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Self-Esteem in Total Blindness and Low Vision Individuals: A Narrative Literature Review

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Abstract

Visual impairments are individuals whose two sight senses cannot function properly. Visual impairments are divided into two types: total blindness and low vision. Despite having limitations, visually impaired individuals must continue to adapt to fulfill the developmental tasks in their life with more complex challenges than normal individuals. Therefore, self-esteem is one of the essential aspects among them. Self-esteem refers to how individuals see themselves as valuable. Previous studies showed varying results between the self-esteem levels of individuals with total blindness and low vision. This literature review aimed to answer three research questions, including the story of self-esteem between visually impaired individuals with complete blindness and low vision, contributing factors, and the measurement of self-esteem in visually impaired individuals. The method used was a narrative literature review using nine kinds of literature obtained through various online databases selected by inclusion criteria. Articles used in this study included visual impairments, blindness, low vision, and self-esteem keywords. Research-based articles were chosen for this study. The review focused on answering research questions. The results showed different levels of self-esteem in total blindness and low vision individuals; total blindness individuals showed higher levels of self-esteem. These results of the literature review revealed physical conditions, gender, age at onset, educational level, social support, quality of life, locus of control (LOC), motor development, coping strategies, self-concept, and physical activity as factors that influence self-esteem among visually impaired individuals. The Rosenberg (1965) scale and the Coopersmith Self-Esteem Inventory (1967) are the most frequently used to measure self-esteem.

Keywords: low vision, self-esteem, total blindness, visual impairments

Introduction

Every individual certainly hopes to be born perfectly without disabilities. However, in reality, not all individuals are lucky to get it. The World Health Organization (WHO) defines disability as a set of physical or mental disorders preventing people from residing independently in social and personal existence. According to Inter-Census Population Survey (SUPAS) in 2016, 8.56% of individuals born with disabilities were recorded, or around 255.1 million of the total population in Indonesia. One type of sensory disability is visual impairment. Visual is one of the most important senses, and its loss severely affects an individual's life and development (Angelopoulou-Sakantami, 2002). The Ministry of Health Republic of Indonesia (2017) estimated that the number of blind individuals in Indonesia was 1.5% of the total population, around 3,750,000 million.

Visual impairments are defined as individuals whose two senses of vision cannot function properly as a channel for obtaining visual information in daily activities like normal individuals (Sarnita & Eddy, 2018). There are two main groups of visually impaired individuals: total blindness and low vision. Total blindness is a term that refers to individuals who cannot see at all. Meanwhile, low vision relates to individuals with impaired vision who can still see using medically recommended aids (Ernawati, 2018).

The sense of sight is vital in various activities, mobility, and daily life, so impaired vision signi-

ficantly affects multiple lines of life. However, visually impaired individuals must continue living their daily lives to fulfill developmental tasks and carry out activities like normal individuals. In living their lives, visually impaired individuals certainly have more significant challenges, so they need to adapt to the environment well.

According to research by Khotimah (2018), adjusting to the daily life of individuals with visual impairments experience some difficulties. These because they have to adapt to various other individual characteristics, find it difficult to socialize with the environment, so they tend to be alone, and due to internal factors, because of their limitations which cause blind individuals to have difficulty in social skills, communication, and academic learning (Baughan, 2012). Visual impairments can also make people feel inadequate and inferior, reduce self-esteem, and be depressed (Van Huijgevoort, 2002).

One of the essential aspects of individual adjustment is self-esteem. Self-esteem measures how an individual evaluates or assesses their value and results from the interaction between the individual and others (Alexander, 1996, cited in Papadopoulos et al., 2013). Self-esteem in individuals is positively related to social support, independence in daily activities, parenting style, and individual participation (Papadopoulos et al., 2013). Individuals with high self-esteem respect themselves and think of themselves as valuable individuals. On the contrary, individuals with lower self-esteem cannot accept themselves, consider themselves useless, and always feel inadequate (Rosenberg, cited in Adiputra, 2015). Self-esteem is one of the most important aspects of personality and personal behavior to help individuals recognize their abilities, values, and degree of importance.

