Socio-economic and Demographic Factors Associated with Adaptive Behavioural Functions of Children Diagnosed with Intellectual Disability in Ethiopia

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Abstract

The socio-economic and demographic factors can influence on the planning and implementation of intervention service for children with intellectual disability. The present study aims to assess the socio-economic and demographic factors associated with adaptive functions of children diagnosed with Intellectual Disability in Ethiopia. 160 children with intellectual disability were included in this cross-sectional study. Vinland Adaptive Behavioural Scale II was administered to assess adaptive behaviour of children diagnosed with intellectual disability. The current study's participants performed poorly in all adaptive behaviour domains and sub-domains. In comparison to younger children, older youngsters scored lower on adaptive behaviour. This indicated that domains of adaptive behavioural functions were linked with age negatively: age and communication (-0.28), age and daily living (-0.22), age and socialization (-0.23); and adaptive composite score and age (-0.3). There was no significant correlation between all domains and subdomain of adaptive behaviour and educational status and gender. In contrast, there was a significant relationship between parents' or caregivers' marital status and all domains and subdomains of adaptive behavioural functions in children with intellectual disability. Those children who were living with married couples perform better than those who were living with single mother, divorced and widowed. Generally, in underdeveloped nations like Ethiopia, description of socio-economic and demographic correlates of intellectual disabilities in children diagnosed with intellectual disability is crucial for designing a meaningful and useful policy and strategy for early identification and intervention of children with intellectual disability.

Keywords: adaptive functions, intellectual disability, socio-demographic characteristics, vineland adaptive behavioural scale

1. Introduction

The estimated prevalence of intellectual disability is nearly 200 million throughout the world, with 41 million having long-term or permanent disability (WHO, 2016). It Ranks fourth in the list of leading cases of disability. The overall prevalence of children with intellectual disability is between 1-3%. It is more common in developing countries because of the higher incidence of injuries and anoxia around birth, and early childhood brain infections. Population studies have shown that overall prevalence of mild to severe intellectual disability ranges from 2.5 to 5 per thousand (Stein & Susser, 1984).

Staddon (2010) defines adaptive behavior as the age-appropriate behaviors necessary for people to live independently and to function safely and appropriately in daily life. Adaptive behaviors are the overall functioning of a person in communication, daily living, socialization and motor skills. These include real life skills such as grooming, dressing, safety, safe food handling, school rules, money management, cleaning, making friends, social skills and so forth. Assessment of the abilities of a child to identify his/her needs, strength, and weakness or limitation is believed to serve as a stepping stone to meet the needs of the individual accordingly. It helps to arrange appropriate intervention programs through the provision of the appropriate support services to avert the condition. As Eldevik (2010) aptly points out, it is not uncommon for individuals with intellectual disabilities to require specially designed instruction to learn adaptive behaviors. The adaptive skills required by individuals with intellectual disabilities are critical factors for success in school, community and home settings.

Vineland Adaptive Behavior Scales are a valid and reliable test to measure a person's adaptive level of functioning. Vineland-II forms aid in diagnosing and classifying intellectual and developmental disabilities and other disorders. As with the current Vineland, the content and scales of Vineland-II were organized within a three domain structure: Communication, Daily Living, and Socialization. This structure corresponds to the three broad Domains of adaptive functioning recognized by the American Association of Mental Retardation (AAMR, 2002): Conceptual, Practical, and Social. In addition, Vineland-II offers a Motor Skills Domain and an optional Maladaptive Behavior Index to provide more in-depth information.

Description of socio-demographic characteristics and adaptive behavioral functions of children with intellectual disabilities are crucial for designing a meaningful and useful policy and strategy to early identification and intervention of children with intellectual disabilities. Parents/caregivers best understand the identification, assessment and intervention of children with intellectual disabilities depending on their background (socio-demographic factors). In addition to this, their economic status also has an impact on the intervention and treatment outcomes. Thus, it would be essential to take all these in account while planning for identification, assessment, and intervention and conducting training. The understanding and recognition of parents/caregivers data can be used to develop assessment and intervention polices in the national level.

