Original article

Perceived Social Support and Self-Efficacy among Blind Adolescents

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Abstract

Background: Blind adolescents are a vulnerable group of the population and they endure a wide range of challenges during their daily lives, including schooling, family life, workplace and society. It is essential that they feel supported by their surrounding people for their growth to proceed as easily as possible. Self-efficacy is considered an important factor for adolescents' healthy physical and mental health to overcome challenges.

Methods: This cross-sectional study was carried out to assess the association between perceived social support and self-efficacy among 107 blind adolescents resided in the hostels of the 'Assistance for Blind Children' (ABC) organization and a college during the study period from January to December 2019. 'Social Support Questionnaire for Children/Adolescents' and 'General Self-Efficacy Scale' were used to construct the questionnaire.

Results: Adolescents had perceived the highest support from parents (26.36±2.32) and the lowest from relatives (14.74±7.48). The mean scores of total SSQC were 106.2±17.5 and the total self-efficacy scale scores were 28.5±5.0 which had average good. The mean of perceived social support was statistically significant with the adolescent's age, gender, father's and mother's education, father's occupation, residence and monthly family income ($p<0.05$). The mean of self-efficacy was statistically significant with the adolescent's family type, father's and mother's education ($p<0.05$). There was a positive significant correlation between self-efficacy and PSS ($r= +0.523$, $p=0.000$).

Conclusion: Resilient social support to the adolescents showed higher levels of self-efficacy. To increase their self-efficacy and help them become self-reliant in the future, they need more technical guidance.

Keywords: Perceived social support, self-efficacy, blind adolescents, Bangladesh.

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Introduction

The crucial time in life is known as adolescence when an adolescent develops the abilities and qualities built to become a productive and reproductive adult.[1] It is referred as a point of transition and challenges for both children and their families.[2] Due to the wide range of relationship adolescents have with peers, families, and other adults, changes in interpersonal relationships during adolescence have come closer.[3]

Visual impairment and blindness have been recognized as a prevalent global health concern that seriously affect a person's personal, professional, and social life.[4] According to World Health Organization (WHO), there are over 45 million people worldwide whose vision is worse, 90% of whom live in developing countries. About 314 million people are visually impaired worldwide and 45 million of them are blind. Child blindness remains a significant problem globally. An estimated 19 million blind children below the age of 15 will live in blindness for many years. In addition, more than 12 million children ages 5-15 are visually impaired because of uncorrected refractive errors, the condition that could be easily diagnosed and corrected.[5,6]

Social support can have important impacts in a variety of circumstances due to its multifaceted effects on mental health and academic performance. Support promotes cooperation, emotions of self-worth and self-efficacy, and it aids in cognitive development by stimulating thought, fostering intellectual progress, and defaming antisocial expectations.[7] Perceived social support (PSS) is a cognitive assessment of one's relationships with

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others. Measures of perceived social support take into consideration the fact that not every connection a person makes with the people in his social network leads to social support. It also improves how people function on a personal level and helps them become more self-reliant.[8]

Self-efficacy is the belief in one's ability to perform at a level that is needed of them; this belief affects how one responds to events in their life. When faced with difficulties, a person's feelings, thoughts, motivation, and behavior all depend on a variety of situations.[9] Adolescents' social networks, including their parents, siblings, relatives, friends, teachers, and neighbors have a greater influence on their physical and mental development. The blind adolescents' interactions and relationships with their families and friends alter as they enter adolescence. Family interactions undergo functional changes because young adolescents during this time desire more autonomy and different relationships with parents. Peers are crucial to adolescent transitions away from their families and toward independence. Increased thought and emotion sharing based on friendship enhances peer involvement and intimacy. But given that blind adolescents have healthy and productive interactions as well as emotional ties with parents, parents continue to be the primary socializing forces throughout this time. Adolescence can therefore have a significant negative impact.[10]

Methods

Study design and settings

This cross-sectional study was commenced to assess the association between perceived social support and self-efficacy among blind adolescents. The study was conducted in purposively selected from a total 7 places. Among them, 6 project offices in 6 districts of the 'Assistance for Blind Children (ABC)' organization (Gazipur, Mymensingh, Jamalpur, Sirajganj, Cumilla, and Brahmanbaria) and a college named Begum Badrunnessa Govt. Girls' College, Dhaka, Bangladesh.

