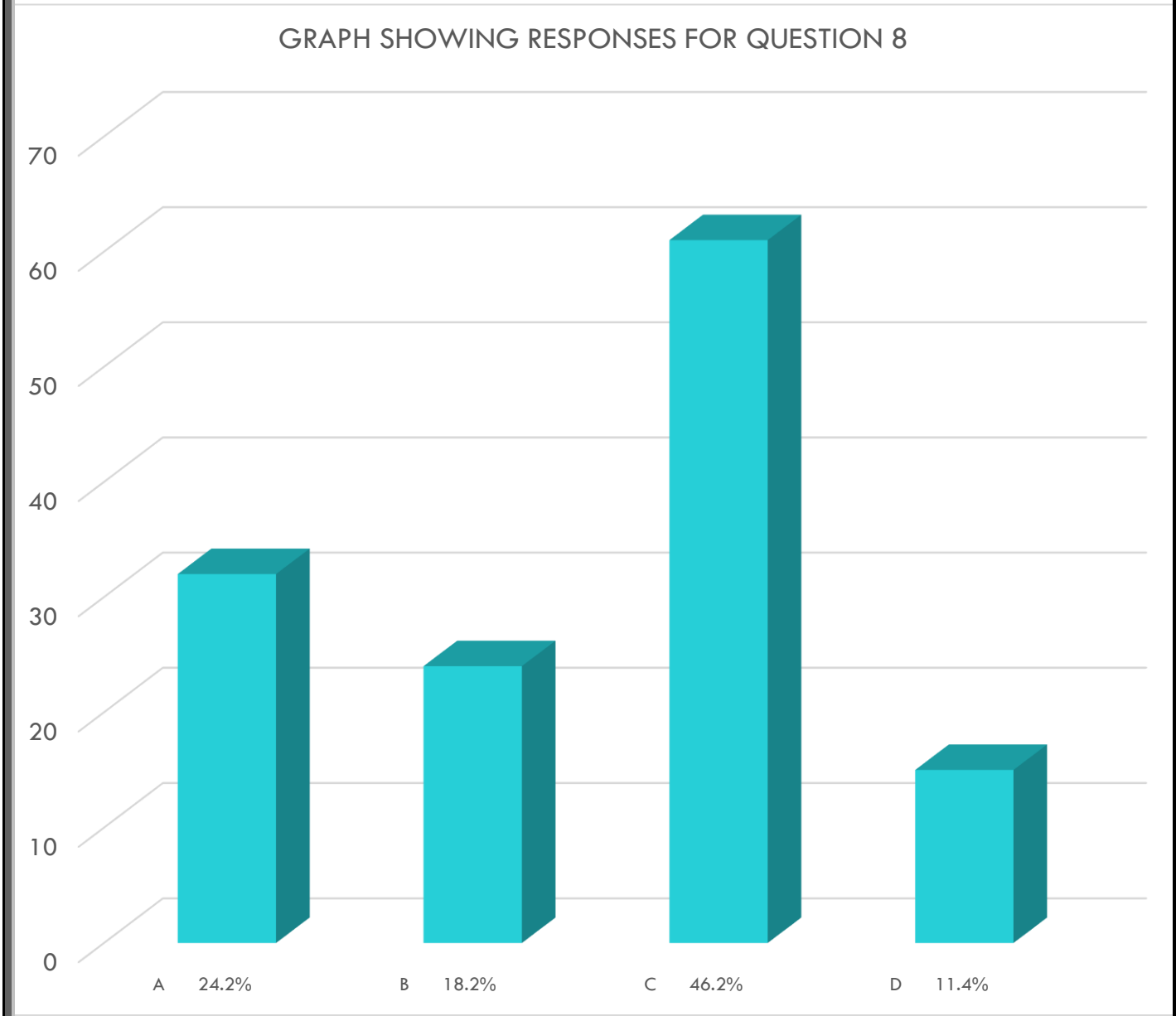

Figure #9- showing the responses for question #8

The chart above illustrates that C had most of the responses while D had the least.

Question 9

Why do you think this man needs a magnifier?

- It helps by making the words bigger for reading
- It can be used to see small objects
- It helps with looking at objects far away
- None of the above

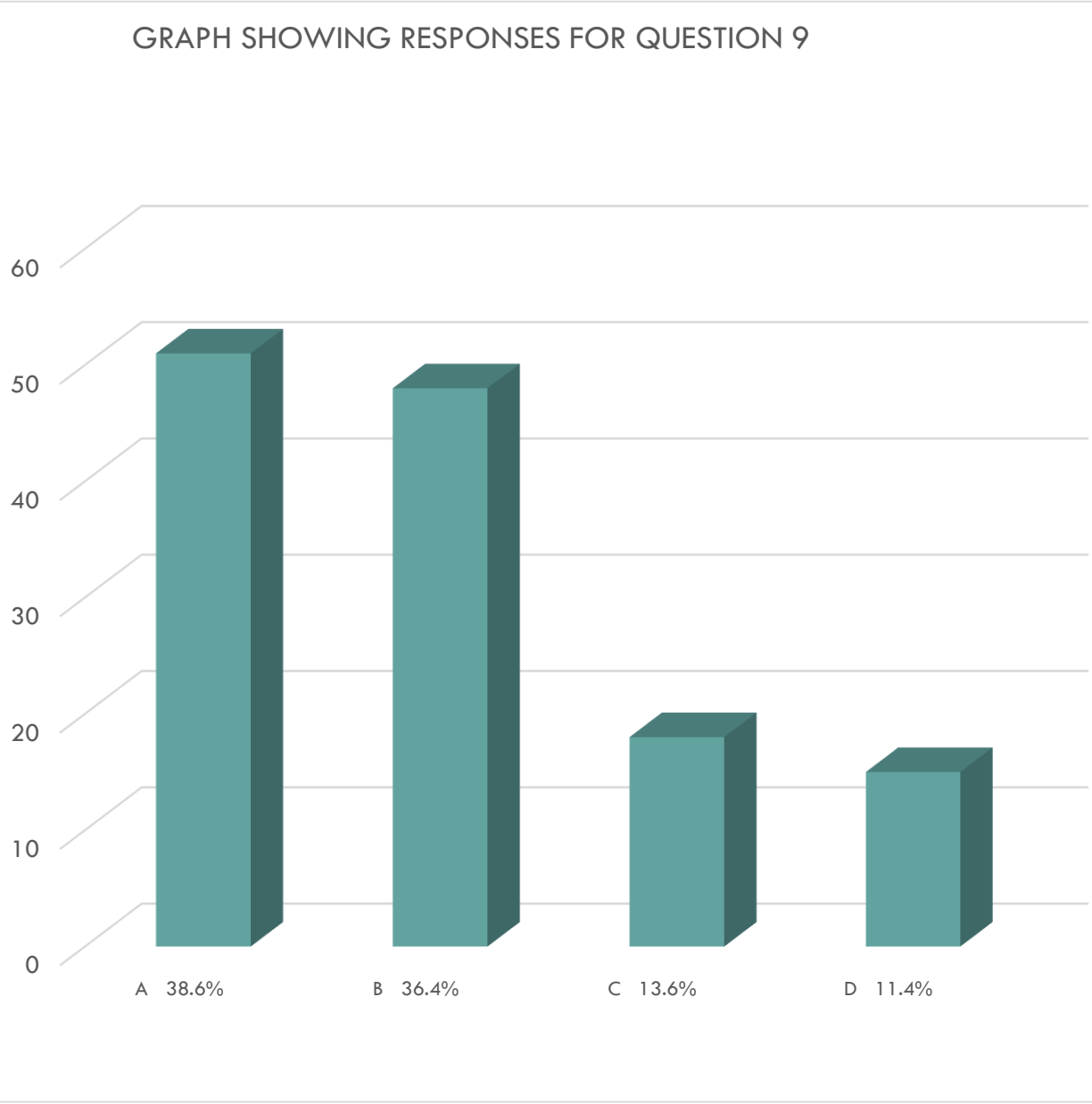

Figure #10 – showing the responses for question #9

The chart above shows that while A had the greatest number of responses, D had the least

Question 10

What are low vision aids?

- They are devices used to assist low vision persons to do their daily task
- They are devices used to assist the general public with their daily task
- They are devices used only when reading
- All of the above

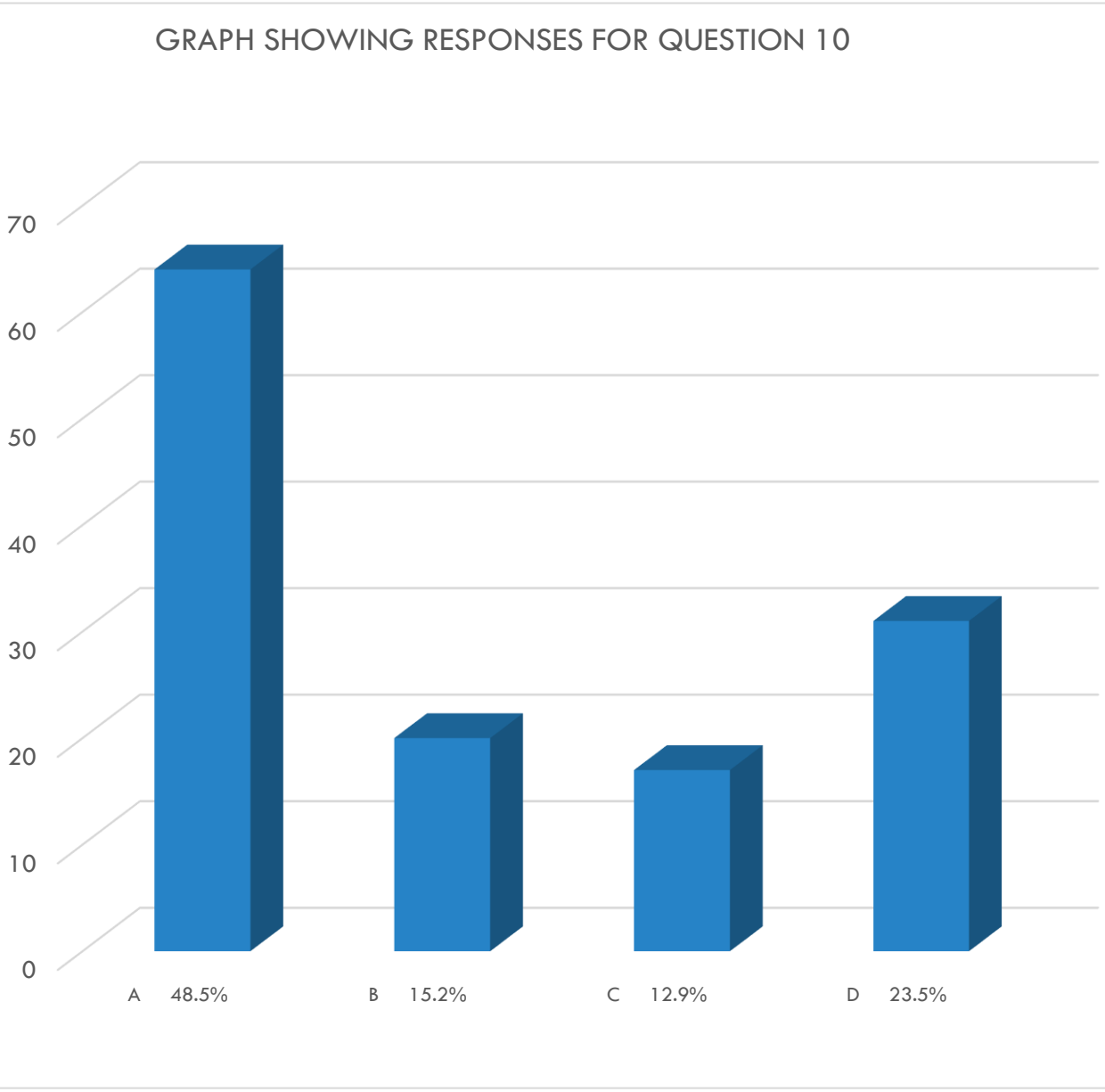

Figure #11 – showing the responses for question #10

Option A had the greater number of responses compared to C

Question 11

Why do you think it is important for some low vision people to have a white cane?