Males are more likely than females to be diagnosed with ID. According to the National Health Interview Survey, from 1997 to 2008 the prevalence of ID was 0.78 percent in boys and 0.63 percent in girls (Boyle et al., 2011). Overall, studies of prevalence show a male excess in the prevalence of ID, which is partially explained by x-linked causes of the disability, such as fragile X syndrome (Durkin et al., 2007). On a study the relationship between age and adaptive functions Kenworthy et al. (2010) did not find a correlation between age and adaptive functioning standard scores in a group of high functioning individuals (12–21 years old) with ASD. Another study by Lopata et al. (2012) bound consistent with the previous findings, that the researchers did not find an association between age and adaptive functioning. It is important to note that the Kenworthy et al. (2010) and the Lopata et al. (2012) studies assessed adaptive functioning using the Adaptive Behavior Assessment System which has demonstrated moderate to strong correlations with the Vineland and other measures of adaptive functioning (Harrison and Oakland 2003). However, (Kanne et al., (2011); Klin et al., (2007); Gabriels et al. (2007); Kanne et al., (2010); and Fisch et al. (2002), reported that age has been negatively associated with adaptive functioning standard scores on the Vineland.

In another study of socio economic and demographic factors associated with adaptive behavior in Egypt, Ibrahim et al., (2020) found that the adaptive behaviour functions among the children diagnosed with autism disorder difference significantly according to age in all domains. They used Vinland Adaptive behavioural scale to assess the informants' adaptive level. Results showed that children aged 3 years have higher level of adaptive functioning in domains of communication, daily living skills and motor skills compared to older children, except for children aged 5 years which have higher level of socialization. Finally they concluded that the correlations detected in their study between adaptive behaviour and some social determinants of health can influence stakeholders' decisions in planning and implementation of autism specific interventions.

1.1 Objective

The aim of this study is to assess socio-economic and demographic factors associated with adaptive functions of children diagnosed with Intellectual Disability in Ethiopian context.

1.2 Use of the VABS in Other Cultures and Languages

Goldberg, Dill, Shin, and Nguyen (2009) describe a study in Vietnam that aimed to translate and adapt the VABS for preschool children aged 3-6 years, with the goal of developing a reliable and valid tool to screen for children who would benefit from early intervention and services in a setting with limited resources. Goldberg et al. (2009) also mention a number of studies on VABS adaption in non-western settings. Anjun, Khadi, and Phadnis (1990), quoted in Goldberg, 2009) studied social maturity in rural and urban Indian newborns using a modification of the Vineland Social Maturity Scale.

The VABS was employed by La Malfa et al. (2009) in an Italian correlation study between the SAED and the Vineland Adaptive Behavior Scales (VABS). Thirty-three persons in residential facilities who did not have clinically significant behavioral or psychiatric illnesses were assessed using both tools, and correlations were examined. The SAED was determined to be psychometrically sound, with a strong link between emotional growth and adaptive behaviour. The application allows you to collect vital information about a person's emotional requirements.

Hayes (2005) conducted a study in Australia, using the VABS and the Kaufman Brief Intelligence Test (K-BIT) to diagnose intellectual disability amongst a forensic sample. There is an over representation of people with intellectual

disability amongst the offender population, with prevalence of 20% being found in prisons in New South Wales in Australia. There is a need for early and accurate identification so that appropriate interventions and supports can be implemented during the legal process. The correlation coefficient between the VABS and the K-BIT was .78. The correlation was less robust for young male offenders and further studies need to look at psychiatric and psychosocial characteristics and their effect on adaptive functioning.

2. Methods

Cross-sectional research design was used in the current study. In Addis Ababa's kindergarten class, there were 171 boys and 128 girls with intellectual disabilities. On the other, 63 males and 94 girls were trained in special needs education and were enrolled in government schools throughout Addis Ababa. The researchers chose two sub cities and two schools specifically for this study. The schools were Kokebe Tsibha and Mekane Iyesus from the respective sub cities, as well as Yeka and Nifase Silk Sub Cities. The researcher purposely chose these institutions because they were pioneers in providing education for children with intellectual disabilities, and they had been employing various assessment tools to detect and test children's adaptive capabilities.

Children with intellectual disabilities from both schools were selected using a stratified sampling method that included gender as a stratum. This method was used to assure a gender-balanced representation of children with intellectual disabilities and their families. Accordingly, the researcher chose 41 boys and 39 girls with intellectual disabilities from Mekane Iyesus and 47 boys and 33 girls from Kokebe Tsibha. All the participants of the current study were children diagnosed with intellectual disabilities.

The researcher, in partnership with the data collectors, carefully chose competent respondents in order to achieve valid results. These were adults who were most familiar with the behavior of children with intellectual disabilities on a daily basis. The respondents were 132 parents (fathers and mothers), 9 grandparents, and 19 relatives and caregivers of children with intellectual disabilities.