Some theorists and researchers claim that loss of vision can severely impact self-esteem. This is because the loss of vision can cause individuals to experience negative interactions and experiences compared to their sighted peers (Tuttle & Tuttle, 2004). The results of previous studies on the self-esteem of the visually impaired showed mixed results.

Individuals with visual impairments report higher levels of self-esteem than normal individuals (Miklyaeva & Gorkovaya, 2019). Other research suggests that there were different levels of self-esteem between total blindness and low vision individuals. Individuals with visual impairments have lower self-esteem because they are more challenged to adapt to visual impairments conditions than those with severe visual impairment (total blindness) (Papadopoulos, 2014). However, other studies showed no significant difference in self-esteem between the sighted and the visually impaired individuals (Tołczyk & Pisula, 2019).

This literature uses the type of narrative literature review. It is because the writing of this literature uses several kinds of literature, which are then synthesized in a narrative literature review format. This study aimed to 1) explore self-esteem conditions among individuals with total blindness and low vision, 2) explore contributing factors to self-esteem among individuals with total blindness and low vision, and 3) explore methods to measure self-esteem among individuals with total blindness and low vision.

Methods

The narrative literature review was used to answer the research questions. There are 11 articles obtained through the online database. Furthermore, two articles were excluded, and nine articles were used in this literature based on the inclusion criteria. Inclusion criteria for articles included in this study were: 1) research-based articles published between 2010-2021; 2) participants of the study were either low vision or total blindness individuals; 3) participants do not have multi disabilities; 4) the article included *self-esteem* as a variable; 5) literature published in peer-reviewed journals. Articles were gathered using *"self-esteem," "visual impairments," "low vision,"* AND *"total blindness"* keywords in online databases, including Google Scholar,

PubMed, ScienceDirect, ProQuest, and SAGE Journals, starting from September until June 2022. Two researchers conducted this literature review. Analysis and comparison of data are carried out by reviewing the results and discussion sections of each literature. Detailed information about research-based articles examined in this study can be seen in table 1.

Table 1. Research-based articles reviewed in this study (n=9)

No.	Authors	Year	Instruments	Country	Participants	Results
1.	Papadopoulos, K., Montgomery, AJ., & Chronopolou, E.	2013	*Self-esteem scale* developed by Rosenberg (1965)	Greece	n_B= 58 n_L= 52 n_O=55 **Total= 165** Age Range= 18-65 years M_{AgeB}=34.89, SD_{AgeB}=12.00 M_{AgeL}=34.73, SD_{AgeL} = 10,66 M_{AgeO} = 34,96, SD_{AgeO} = 9,57	1. Individuals without visual impairments showed higher self-esteem than Individuals with total blindness and low vision. - Sighted participants (Mean=23.75, SD= 3.61) - Total blindness (Mean=21.84, SD=4.09) - Low vision (Mean=20.44, SD=3.79) 2. Factors that affect self-esteem are the locus of control (LOC), age at onset, and social support. 3. The scale used in this study evaluated demographic data and utilized the Rosenberg Self-Esteem Scale (1965) with ten question items. The ten items are answered in 4-stages, from "Strongly disagree" to "Strongly agree."
2.	Anastasia V. Miklyaeva, Iriana A. Gorkovaya	2019	*An adapted version of Sidorenko's Self-esteem scale by* Manaster and Corsini (1982) *A modified version of Dembo and Rubinstein's self-esteem scale by Prikhozhan* (1988).	Russia	n_B= 22 n_L= 39 n_O=112 **Total= 173** Age Range= 13-16 years M_{AgeT}=14,02, SD_{AgeT}=0,69	1. Individuals with total blindness showed higher self-esteem than individuals with low vision and those without visual impairments. Individuals with total blindness showed high self-esteem about the future. Self-esteem among individuals with low vision was similar to individuals without visual impairments. 2. Self-esteem is one aspect that affects hardiness. 3. The measures used the Self-esteem Scale by Manaster and Corsini (adapted by Sidorenko, 1993) consisting of actual, mirrored, maximum, perspective, and ideal self-esteem; the Self-Esteem Scale

