Journal of Social Sciences and Humanities Review (JSSHR)
Vol. 6, No. 3 (124-138)
ISSN: 2279-3933

Original Article

Relationships between Socio-Economic and Demographic Characteristics of Persons with Visual Impairment and Blindness

Colinie Wickramarachchi[1], Ruwan Jayathilaka[2*], Wageesha Serasinghe[3], Lakshika Kollure[4], Thushya Thisarani[5], Theekshana Suraweera[6], Samantha Thelijjagoda[7]

[1,3,4,5]Department of Business Management, SLIIT Business School, Sri Lanka Institute of Information Technology, New Kandy Road, Malabe, Sri Lanka
[2,6,7]Department of Information Management, SLIIT Business School, Sri Lanka Institute of Information Technology, New Kandy Road, Malabe, Sri Lanka

[1]colinie.w@sliit.lk
[2]ruwan.j@sliit.lk
[3]wageeshaw97@gmail.com
[4]lakshikakollure1997@gmail.com
[5]thushyaliyanage07@gmail.com
[6]theekshana.s@sliit.lk
[7]samantha.t@sliit.lk

[1]https://orcid.org/0000-0002-0995-5941
[2]https://orcid.org/0000-0002-7679-4164
[3]https://orcid.org/0000-0002-7582-6080
[4]https://orcid.org/0000-0002-1192-9531
[5]https://orcid.org/0000-0001-7063-9000
[6]https://orcid.org/0000-0002-1756-7447
[7]https://orcid.org/0000-0002-0548-1603

Abstract

This paper examined the extent to which socio-economic and demographic characteristics are related to the levels of vision of persons with visual impairment and blindness. A mixed method approach was employed in this study. Data collection was conducted in *Siyanethugama* Village in *Hambanthota* district and *Polpithigama* Divisional Secretariat in *Kurunegala* district in Sri Lanka. The study deployed convenient and purposive sampling techniques. Information was gathered through questionnaires and personal interviews. Overall, results revealed that level of vision vary with several socio-economic characteristics. Age and education were not related to the levels of vision in the *Polpithigama* region whereas in the *Hambanthota* region a significant relationship between age and education with levels of vision was observed. Income was not related to the level of vision. Participants' views and opinions of resources, opportunities, income, employment, and government activities were found to be the driving forces of quality of life related to vision. The study concluded that age and education need to be considered in improving quality of life related to vision and further investigations are needed to determine the relationships between levels of vision and socio-demographic characteristics and to explore perceptions related to vision impairments.

Keywords: quality of life, socio-economic characteristics, Sri Lanka, visually impairments and blindness

This article is published under the Creative Commons CC-BY-ND License (https://creativecommons.org/licenses/by-nd/4.0/). This license permits to use, distribute, and reproduce the contents of the publication for commercial and non-commercial purposes, provided that the original work is properly cited and is not changed anyway.

Journal of Social Sciences and Humanities Review (JSSHR)
Vol. 6, No. 3 (124-138)
ISSN: 2279-3933

Original Article

INTRODUCTION

The world is a one station where people meet all and everything with different kinds of perspectives based on their own utilizing capacity. In a global context reminiscent to this, the penetrations of health and quality of life of the individuals are dispersed on to various factions and thus it leads with adverse or positive effect to their quality of life. In respective to this situation, possessing some sort of disability or vision problems is a major phenomenon which affects people's health. Due to this, the extreme financial obligation tends to push the fore for all the individuals. Therefore, many households who live in rural arenas held this disability or vision issues in the same way without spending medical expenses due to their unbearable poorness. The Convention of United Nations on the Rights of Persons with Disabilities is compelled and legally bound to ensure the human rights with a perpetual goal of enhancing their quality of life. However, it is discovered that society seems regressive in accepting these individuals as capable citizens. Nearly 70% of these people are found to be unemployed even being at an employment age (DCS, 2016). In Sri Lanka, it has been estimated that over 100,000 people are deemed to be visually impaired or blind. Taking in to consideration on this specific community, this study deals with the socio-economic aspect of persons with visual impairment and blindness. Notable initiatives are conducted to explore health related issues or cases regard to vision impairments, yet the socio-economic aspect has not been examined.

Thus, this study is aimed at addressing the socio-economic and demographic aspects of persons with visual impairment and blindness, to determine the relationship between their vision levels and the socio-economic attributes and to explore the factors affecting quality of life. Existing empirical studies about this community proclaim a limited faction which deals in ophthalmic perspective. Hence, this knowledge gap needs to be addressed. Identifying these factors and their relationship can set up a framework on formulating policies with respect to people with visual impairment and blindness to provide a platform that facilitates a wide contribution to have an equitable society.