2.1 Instruments

Vineland Adaptive Behavior Scales, Second Edition was employed by the researchers. The Vineland-II is a norm-based standardized test of adaptable behaviour that evaluates the adaptive abilities of people from infancy to 90 years old (Sparrow, Cicchetti, & Balla, 2005).

The process of translation of the VABS-II into multiple languages follows guidelines prescribed by Beaton et al. (2000) or Guillemin, Bombardier, and Beaton (1993). The methodology that is used in the process of translation strives to achieve the maximum level of equivalence between the original VABS II and the translated version of the VABS-II, while considering the cultural differences.

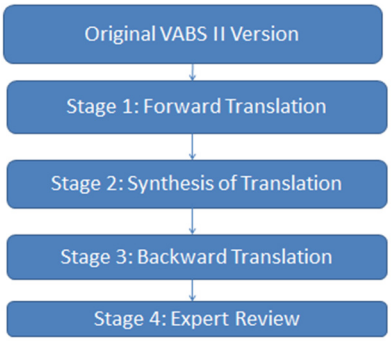

Figure 1. The Process of Translation Guideline

Source: Beaton et al. (2000)

2.2 Ethical Considerations

Ethical clearance letter was obtained from Addis Ababa University to reassure participants that their participation in the research was voluntary and that they were free to withdraw at any point and for any reason. In addition to this, participants were fully informed regarding the objectives of the study, while they were reassured that their answers

would be treated anonymously and used only for the research purpose. In contrast, the researcher attempted to create and maintain a climate of comfort.

3. Findings

This section presents a summary of the major findings of the study. It is organized in line with the specific objectives of the study. The section began with the findings, by presenting the demographic information of the participants; compare the socio demographic variables with VABS-II score.

Table 1. Demographic Characteristics of the Comparability Analysis Sample, by Age & Gender

Demographic Information		Age										Total	
		6-8		9-11		12-15		16-21		22 +			
		N	%	N	%	N	%	N	%	N	%	N	%
Sex	Female	6	8.33	12	16.66	17	23.61	29	40.27	8	11.11	72	100
	Male	9	10.22	14	15.9	25	28.4	34	38.63	6	6.81	88	100

Table 1 show the demographic characteristics of the sample 160 individuals with intellectual disability who were assessed under Vineland Adaptive Behavioural Scale II semi structured interview. Girls and boys were fairly evenly represented from each school. Overall girls comprised 45 percent of the sample.

Table 2. Educational Status of Parents/Caregivers

	Can't read and write	From Grade 1 up to 8	Finished Secondary School	First degree & above	Total	Missing System	Total
Mother's/Mother Figure Educational Status							
Frequency	48	47	42	15	152	8	160
Percent	30.0	29.4	26.3	9.4	95.0	5.0	100.0
Valid Percent	31.6	30.9	27.6	9.9	100.0		
Cumulative Percent	31.6	62.5	90.1	100.0			
Father's/Father Figure Educational Status							
Frequency	21	28	57	19	125	35	160
Percent	13.1	17.5	35.6	11.9	78.1	21.9	100.0
Valid Percent	16.8	22.4	45.6	15.2	100.0		
Cumulative Percent	16.8	39.2	84.8	100.0			

As it shown in Table 2, 48(30%) of mothers or mother figures can't read and write whereas 47(29.4%) of them were responded that they have studied from grade 1 up to 8, the others 42 (26.3%) of them have finished secondary school and the rest 15(9.4%) of them have got first degree and above. On the other hand regarding father or father like figures, 21(13.1%) of them can't read and write, 28(17.5%) have studied from grade 1 up to 8, 19(11.9%) of them have completed secondary school and the rest 35(21.9%) of them have first degree and above.

The majority of the current sample (72.5%) lives in very low and low socioeconomic levels and (6.2%) of the sample live in moderate SES (Table 3). Even though there were some differences, there was no statistically significant difference between SES (income) and the result of VABSII for children with intellectual disability.