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No.	Authors	Year	Instruments	Country	Participants	Results
						by Dembo and Rubinshtein (modified by Prikhozhan, 1988) which consists of natural, perfect, and possible self-esteem.
3.	Salehi, M., Azarbaeuejani, A., Shafiei, K., Ziaei, T., & Shayegh, B.	2015	The 30-item Eysenck Personality Inventory.	Iran	**n_B+ n_L =138** Age Range= Above 18 years M_{AgeT}=30,9, SD_{AgeT}=8,0	1. The majority (approximately 62.5%) of individuals with total blindness and low vision obtained high self-esteem, and 34.8% of participants showed low self-esteem scores. 2. Factors that affect self-esteem are self-concept and social support. 3. The scale used in this study was the 30-item Eysenck Personality Inventory (EPI) used to examine participants' self-esteem, all converted to Braille, requiring participants to answer all questions accurately.
4.	Papadopoulos, K.	2014	The Rosenberg Self-Esteem Scale (1965)	Greece	**n_B+n_L= 84** Age Range= Above 18 years M_{AgeB}= 28,76, SD_{AgeB} = 7,32 M_{AgeL}= 28,25, SD_{AgeL} = 6,62	1. Individuals with total blindness showed higher self-esteem than individuals with low vision. - Total blindness (Mean=22.29, SD=4.22) - Low vision (Mean=21.02, SD=4.29) 2. Factors that affect self-esteem are the internal locus of control (LOC), age at onset, and educational level. 3. The scale used in this study evaluated demographic data and utilized the Rosenberg Self-Esteem Scale (1965) with ten question items. The ten items are answered in 4-stages, from "Strongly disagree" to "Strongly agree."
5.	Fotiadou, E., Christodoulou, P., Soulis, S-G., Tsimaras, V.K., & Mousouli, M.	2014	Coopersmith Self-Esteem Inventory (CSEI)	Greece	n_B= 37 n_O= 37 **Total=74** Age Range= 8-14 years	1. Individuals with total blindness showed lower self-esteem than individuals without visual impairments. - With visual impairments (Mean=53.70, SD=13.87)

Table 1. Research-based articles reviewed in this study (n=9)

No.	Authors	Year	Instruments	Country	Participants	Results
					M_{AgeB} = 10,24, SD_{AgeB} = 2,19 M_{AgeO} = 10,16, SD_{AgeO} = 2,25	- Without visual impairments (Mean=76.62, SD=12.36) 2. Factors that affect self-esteem are social support and motor development. 3. The measure used in this study was the Coopersmith Self-Assessment Instrument for Measuring Self-Esteem (1987).
6.	Chutima Jalayondeja, Wattana Jalayondeja, Jattuporn Suttiwong, Patricia E Sullivan, and Deepika LHK Nilanthi	2016	The Rosenberg Self-Esteem Scale	Thailand	**n_B= 160** Age Range= 18-48 years M_{AgeB}=25,2, SD_{AgeB}=6,0	1. Individuals with visual impairments showed high self-esteem. 2. Factors that affect self-esteem are quality of life and physical activity. 3. The scale used in this study was the Rosenberg Self-Esteem Scale (RSES) (1965), which measures the perception of global self-esteem. The higher the score, the higher the self-esteem.
7.	Sylwia Tołczyk and Ewa Pisula	2019	Multidimensional Self-Esteem Inventory (MSEI), Oleh O'Brien dan Epstein (1988)	Poland	n_B= 39 n_L= 11 n_O= 50 **Total=100** Age Range= 16-18 years M_{AgeB+L}=18.28, SD_{AgeB+L}=1.49 M_{AgeO}=18.70, SD_{AgeO}=0.93	1. No differences in self-esteem were observed among individuals with total blindness, individuals with low vision, and individuals without visual impairments. 2. Factors that affect self-esteem are physical conditions, gender, social support, and coping strategies. 3. The scale used in this study is the Self Esteem Inventory (MSEI) by O'Brien and Epstein (1988), which consists of 116 items. For 61 items, participants evaluated the accuracy of their description on a 5-point Likert scale (from 1 completely untrue to 5 entirely accurate). In comparison, the other 55 items asked about the frequency of occurrence of emotions, thoughts, and experiences (from 1 rarely to 5 very often). The reliability

Table 1. Research-based articles reviewed in this study (n=9)