The outcomes of this study will strengthen the country's image on developing this underprivileged community on equitable ground, thus enhancing the magnitude of human rights and social sustainability. Further, this information will assist the policy makers, non-governmental organizations, and international associations to grasp the overall picture on how changes in vision levels can impact lives of people, thereby to devise welfare strategies and policies.
This paper is organized under five sections, where literature review is

Original Article

presented next. Research methodology and results are detailed in the section three and four and the conclusions are given last. This study was reviewed and approved by the SLIIT Ethical Clearance Board of the Faculty of Graduate and Research Studies.

LITERATURE REVIEW

Globally around 2.2 billion people are afflicted with different visual incapacities and among them, nearly 1 million are severely impaired or blind (WHO, 2021). The visual incapacities constitutes a leading health problem worldwide that has caused significant negative impact on people's day to day life (Wong & Brown, 2013). Moreover, most of the persons with visual impairment and blindness live in rural areas (L. Dandona et al., 2001). Within such a conundrum, it is noteworthy to investigate their socio-economic characteristics and its relationship with levels of vision. These socio-economic factors are known to be associated with visual impairment which is considered to have a direct link with a person's quality of life (Koberlein, Beifus, Schaffert, & Finger, 2013). Onabolu et al. (2018) stress the importance of one's vision in correspondence to quality of life. Accordingly, age, gender, literacy, employment, education, and culture reflect as significant aspects in relation to persons with different levels of vision. Stevens et al. (2013), proved a strong association exists with socio-economic characteristics and levels of vision.

Furthermore, Klaver, Wolfs, Vingerling, Hofman, and De Jong (1998), socio-economics is an important aspect that focusses on the relationship between social behavior and economics of a particular underprivileged social group within a society. Therefore, it is important to have a deeper understanding about the extent and nature of characteristics of the population, in order to meet the needs of persons with visual impairment and blindness to build more effective aids (R. Dandona & Dandona, 2001). It is also important to be aware that some of the demographic characteristics of the specific population will presumably differ.

Considering the context of socio-economic aspects in relation to people with different levels of vision, it is noteworthy to focus on filling the knowledge gap. Less empirical studies have looked into the relationship between socio-economic and demographic characteristics of different levels of vision. Much literature is based on an ophthalmology aspect. In these circumstances, the importance of the visual disabilities and their socio-economic attributes is unknown. Therefore, this study investigates the socio–economic characteristics, its relationship with levels of vision among persons who are visually impaired and blind and the factors affecting quality of life in the Sri Lankan setting.

Original Article

METHODOLOGY

Data

A comprehensive field research was conducted with the aim of investigating the socio-economic status of persons with visual impairment and blindness in the *Hambanthota District and the Polpithigama Divisional Secretariat*. The population was based on the purposive and convenient sampling method.

A model village named "*Siyanethugama*" is located in *Hambantota* district, far South in Sri Lanka. It comprises 27 families in which there is at least one visually impaired or blind person, which formed a clustered community. This village was built under the Government low-cost rural housing programme of the Ministry of Housing and Construction in 2018.

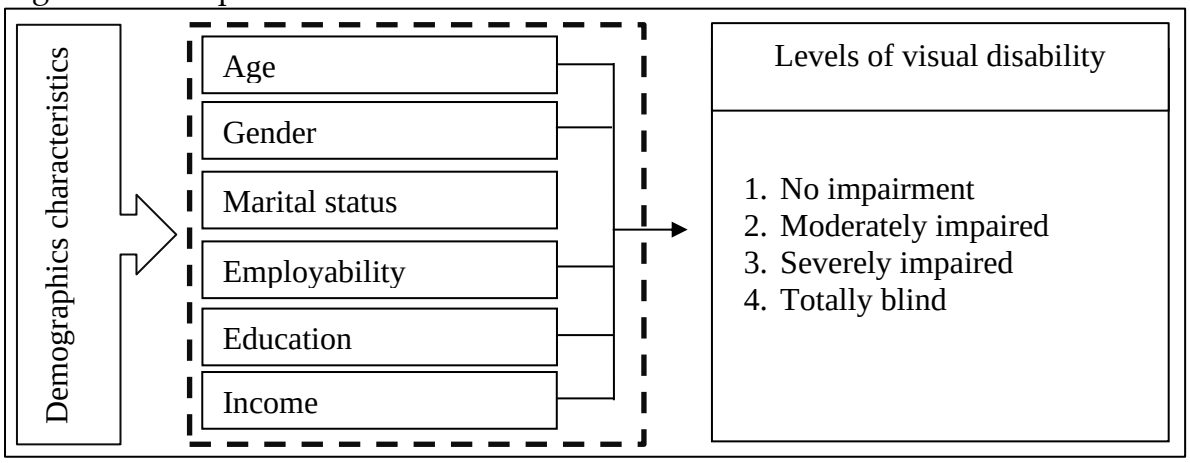
In the *Polpithigama* Divisional Secretariat, 149 Grama Niladhari Divisions exists. This selected *Polpithigama* Divisional Secretariat is one of the divisions in the *Kurunegala* District of the North Western Province.