- To alert the public they are low vision persons
- To get around safely without bumping into objects
- Style or fashion
- None of the above

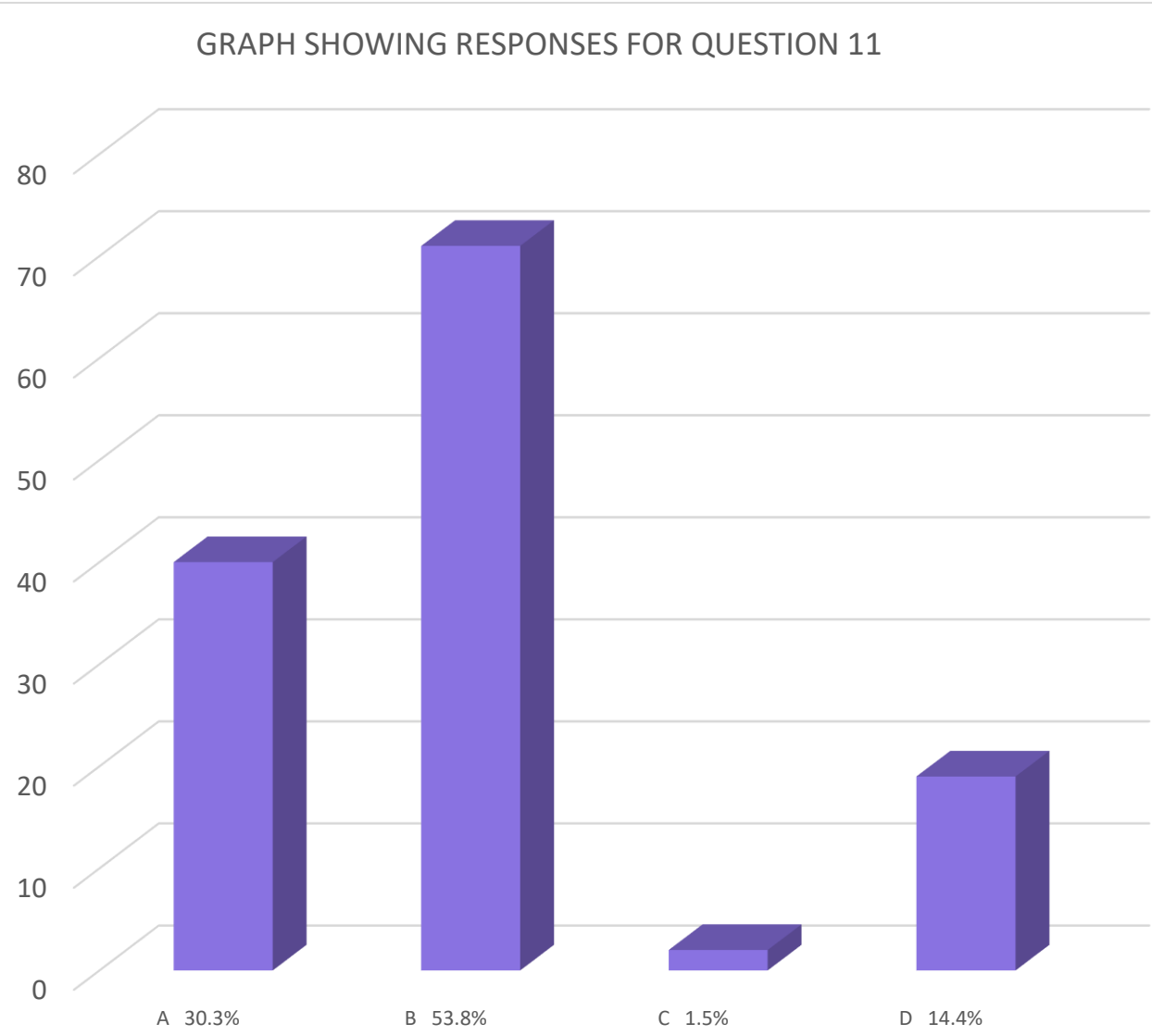

Figure #12- showing the responses for question #11

The chart above displays that B had the majority of the responses compared to C.

Question 12

You are at a red light and you see a person helping a low vision patient to cross the road. What would you do?

- Hold the arm of the person and bring them forward
- Wait for the green light and drive around them
- Ask if they need assistance
- Wait in the car until they finish cross the road