Sample selection criteria

Adolescents were conveniently selected 107 blind adolescents resided in the study place hostels. Participants aged 10-19 years with complete or partial blindness were included in the study. The blind adolescent who had a chronic illness and mental retardation was excluded from the study. The sample size was calculated with a 95% CI and a relative precision of 5%.

Data collection methods

Data was collected from the students through a semi-structured questionnaire, which was pretested among the 25 blind adolescents of the 'Blind Education and Rehabilitation Development Organization' (BERDO), Dhaka. Participants were interviewed according to their convenience through face-to-face interviews, during the study period from January to December 2019. This questionnaire was constructed with-

A. A semi-structured questionnaire to evaluate the socio-demographic characteristics.
B. 'Social Support Questionnaire for Children' (Intermediate version; SSQC) was used to assess the perceived social support level.
C. 'General Self-Efficacy (GSE) Scale' was used to assess the level of self-efficacy.

Statistical analysis

Data were coded, entered, edited, and cleaned cautiously and then exported into SPSS v25. Continuous variables were summarized using measures of central tendency and dispersion such as mean, percent, and standard deviation. For significance, the independent sample 't' test and ANOVA were used to see the associations and correlations with a 95% confidence level were computed and the p-value <0.05 was considered as having a significant association. The results were presented in tables and charts.

Ethical approval

Informed written assent and consent was obtained from concern authorities and each participant. Confidentiality of data was ensured and unauthorized access to data was not allowed. The Institutional Review Board (IRB) at the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka 1212, Bangladesh. (Reference: NIPSOM/IRB/2019/111)

Results

Table 1 characterizes the socio-demographic profile of 107 blind adolescents. The mean age was 15.1±2.1 years and majorities (57.0%) were from the age group 11-15 years. More than half of the adolescents were male (58.9%) and were in the secondary level (57.0%) of education. Nearly half of the participant's father completed primary level (46.7%) of education and mothers was illiterate (47.7%). Occupation of the adolescent's parent, most of the participant's father was a service holder (61.7%) and the mother was a homemaker (73.8%). About two-thirds (69.2%) came from nuclear families and resided in rural areas (84.1%). The mean monthly family income was 20766.4±4665.4 taka and about two-thirds (64.7%) of the family's income was less than 21,000 taka.

Table 1: Socio-demographic profile (n=107)

Characteristics		Frequency	Percent
Age groups (years)	11-15	61	57.0
	16-19	46	43.0
	Mean±SD		15.1±2.1
Sex	Male	63	58.9
	Female	44	41.1
Education	Primary	18	16.8
	Secondary	61	57.0
	Higher secondary	28	26.2
Father's education	Illiterate	34	31.8
	Primary	50	46.7
	Secondary and above	23	21.5
Mother's education	Illiterate	51	47.7
	Primary	48	44.9
	Secondary and above	8	7.5
Father's occupation	Farmer	36	33.6
	Businessman	5	4.7
	Service holder	66	61.7
Mother's occupation	Homemaker	79	73.8
	Day laborer	17	15.9
	Service holder	11	10.3
Residence	Rural	90	84.1
	Urban	17	15.9
Type of family	Nuclear	74	69.2
	Joint	33	30.8
Monthly family income (Taka)	10,000-15,000	25	23.4
	15,001-21,000	44	41.3
	≥21,001	38	35.3
	Mean±SD	20766.4±4665.4	

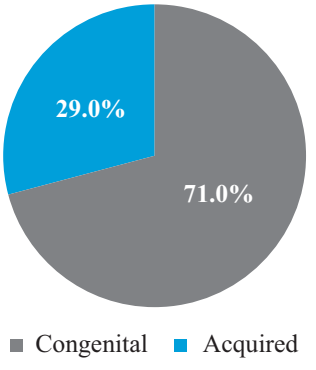

Figure 1: Cause of blindness (n=107)