No.	Authors	Year	Instruments	Country	Participants	Results
						coefficient in the visual impairment group was .84.
8.	Konstantinos Papadopoulos, Theodosis Paralikas, Marialena Barouti & Elena Chronopoulou	2014	The Rosenberg Self-Esteem Scale (Rosenberg,1965)	Greece	n_B= 30 n_L= 25 n_O= 93 **Total=148** Age Range= 18-73 years M_{AgeB+L}= 37,4, SD_{AgeB+L}= 15,01 M_{AgeO}= 37,1, SD_{AgeO}= 13,96	1. Individuals with low vision showed lower self-esteem than individuals with total blindness and individuals without visual impairments. 2. The factor that affects self-esteem is the locus of control (LOC). 3. The scale used in this study was the 10-item Rosenberg Self-Esteem Scale (1965). Participants responded based on a system of four multiple-choice answers (strongly agree, agree, disagree, strongly disagree) and asked participants about demographic data.
9.	Savitri, V & Hartati, E.	2018	Coopersmith Self-Esteem Inventory (CSEI)	Indonesia	**n_B= 50**	1. The majority of 48 participants (approximately 98%) individuals with total blindness showed moderate self-esteem, and 1 participant (2%) showed high self-esteem. 2. The factor that affects self-esteem is social support 3. The measure used in this study was the Coopersmith Self-Esteem Inventory (CSEI) questionnaire, which consists of 25 questions.

n_B= number of total blindness participants; n_L= number of low vision participants; n_O= number of participants without visual impairments; M_{AgeT}= Mean Age total; M_{AgeB}= mean age of individuals with total blindness; M_{AgeL}= mean age of individuals with low vision; M_{AgeO}= mean age individuals without visual impairments; SD_{AgeT}= standard deviation for the period in total; SD_{AgeB}= standard deviation for age among individuals with total blindness; SD_{AgeL}= standard deviation for age among individuals with low vision; SD_{AgeO}= standard deviation for age among individuals without visual impairments.

Results and Discussion

Exploration of Self-esteem among Individuals with Total blindness and Low Vision

According to Alexander (1996) (cited in Papadopoulos et al., 2013), self-esteem is a measure of how an individual evaluates or assesses their value and is the result of an interaction between the individual and significant others. Self-esteem can fluctuate as time, space, and the demands of people's lives change. In addition, inadequate emotions can change a person's self-esteem (Gold, cited in Papadopoulos et al., 2013). Meanwhile, according to Coopersmith (1967) (mentioned in Augestad, 2017), self-esteem is a form of self-evaluation. This evaluation indicates approval or disapproval and reflects the extent to which the person views themself as competent, valuable, meaningful, and successful. Self-esteem is the dominant aspect of an

individual's self-related to motivation and self-concept (Papadopoulos et al., 2014).

After a review of nine pieces of literature related to research on the level of self-esteem in individuals with total blindness and low vision as well as in normal-sighted individuals showed variations in the results of self-esteem levels.

Papadopoulos et al. (2013) have shown that normal-sighted adults report higher self-esteem than adults who are blind or have low vision. They were followed by total blindness and low vision participants at the lowest level. These results are in line with the research of Papadopoulos et al. (2014) showed that although there is no significant difference, the highest level of self-esteem is owned by sighted individuals than individuals with total blindness, and the lowest in individuals with low vision. Research results by Fotiadou et al. (2014) also showed that visually impaired children and adolescents performed significantly below in self-esteem than sighted children and adolescents of similar age groups.

The results of these studies have differences from the effects of research by Miklyaeva & Gorkovaya (2019), which showed adolescents with visual impairments have the highest indicator of self-esteem. This is reflected in the actual and prospective self-esteem. The self-esteem of a low-vision youth is similar to that of a sighted child. The research results by Salehi et al. (2015), according to the obtained results, from 138 participants with visual impairment, 65.2% of the participants had high self-esteem, and 34.8% of the participants had low self-esteem. These results indicate that most of the participants have a high level of self-esteem. The results of research by Papadopoulos (2014) showed that young adults with blindness have higher self-esteem than young adults with low vision. Jalayondeja et al. (2016) also showed that individuals with visual impairments showed high self-esteem.