A pre-tested questionnaire was used to acquire data from the respondents. Detailed interviews were also held to elucidate details concerning socio-economic and demographic characteristics on people of different levels of vision and what factors affect their quality of life. The research team visited households door to door to collect necessary information. Total of 252 participants with visual impairment and blindness were gathered, 64 respondents from *Siyanethugama* Village in *Hambanthota* district and 188 respondents from the *Polpithigama* Divisional Secretariat in *Kurunegala* District.

Conceptual framework

Figure 1 illustrates the key variables concerning this study and how socio-economic characteristics interrelate with the levels of vision. Independent variable is the *levels of vision* and this study considers four levels of vision; *no impairment, moderately impaired, severely impaired, and totally blindness*. Dependent variables included *socio-economic characteristics of persons.*

Figure 1 Conceptual framework



Original Article

The socio- economic characteristics are categorized as follows. Age distribution is scattered between 10 to 60+ years. Marital status is categorized as single, married, divorced, widowed and other. Education levels are grouped as no schooling, primary level, secondary level, passed ordinary level (O/L), grade 12-13, passed advanced level (A/L), tertiary and vocational. The employment status of *Hambanthota* and *Polpithigama* are categorized as employed, seeking a job, student, household activity, retired, unable to work and other. Similarly, income levels are labelled as no income, up to Sri Lankan Rupees (LKR) 10,000, LKR 10,000-25,000, LKR 25,000-50,000, LKR 50,000-75,000, and LKR 75,000 and above.

Analytical Tool

This research consists of three phases. To analyze the identified socio-economic characteristics, descriptive statistics was utilized. To determine the relationship between socio-economic and their levels of vision, Spearman correlation coefficient and chi-square test was utilized. To explore the factors affecting quality of life, Word Cloud illustration was employed.

Qualitative variables such as gender, education and marital status were measured and chi-square test was used in the analysis.

Quantitative variables as age, employment and income were measured by Spearman correlation coefficient. Data analysis was conducted using SPSS 22 statistical software package.

Recent empirical studies have used Word Cloud to exhibit qualitative responses (Alles et al., 2020). Many researchers found that despite its simplicity the Word Cloud is a successful qualitative technique to analyze the data (Bhanot, Rao, & Deshmukh, 2016; Jayathilaka, Dharmasena, Rezahi, & Haththotuwegama, 2020). Thus, the current study employed Word Cloud technique to explore and identify the factors affecting quality of life.

RESULT AND DISCUSSION

Results

This section provides results of socio-economic characteristics of the participants and relationships between socio-economic attributes and their levels of vision. Moreover, the factors which affect the quality of life of the participants were described.

Distribution of Socio-Economic Characteristics of the Population

This study identified 252 participants: 64 from *Siyanethugama* Village in *Hambanthota* district and 188 from *Polpithigama* Divisional Secretariat in *Kurunegala* District. The age of participants averaged 48.45 (*Hambanthota*) and 43.30 (*Polpithigama*) years and ranged overall from 10 to 60+. Gender disparities can be noted

Original Article

where the majority can be conferred to males and females as 63.50% (*Hambanthota*) and 60.80% (*Polpithigama*) respectively. Most participants in the *Hambanthota* area had passed G.C.E O/L (28.60%) but the statistics of the *Polpithigama* area highlight that majority (23.20%) had only attained primary education. Among the marital status classification, in both districts majority of the participants are married, where 69.80% in *Hambanthota* and 63.70% in *Polpithigama*. The participants who responded to this survey are mostly employed persons as of 46.00% and 44.70%, correspondingly for the two districts. Moreover, income of the participants in the two districts clarifies to an income level between LKR 10,000 - 25,000 in *Hambanthota* (34.90%) and *Polpithigama* (28.70%). Mean values denote 3.00, i.e. income level LKR 10,000 – 25,000 and 2.57, i.e. up to LKR 10,000 which ranged between the income levels of no income to LKR 75,000 and above for the two districts, respectively.