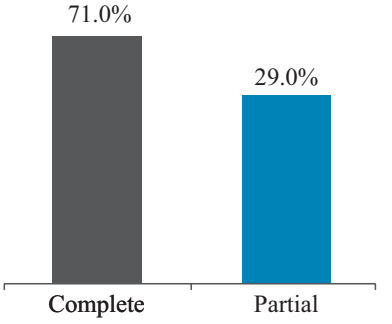

Figure 2: Type of blindness (n=107)

Table 2: Perceived social support scores by SSQC (n=107)

SSQC	Mean±SD
Subscales	
Parent's support	26.4±2.3
Relative's support	14.9±7.5
Non-relative adult's support	20.0±6.0
Sibling's support	25.3±2.9
Peer's support	19.8±7.9
Total scores	106.2±17.5

Figure 1 and 2 shows 71.0% of participants' blindness was congenital and those adolescents were completely blind. Table 2 demonstrates the mean PSS scores of five subscales of SSQC. Parents' support was 26.4±2.3 and siblings' support was 25.3±2.9, followed by non-relative adults' support was 20.0±6.0, peer's support was 19.8±7.9 and relatives' support was 14.9±7.5. The mean scores of total SSQC were 106.2±17.5.

Table 3 demonstrates the perception of blind adolescents' self-efficacy by using the GSE scale which consists of 10 questions. The majority of the blind adolescent perceived their self–efficacy as moderately true. The total self-efficacy scale scores range from 10-40 and the mean score of self-efficacy was 28.5±5.0, it can be assumed that the self-efficacy of blind adolescents was on average good.

Table 4 interprets the association between self-efficacy and the perceived social support (SSQC) subscale of the participants. There was positive correlation between self-efficacy with the parents' support subscale (r= +0.250, p=0.009), relative's support (r= +0.426, p=0.000), non-relative's support (r= +0.319, p=0.001), sibling's support (r= +0.160, p=0.000) and peer's support (r= +0.378, p=0.000). These associations were statistically significant (p<0.05).

Figure 3 interprets the association between self-efficacy and the total PSS scores of the participants. There was a positive correlation between self-efficacy and PSS (r= +0.523, p=0.000), which was statistically significant (p<0.05).

Table 3: Blind adolescents' perception of self-efficacy (n = 107)

Items	Not at all true	Hardly true	Moderately true	Exactly true
	n(%)	n(%)	n(%)	n(%)
I can always manage to solve difficult problems if I try hard enough	0(0)	13(12.1)	76(71.0)	18(16.8)
If someone opposes me, I can find the means and ways to get what I want	2(1.9)	31(29.0)	61(57.0)	13(12.1)
It is easy for me to stick to my aims and accomplish my goals	0(0)	12(11.2)	45(42.1)	50(46.7)
I am confident that I could deal efficiently with unexpected events	0(0)	37(34.6)	57(53.3)	13(12.1)
Thanks to my resourcefulness, I know how to handle unforeseen situations	2(1.9)	31(29.0)	55(51.4)	19(17.8)
I can solve most problems if I invest the necessary effort	0(0)	29(27.1)	64(59.8)	14(13.1)
I can remain calm when facing difficulties because I can rely on my coping abilities	9(8.4)	50(46.7)	38(35.5)	10(9.3)
When I am confronted with a problem, I can usually find several solutions	1(0.9)	38(35.5)	58(54.2)	10(9.3)
If I am in trouble, I can usually think of a solution	0(0)	39(36.4)	57(53.3)	11(10.3)
I can usually handle whatever comes my way	2(1.9	28(26.2)	60(56.1)	17(15.9)
Mean ±SD	28.5 ± 5.0			