Table 3. Parents/Caregivers Income per Month and Children's Adaptive Behavioural Scores

Income		Communication Domain	Daily living domain	Socialization Domain	Adaptive Composite Score
	Mean	48.0227	52.5795	51.7159	49.7045
below 2000	N	88	88	88	88
	Std. Deviation	11.86899	11.45077	10.17880	9.83912
	Mean	45.5357	51.4643	53.4286	49.2500
2000 up to 5000	N	28	28	28	28
	Std. Deviation	11.61889	10.30096	11.31511	9.04976
	Mean	53.3000	56.7000	59.2000	54.7000
6000-10,000	N	10	10	10	10
	Std. Deviation	12.12939	6.79951	8.77876	7.18099
	Mean	57.0000	52.7500	46.0000	51.2500
Above 10,000	N	4	4	4	4
	Std. Deviation	21.19748	12.01041	9.52190	8.53913
	Mean	48.1692	52.6615	52.4846	50.0385
Total	N	130	130	130	130
	Std. Deviation	12.24564	10.89951	10.46681	9.46917

Table 4. Means and Standard Deviations of Domain and Adaptive Behaviour Composite Scores, by Mother's (Mother figure) Education Level

	Can't read and write		From Grade 1 up to 8		Completed High school		First degree & above		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Communication Domain	45.7	10.8	47	12.9	50.2	11.7	52.5	11.7	48	12.2
Daily living domain	49.4	10.9	53.7	10.7	55	10.4	55.1	9.6	52.9	10.8
Socialization Domain	51.4	10.7	50.7	10.1	54.9	9.4	59.6	10.2	53	10.4
ACS	47.3	9.2	49.6	10.1	52.8	8	54.9	7.6	50.3	9.3

Mothers/Mother figure's that can't read and write children with intellectual disability scored (45.7, SD 10.8) in communication domain, (x= 49.4, SD= 10.9) in daily living domain, (x= 51.4, SD= 10.7) in socialization domain and (x=47.3, SD= 9.2) in adaptive composite score (Table 4). Whereas mothers/mother figure's that studied from grade one up to eight children with intellectual disability scored (47, SD 12.9) in communication domain, (x= 53.7, SD= 10.7) in daily living domain, (x= 50.7, SD= 10.1) in socialization domain and (x=49.6, SD= 10.1) in adaptive composite score. As it shown in the table above there was a steady increment from the scores of parents who can't read up to parents above first degree in all domains of adaptive behavioural functions. Except the communication domain there was significant difference between mother's/mother figure's education status and their children adaptive behavioural functions. When mother's/mother figure's education status increases their children adaptive behavioural functions increased significantly for daily living domain, socialization domain and adaptive composite score.

Table 5. Means and Standard Deviations of Domain and Adaptive Behaviour Composite Scores, by Father's/father figure Education Level

	Can't read and write		From Grade 1 up to 8		Finished Secondary School		First degree & above			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Communication Domain	44.8	11.7	47.5	12.4	49	12.8	51.6	10.8	48.4	12.3
Daily living domain	50	9.9	51.8	11.6	54.6	10.2	53.4	10	53	10.5
Socialization Domain	53.2	9.8	51.9	11.4	53.3	9.9	57.2	9.9	53.6	10.2
ACS	48.6	8.1	49	11.1	51.3	9.2	53.6	6	50.7	9.2

As it is shown in Table 5, fathers/father figure's that can't read and write children with intellectual disability scored (44.8, SD 11.7) in communication domain, (x= 50, SD= 9.9) in daily living domain, (x= 53.2, SD= 9.8) in socialization domain and (x=48.6, SD= 8.1) in adaptive composite score. Whereas fathers/father figure's that studied from grade one up to eight children with intellectual disability scored (47, SD 12.9) in communication domain, (x= 53.7, SD= 10.7) in daily living domain, (x= 50.7, SD= 10.1) in socialization domain and (x=49.6, SD= 10.1) in adaptive composite score. As it shown in the table above similar to the mother's/mother figure's educational status there was a steady increment from the scores of parents who can't read up to parents above first degree; however, there was no statistical difference between educational level of father's/father figure's and all domains of adaptive behavioural functions of children with intellectual disability.