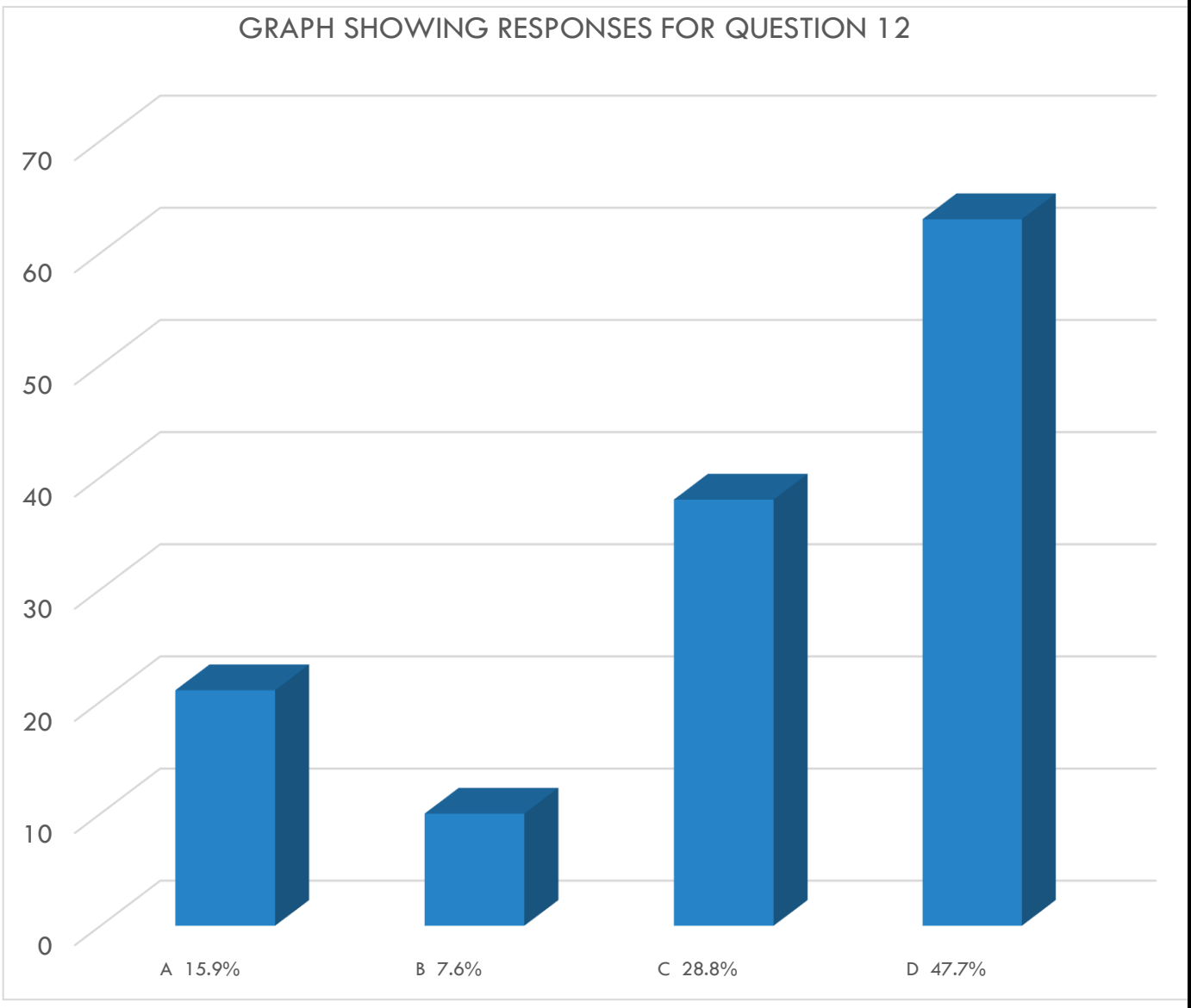

Figure #13- showing the responses for question #12

The chart above shows that D had the greatest number of responses as to B

Question 13

Do you think it is important to be aware of low vision aids?
 Yes

 No

State reason

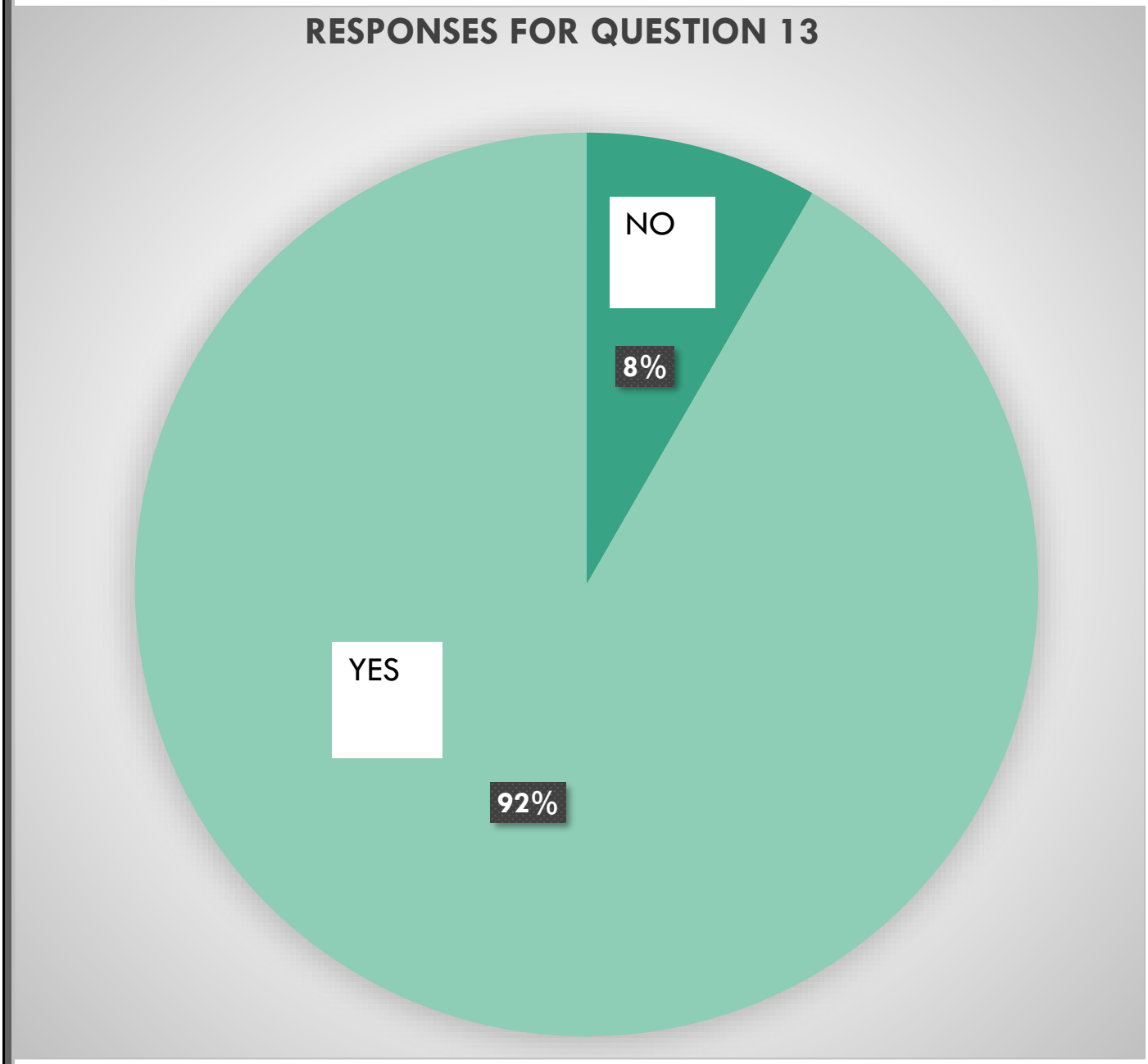

Figure #14- showing the responses for the Y/N part of question #13

The chart shows that the majority of individuals chose yes

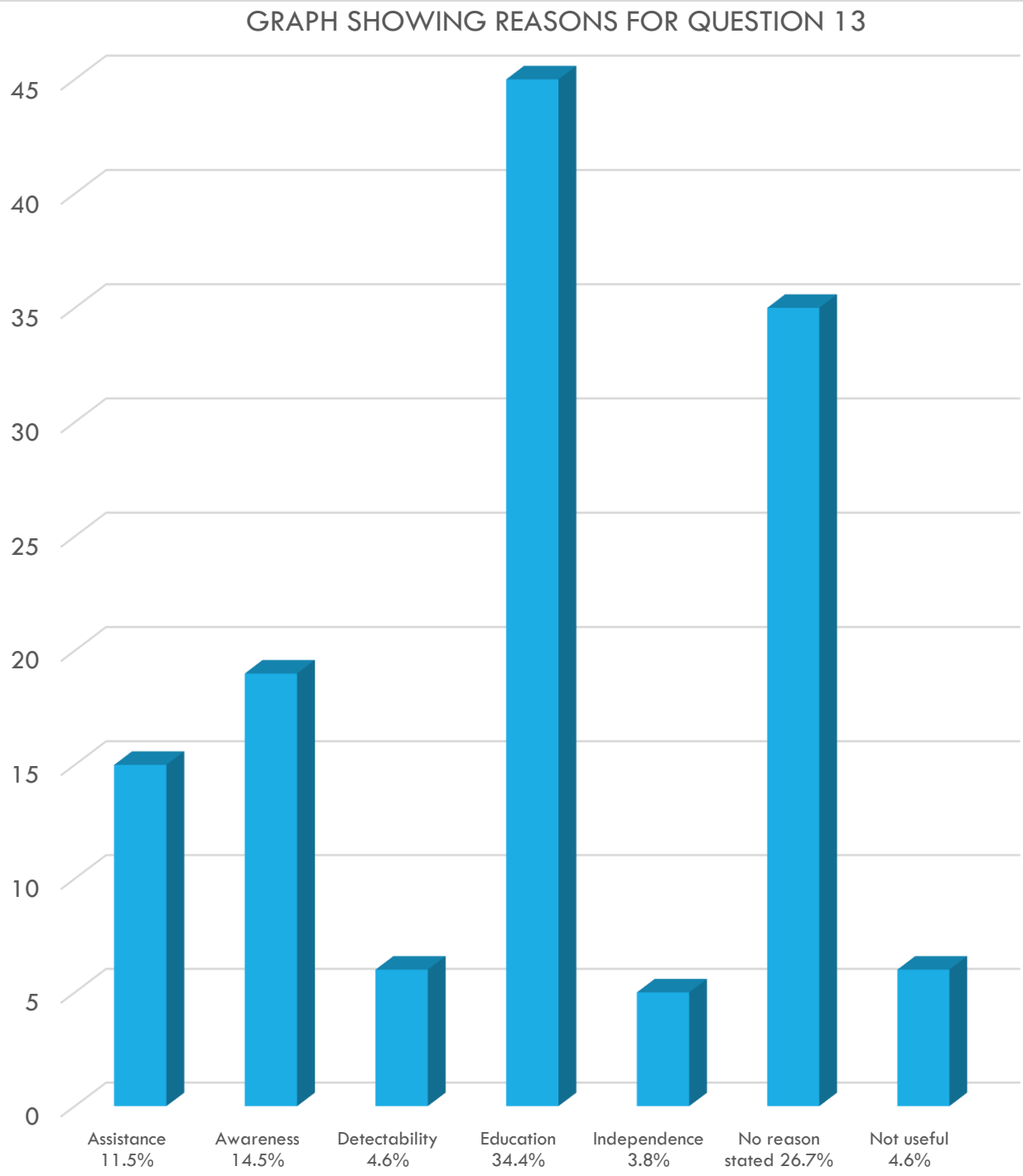

Figure #15- showing the reasons for question #13

It can be seen that Education was the main reason since it had the highest percentage

Question 14

What do you think can be done in the future to increase the awareness of low vision patients?

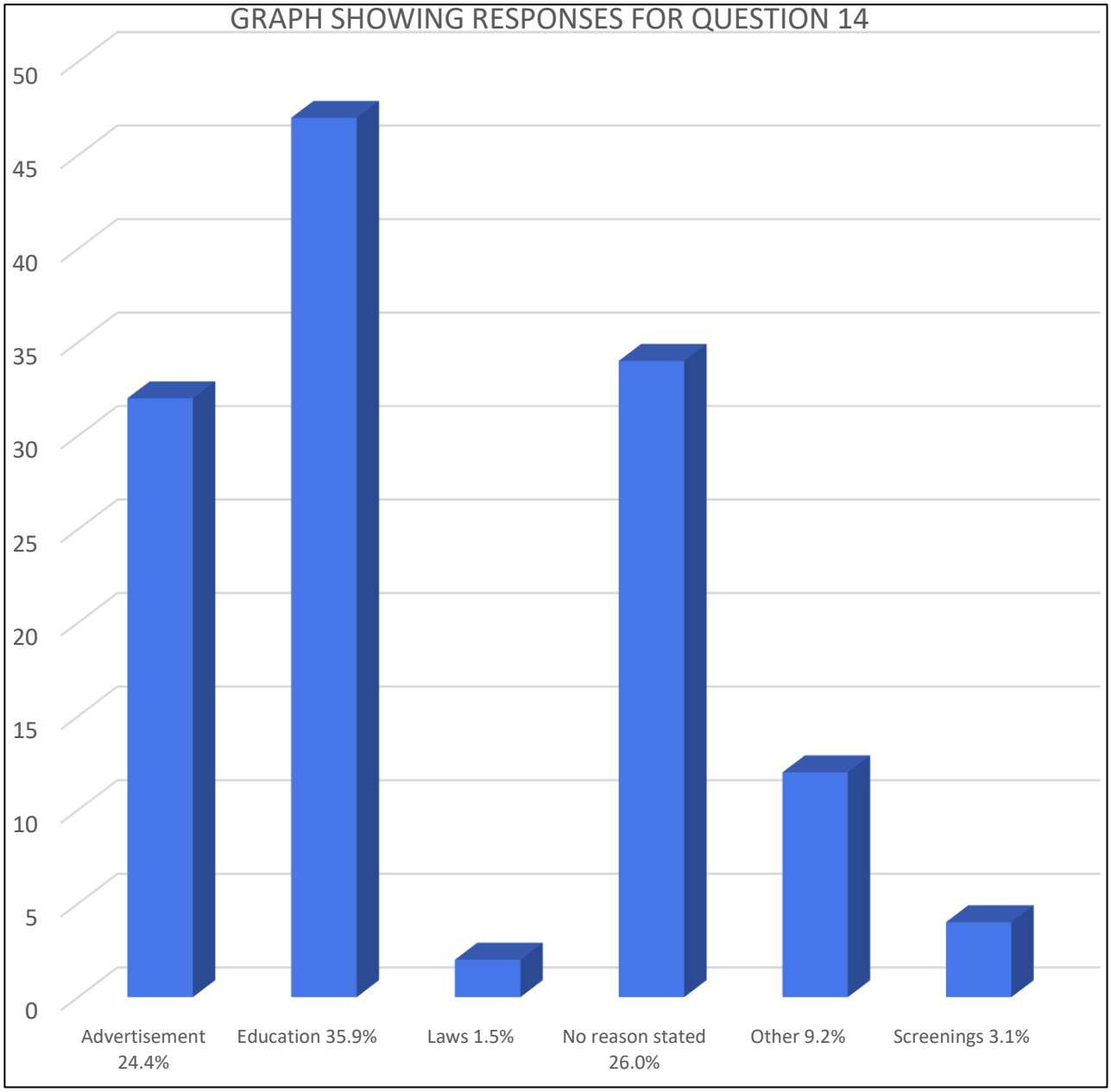

Figure #16 showing the responses for question #14

As shown above, the most popular reasons for this question was also Education

Question 15

Do you think that low vision patients should be able to have job opportunities?

□ Yes

□ No

State reason

_____

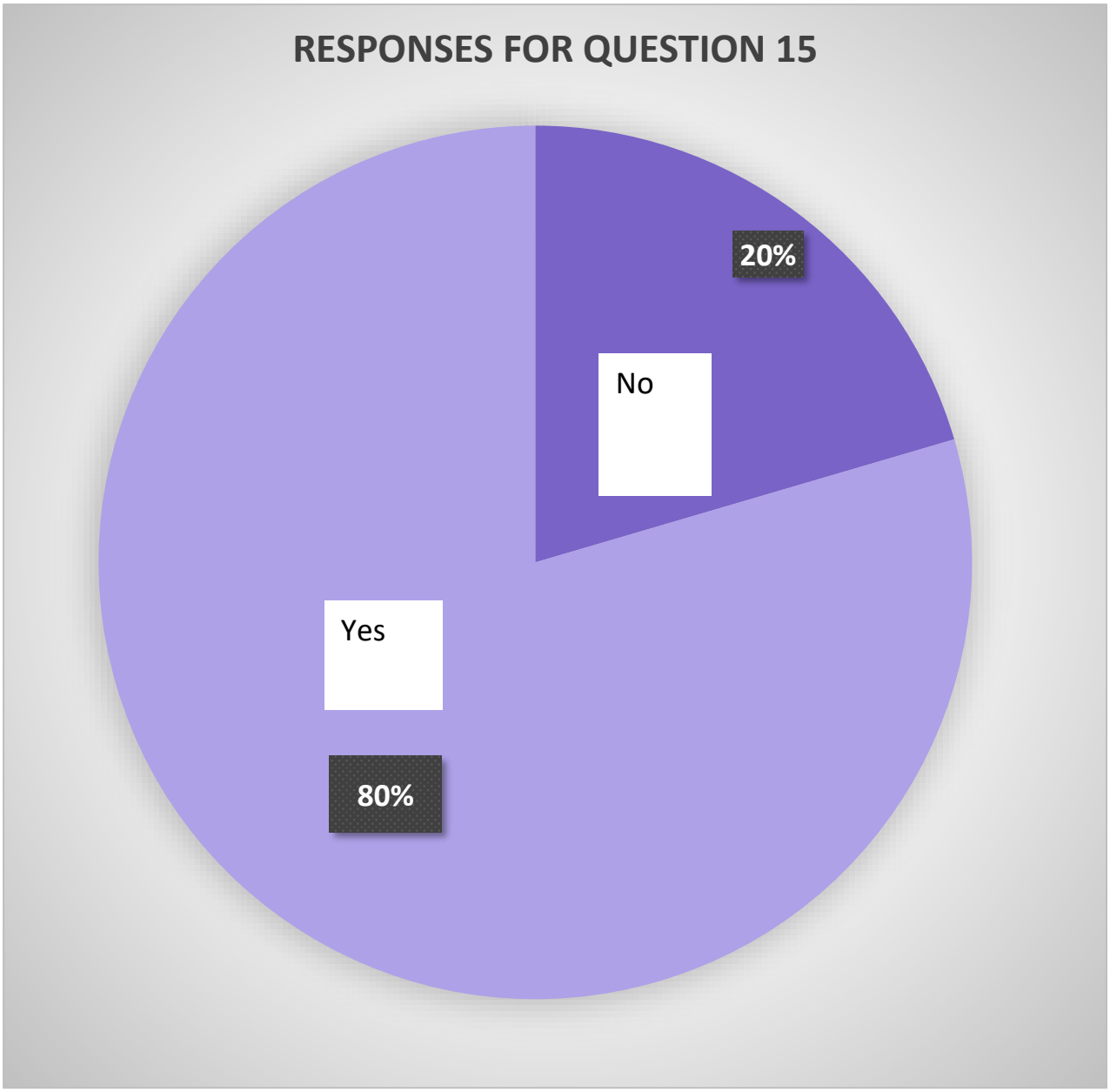

Figure #17- showing the responses for the Y/N part of question #15

This chart also shows that the majority of the responses were Yes.