Table 4: Correlation within self-efficacy and PSS (n=107)

		r value	p value
SSQC subscales	Parent's support	+0.250	*0.009
	Relative's support	+0.426	*0.000
	Non-relative adult's support	+0.319	*0.001
	Sibling's support	+0.160	*0.000
	Peer's support	+0.378	*0.000

Pearson product-moment correlation coefficient test was done; *Statistically significant value

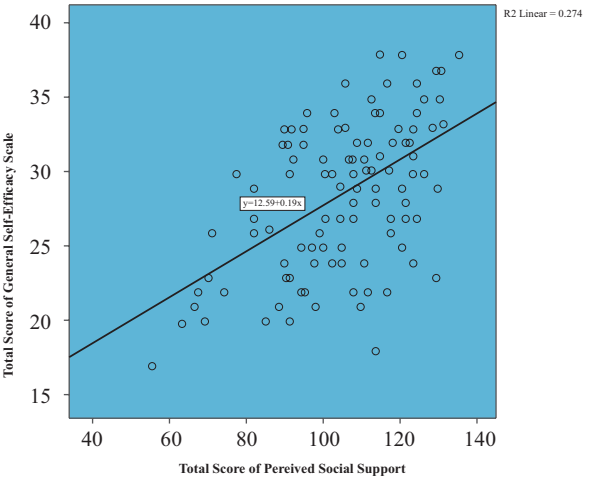

Figure 3: Correlation within self-efficacy and total PSS scores (n=107)

Table 5: Association between PSS scores and different variables (n=107)

Variables	N	Perceived social support		t value	p value
		Mean score	SD		
Age groups (years)					
11-15	61	2.19	±0.319	0.007	*0.006
16-19	46	2.09	±0.386		
Sex					
Male	63	2.16	±0.343	-2.223	*0.005
Female	44	2.08	±0.356		
Education					
Primary	18	2.17	±0.349	F= 0.292	0.399
Secondary	61	2.13	±0.319		
Higher secondary	28	2.09	±0.416		
Father's education					
Illiterate	34	1.99	± 0.406	F= 4.060	*0.020
Primary	50	2.15	± 0.309		
Secondary and above	23	2.25	± 0.293		
Mother's education					
Illiterate	51	2.03	± 0.367	F= 4.438	*0.014
Primary	48	2.19	± 0.308		
Secondary and above	8	2.32	± 0.322		
Father's occupation					
Farmer	34	1.95	± 0.378	F= 8.675	*0.000
Businessman	50	2.18	± 0.303		
Service holder	23	2.25	± 0.285		
Mother's occupation					
Housewife	81	2.12	± 0.351	F= 2.172	0.119
Day laborer	13	2.01	± 0.370		
Service holder	13	2.29	±0.272		
Residence					
Rural	90	2.12	±0.373	0.003	*0.003
Urban	17	2.13	±0.189		
Type of family					
Nuclear	72	2.12	±0.344	-0.288	0.718
Joint	35	2.14	±0.364		
Monthly family income (Taka)					
10,000-15,000	25	1.95	±0.352	F= 6.550	*0.002
15,001-21,000	44	2.11	±0.369		
≥21,001	38	2.26	±0.268		
Cause of blindness					
Congenital	76	2.14	±0.347	0.529	0.663
Acquired	31	2.09	±0.359		
Type of blindness					
Complete	76	2.15	±0.355	0.995	0.763
Partial	31	2.07	±0.336		

Independent sample 't' test and ANOVA were done (F); *Statistically significant value

Table 5 interprets the mean scores of perceived social support with the different variables. The mean of perceived social support was statistically significant with the adolescents aged 11-15 years (p=0.006), male (p=0.005), and resided in urban areas (p=0.003) by independent sample 't' test. There were significant differences found with their father's and mother's education (p=0.020, 0.014), father's occupation (p=0.000), and monthly family income (p=0.002) by one-way ANOVA test. Post-hoc test (Hochberg) also revealed that there were significant differences.