The findings of Tołczyk & Pisula (2019) showed no difference between the visually impaired and non-visually impaired groups in most aspects of the self-esteem measured in the study. The two exceptions were moral self-approval and body appearance.

The results of research by Savitri & Hartati (2018) showed that the self-esteem level of 50 visual impairments respondents had high self-esteem in 1 (2%) of respondents, and 49 (98%) of respondents had moderate self-esteem, so it can be concluded that respondents have self-esteem at a moderate level.

Based on the results obtained from the nine kinds of literature, it can be concluded that three types of literature showed a higher level of self-esteem in sighted individuals than in visually impaired individuals (Fotiadou et al., 2014; Papadopoulos et al., 2013, 2014). Four kinds of the literature showed a high level of self-esteem in visually impaired individuals than in normal-sighted individuals (Jalayondeja et al., 2016; Miklyaeva & Gorkovaya, 2019; Papadopoulos, 2014; Salehi et al., 2015). One piece of the literature showed no significant difference between sighted and visually impaired individuals (Tołczyk & Pisula, 2019), and one part of the literature showed self-esteem in visually impaired individuals is at a moderate level (Savitri & Hartati, 2018).

The entire literature found mixed results. The difference can influence the sample's age, gender, type of measurement used, the number of samples, and contributing factors that affect the self-esteem level in the sample. However, the entire literature consistently showed that individuals with total blindness have higher levels of self-esteem than individuals with low vision.

Exploration of Contributing Factors to Self-esteem among Individuals with Total blindness and Low Vision

Several contributing factors that affect the level of self-esteem among totally blind and low-vision individuals:

The first factor is physical conditions. Physical conditions, especially in the sense of sight, are one of the factors that influence different levels of self-esteem. The conditions in question are whether individuals have sighted or visual impairments, either

total blindness or low vision. This is because the loss of vision is associated with a lifelong disability which causes negative emotions such as shock, rejection, social isolation, grief, withdrawal, and depression, resulting in negative interactions, lower psychological conditions, and depression which affects their self-esteem. Studies have shown that individuals with low vision have more negative self-perception than those who are blind because they are more challenged to adapt to their surroundings (Tołczyk & Pisula, 2019). This visual impairment condition also affects how blind individuals perceive their appearance or body image, especially females (Tołczyk & Pisula, 2019).

The second factor is gender. Gender was associated with the self-esteem of individuals with visual impairments in body appearance and function. The results of Tołczyk & Pisula (2019) research found that females with visual impairments scored lower than males with visual impairments and sighted females. One aspect of self-esteem was body appearance. Visually impaired women are not very satisfied with their body appearance. Visually deficient women also showed a strong relationship between body image and psychological well-being (Pinquart & Pfeiffer, 2011). This result suggests that visually impaired women need help to gain physical acceptance to improve their self-esteem (Tołczyk & Pisula, 2019).

The third factor is the age at onset of visual impairment. The present study identified the age of onset as a significant negative predictor of self-esteem (Papadopoulos et al., 2013). The lower the age of blindness has an impact on self-esteem. Individuals with adventitious (non-congenital) visual impairment showed a low self-esteem level because it is relatively easier to adapt to visual impairment when identified in early childhood than when identified in adolescence or adulthood. Individuals with adventitious visual impairment often experience destructive emotional states and can take a long time to adjust (Papadopoulos, 2014). Higher levels of depression are associated with the recent onset of visual impairment, as an adaptation to visual impairment can take a long time. Individuals with low vision have more shock, anger, and depressive symptoms (Papadopoulos, 2014).

The fourth factor is educational level. The results of the present study found that academic level is one of the predictors of self-esteem. Learning activities increase self-esteem since learners experience a greater sense of efficacy and fulfillment (Orth et al., 2010). Highly educated individuals predicted higher self-esteem, and less educated individuals reported lower self-esteem (Orth et al., 2010).