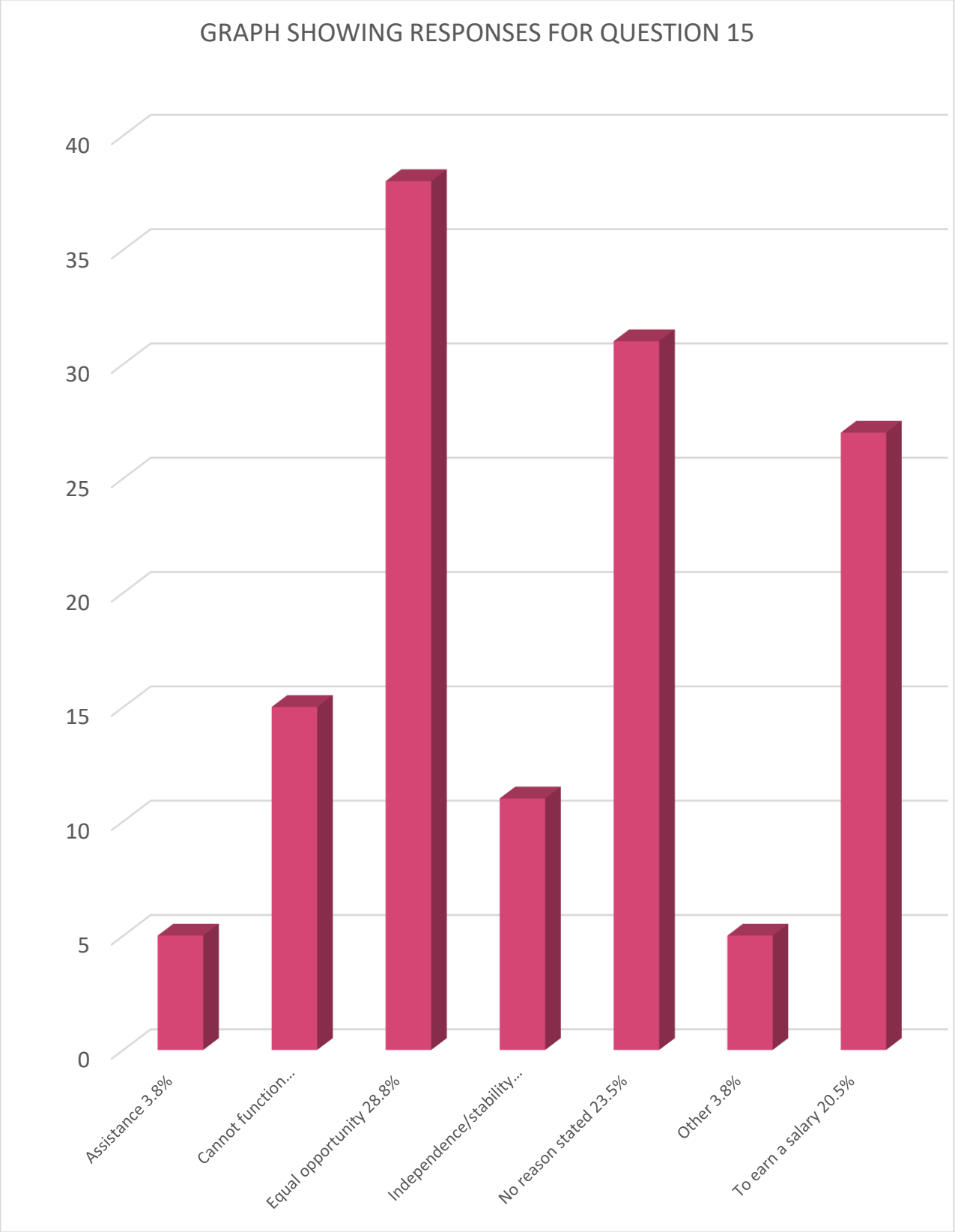

Figure #18- showing the responses for question #15

This chart shows that Equal Opportunity is the main reason.

CHAPTER 5

5.0- DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1-Discussion

The questionnaire contained several different questions, all, however, about low vision and low vision aids. It began a simple gender question, followed by the six age group options. The analysis involved using the SPSS program and applying the chi-square test to the various questions. The relationship between age and gender to the individual question would be interpreted with the aid of graphical representation.

Out of the 400 questionnaires that were distributed in the various businesses, the total amount that was filled out of the 400, was 132. Hence, the data analysis contained a total of 132 responses. It should be noted that the numbering of the questions started with 0.

Relationship between Gender & Age

		Age						
		A (18-30)	B (31-40)	C (41-50)	D (51-60)	E (61-70)	F (70+)	Total
Gender (M/F)	M	18	11	10	8	7	3	57
	F	13	21	19	13	7	2	75
Total		31	32	29	21	14	5	132

Table #1- showing the relationship between Gender & Age for 132 completed questionnaires.

Out of the 132 responses, the number of males and females should have been equal and for the six different groups, the standard percentage for each response should have been 16.67% or approximately 22 individuals for each. However, from the table above, it can be perceived that this was not the case. Instead, the total number of males and females that participated in this questionnaire were 57 and 75 respectively.

Concerning the different age groupings, there were 18 males and 13 females between 18-30, 11 males and 21 females between 31-40, 10 males and 19 females between 41-50, 8 males and 13 females between 51-60, 7 males and females between 61-70 and 3 males and 3 females over 70 years

Relationship between Gender & Qu.2

		#2				
		A	B	C	D	Total
Gender (M/F)	M	18	10	20	9	57
	F	30	13	30	2	75
Total		48	23	50	11	132

Table #2- showing the relation between the gender of the persons to question #2

This question contained four options, A-D. Each option was thought to have approximately 33 responses but this did not occur. Option A had 18 males and 30 females, B had 10 males and 13 females, C had 20 males and 30 females and D had 9 males and 2 females. Overall, the option that had the least number of responses was D with more male participants and the option that had the most numbers of responses was C with more female participants.

Relationship between Age and Qu.2

		#2				
		A	B	C	D	Total
Age	A (18-30)	12	3	12	4	31
	B (31-40)	11	5	15	1	31
	C (41-50)	16	3	7	3	29
	D (51-60)	4	5	12	0	21
	E (61-70)	4	4	3	3	14
	F (70+)	1	3	1	0	6
Total		49	23	50	11	132

Table #3- showing the relation between the age of the persons to question #2

- From the table above, it can be seen that most numbers of the responses came from participants between 18-30, 31-40 and 41-50. However, the age group 41-50 had most of the responses for option A

Relationship between Gender & Qu.3

		#3				
		A	B	C	D	Total
Gender (M/F)	M	31	23	0	3	57
	F	39	28	1	7	75
Total		70	51	1	10	132

Table #4 – showing the relation between the gender of the persons to question #3

This question also should have had approximately 33 responses for each option but this did not happen. Instead, option A had 70 from 31 males and 39 females, option B had 51 from 23 males and 28 females, option C had 1 from 1 female and option D had 10 from 3 males and 7 females. The option with the least responses was C and the option with the most responses was A

Relationship between Age & Qu.3

		#3				
		A	B	C	D	Total
Age	A (18-30)	19	9	0	3	31
	B (31-40)	15	15	0	2	31
	C (41-50)	18	8	0	3	29
	D (51-60)	9	11	0	1	21
	E (61-70)	7	6	1	0	14
	F (70+)	2	2	0	1	6
Total		70	51	1	10	132

Table #5- showing the relation between the age of the persons to question #3

It can be seen that most of the responses for this question came from persons who were among the following age groups: 18-30, 31-40 and 41-50. However, the responses for C came from persons between 18-30 and for option C, was one person over the age of 70.

Relationship between Gender & Qu.4

		#4				
		A	B	C	D	Total
Gender (M/F)	M	27	16	8	6	57
	F	43	23	6	3	75
Total		70	39	14	9	132

Table #6- showing the relation between the gender of the persons to question #4

Since this question contained four options, the number of responses that was expected would have been approximately 33 responses for each of them. Alternatively, there were 70 responses for option A from 27 males and 43 females, 39 for B from 16 males and 23 females, 14 for C from 8 males and 6 females and 9 for D from 6 males and 3 females. The option with the least responses for this question was D and the option with the most responses was A with 27.

Relationship between Age & Qu.4

		#4				
		A	B	C	D	Total
Age	A (18-30)	15	8	7	1	31
	B (31-40)	17	10	3	2	32
	C (41-50)	19	8	2	0	29
	D (51-60)	13	6	0	2	21
	E (61-70)	5	4	2	3	14
	F (70+)	1	3	0	1	5
Total		70	39	14	9	132

Table #7- showing the relation between the age of the persons to question #4

The table above shows that for option D, most of the responses were from individuals between 61-70. For option A, most of the responses were from individuals between 41-50.

Relationship between Gender & Qu.5

		#5					
		A	B	C	D	E	Total
Gender (M/F)	M	8	32	7	8	2	57
	F	10	46	6	11	2	75
Total		18	78	13	19	4	132

Table #8- showing the relation between the gender of the persons to question #5

Particularly, this question had five options instead. The expected responses should have been approximately twenty-six for each option. Rather, there were 18 for A from 8 males and 10 females, 78 for B from 32 male and 46 females, 13 for C from 7 males and 6 females, 19 for D from 8 males and 11 females and 4 for C from 2 males and 2 females. From these numbers, it can be seen that option E had the least amount of responses and option B had the most amount of responses.

Relationship between Age & Qu.5

		#5					
		A	B	C	D	E	Total
Age	A (18-30)	4	21	1	4	1	31
	B (31-40)	4	18	5	4	1	32
	C (41-50)	2	21	1	5	0	29
	D (51-60)	4	13	1	2	1	21
	E (61-70)	1	5	4	4	0	14
	F (70+)	3	0	1	0	1	5
Total		18	78	13	19	4	132

Table #9- showing the relation between the age of the persons to question #5

The table above shows that for option E, the responses came from one person of the age groups: 18-30, 31-40, 51-60 and 70+ years. For option B, the majority of the responses came from individuals of the age group 18-30 and 41-50

Relationship between Gender & Qu.6

		#6				
		A	B	C	D	Total
Gender (M/F)	0	1	2	2	52	57
	1	6	5	5	59	75
Total		7	7	7	111	132

Table #10- showing the relation between the gender of the persons to question #6

Returning to a question with four options, the expected responses would be approximately 33 for each of the options. The table above shows that the responses for each of the options were as follows: A=7 from 1 male and 6 females, B=7 from 2 males and 5 females, C=7 from 2 males and 5 females as well and D=111 from 52 males and 59 females. Most of the responses were under option D.