Table 1. Distribution of socio-economic characteristics of persons with visual impairment and blindness in *Hambanthota* and *Polpithigama*

Socio-economic characteristics	**Population**			
	Hambanthota		***Polpithigama***	
	Count	**Percentage**	**Count**	**Percentage**
Gender				
Male	41	63.50	117	60.80
Female	23	36.50	71	39.20
Total (N)	64		188	
Age				
<10	0	0	13	7.60
10-19	0	0	17	9.90
20-29	7	11.10	18	8.20
30-39	7	11.10	18	9.90
40-49	18	28.60	41	20.50
50-59	18	28.60	37	19.90
60+	14	20.60	44	24.00
Total (N)	64		188	
Education level				
No schooling	6	7.90	19	10.40
Primary education	8	12.70	58	31.70
Secondary education	15	22.20	34	18.30
G.C.E (O/L) - Passed	18	28.60	43	23.20
Grade 12-13	1	1.60	8	3.00
G,C,E (A/L) -Passed	4	6.30	16	9.10
Tertiary	11	17.50	3	1.80
Vocational	1	1.60	0	0
Total (N)	64		181	
Marital status				
Single	18	28.60	56	30.40

Original Article

Socio-economic characteristics	Population			
	Hambanthota		*Polpithigama*	
	Count	**Percentage**	**Count**	**Percentage**
Married	45	69.80	120	63.70
Divorced	1	1.60	5	1.80
Widowed	0	0	7	4.10
Other	0	0	0	0
Total (N)	64		188	
Employment status				
Employed	29	46.00	79	44.70
Seeking a job and available to work	13	19.00	2	0.60
Student	7	11.10	27	16.10
Household activity	4	6.3	15	8.70
Retired	1	1.6	6	3.10
Unable to work	0	0	30	16.10
Others	10	15.9	6	3.70
Total (N)	64		167	
Income				
No income	1	1.60	2	0.60
Up to 10,000	18	27.00	23	12.90
10,000 – 25,000	22	34.90	55	28.70
25,000 – 50,000	11	17.50	44	25.10
50,000 – 75,000	12	14.30	14	7.60
75,000 & above	0	0	4	2.30
Total (N)	64		188	

Relationship of Socio-Economic Characteristics of Persons with Visual Impairment and Blindness

Table 2 illustrates the correlating quantitative factors of the socio-economic characteristics with people's levels of vision. Results from the Spearman test indicated that age, level of education were significantly related to level of vision.

Table 2. Spearman correlation results of the quantitative variables with levels of vision

Socio-economic characteristics	*Hambanthota*	*Polpithigama*
Age	-0.332**	-0.024
Education	0.292*	-0.017
Income	0.119	-0.001
Total	**64**	**188**

Note: **, *, denote significance levels at 1% and 5% respectively.

It was identified in proportion to *Polpithigama* statistics that there is no significant association between age, education, and income along with the levels of vision (Table 2) whereas in proportion to *Hambanthota* statistics, age signified a weak negative relationship with the levels of vision and education signified a weak positive relationship with the levels of vision. It denotes under 1% and 5% significance level; whereas income was identified to have a no significant association with levels of vision.

Original Article

Table 3 illustrates Chi-squared test results of the relationships between gender, marital status, employability with the levels of vision.

Table 3. Chi-square results of the qualitative variables with levels of vision

	Hambanthota (%)			*Polpithigama* (%)		
	Total blindness	**Severely impaired**	**Moderately impaired**	**Total blindness**	**Severely impaired**	**Moderately impaired**
Gender						
Male	34.9	17.5	11.1	27.1	14.5	19.9
Female	28.6	4.8	3.2	16.3	7.2	15.1
% of Total	63.50	22.20	14.30	43.40	21.70	34.90
χ^2		3.410			0.955	
p		0.182			0.620	
Marital status						
Single	19	7.9	1.6	12	8.4	11.4
Married	42.9	14.3	12.7	27.7	12	22.3
Divorced	1.6	0	0	1.2	1.2	0
Widowed	0	0	0	2.4	0	1.2
Other	0	0	0	0	0	0
% of Total	63.50	22.20	14.30	43.40	21.70	34.90
χ^2		2.375			6.233	
p		0.667			0.398	
Employability						
Employed	28.6	9.5	7.9	3.7	1.2	0.6
Seeking a job	7.9	7.9	3.2	18	9.3	16.8
Student	9.5	1.6	0	5.6	5	5.6
Household	6.3	0	0	5	0.6	3.7
Retired	0	1.6	0	3.1	0	0.6
Unable to work	0	0	0	8.1	4.3	5
Others	11.1	1.6	3.2	0	0	2.5
% of Total	63.50	22.20	14.30	43.50	20.50	36
χ^2		11.717			21.972	
p		0.304			0.079	

It was identified that a significant relationship did not exist between the three variables with the levels of vision in *Hambanthota*. However, in *Polpithigama*, employability and levels of vision were nearly significant.