The fifth factor is social support. The self-esteem of visually impaired individuals is positively linked to their social support (Papadopoulos et al., 2013). Individuals with visual impairment are more dependent on their parents and other adults. Therefore, the self-esteem level of individuals with visual impairments depends on social support from family, peer group, and their living environment. When their environment is supportive, they are helped to create and maintain their positive self-esteem (Fotiadou et al., 2014) and consequently develop their social skills (Salehi et al., 2015). The high self-esteem of visually impaired individuals is positively correlated with social support, especially from peers, parents, and neighbors (Papadopoulos et al., 2014). The results of Savitri & Hartati (2018) also reveal that the relationship between social support and self-esteem in the blind showed a positive direction, which means that the higher the social support received by individuals with visual impairments, the higher levels of self-esteem they have. An environment that does not isolate or deny their existence makes the visually impaired individuals feel that the climate accepts them so that they will be encouraged to play an active role in seeking social experiences. The results of other studies by Papadopoulos et al. (2013) showed that low vision individuals tend to hide their disability and have difficulty seeing themselves as part of the world and their environment so that the support of parents, social workers, teachers, and rehabilitation specialists is needed to help individuals with low vision. The

results of Miklyaeva & Gorkovaya (2019) state that individuals with low vision were more susceptible to health assessments and gave a lower estimate of their character, so support, especially psychological support, is an essential aspect for visually impaired individuals with their social environment. The results of these studies indicate that social support is necessary because it is known to be positively related to an individual's level of self-esteem. Social support in developing positive self-esteem covers various domains such as competence, acceptance, building close relationships, liking, self-control, and moral self-approval (Tołczyk & Pisula, 2019).

The sixth factor is quality of life. Self-esteem was the primary factor that explained the quality of life. Both are interrelated with each other because self-esteem is one of the significant factors in the quality of life (Jalayondeja et al., 2016). Jalayondeja et al. (2016) state that individuals with visual impairments who have a good quality of life could perform activities like ordinary individuals, not have feelings of inferiority, be satisfied with their disabilities and images, be happy with receiving education and training, and also have interest for their future careers.

The seventh factor is the locus of control (LOC). LOC plays an equally important role in visually impaired adaptation and influences life's daily challenges with visual impairments. In theory, internal LOC and high self-esteem have protective functions and can affect the assessment of stressful situations, coping efforts, or both (Papadopoulos et al., 2013). Individuals with an internal LOC believe they can confidently and proactively work on their decision planning and succeed in their efforts. In the present study, participants with a high external locus of control tended to have lower self-esteem and higher levels of melancholia, depression, anxiety, and asthenia (Papadopoulos et al., 2014). As a result of multiple regression analysis, Papadopoulos (2014) showed a significant relationship between visual status (total blindness or low vision) with LOC and self-esteem. LOC can be divided into two, namely internal and external LOC. External LOC correlates negatively with high self-esteem levels (Papadopoulos et al., 2014). This is because external LOC illustrates that individuals see themselves as relatively controlled by others, highly dependent on situational variables, and tend to blame events or forces outside helpless individuals. At the same time, the internal LOC believes that life is controlled by themselves. Therefore, visually impaired individuals need to have internal LOC to experience better adjustments.

The eighth factor is motor development. The present result found that when individuals improve their motor development, they simultaneously improve their self-esteem. The performance of individuals with visual impairments in motor development is lower than usual. Mastering motor skills and positive building self-esteem are paramount to individuals, especially those with visual impairments. This includes the level of independence or autonomy, adaptive behavior, and quality of life (Fotiadou et al., 2014). Parents and teachers have an interactive space of educational environment and interpersonal relationships to ensure proper conditions for developing motor skills and the visually impaired's positive self-esteem and empowerment (Fotiadou et al., 2014).

The ninth factor is coping strategies. Individuals with visual impairments tend to be more prone to experiencing negative emotions, so they need to do coping strategies. There are several types of coping strategies used in Tołczyk & Pisula's (2019) research, namely task-oriented coping, which is a task-focused coping strategy or planning solutions to problems; emotion-oriented coping, which is a coping strategy that focuses on oneself, one's own emotions; and avoidance-oriented coping, which is coping approach that focuses on avoiding difficult situations by seeking social distraction. The results showed that visually impaired individuals most frequently used avoidance-oriented coping, particularly related to moral self-approval, body functions, and physical attractiveness. Individuals with high self-esteem will

be able to cope with stress and persistently behave in challenging or stressful situations. It is essential to increase the self-esteem of visually impaired individuals. Hence, they are less likely to avoid stressful situations, as beliefs about their competence give them the strength to cope with specific situations. A coping strategy for the visually impaired may be considered (Schaefer, 2015).