Relationship between Age & Qu.6

		#6				
		A	B	C	D	Total
Age	A (18-30)	0	1	1	29	31
	B (31-40)	1	1	5	25	32
	C (41-50)	1	2	0	26	29
	D (51-60)	2	0	1	18	21
	E (61-70)	3	1	0	10	14
	F (70+)	0	2	0	3	5
Total		7	7	7	111	132

Table #11- showing the relation between the age of the persons to question #6

Concerning the table above, for option A, the majority of the responses were from participants of age 61-70. For option B, the individuals were from 41-50 and 70+years. Option C majority responses were from participants of ages 31-40. Option D had more of the number of responses from persons between the age of 18 and 30 years.

Relationship between Gender & Qu.7

		#7					
		A	B	C	D	E	Total
Gender (M/F)	M	18	16	9	12	2	57
	F	14	21	20	14	6	75
Total		32	37	29	26	8	132

Table #11- showing the relation between the gender of the persons to question #7

From the question above, it can be seen that there are five options to choose from so the expected number of responses would have been on average, 26 responses for each. However, this was not the case. Instead, option A has 32 responses from 18 males and 14 females, B has 37 from 16 males and 21 females, C has 29 from 9 males and 20 females, D has 26 from 12 males and 14 females and E has 8 from 2 males and 6 females. This shows that option E has the least number of responses as well as option B has more of the responses.

Relationship between Age & Qu.7

		#7					
		A	B	C	D	E	Total
Age	A (18-30)	5	8	8	8	2	31
	B (31-40)	10	8	4	5	5	32
	C (41-50)	10	6	6	7	0	29
	D (51-60)	5	7	7	2	0	21
	E (61-70)	1	7	3	2	1	14
	F (70+)	1	1	1	2	0	5
Total		32	37	29	26	8	132

Table #12- showing the relation between the age of the persons to question #7

From the information above, it is noticed that for option E, the greater number of responses were from individuals of the age group 31-40. Option B, which had the most responses overall for this question, had more from individuals between 18 and 50 years.

Relationship between Gender & Qu.8

		#8				
		A	B	C	D	Total
Gender (M/F)	M	12	15	23	7	57
	F	20	9	38	8	75
Total		32	24	61	15	132

Table #13- showing the relation between the gender of the persons to question #8

This question has four options as seen above. Hence, the expected number of responses should have been approximately 33 for each. But from the table, the responses for the particular responses were as follows: A has 32 from 12 males and 20 females, B has 24 from 15 males and 9 females, C has 61 from 23 males and 38 females and D has 15 from 7 males and 8 females. Evidently, from this, D has the least number of responses whereas C has the most numbers of responses.

Relationship between Age & Qu.8

		#8				
		A	B	C	D	Total
Age	A (18-30)	6	7	15	3	31
	B (31-40)	11	5	11	5	32
	C (41-50)	5	2	20	2	29
	D (51-60)	4	4	11	2	21
	E (61-70)	5	6	2	1	14
	F (70+)	1	0	2	2	5
Total		32	24	61	15	132

Table #14- showing the relation between the age of the persons to question #8

The table shows that option D had most of the responses from persons who were between the ages of 31 to 40 while option C, mostly involved individuals between the age of 41 and 50.

Relationship between Gender & Qu.9

		#9				
		A	B	C	D	Total
Gender (M/F)	M	19	20	9	9	57
	F	32	28	9	6	75
Total		51	48	18	15	132

Table #15- showing the relation between the gender of the persons to question #9

This question has four options so as previously mentioned, the expected number of responses would have been on an average of 33 for each option. Rather, option A has 51 responses from 19 males and 32 females, B has 48 from 20 males and 28 females, C has 18 from 9 males and 9 females and D has 15 from 9 males and 6 females. Option D had the minimum amount of responses whereas option A had the maximum number of responses.

Relationship between Age & Qu.9

		#9				
		A	B	C	D	Total
Age	A (18-30)	12	11	6	2	31
	B (31-40)	15	11	2	4	32
	C (41-50)	13	13	2	1	29
	D (51-60)	6	9	4	2	21
	E (61-70)	4	4	3	3	14
	F (70+)	1	0	1	3	5
Total		51	48	18	15	132

Table #16- showing the relation between the age of the persons to question #9

Option D having the minimum number of responses and most of the persons that chose this option were of the following age groups: 31-40, 61-70 and 70+. Option A had the maximum number of responses particularly had persons between 31 and 40 years. This group of individuals had the majority of the responses for option A.

Relationship between Gender & Qu.10

		#10				
		A	B	C	D	Total
Gender (M/F)	M	27	8	4	18	57
	F	37	12	13	13	75
Total		64	20	17	31	132

Table #17- showing the relation between the gender of the persons to question #10

The expected response for each of the options should have been roughly around 33 responses but alternatively, A has 64 from 27 males and 37 females, B has 20 from 8 males and 12 females, C has 17 from 4 males and 13 females and D has 31 from 18 males and 13 females. Option C has the lower number of responses whereas option A has the highest number of responses.

Relationship between Age & Qu.10

		#10				
		A	B	C	D	Total
Age	A (18-30)	14	4	4	9	31
	B (31-40)	16	8	3	5	32
	C (41-50)	19	3	3	4	29
	D (51-60)	12	4	2	3	21
	E (61-70)	2	0	4	8	14
	F (70+)	1	1	1	2	5
Total		64	20	17	31	132

Table #18- showing the relation between the age of the persons to question #10

The lower number of responses for this question was for option C, as previously stated. Most of the individuals that chose that option were around 18-30 and 61-70 years. Most of the persons who chose option A were between 41 to 50 years.

Relationship between Gender & Qu.11

		#11				
		A	B	C	D	Total
Gender (M/F)	M	20	22	1	14	57
	F	20	49	1	5	75
Total		40	71	2	19	132

Table #19- showing the relation between the gender of the persons to question #11

The table above shows that option A has 40 responses from 20 males and 20 females, B has 71 from 22 males and 49 females, C has 2 from 1 male and 1 female and D has 19 from 14 males and 5 females. We would have expected that each option had around 33 responses. Certainly, it can be recognized that C had a lower number of responses compared to B which had the highest number of responses for this question.

Relationship between Age & Qu.11

		#11				
		A	B	C	D	Total
Age	A (18-30)	11	18	1	1	31
	B (31-40)	11	17	0	4	32
	C (41-50)	6	20	0	3	29
	D (51-60)	5	13	1	2	21
	E (61-70)	6	2	0	6	14
	F (70+)	1	1	0	3	5
Total		40	71	2	19	132

Table #20- showing the relation between the age of the persons to question #11

Given that option C has the minority of the responses, the two individuals that chose this choice were between 18-30 and 51-60 years. Option B which had the majority of the responses for this question comprised most of the individuals that were between 41-50 years.

Relationship between Gender & Qu.12

		#12				
		A	B	C	D	Total
Gender (M/F)	M	11	4	16	26	57
	F	10	6	22	37	75
Total		21	10	38	63	132

Table #21- showing the relation between the gender of the persons to question #12

From the table above, it can be noticed that option A had 21 responses from 11 males and 10 females, B had 10 from 4 males and 6 females, C had 38 from 16 males and 22 females and D had 63 from 26 males and 37 females. We would have expected that for each of the option, there would have been relatively 33 responses for each. Given these values, it is surely seen that option B had the lowest number of responses compared to option D, which had the highest number of responses overall.

Relationship between Age & Qu.12

		#12				
		A	B	C	D	Total
Age	A (18-30)	7	2	7	15	31
	B (31-40)	3	4	10	15	32
	C (41-50)	3	1	9	16	29
	D (51-60)	3	3	5	10	21
	E (61-70)	4	0	5	5	14
	F (70+)	1	0	2	2	5
Total		21	10	38	63	132

Table #22 – showing the relation between the age of the persons to question #12

Of the 10 persons who chose choice B, most of them were between 31-40 years. For option D, which had mainly the highest number of responses for this question, involved individuals that were mostly between 41 and 50 years old.

Relationship between Gender & the Y/N part of Qu.13

		#13		
		No	Yes	Total
Gender (M/F)	M	4	53	57
	F	7	68	75
Total		11	121	132

Table #23- showing the relation between the gender of the individuals to the Y/N part of number #13.

The first part of this question included a yes/no option. As previously stated, the number 0 represents no and 1 represents yes. The expected number of responses would have been roughly 66 for each. This part of the question involved 11 persons saying no and 121 persons saying yes. Of these 11 individuals, 4 of which were males and the remaining 7 were females. Out of the 121 persons, 57 were males and 75 were females.

Relationship between Age & the Y/N part of Qu.13

		#13		
		No	Yes	Total
Age	A (18-30)	4	27	31
	B (31-40)	3	29	32
	C (41-50)	1	28	29
	D (51-60)	1	20	21
	E (61-70)	0	14	14
	F (70+)	2	3	5
Total		11	121	132

Table #24- showing the relation between the age of the persons to the Y/N part of question #13

Of these 11 individuals who chose option no, most of them were mostly among 18-30 years old and out of the 121 who chose yes, the majority of them were between 31-50 years old.

Relationship between Gender & the reason stated in Qu.13

		REASON FOR #13							Total
		Assist-ance	Aware-ness	Detect-ability	Educat ion	Independ ence	No reason stated	Not useful	
Gender (M/F)	M	5	7	2	18	5	18	2	57
	F	10	13	4	27	0	17	4	75
Total		15	20	6	45	5	35	6	132

Table #25- showing the relation between the gender of the persons to the reasons in question #13

This part of question #13 asked for the reason why they chose yes or no previously. The different answers that were obtained from the questionnaires were further grouped into the various categories as seen above. Out of the 132 responses, Assistance had 15 from 5 were males and 10 were females, Awareness had 20 from 7 males and 13 females, Detectability had 6 from 2 males and 4 females, Education had 45 from 18 males and 27 females, Independence had 5 from all male participants, 18 males and 17 females did not give a response and 2 males and 6 females reasons that were classified as not useful. These values present that the reason with the lowest number of responses was Independence and the reason with the highest number of responses was Education.

Relationship between Age & the reason stated in Qu.13

		REASON FOR #13							
		Assist-ance	Aware-ness	Detect-ability	Educa-tion	Indepen-dence	No reason stated	Not useful	Total
Age	A (18-30)	3	3	2	8	2	12	1	31
	B (31-40)	4	5	2	11	1	8	1	32
	C (41-50)	4	6	2	10	1	6	0	29
	D (51-60)	2	3	0	10	1	3	2	21
	E (61-70)	2	3	0	5	0	2	2	14
	F (70+)	0	0	0	1	0	4	0	5
Total		15	20	6	45	5	35	6	132

Table #26 – showing the relation between the age of the persons to the reason stated in question #13

Of the five individuals that identified Independence as the reason, 2 of them were between 18-30 years. Out of the 45 persons who described Education as a reason, 11 of them were between 31 to 40 years and 20 of them were between 41 to 60 years.