Table 6. Model Summary of the Multiple Regression Analysis for the Combined Contribution of Mother's/mother Figures' Employment, Marital Status, Income and Educational Status Factors to the Prediction of Children with Intellectual Disabilities Composite Adaptive Behavioural Functions

REGRESSION		ANOVA[a]				
Model		Sum of Squares	df	Mean Square	F	Sig.
R= .434	Regression	2178.081	4	544.520	7.250	.000[b]
R Square= .188	Residual	9388.727	125	75.110		
Adjusted R Square= .162	Total	11566.808	129			

a. Dependent Variable: Adaptive composite score

b. Predictors: (Constant), Mother's/mother figure's Employment, Marital status, Income, Educational Status

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	44.041	2.686		16.394	.000
	Marital Status	-1.016	.470	-.179	-2.160	.033
	Income	3.145	1.011	.255	3.111	.002
	Mother/mother figure	2.052	.780	.219	2.633	.010
	Father/father figure	1.703	.863	.175	1.974	.051
	Occupation	-1.636	1.535	-.087	-1.066	.288

a. Dependent Variable: Adaptive composite score

Table 7. Means and Standard Deviations of VABS II Domains and Adaptive Composite Score across Age Groups

Age		Communication Domain	Daily Living Domain	Socialization Domain	Adaptive composite score
6-8	Mean	54.5333	59.8667	55.8000	54.9333
	N	15	15	15	15
	Std. Deviation	6.82293	6.57774	7.58005	8.76247
9-11	Mean	49.9231	53.0385	55.3077	52.3462
	N	26	26	26	26
	Std. Deviation	12.89317	12.44020	11.00825	9.19105
12-15	Mean	47.4048	52.8333	53.0714	50.2857
	N	42	42	42	42
	Std. Deviation	10.74780	9.84741	9.83124	7.73426
16-21	Mean	48.5397	52.5714	53.3492	50.5873
	N	63	63	63	63
	Std. Deviation	11.20027	10.31553	10.05975	7.98514
22-90	Mean	32.5714	45.2857	40.2143	36.7857
	N	14	14	14	14
	Std. Deviation	15.85858	11.47190	12.47877	13.59965
Total	Mean	47.6313	52.7625	52.6750	49.9937
	N	160	160	160	160
	Std. Deviation	12.45653	10.72907	10.82482	9.70476

Subdomain, domain and Adaptive Composite norms were developed by using several stages. Raw subdomain scores were input to generate subdomain v-scales. In other hand to generate the domain standard scores the researcher used the sum of sub-domain v-scale scores within the domain, and the sum of the domain standard scores was used to generate the Adaptive Composite standard score. In each stage converting the input scores into another metric using a normalization algorithm, and then hand smoothing the results of remove the effects of sampling variation were involved. The analysis was son using the 5 age groups described in the demographic table.

Table 7 shows the progression of domain Mean raw scores for 5 age groups from 6 years up to 22+. Generally as it is shown mean subdomain scores increase rapidly during the childhood and continue to increase, but at a slower rate, up through late adolescence, when the rate of increase tapers off.

Table 8. Means and Standard Deviations of VABSII Domains and Adaptive Composite Score across Gender

Gender		Communication Domain	Daily living domain	Socialization Domain	Adaptive Composite Score
F	Mean	47.2222	52.2917	51.4444	49.3889
	N	72	72	72	72
	Std. Deviation	12.37014	11.91216	11.75919	10.26214
M	Mean	47.9659	53.1477	53.6818	50.4886
	N	88	88	88	88
	Std. Deviation	12.58758	9.70785	9.95108	9.25376
Total	Mean	47.6313	52.7625	52.6750	49.9937
	N	160	160	160	160
	Std. Deviation	12.45653	10.72907	10.82482	9.70476

As can be noted from Table 8 there was no significant difference between all domain scores male (47.9) and female (47.2) communication, male (53.1) and female (52.2) daily living, male (53.6) and female (51.4) socialization domain score. In addition to these there was no significant difference between male (49.9) and female (49.3) in overall adaptive composite score.

Table 9. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Communication Domain	Equal variances assumed	.000	.986	-.375	158	.708	-.74369	1.98484	-4.663	3.176
	Equal variances not assumed			-.375	152.77	.708	-.74369	1.98137	-4.658	3.170
Daily Living Domain	Equal variances assumed	4.471	.056	-.501	158	.617	-.85606	1.70899	-4.231	2.519
	Equal variances not assumed			-.491	136.28	.624	-.85606	1.74407	-4.304	2.592
Socialization Domain	Equal variances assumed	2.091	.150	-1.304	158	.194	-2.23737	1.71641	-5.627	1.152
	Equal variances not assumed			-1.282	139.49	.202	-2.23737	1.74522	-5.687	1.213
Adaptive Composite Score	Equal variances assumed	1.023	.313	-.712	158	.478	-1.09975	1.54458	-4.150	1.950
	Equal variances not assumed			-.705	144.64	.482	-1.09975	1.56069	-4.184	1.984

Independent sample t-test was performed to compare the domain and subdomain scores of adaptive behavioural scale in boys and girls. As it shown in Table 9, there was no significance difference in boys and girls composite adaptive score of VABS-II, between girls (M=49.4, SD=10.3); t (158) =-.712, P=.478. . No sex differences were found in the score of domain and subdomain of VABS-II.