Table 6: Association between self-efficacy scores and different variables (n=107)

Variables	N	General self-efficacy		t value	p value
		Mean score	SD		
Age groups (years)					
11-15	61	2.86	±0.474	0.276	0.202
16-19	46	2.83	±0.533		
Sex					
Male	63	2.87	±0.498	0.556	0.953
Female	44	2.81	±0.502		
Education					
Primary	18	2.83	±0.497	F= 0.019	0.981
Secondary	61	2.84	±0.460		
Higher secondary	28	2.86	±0.589		
Father's education					
Illiterate	34	2.67	± 0.515	F= 3.922	*0.023
Primary	50	2.87	± 0.487		
Secondary and above	23	3.03	±0.430		
Mother's education					
Illiterate	51	2.74	± 0.513	F= 3.883	*0.019
Primary	48	2.92	± 0.469		
Secondary and above	8	3.13	± 0.453		
Father's occupation					
Farmer	38	2.74	± 0.524	F= 1.406	0.250
Businessman	32	2.93	± 0.478		
Service holder	37	2.88	± 0.481		
Mother's occupation					
Housewife	81	2.86	±0.511	F= 0.209	0.812
Day laborer	13	2.76	± 0.501		
Service holder	13	2.83	± 0.437		
Residence					
Rural	90	2.83	±0.517	-0.806	0.097
Urban	17	2.94	±0.384		
Type of family					
Nuclear	72	2.86	±0.441	0.496	*0.005
Joint	35	2.81	±0.604		
Monthly family income (Taka)					
10,000-15,000	25	2.79	±0.489	F= 1.367	0.260
15,001-21,000	44	2.78	±0.531		
≥21,001	38	2.95	±0.467		
Cause of blindness					
Congenital	76	2.84	±0.484	-0.205	0.226
Acquired	31	2.86	±0.539		
Type of blindness					
Complete	76	2.87	±0.495	0.648	0.687
Partial	31	2.79	±0.512		

Independent sample 't' test and ANOVA were done (F); *Statistically significant value

Table 6 interprets the mean scores of self-efficacy with the different variables. The mean of self-efficacy was statistically significant with the adolescent's family type (p=0.005) by independent sample 't' test. There were significant differences found with their father's and mother's education (p=0.023, 0.019) by one-way ANOVA test. Post-hoc test (Hochberg) also revealed that there were significant differences.

Discussion

Relationships with peers and adults other than family are needed to be formed during adolescence. It could still be necessary to build and preserve a relationship between parents and children.[11] This study was directed among 107 blind adolescents aged 10 to 19 years who lived in the hostels of the study places. The mean age of the adolescent was 15.1±2.1 years and majorities (57.0%) were from the age group 11-15 years. In this study, PSS was more in the adolescents of the 11-15 years age group (2.19±0.319) than in adolescents of the 16-19 years age group (2.09±0.3860), which was statistically significant. In a study in Netherlands, found social support for adolescents with visual impairments tends to decrease as their age increases, which is similar to the present study.[10]

In the present study, majorities were male (58.9%). The mean scores of PSS for male adolescents (2.16±0.343) came more than females (2.08±0.356) and this difference was statistically significant, which shows similarity in a study in Finland. The study found that gender also appears to be an influential factor in social support.[12] But in another study in Spain, gender was a contextual component that showed various responses in the support process. Girls in particular tended to see their social network as being more supportive than boys.[13] In a prospective study found that female adolescents perceived their peers' support more than male adolescents. Male adolescents thought their parents supported them more than girls, which is similar to this study.[14] This study revealed that male adolescents' self-efficacy (2.87±0.498) was more than females (2.81±0.502), but this difference was not statistically significant. Another study revealed a similar finding, emphasizing the significance of adopting adolescent self-efficacy differences into the perspective.[15]

According to this study, most of the participants' fathers completed the primary level of education (46.7%) and mothers were illiterate (47.7%). The association between PSS and parent's education was found statistically significant, and adolescents' self-efficacy and parental education had also a significant association. A study in America showed that parental education had a strong correlation to adolescents' PSS and a strong correlation between parental education and self-efficacy.[16]