Relationship between Gender and the reason stated In Qu.14

		REASON FOR #14						Total
		Advertise-ments	Educa-tion	Laws	No reason stated	Other	Screenings	
Gender (M/F)	M	11	19	2	17	6	2	57
	F	22	28	0	17	6	2	75
Total		33	47	2	34	12	4	132

Table #27 showing the relation between the gender of the individuals to the reason stated in question #14

This question was also asking for the participants to generate a reason to answer the question above. After all the questionnaires were collected, the answers that were obtained were further categorized into the following groups: Advertisements had 33 responses from 11 males and 22 females, Education had 47 from 19 males and 28 females, Laws had two responses from two males, Screenings had 4 from 2 males and 2 females, 17 males and 17 females did not give a reason for this question and 12 of the responses were identified into Other. These values show that the reason Law had the minimum number of responses and Education had the majority number of responses.

Relationship between Age & the reason stated in Qu.14

		REASON FOR #14						Total
		Advertise-ments	Educa-tion	Laws	No reason stated	Other	Screen-ings	
Age	A (18-30)	5	10	1	11	2	2	31
	B (31-40)	10	9	0	7	5	1	32
	C (41-50)	5	15	0	6	2	1	29
	D (51-60)	9	9	1	1	1	0	21
	E (61-70)	3	4	0	5	2	0	14
	F (70+)	1	0	0	4	0	0	5
Total		33	47	2	34	12	4	132

Table #28- showing the relation between the age of the persons to the reason stated in question #14

Of the two individuals that responded Law as a reason, one of which was between 18-30 years and the other was between 51-60. Education was the main reason for this question and it involved 19 persons between 18-40 years and 15 persons between 41-50 years.

Relationship between Gender& the Y/N part of Qu.15

		#15		
		No	Yes	Total
Gender (M/F)	M	14	43	57
	F	13	62	75
Total		27	105	132

Table #29 – showing the relation between the gender of the persons to question #15

This question, just like #13 above, involved two parts. Firstly, the yes/no section and then the part where the individual would have to put their reason on why they either chose yes or no. For the first part, of the 132 participants, 27 of them said no and the remaining 105 said yes. The 27 persons that said no were 14 males and 13 females. The 105 that said yes were from 43 males and 62 females.

Relationship between Age & the Y/N part of Qu.15

		#15		
		No	Yes	Total
Age	A (18-30)	7	24	31
	B (31-40)	7	25	32
	C (41-50)	5	24	29
	D (51-60)	3	18	21
	E (61-70)	3	11	14
	F (70+)	2	3	5
Total		27	105	132

Table #30 – showing the relation between the age of the persons to the Y/N part of question #15

The 27 persons that responded to option No mainly involved persons who were between the ages of 18 to 40 years. Most of the persons that responded yes were between the following age group: 18 to 50 years old. Seventy-two of the 105 persons were off this particular age group

Relationship between Gender to the reason states in Qu.15

		#15 reason							
		Assist-ance	Cannot function properly	Equal oppor-tunity	Indepen-dence/ stability	No reason stated	Other	To earn a salary	Total
Gender (M/F)	0	5	7	14	3	16	1	11	57
	1	0	8	24	8	15	4	16	75
Total		5	15	38	11	31	5	27	132

Table #31 showing the relation between the gender of the persons to the reason stated in question #15

This part of the question is where the persons are asked to state the reason why they chose either yes or no. As stated above, the ordinary responses were categorized into groups so that they would be easier to analyze. The groups and responses were as follows: Assistance with 5 responses from 5 males, Cannot function properly with 15 from 7 males and 8 females, Equal opportunity with 38 from 14 males and 24 females, Independence/stability with 11 from 3 males and 8 females, To earn a salary with 27 from 11 males and 16 females and another group of responses were classified as Other. In addition to this, out of the 132 individuals that participated, 31 of them did not give a reason. The numbers show that Assistance was the reason that had the lowest number of responses and Equal opportunity had the most.

Relationship between Age & the reason stated in Qu.15

		#15 reason							
		Assist-ance	Cannot function properly	Equal oppor-tunity	Indepen-dence/ stability	No reason stated	Other	To earn a salary	Total
Age	A (18-30)	2	2	8	1	10	1	7	31
	B (31-40)	1	4	9	3	7	1	7	32
	C (41-50)	2	3	13	4	6	0	1	29
	D (51-60)	0	2	7	1	3	2	6	21
	E (61-70)	0	3	1	2	1	1	6	14
	F (70+)	0	1	0	0	4	0	0	5
Total		5	15	38	11	31	5	27	132

Table #32- showing the relation between the ages of the persons to the reason stated in question #15

The graph and table show that Assistance, which had the least amount of persons that responded this, mainly involved persons between 18-30 and 41-50 years. Equal opportunity, to which most of the individuals responded largely involved persons between the age of 41 and 50.

For Question #2

According to the chi-square test between age and question two it was determined that the p-value = 0.033, which is less than 0.05 making it statistically significant but what is significant about that relationship? Question two consisted of four options A to D. From the results table, option A “a person who always wears glasses” had a total of 48 responses so for each of the six age groups, there should have been eight participants but that was not the case. Instead there were 29 participants from the age group 41-50 years that choose option A.

The age group 41-50 years has a significant difference to option A , Similarly option B "Elderly citizens" had a total of 23 responses so for each age group, there should have been approximately 4 participants. There were five participants from age group 70 years and over that chose option B though its slightly over the value expected age group 70 years and over has a significant difference to option B. Lastly, option C "Persons who vision can't be corrected with glasses or spectacles" had a total of 50 responses so for each age group, there should have been around 8 participants. However, this was not the case. There were 21 participants between 51-60 years who chose option C, hence age group 51 to 60 had a significant difference to option C. This also indicates that 50 out of 132 participants understood the definition of a low vision person.

There were 29 persons between the age group 41 to 50 years so each option should have had roughly 7 persons however option A had 16 individuals whereas option C had seven individuals because there was a big difference between option A and C so there was a significant difference. There were 21 persons between 51 to 60 years, so there should have been approximately 5 persons for each option but for option C, there were 12 persons which is almost two times the amount expected. Option B had five participants so because there was a large difference between values so there was a significant difference. Lastly for the age group, 70 years and over, option B had 3 participants while option A and C had 1, therefore there was a significant difference.

The Cremer V test was also performed and the value found was 0.259 which indicates the relationship between age and question 2 has a moderate relationship.

For Question #5

The chi-square test between age and question five had a p-value of 0.033 which is less than 0.05, making it statistically significant. Question five consisted of options A to E.

From the results table, option A had a total of 18 responses so for each age group, there should have been 3 participants this did not occur. Instead, five participants from the age group 70 years and over choose option A. Therefore, this age group had a significant difference. Likewise, option B had a total of 78 responses, which was the most preferred option for this question. There was a big difference noted with this option compared to the rest, this could have been because a picture was used to aid in answering the question or that the public truly understands the duty of a guide dog. For each of the age group, there should have been approximately 13 participants but there were only five who choose option B from the age group 70 years and over, which is almost three times lower than the expected value. Therefore age group 70 years and over also has a significant difference. Similarly, option C had a total of 13 responses so for each age group there should have been approximately two participants, however that was not the case. Rather, there were 14 participants from the age group 61-70 years that chose option C, therefore, age group 61 to 70 years has a significant difference. Lastly option E had a total of four responses which was the least preferred option compared to the rest. For each group in this case, there should have been one participant but there were five participants from the age group 70 years and over that choose option E. The age group 70 and over is statistically significant.

There were 5 persons between the age of 70 years and over so ideally for each of the four options, there should have been around 1 person responding per option. This did not occur. Instead, option A had 3 participants and option C had 1 participant, therefore, there was a significant difference. Option B had zero responses which suggest no one in that age group thought option B was a good answer. For option E, there was one participant when compared to the rest of the responses so it was indeed statically significant.

There were 14 persons between the age group 61-70 years so each option should have had roughly 4 persons, option C had 4 individuals whereas option A had one individual, therefore there was a significant difference.

The Cremer V test was also performed and the value found was 0.256 which indicates the relationship between age and question five has a moderate relationship.

For Question #6

The chi-square test between age and question six has a p-value of 0.004 which is less than 0.05 making it statistically significant. Question six consisted of four options A to D. From the results table, option A had a total of seven responses so for each age group there should have been approximately one participant. This, however was not the case. There were fourteen participants from the age group 61 to 70 years that choose option A. Therefore, the age group 61 to 70 years has a significant difference. Option B had seven responses so for each age group, there should have been roughly 1 participant which is the same value we got for option A. However, there were five who choose option B from the age group 70 years and over therefore age group 70 years and over had a significant difference. Likewise, option C had seven responses, so the same principle applies here. For options A and B, each of the age groups should have had approximately one participant however this did not occur. Alternaively, there were thirty two participants from the age group 31 to 40 years that chose option C, therefore age group 31 to 40 years had a significant difference. The age group 31 to 40 years had the most participants when compared to the rest of age groups. Also option A,B and C had the same number of responses when compared to option D, which had one hundred and eleven responses. This showed that the data was skewed to option D.

There were 14 persons between the age of 61 to 70 years so for each of the four options, there should have been around 4 persons responding per option. This was not the case.

Instead, option A had 3 participants and option B had 1 participant therefore there was a significant difference in option A. There were 5 persons between the age group 70 years and over so in this case, each option should have 1 person however, for option B there were 2 persons, and option C had so there was no significant difference in option B. There were 32 persons between the age group 31 to 40 years so each option should have had roughly 8 persons however option C had 5 individuals whereas options A had one individual so because of the difference in values, there was a significant difference.

The Cremer V test was performed and the value found was 0.291 which indicates the relationship between age and question six also has a moderate relationship.

For Question #10

When the Chi-square test was applied to this question and the different age groups, the "p value" was found to be 0.045. Considering that this value is less than 0.05, this implies that this question is statistically significant. Particularly, this question asks what are low vision aids and contained four options, A-D. Option A had 64 responses so for each age group, there should have been around 10 persons but this did not occur. Instead, 19 persons between the age of 51-60 chose A which had a significant difference compared to the other age groups. This indicates that people of this age group knew more about low vision aids since they chose the answer that stated low vision aids are devices used to assist low vision persons to do their daily task which is the correct answer. Option B had 20 responses so in this case, each age group should have had approximately 3 individuals. Rather, 8 persons between the age of 31-40 and 0 persons between 51-60 chose this option. From these values, it can be seen that those age groups had a significant difference compared to the others.

There were 31 persons between the age of 18-30 so for each of the four options, there should have been around 7 persons.

However, this did not occur. Instead, option A had 14 individuals which is double the expected number. There were 32 persons in the age group 31-40 so in this case, each option should have had 8 persons but for option A again, there were 16 individuals which is again, double than expected. There were 29 persons between 41-50 so each option should have had roughly 7 persons as well. But, option A had 19 individuals which is almost three times the expected value so this also had a significant difference. There were 14 persons between 61 and 70 years. So, there should have been generally 3 or 4 persons for each option but for option D, there were 8 persons. This was significantly different for the other options of this particular age group.

Based on the Cramer's V score being 0.253, it shows there is a moderate relationship between question #10 and the various age groups.

For Question #11

When the Chi-square test was applied to question #11 and the gender question, the "p-value" was found to be 0.006. This value is less than 0.05 which means that this question is statistically significant. This question asks why would a person think it is important for some low vision people to have a white cane. It contained four different options but the right answer was option B. Option B had 71 responses. The expected number of males and females should have been roughly around 35 for each. Instead, there were 22 males and 49 females. These values show that for this option, there was a significant difference. It can also be seen that more females got the answer correct. Option D had a total of 19 responses so there should have been around 9 responses for both male and female but instead there were 14 from males and 9 from females which is also significantly different.