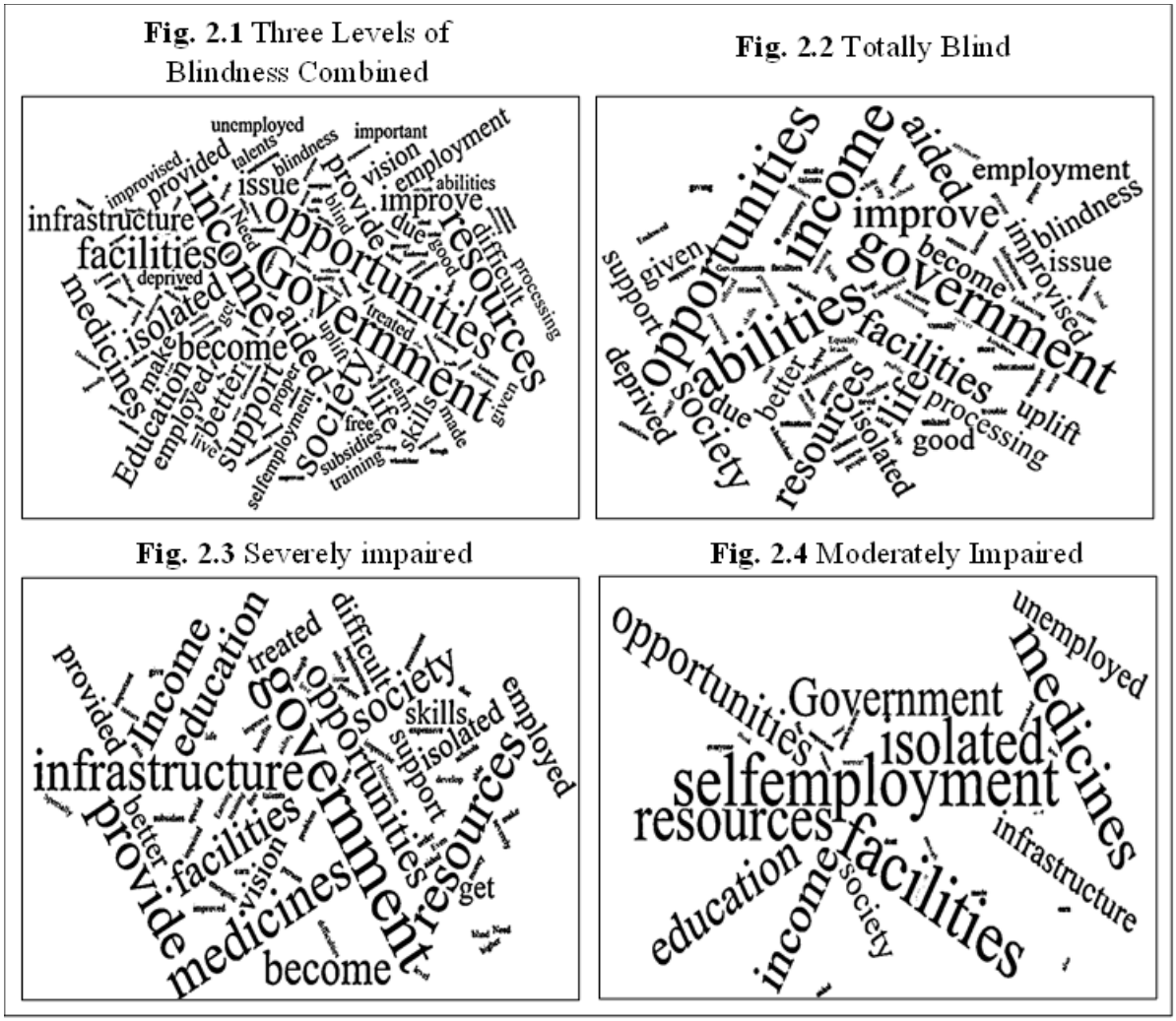
Qualitative Analysis on Factors Affecting Quality of Life

One aim of the study was to explore what factors cause privileges or deprive their quality of life of the people in the *Hambanthota* area. This area was selected purposively due to its coverage of mostly the qualitative aspects of persons with visual impairment and blindness. This was obtained through a visualized exploration of keywords with Word Cloud illustration which applied responses in detail. Purpose was to identify the highlighted keywords in general and further explore each vision

Original Article

level as moderately impaired, severely impaired, and totally blind.