This study revealed that 69.2% of adolescents were from the nuclear family. The mean scores of PSS in adolescents from joint family (2.14±0.364) were more than those from the nuclear family (2.12±0.344). In a study in Netherlands, found that blind and visually impaired adolescents perceived more support from extended family members, which is similar to the study.[17] In contrast to nuclear families, which get support from either the parents or the siblings, joint or extended families had more members who were able to provide more support. The mean scores of self-efficacy in adolescents from the nuclear family (2.86±0.441) were more than those from the joint family (2.81±0.604); and the difference was statistically significant (p=0.005). A similar study carried out in the Netherlands came to the same finding as this study.[17] This variation could arise because parents in nuclear families devote more time to their children, which increases their efficiency and autonomy.

This study revealed that 84.1% of adolescents were from rural areas and the mean scores of PSS in the adolescents from urban areas (2.13±0.189) was more than from rural areas (2.12±0.373); and the difference was statistically significant (p=0.003). The similarity was found in a study in Finland that showed urban adolescents got more social support than rural ones.[18] It can be as urban areas have more opportunities for education and other amenities.

This study revealed a significant relation between PSS and the monthly household income of the participants (p=0.002). But another study showed that social support didn't depend upon socio-economic status.[19] The socioeconomic and cultural backdrop of Bangladesh may be the cause of the discrepancy revealed in this study.

In the current study, 71.0% of participants' blindness was for congenital cause and the rest 29.0% for the acquired cause. Here, PSS was more in adolescents whose blindness is from a congenital cause than in adolescents with the partial type of blindness. The mean scores of PSS for adolescents with congenital blindness (2.14±0.347) came more than for adolescents with acquired blindness (2.09±0.359). But the difference was not statistically significant. In a study in Germany, adolescents who were congenitally blind showed less decline of PSS than adolescents with the acquired type of blindness, which is similar to the present study.[20] Congenitally blind person receive support from their birth, but in the case of acquired blindness, it is less obvious.

In this study, out of 107, 76 participants' blindness was complete type and 31 participants' blindness was partial type. In a study in Germany, the majority of the participants (60.8%) were completely blind and the others had low vision or were partially blind, which is similar to the present study.[20] The mean scores of PSS for adolescents with complete blindness (2.15±0.355) came more than adolescents with the partial type of blindness (2.07±0.336), which is similar to the study.[20]

In this study, adolescents perceived the highest social support from their parents (26.36±2.32) and siblings (25.28±2.92). Blind and visually impaired adolescents perceived more social support, specifically from parents and peers. This finding was found in the studies in Germany[20], in Netherlands[10,12] and Spain.[21]

The present study revealed the association between self-efficacy and PSS of blind adolescents, and there was a positive correlation that was statistically significant (p=0.000). There was a positive correlation between self-efficacy and perceived social support or parents support subscale, which was also statistically significant (p=0.009). Of the five sources of social support, the

frequency of parent support is the most positively correlated with general self-efficacy. In a study revealed that the importance of parent support is the most positively correlated source of support to general self-efficacy.[11] Another study in China showed that social support is an important resource that can help individuals cope with stress, enhance self-confidence and improve self-efficacy.[22]

Conclusion

The present study revealed that blind adolescents' PSS has an association with self-efficacy. Participants whose social support was better had better self-efficacy. Male adolescents, younger in age, resided in the urban area had perceived more social support than other adolescents. Those participants who belong to the nuclear family had more self-efficacy than participants of the joint family. Parental education showed an influence on both blind adolescents' PSS and self-efficacy. Most of the blind adolescents' self-efficacy was on average good. This study also showed that blind adolescents perceived support from their parents, siblings, relatives, non-relative adults and peers. They perceived the highest support from their parents and siblings. There was a significant positive correlation between PSS and self-efficacy. Both informational and psychological support should be provided to the adolescents. Self-capability to become independent will be built by informational support and psychological support help to improve their well-being. To improve their self-development and self-confidence, communication and social mobilization should be strengthened. Thus better perceived social supports result in better self-efficacy.

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