This question contained responses from 57 males and 75 females. For each of the four options, there should have been almost 14 males. However, this was not the case. Option B had 22 males, A had 20, D had 14 and C had 1. These values show that each of the options were significantly different from the other. For each of the options, there should have been roughly 18 females. Yet again, this did not occur. Rather, B had 49, A had 20, D had 5 and C had 1. These values also indicate that each option was also significantly different from the other.

Based on the Cramer's V score being 0.305, it implies that there is a strong relationship between question #11 and gender.

When the Chi-square test was applied to question #11 and the various age groups, the "p-value" was found to be 0.009. This value is less than 0.05 which means that this is statistically significant. Option A had a total of 40 responses so each of the six age groups should have had around 6 persons from each, but this did not occur. Instead, there were 11 persons between 18-30. 11 between 31-40 and 1 person above 70 years. These values display that they were significantly different from each other. Option B had 71 persons so the predicted number of persons for each option would have been around 11 but this was not the case. Rather, there were 20 persons between the age of 41-50 and 2 persons between the age of 61-70. From this, it can be seen that people between the age of 41-50 got the answer correct and that the values for the options were significantly different. Option D had 19 responses in total so the expected number would have been generally 3 persons for each of the age groups but this did not happen. Alternatively, there were 6 persons between the age of 61-70 which is double than that expected while there was 1 person between the age of 18-30. These values indicate that it was significantly different for the age groups.

There were 31 persons between the age of 18 and 30 so there should have been around 7 or 8 persons for each of the option but this was not the case. Instead, option B had 18 persons which is almost three times the number expected while C and D had 1 person each. The number of persons for each of the options were significantly different. There were 29 persons between the age of 41- 50 so yet again, there should have been roughly 7 persons for each of the option. However, this did not occur. Rather, there 20 persons for option B which is almost three times the number than expected while there were 0 persons for C. These values were significantly different from each other. There were five persons above 70 years. So, it would have been expected that each option had 1 person but this did not happen. Option C had 0 persons while D had three persons. Also, these values were significantly different from each other.

Based on the Cramer's V score being 0.280, it shows that there is a moderate relationship between question #11 and age.

This study was done to determine the awareness of low vision aids amongst the Trinidad and Tobago Population. A total of four hundred (400) questionnaires were given out throughout different optical stores in areas of Trinidad such as Point Fortin, Princes Town, San Fernando, Chaguanas, and Port of Spain. Out of this total, there were one hundred and thirty-two responses (132). As far as we know, this is the first study to evaluate the awareness of low vision aids amongst the Trinidad and Tobago population. There were 57% female participants in this study and 43% male participants.

It was found that 37.9% of the population knows the definition of a low vision person whereas 62.1% does not know.

In a similar study (4) conducted in Spain with 55.3% female and 44.7% male participants,48% of participants was aware of low vision and 97% were aware of blindness. Lupón M, Cardona G, Armayones M. Public knowledge of low vision and blindness, and readability of on-topic online information.

In our study as expected 49% of the tested population knew what low vision aids were whereas 51% didn't.

Magnifiers and Electronic devices (18) can assist low vision persons when reading however from the findings 24.2% of our participants said that low vision persons can't read their books, whereas 28% indicated they can read with magnifiers and 19.7% indicate they use electronic devices. When the population was asked about the use of telescopes, 46.2% stated that telescopes are used to look at stars in the sky whereas 18.2% thinks it's useful when watching television therefore approximately 82% of the population don't understand the use of telescopes in the low vision field. Another interesting finding was that 59.1% of the population understood the duty of a Guide Dog (9) but when asked how low vision persons got around only 10.6% selected guide dogs therefore this suggest that the population has a general idea of guide dogs but it's not something that they see frequently in this country.

When the public was asked about white canes (11) 53.8% understood what white canes are used for. In a study conducted in Ghana (1), it was concluded that low vision persons using the white can may encounter challenges and it is very important to educate the public about the significance of the white cane.

In our Trinidad and Tobago participants 49% of the tested population knew what low vision aids were whereas 51% didn't. Therefore the need to spread awareness is important.

There were three main objectives for this research which was to perceive how low vision devices are used in Trinidad and Tobago, to compare how low vision devices are used in Trinidad and Tobago to the rest of the world, and lastly to determine what can be done in the future to increase the public awareness.

Low vision patients can be found all around the world however some countries have developed ways to help low vision person when performing their daily tasks. Japan (3) was the first country to bring about tactile pavements the purpose of this was to help low vision person get around safely. There are two types of tactile tiles. The first tile is raised dots which suggest caution whereas the other tile is long and parallel and is used to aid with direction. This is mostly helpful for persons who are using long white canes to get around without the help of a sighted guide or guide dog. This is something yet to be introduced in Trinidad and Tobago and can have great benefits for our low vision population.

Guide dogs are known for their skills in helping low vision persons to get around safely however they are not allowed in all countries. Guide dogs are allowed in countries such as The United Kingdom, the United States and Germany just to name a few. Under the American and Disability act guide dogs have the right to escort their low vision owner to hotels as well as stay in the hotel room and is also allowed to be in public areas of the hotel. Unfortunately, guide dogs are not allowed in hotels in Trinidad and Tobago since most hotels have a no pets policy this is something that should be considered and implemented in the future to further aid low vision citizens. According to a recent study (22) done in Trinidad and Tobago amongst low vision persons, 74% of males and 21% females are open to trying guide dogs as their new form of motility however the issue remains of not being able to go to public places, not being able to take public transportation, as well as no laws, are put in place to accept guide dogs here in Trinidad and Tobago.

Though Trinidad and Tobago have not put many measures in place to educate the public about low vision and its aids, one restaurant in South Trinidad has introduced braille to their menu in hopes to help low vision persons when ordering food. There is still more that needs to be done to educate the public about low vision aids that is why this research project was done in an attempt to increase awareness. Previous data on this specific topic was rare which suggest why more research should be done.

5.2- Conclusion

This research was done to raise awareness and educate persons about low vision and the use of low vision aids. This was achieved by giving out sample questionnaires containing 15 questions to persons 18 years and older. A total of four hundred (400) questionnaires were given out throughout various optical stores in areas of Trinidad such as Point Fortin, Princes Town, San Fernando, Chaguanas, and Port of Spain. Out of this total, there were one hundred and thirty-two responses (132). After the data was collected, a full analysis was done to determine how much or how little the citizens of Trinidad Tobago knows about low vision aids. In this study, out of the 132 completed questionnaires, 57 of them were male participants and 75 of them were female participants. In terms of percentages, 43.2% were males and 56.8% were females. 92 of the 132 individuals were from the following age groups: 18-30, 31-40 and 41-50.

The outcome of this study explained that a great number of persons who participated in this questionnaire still did not know much about low vision or low vision aids. This was seen in the results of many questions. This proved our hypothesis to be true. The Trinidad and Tobago population do have little to no knowledge on the use of low vision aids. This means that there is a lot of space for improvement in what can be done to educate the public about low vision aids.

5.3- Recommendation

- We recommend that more research should be done throughout the Caribbean to determine the awareness of low vision aids on a wider platform
- The public should be educated about low vision aids through educational seminars at community centres in different areas of Trinidad and Tobago however due to the current covid pandemic online webinars can be available
- Optical places should have postures and charts advertising low vision aids
- Guide Dogs should be allowed to hotels and restaurant with their low vision owners
- Tactile pavement should also be introduced to aid low vision patient when crossing the streets

References

1. The White Cane. Its Effectiveness, Challenges and ... [Internet]. [cited 2021May19]. Available from: https://www.researchgate.net/publication/341079397_The_White_Cane_Its_Effectiveness_Challenges_and_Suggestions_for_Effective_Use_The_Case_of_Akropong_School_for_the_Blind

2. Beta. Restaurant adds Braille to menu [Internet]. CNC3. 2021 [cited 2021May19]. Available from: https://www.cnc3.co.tt/restaurant-adds-braille-to-menu/

3. Follow the Yellow Brick Roads - Japan's Tactile Paving Blocks [Internet]. Samurai Tours. 2020 [cited 2021May19]. Available from: https://www.samuraitours.com/japans-tactile-paving-blocks/

4. Lupón M, Cardona G, Armayones M. Public knowledge of low vision and blindness, and readability of on-topic online information [Internet]. Journal of Optometry. Elsevier Doyma; 2020 [cited 2021May19]. Available from: https://www.sciencedirect.com/science/article/pii/S188842962030073X?via%3Dihub

5. Service Dog Rules for Staying in Hotels [Internet]. Service Dog Certifications. 2018 [cited 2021May19]. Available from: https://www.servicedogcertifications.org/service-

dog-rules-for-staying-in-hotels/#:~:text=Under%20the%2n.d.A%20laws%2C%20the,for%20people%20traveling%20with%20pets.

6. Vision impairment and blindness [Internet]. Who.int. 2021 [cited 16 May 2021]. Available from: https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

7. Fair R. Cane and able [Internet]. Eurekamagazine.co.uk. 2021 [cited 13 May 2021]. Available from: https://www.eurekamagazine.co.uk/design-engineering-features/coffee-time-challenge/cane-and-able/47307/

8. Low Vision and Your Eyes [Internet]. WebMD. WebMD; [cited 2021Feb5]. Available from: https://www.webmd.com/eye-health/eye-health-low-vision

9. History - Guide Dogs NSW/ACT [Internet]. Guide Dogs NSW/ACT. 2021 [cited 17 May 2021]. Available from: https://nsw.guidedogs.com.au/about-us/history/

10. Cosmin. Low Vision Aids [Internet]. IALVS. [cited 2021Apr10]. Available from: https://www.ialvs.com/ways-we-can-help/low-vision-aids-devices-and-glasses/

11. Low Vision and the White Cane: A Tool for Fall Prevention [Internet]. VisionAware. 2020 [cited 2021May18]. Available from: https://visionaware.org/everyday-living/essential-skills/an-introduction-to-orientation-and-mobility-skills/low-vision-and-the-white-cane-a-tool-for-fall-prevention/

12. Low Vision Basics [Internet]. Second Sense. 2020 [cited 2021Apr23]. Available from: https://www.second-sense.org/starting-and-leading-a-support-group/vision-loss-resources/low-vision-basics/

13. Low-Vision Devices [Internet]. Low-Vision Devices - Health Encyclopedia - University of Rochester Medical Center. [cited 2021Feb26]. Available from: https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=85&contentid=P00508

14. Team AAVE. Low Vision Aids for Reading [Internet]. All About Vision. All About Vision; 2021 [cited 2021Mar18]. Available from: https://www.allaboutvision.com/lowvision/reading.htm

15. What Is Low Vision? [Internet]. VisionAware. 2021 [cited 2021Apr28]. Available from: https://visionaware.org/your-eye-condition/eye-health/low-vision/

16. Zoomax. WHO Definitions of Low Vision - Zoomax Low Vision Aids [Internet]. Zoomax. [cited 2021Mar4]. Available from: https://www.zoomax.com/low-vision-information/WHO-Definitions-of-Low-Vision.html

17. Low Vision Telescopic Systems [Internet]. Designs for Vision Telescopic Optical Aids for the Partially Sighted. [cited 2021May17]. Available from: https://www.designsforvision.com/LVhtml/LVtel.htm

18. What Are Low Vision Optical Devices? [Internet]. VisionAware. 2020 [cited 2021May10]. Available from: https://visionaware.org/everyday-living/helpful-products/overview-of-low-vision-devices/low-vision-optical-devices/

19. Quantitative Research: Definition, Methods, Types and Examples | QuestionPro [Internet]. QuestionPro. 2021 [cited 20 May 2021]. Available from: https://www.questionpro.com/blog/quantitative-research/