Figure 2: Word Cloud illustrations of interview proceedings of persons who are visually impaired and blind



Four illustrations in Figure 2 aim to depict people's perceptions on the level of vision based on interviews conducted. Figure 2.1 labelled as 'Three Levels of Blindness Combined' depicts the words mostly used by people with all levels of vision combined, whereas other three are of three different levels of vision, Figure., 2.2- 'Totally Blind', 2,3 'Severely Impaired' and 2.4- 'Moderately Impaired'. Accordingly, Figure 2.1 depicts that among other factors, the resources, opportunities, income, employment, and government have become prominent as perceived issues associated with the quality of life of persons with visual impairment and blindness. For example, in all four illustrations "Government" has been highlighted. Following four responses obtained from respondents through the interview process explain this issue:

Original Article

> *"**Government** should think of self-employment **opportunities** because they don't have enough resources and income to live. If they were aided with employment opportunities, it will be a support for them"*
> (Respondent 03, moderately impaired)

> *"Endowed with countless abilities but **government** has not offered any **opportunities** neither resources to improve the abilities."*
> (Respondent 28, totally blind)

> "*Earning income with this issue was difficult but if **government** can provide new opportunities for their talents, then he can be employed and will be able to gain resources..."*
> (Respondent 26, severely impaired)

> *"Dedication and energy will make a person better. If **government** can provide facilities, opportunities and resources then it will make their income reach a higher level and they will become special in society"*
> (Respondent 18, severely impaired)

Thus, the dependency on government support by the visually incapacitated is highlighted. Furthermore, their displeasure on inadequate intervention by the inefficiency in the Government mechanism is emphasized here. These findings depict that persons with visual impairment and blindness generally believe that their quality of life could be improved with proactive Government intervention.

Furthermore, the examples given below indicate that opportunities such as facilities for self-employment and resources as two major issues.

> *"Self-employment **opportunities** should be provided by the Government and the Government should help them to acquire capital or give **resources** and facilities as they don't have them"*
> (Respondent 37, totally blind)

> *"Income is deprived due to blindness as a reason for not providing **opportunities** and **resources**"*
> (Respondent 18, totally blind)

Conclusively based on all these keywords, it can be inferred that concepts such as resources, opportunities, income, employment, and government are related to the driving forces of the quality of life in the participants.

Discussion

The results show different perspectives of socio-economic statuses in relation to the levels of vision in two selected districts in Sri Lanka. Age shows a significant correlation with the level of vision. Our results are in line with some other studies. For example, Abdull et al. (2009) stated that increasing age is associated with major blinding conditions whereas as the World Health Organization (2011) states that a higher risk of being visually impaired or blind exists in elderly people, both globally and locally. Hassan Hashemi, Khabazkhoob, Saatchi,

Original Article

Ostadimoghaddam, and Yektae (2018) determined that people with visual impairment or blindness are highly abandoned at older ages. Therefore, it can be argued that age and vision levels correlate to a significant negative relationship.

The study conducted by Fouad, Mousa, and Courtright (2004) determines that there is no significant association between gender and visual impairment; this aligns with findings of this study, where it depicts that a relationship does not exist between gender and levels of vision. Similarly, marital status of the participants does not depict a significant relationship with levels of vision. Nevertheless, findings of this study is contrary to the discoveries of Bookwala (2011) which depict a negative relationship with the levels of vision; however, a relationship exists between variables reasoning for a perverse situation with the results of this study.

The variable, employment, shows a non-significant relationship with the level of vision and it should be further studied. Bell and Mino (2015) highlight that factors related to education and rehabilitation affect employment outcomes, where higher education is associated with better employment outcomes. Under quality education, people who are visually impaired were more likely to be employed and to have higher income than less educated individuals.

The variable education results to have a significant correlation with the levels of vision where it is compatible with the researcher Nam et al. (2015) who confirms that a positive literacy leads to prevent cataract issues. Results with regard to the income variable indicate a non-significant correlation with the levels of vision. These results are contrary to the previous studies where Nam et al. (2015) identify that positive literacy leads to a better employment status, thus, leading to an appropriate income. Therefore, the researcher proves a significant relationship between income and levels of vision. The empirical research initiated by Lhing, Nanseki, and Takeuchi (2013) also indicated that, education is a major influencing factor on household income of individuals with visual incapacities. There is a strong and positive relationship between level of education and household income which means that, higher educational literacy would be able to generate more earnings and income than a person who has low educational status. Therefore, the finding that there is no relationship between income and levels of vision indicates that this study is contrary to that of other studies conducted in this area of research.

Finally, individual perceptions related to resources, opportunities, income, employment, and government were identified as the driving forces of quality of life. These reasons are further guided by limited evidence in previous studies conducted by Tomlinson (2016)

Original Article

and Correa and Beverly (1990) who discovered that education, employment and resources as key factors for improvement of quality of life. Further, it elaborates the quality of life, on how it has become an impactful life towards their visually impaired life. Nevertheless, it shows the vulnerability amongst them for the necessity to snatch opportunities and resources for their quality of life to become healthier.