The tenth factor is self-concept. Self-concept is the basis of all motivated behavior. It is defined as a dynamic and organized system of beliefs, attitudes, and views that each person provides to achieve the actual pattern of their identity (Salehi et al., 2015). Self-concept is related to self-esteem because individuals with a high level of self-concept have high self-esteem. Results of research by Salehi et al. (2015) showed a significant positive association between general self-concept and self-esteem. The overall self-concept is essential for improving the level of self-esteem. Given the interrelationship between general self-concept and self-esteem, general self-concept is very important for improving the self-esteem of visually impaired individuals. It makes them more socially compatible (Salehi et al., 2015).

The eleventh factor is physical activity. One of the crucial factors affecting the body image of visually impaired individuals is the level of physical activity (Greguol et al., 2014). The findings of Jalayondeja et al. (2016) suggested that self-esteem was significantly associated with high levels of physical activity. Physical activity also influenced life satisfaction and self-esteem (Jalayondeja et al., 2016). It seems more important to increase physical activity opportunities so visually impaired individuals can improve their social skills, build intimate relationships, and get social support from their peers because these are essential elements of self-esteem (Movahedi et al., 2011).

Exploration of Measurements of Self-esteem for Individuals with Total blindness and Low Vision

Various instruments were used in the related literature to measure self-esteem in visually impaired individuals. The self-esteem scale by Rosenberg (1965) is the most widely used measurement scale, which consists of ten questions, followed by the self-esteem scale by Coopersmith (1967). In taking measurements for visually impaired individuals, the participants had been given prior informed consent by using appropriate forms. Sizes of these scales were administered to visually impaired participants in a questionnaire. All translated to Braille or on a computer were provided with a file containing all questionnaires (the text files were converted to audio files via special software) (Salehi et al., 2015). Several studies also carried out measurements one by one in the presence of the researcher (not by telephone), and participants answered the questions orally (Papadopoulos et al., 2013, 2014). Some studies did not explain precisely how the measurements were carried out. In addition to using a questionnaire measurement, the participants' demographic data were also asked directly by the researchers. The demographics data collected from participants were visual acuity, visual field, and reading media (vision status was assessed using these three variables), gender, age, age at loss of sight, recency of vision loss (current age minus age at loss of view), financial status, education level, parents' education level, and ability of independent movement.

Conclusion

Self-esteem is how individuals perceive, value, and evaluate themselves. This aspect is needed in everyday life, including by the visually impaired individual, so they can appreciate themselves more even though they have to live with limitations. Based on nine research pieces of literature regarding self-esteem, total blindness, and low vision that have been reviewed, different results were obtained on self-esteem between total blindness and low vision. Three kinds of the literature showed a higher level of sighted individuals than visually impaired individuals; four types of the literature revealed a high level of self-esteem in the visually impaired, and one showed no significant difference between sighted individuals

and visually impaired individuals. One piece of the literature showed self-esteem in visually impaired individuals at a moderate level. However, the entire literature consistently showed that individuals with total blindness have a higher level of self-esteem than individuals with low vision. The differences in research results can be influenced by the difference in age, gender of the sample, type of measurement used, the number of samples, and contributing factors that affect self-esteem. These factors are physical conditions, gender, age at onset, educational level, social support, quality of life, locus of control (LOC), motor development, coping strategies, self-concept, and physical activity. The self-esteem scale by Rosenberg (1965) is the most widely used measurement scale, which consists of ten questions, followed by the self-esteem scale by Coopersmith (1967). The demographic data of the participants were also asked directly by the researcher. The demographic data requested were age, gender, vision status, age at onset of visual impairment, how recent the loss of vision is (how many years since the occurrence), reading media, educational level, financial status, marital status, employment status, and the ability of independent mobility. Because the research literature that discusses self-esteem specifically for visually impaired individuals was still very minimal with varying results in each research, it would be better if further research could examine the self-esteem of individuals, especially with total blindness and low vision in the specific age phase. It can explain in more detail the internal and external factors that affect the self-esteem level in total blindness and low vision individuals.

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