20. Research Guides: Organizing Your Social Sciences Research Paper: Quantitative Methods [Internet]. Libguides.usc.edu. 2021 [cited 20 May 2021]. Available from: https://libguides.usc.edu/writingguide/quantitative

21. [Internet]. Longdom.org. 2021 [cited 20 May 2021]. Available from: https://www.longdom.org/open-access/can-low-vision-aids-improve-the-quality-of-life-of-low-vision-patients.pdf

22. Severe Visual Impairment, Mobility and Guide Dogs in Trinidad and Tobago [Internet]. Aaopt.org. 2021 [cited 20 May 2021]. Available from: https://www.aaopt.org/detail/knowledge-base-article/severe-visual-impairment-mobility-and-guide-dogs-trinidad-and-tobago

23. Sample Size Calculator by Raosoft, Inc. [Internet]. Raosoft.com. 2021 [cited 20 May 2021]. Available from: http://www.raosoft.com/samplesize.html

24. IBM - Wikipedia [Internet]. En.wikipedia.org. 2021 [cited 20 May 2021]. Available from: https://en.wikipedia.org/wiki/IBM

Appendices

1. Exemption Letter

THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD AND TOBAGO, WEST INDIES
CAMPUS RESEARCH ETHICS COMMITTEE
TELEPHONE: (1-868) 662-2002 ext. 82755 E-mail: campusethics@sta.uwi.edu

January, 12 2021

Niall Farnon
Daniella Meighoo, Ambika Gookool
Level #2, Training Centre Couva Hospital & Multi Training Facility Sir Solomon Hochoy Highway
Email: Niall.Farnon@sta.uwi.edu

Dear Niall Farnon,

Ref: CREC-SA.0715/01/2021

Title: Awareness and knowledge of the use of low vision aids among Trinidad and Tobago Population

I am pleased to advise that your application for research on the above captioned topic has met the criteria for Exemption from Review from the Campus Research Ethics Committee, St. Augustine.

Sincerely,

Professor Jerome De Lisle
Chair
Campus Research Ethics Committee

2. Questionnaire

RESEARCH PROJECT QUESTIONNAIRE

COURSE CODE & TITLE: OPTM 3082- THE RESEARCH PROJECT

NAME OF STUDENTS: Daniella Meighoo & Ambika Gookool

TITLE OF PROJECT: Awareness and knowledge of the use of low vision aids among Trinidad and Tobago Population

Participation in this study is completely voluntary. The researchers will maintain the confidentiality of the research records or data using password protected file on a password protected laptop, and all data will be destroyed in five years.
By submitting this form you are indicating that you have read the description of the study, are over the age of 18, and that you agree to the terms as described.

If you have any questions, please contact me at ambikagookool@hotmail.com or daniellameighoo97@gmail.com .Thank you in advance for your participation!

0. Gender
   - ☐ Male
   - ☐ Female

1. Age
   - ☐ 18 – 30
   - ☐ 31 – 40
   - ☐ 41 – 50
   - ☐ 51 – 60
   - ☐ 61 – 70
   - ☐ 70 +

For the following questions, please tick the best option(s).

2. How would you describe a person who has low vision?
   - ☐ A person who always wears glasses
   - ☐ Elderly citizens
   - ☐ Persons who vision can't be corrected with glasses or spectacles
   - ☐ None of the above

3. Which of the following statements below best describes your view on people who are partially or legally blind?
   - ☐ People who are partially or legally blind always use a white cane to get around
   - ☐ People who are partially or legally blind cannot do things by themselves
   - ☐ People who are partially or legally blind can drive

☐ None of the above

4. How do people who are blind or can partially see get around ?
   - ☐ White cane
   - ☐ A person guiding them
   - ☐ A dog guiding them
   - ☐ None of the above

The picture below shows a guide dog with its owner.

Question 5 and 6 are related to the picture above

5. What do you think the guide dog is doing?

- ☐ Going for a walk
- ☐ Helping the partially blind woman cross the street
- ☐ Keeping the woman company
- ☐ Protecting the woman
- ☐ None of the above

6. In situation where you see the guide dog with their owner, what should you do?

- ☐ Go up to the dog and pet it
- ☐ Talk to the dog and give it tasty treats
- ☐ Take the harness from the owner and give the dog commands
- ☐ Allow the dog to get by safely without any distractions

7. How do you think a partially blind person reads their books?

- ☐ They can't read
- ☐ With the help of devices such as magnifiers
- ☐ Their family members read their book to them
- ☐ With the help of electronic devices
- ☐ None of the above

The picture below shows a girl with a telescope.

8. Why do you think she is using the telescope?
   - ☐ To help her when reading
   - ☐ To assist her while watching television
   - ☐ To look at the stars in the sky
   - ☐ None of the above

The picture below shows a man using a handheld magnifier.

9. Why do you think this man needs a magnifier?

- ☐ It helps by making the words bigger for reading

- ☐ It can be used to see small objects
- ☐ It helps with looking at objects far away
- ☐ None of the above

10. What are low vision aids ?

- ☐ They are devices used to assist low vision persons to do their daily task
- ☐ They are devices used to assist the general public with their daily task
- ☐ They are devices used only when reading
- ☐ All of the above

11. Why do you think it is important for some low vision people to have a white cane?

- ☐ To alert the public they are low vision persons
- ☐ To get around safely without bumping into objects
- ☐ Style or fashion
- ☐ None of the above

12. You are at a red light and you see a person helping a low vision patient to cross the road. What would you do?

- ☐ Hold the arm of the person and bring them forward
- ☐ Wait for the green light and drive around them
- ☐ Ask if they need assistance
- ☐ Wait in the car until they finish cross the road

13. Do you think it is important to be aware of low vision aids ?

- ☐ Yes
- ☐ No

State reason

_____

_____

14. What do you think can be done in the future to increase the awareness of low vision patients ?

_____

_____

15. Do you think that low vision patients should be able to have job opportunities?

☐ Yes

☐ No

State reason

_____

3. Consent Form

THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD AND TOBAGO, WEST INDIES
CAMPUS RESEARCH ETHICS COMMITTEE
TELEPHONE: (1-868) 662-2002 ext. 82755 E-mail: campusethics@sta.uwi.edu

CONSENT TO PARTICIPATE IN RESEARCH

Complete Protocol Title: Awareness and knowledge of the use of low vision aids among Trinidad and Tobago Population

Principal Investigator: Niall Farnon

Co Investigator(s): Daniella Meighoo, Ambika Gookool . . . . . .

1. Identification of project

a. What is the purpose of this research?
The purpose of this research is to determine how much the people of Trinidad and Tobago, ages 18 and over, knows about the use of low vision devices. Low vision devices are devices that makes it possible for visually impaired patients to perform their everyday tasks such as preparing meals or taking medication.

b. How long it will take to complete this project?
This research would be conducted for a total duration of three months from February 12th to May 10th 2021.The purpose is to determine how much people of Trinidad and Tobago knows about the use of low vision devices

c. Why am I selected for this research?
The opportunities of a low vision patient is different in different countries around the world. It is important to understand how much knowledge the population of Trinidad Tobago has on low vision devices since there are a lot of low vision patients that resides here. You have been selected in this study to determine how much you know about low vision devices.

d. Why is this document for obtaining informed consent important?
Consent is important because it is a legal documentation which shows you are participating in the study of your own free will

2. Description of Procedures

a. What am I expected to do in this study?
We expect you to read through all the instructions carefully and answer the questions listed truthfully and to the best of your ability

b. Which procedures are investigational, which are routine? What is the expected duration, how frequently I have to participate and where will the activities take place?
The research design and method this project would be based on is the quantitative design, using the method as questionnaires. The most important variable that would be analyzed is the patient knowledge. With the help of the questionnaire, we would be focusing on what the public knows about the use of the low vision aids. The timeframe is from the 12th February, 2021 to the 10th May,2021. It was decided that the questionnaires would be shared amongst different optical companies around Trinidad and Tobago. We intend to visit these companies, around areas such as, Point Fortin, Penal, San Fernando, Princes town, Chaguanas, Port of Spain and Tobago and ask the staff to share the questionnaires to individuals over the age of 18 to participate and collect it back afterwards and we would return back after one month to collect it.

c. How many participants are involved in the study approximately?
There are approximately 400 participants that would be invited to take part in this study

3. Risks and Discomforts

a. What are the risks or discomforts that may result from my participation in the study?
There is a little likelihood of any risk or discomfort that may result from your participation in this study since we will be assessing your knowledge on low vision devices. It also is a one time study so it will not be an inconvenience to participants as well as the risk of the confidentiality breach would be minimized. Lastly the questionnaire is short so it will not be as time consuming.

b. What help and treatments are available if any adverse reactions occur? How can I access them? Is there any compensation available if serious adverse effects occur?
There is no opportunity for adverse reactions

c. Are there any potentially beneficial treatments or procedures that are withheld for the purpose of the study?
No

4. Termination of Research

a. Are there any anticipated circumstances under which the study/participation may be terminated by the researchers without regard my consent?
There are no circumstances under which participation may be terminated by the investigator without the regards of the participant consent because we are interested in your honest input

5. Benefits

a. What are the benefits to me (and the wider society) by this study?
There will not any direct benefit to the participant however it would benefit the low vision population because the general public would now be able to understand the concept of how low vision aids work and how it impacts low vision patients.

6. Alternatives

a. Does this study involve more than minimal risk? Are there any appropriate alternative procedures or courses of treatment that might be advantageous to me?
This study involves minimal risk.

b. Do I have the right to pursue the alternatives?
You have the right to choose whether or not you want to participate in this questionnaire since it is subjective

7. Confidentiality

a. How will confidentiality be maintained regarding my data? Who will have access to the data, how the data will be reported and /or published?
The information given is anonymous. A total of three people will have access to the data. The data will be reported using graphical representation. It would be stored on a password protected file on a password protected computer where only three people will have access as well as it can be used later on to be published.

8. Cost and Payments

a. Are there any costs involved and are there any compensations provided?
There are no cost involved and no compensation

9. Freedom to Withdraw

a. Do I have the freedom to withdraw from the study anytime?
Participation in this study is voluntary and you are free to withdraw at any time

b. Will withdrawing from the study have any impact on my treatment?
No

10. Opportunity to ask questions

a. Do I have to right to ask questions anytime during the study? Whom should I contact?
Yes you do have the right to ask questions and have them answered before the start of the study. At any time you can contact Ambika Gookool at ambikagookool@hotmail.com or Daniella Meighoo at daniellameighoo97@gmail.com as well as Dr. Shalini Pooransingh or you can call 1868-225-1014

CONSENT

I have read and understood this explanation. The researcher has also explained the study to me. I have had a chance to ask questions and have them answered to my satisfaction. I agree to take part in this study. I have not been forced or made to feel like I had to take part.

By signing this document, I agree that I have read and received a copy of this document.

I must sign this Consent Form. I will be given a signed copy of the form to keep.

Print Name of Subject

_____

Signature of Subject Date

_____

INVESTIGATOR'S STATEMENT AND SIGNATURE
I have explained the purpose of the research, the study procedures, including those that are investigational, the possible risks and discomforts, and the potential benefits, and have answered all questions regarding the study to the best of my ability. In my opinion, the participant understands these issues and has voluntarily agreed to participate in the study.

Signature of Person conducting the informed consent discussion Date

_____

Role of person named above in the research project

_____

Signature of Second Witness Date

_____

By Chairman:

This document was approved by Campus Ethics Committee on:
January, 12 2021
This document expires on:
January, 12 2022