CONCLUSION AND IMPLICATIONS

The association between the levels of vision and socio-economic characteristics of people and their perceptions related to visual impairments were investigated. In the *Hambanthota* region, men and those of aged between 40-59 years seem to be more vulnerable to have visual impairment and blindness However, the majority of them were employed. Furthermore, education received at least up to G.C.E O/L would assist them to secure at least a low-level income generating job. In *Polpithigama*, the highest number of persons with visual impairment and blindness were married men. The majority of them were educated only up to a primary level. Education and age were factors that were highly related to the levels of vision and the quality of life, whereas income, gender, marital status, and employability were not seemed to be related to the levels of vision. The Word Cloud illustration indicates that the government could aid the persons having visual incapacities with proper education, resources, opportunities, employment, infrastructure facilities and free medicines. This would enable them to have better living standards and a pleasant life. The results highlight the importance of health care of persons with visual impairment and blindness as a productive and healthier group in order to achieve a better quality of life.

The outcome of this study can assist the government and regulatory agencies to design policies and help them make effective decisions to improve the facilities of social services in Sri Lanka. Due to weaknesses in the processes deployed by the government to eradicate this issue pertaining to vision disorders, available social facilities do not fulfil the needs of the society. Therefore, the government and regulatory agencies should introduce and formulate policies in a productive manner. Our findings will provide a framework to guide, monitor and develop government's decision-making process in order to uplift the management process. In addition to this, the Sri Lankan government can initiate an effective public health awareness programme focussing on these people in order to eliminate the major causes for unavoidable blindness. In this endeavour, the government should provide proper training and carrier development services to resource personnel. The government should consider providing

Original Article

free health care services for people with lower education and lower income.

It is evident that in rural areas, most people between the age category of 40-80 range suffer from vision impairments. Hence, it would be valuable to expand investigation to less privileged areas in Sri Lanka. The government should consider providing aiding equipment for the visually disabled in 'under privileged' communities.

Apart from detection of impairments, imitating a proactive preventive approach can assist to minimise the risk for expanding the visual incapacities. As such, the government can increase awareness by delivering proper education to people with less education skills and income to enable them for better awareness on eye health. Thus, with people themselves being responsible for their eye health and seeking medical attention at the initial signs of eye disorders, they can lower the possibility of suffering from visual disability. Such awareness programmes can help cause a positive shift in attitudes of people regarding visual disorders. It can also minimise myths on eye health, thus preventing visual problems at an early age.

For those already having visual incapacities, priorities need to be in place to improve their self-worth and motivation, train the people to acquire their skills, enhance marketability of products of services, equity in pay and recognition as well as employability. These can provide the setting for the visually disabled to have a better income and to improve the quality of life. A broader mechanism involving institutional and business sector collaborations with many parties is essential to facilitate such a strategy. Such deliberations can help shift attitudes in society and corporate sector that visually disable people are helpless, live out of poverty, incapable and lead a poor quality of life. In other words, persons with visual impairments and blindness do not merely have the potential to be self-employed, but also can be direct or indirect service providers as well as employees in organisations.

Acknowledgments

The authors acknowledge the contributions of the following institutions and people involved. This is an outcome of research project on 'Quality of Life and Employability potential of Persons with Visual Impairment and Blindness in Sri Lanka' of Business School of the Sri Lanka Institute of Information Technology, Colombo Sri Lanka. This project is supported by the World Bank funded Accelerating Higher Education Expansion and Development (AHEAD) programme implemented through the Ministry of Higher Education and the University Grants Commission (UGC) of Sri Lanka, which is coordinated by the Operations Monitoring and Support Team (OMST) of the Ministry.

Original Article

References

Abdull, M. M., Sivasubramaniam, S., Murthy, G. V., Gilbert, C., Abubakar, T., Ezelum, C., and Rabiu, M. M. (2009). Causes of blindness and visual impairment in Nigeria: the Nigeria national blindness and visual impairment survey. *Investigative Ophthalmology & Visual Science, 50*(9), 4114-4120. https://doi:10.1167/iovs.09-3507

Alles, L., Jayathilaka, R., Kumari, N., Malalathunga, T., Obeyesekera, H., and Sharmila, S. (2020). An investigation of the usage of capital budgeting techniques by small and medium enterprises. *Quality & Quantity, 55*(3), 993-1006. https://doi:10.1007/s11135-020-01036-z

Bell, E. C., and Mino, N. M. (2015). Employment Outcomes for Blind and Visually Impaired Adults. *Journal of Blindness Innovation and Research, 5*(2), 1-28. https://doi:10.5241/5-85

Bhanot, N., Rao, P. V., and Deshmukh, S. G. (2016). Identifying the perspectives for sustainability enhancement. *Journal of Advances in Management Research, 13*(3), 244-270. https://doi:10.1108/jamr-02-2016-0012

Bookwala, J. (2011). Marital quality as a moderator of the effects of poor vision on quality of life among older adults. *The journals of gerontology. Series B, Psychological sciences and social sciences, 66*(5), 605-616. https://doi:10.1093/geronb/gbr091

Correa, V. I., and Beverly, C. L. (1990). A Content Analysis of Research in Blindness and Early Childhood. *Peabody Journal of Education, 67*(2), 22-33. https://doi:10.1080/01619569009538678

Dandona, L., Dandona, R., Srinivas, M., Giridhar, P., Vilas, K., Prasad, M. N., John, R. K., McCarty, C. A., and Rao, G. N. (2001). Blindness in the Indian state of Andhra Pradesh. *Investigative Ophthalmology & Visual Science, 42*(5), 908-916.

Dandona, R., and Dandona, L. (2001). Socioeconomic Status and Blindness. *British Journal of Ophthalmology, 85*(12), 1484-1488. https://doi:10.1136/bjo.85.12.1484

DCS. (2016). *Household Income and Expenditure Survey 2016*. Retrieved from www.statistics.gov.lk

Fouad, D., Mousa, A., and Courtright, P. (2004). Sociodemographic characteristics associated with blindness in a Nile Delta governorate of Egypt. *British Journal of Ophthalmology, 88*(5), 614-618. https://doi:10.1136/bjo.2003.026997

Hassan Hashemi, Khabazkhoob, M., Saatchi, M., Ostadimoghaddam, H., and Yektae, A. (2018). Visual Impairment and Blindness in a Population-Based Study of Mashhad, Iran. *Journal of Current Opthalmology, 30*(2), 161-168. https://doi:10.1016/j.joco.2017.01.003

Jayathilaka, R., Dharmasena, T., Rezahi, N., and Haththotuwegama, S. (2020). The impact of online reviews on inbound travellers' decision making. *Quality & Quantity, 54*(3), 1005-1021. https://doi:10.1007/s11135-020-00971-1

Klaver, C. C., Wolfs, R. C., Vingerling, J. R., Hofman, A., and De Jong, P. T. (1998). Age-specific prevalence and causes of blindness and visual impairment in an older population: the Rotterdam Study. *Archives of Opthalmology, 116*(5), 653-658. https://doi:10.1001/archopht.116.5.653

Koberlein, J., Beifus, K., Schaffert, C., and Finger, R. P. (2013). The economic burden of visual impairment and blindness: a systematic review. *BMJ Open, 3*(11), 1-6. https://doi:10.1136/bmjopen-2013-003471

Lhing, N. N., Nanseki, T., and Takeuchi, S. (2013). An Analysis of Factors Influencing Household Income: A Case Study of PACT Microfinance in Kyaukpadaung Township of Myanmar. *American Journal of Human Ecology, 2*(2), 94-102. https://doi:10.11634/216796221302320

Nam, G. E., Han, K., Ha, S. G., Han, B. D., Kim, D. H., Kim, Y. H., Cho, K. H., Park, Y. G., and Ko, B. J. (2015). Relationship between socioeconomic and lifestyle factors and

Original Article

cataracts in Koreans: the Korea National Health and Nutrition Examination Survey 2008-2011. *Eye (Lond), 29*(7), 913-920. https://doi:10.1038/eye.2015.66

Onabolu, O., Bodunde, O., Ajibode, A., Otulana, T., Ebonhor, M., and Daniel, O. (2018). Rehabilitation and Paid Employment for Blind People in a Low Income Country. *Journal of Advances in Medicine and Medical Research, 25*(8), 1-9. https://doi:10.9734/jammr/2018/39856

Stevens, G. A., White, R. A., Flaxman, S. R., Price, H., Jonas, J. B., Keeffe, J., Leasher, J., Naidoo, K., Pesudovs, K., Resnikoff, S., Taylor, H., and Bourne, R. R. A. (2013). Global prevalence of vision impairment and blindness: magnitude and temporal trends, 1990-2010. *Ophthalmology, 120*(12), 2377-2384. https://doi:10.1016/j.ophtha.2013.05.025

Tomlinson, S. M. (2016). Perceptions of accessibility and usability by blind or visually impaired persons: A pilot study. *Proceedings of the Association for Information Science and Technology, 53*(1), 1-4. https://doi:10.1002/pra2.2016.145053011220

WHO. (2021). Blindness and vision impairment. https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

Wong, A. A., and Brown, R. E. (2013). Prevention of vision loss protects against age-related impairment in learning and memory performance in DBA/2J mice. *Front Aging Neurosci, 5*(52), 52. https://doi:10.3389/fnagi.2013.00052

World Health Organization. (2011). *World Report on Disability*. Retrieved from World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland: https://apps.who.int/iris/bitstream/handle/10665/70670/WHO_NMH_VIP_11.01_eng.pdf?sequence=1