Table 10. Socio-economic and Demographic Factors Associated with Adaptive Behaviour among Children Diagnosed with Intellectual Disability

		Communication Domain	Daily living domain	Socialization Domain	Adaptive Composite Score
Agee	Pearson Correlation	-.280**	-.223**	-.231**	-.307**
	Sig. (2-tailed)	.000	.005	.003	.000
	N	160	160	160	160
Income	Pearson Correlation	.088	.197*	.245**	.207*
	Sig. (2-tailed)	.318	.025	.005	.018
	N	130	130	130	130
Marital Status	Pearson Correlation	-.261**	-.172*	-.265**	-.288**
	Sig. (2-tailed)	.001	.029	.001	.000
	N	160	160	160	160
Education Status	Pearson Correlation	.136	.230**	.247**	.244**
	Sig. (2-tailed)	.094	.004	.002	.002
	N	152	152	152	152
Gender	Pearson Correlation	.030	.040	.103	.057
	Sig. (2-tailed)	.708	.617	.194	.478
	N	160	160	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

As it shown in the table 10, there was a significant but negative relationship between mothers'/mother figures' marital status and all domains of adaptive behavioural functions of children with intellectual disability (r= -.26; p <.05) in communication domain, (r= -.17; p <.05) in daily living domain, (r= -.26; p <.05) in socialization and(r= -.29; p <.05) in adaptive composite behavioural scale. On the other hand there was statistically significant relationship between income and adaptive behavioural function of children with intellectual disability except the communication domain (r= 0.18, P < .05) in daily living domain, (r= -.25; p <.05) in socialization domain and (r= -.21; p <.05) in adaptive composite score. In contrary to the above there was no statistically significant relationship between male and female children with intellectual disability and their adaptive behavioural functions in all domains.

4. Discussion

Kenworthy et al. (2010) did not find a correlation between age and adaptive functioning standard scores in a group of high functioning individuals (12–21 years old) with ASD. Another study by Lopata et al. (2012) bound consistent with the previous findings, that the researchers did not find an association between age and adaptive functioning. It is important to note that their studies assessed adaptive functioning using the Adaptive Behaviour Assessment System, which has demonstrated moderate to strong correlations with the Vineland and other measures of adaptive functioning (Harrison and Oakland 2003). In contrast to the above study, the present study found that there was a significant correlation between age and all domains of adaptive functions: communication (-0.28), daily living (-0.22), socialization (-0.23), and adaptive composite score (-0.31) of VABS. The present study was in line with Kanne et al., (2011); Klin et al., (2007); Gabriels et al., (2007); and Fisch et al., (2002), who reported that age has been negatively associated with adaptive functioning standard scores on the Vineland Adaptive Behavioral Scale.

One of the most constant risk factors for ID is poverty (Cooper and Lackus, 1983; Durkin et al., 1998; Stein and Susser, 1963). Children from low SES backgrounds were more than twice as likely to have ID as children from middle- or high-SES backgrounds (Camp et al., 1998). Thus, this shows that poverty and disability are linked in a vicious cycle, one feeding the other. Particularly in low- and middle-income countries (LMICs), the risk of disability is increased by factors related to poverty, such as limited access to healthcare, poor water and sanitation, malnutrition, and unfavourable living conditions (Ashwood et al, 2015). In line with the above finding the current study found that

above 72% of the children with intellectual disability were from low income families. Disability, on the other hand, can result in exclusion from employment, education, and healthcare, as well as costly healthcare and other expenses, which can cause or exacerbate poverty (Delpiazza et al., 2018). Similar to this, the current study found that over 70% of parents/caregivers of children with intellectual disabilities were unemployed. On the other hand, in relation to adaptive behavioural functions, there was a significant relationship between income or economic factors and adaptive behavioural functions in the daily living domain, socialization domain, and composite adaptive function scores. However, the current study found no significant relationship between economic factors and the communication domain. Nag et al. (2018) used the Vineland Adaptive Behavioural Scale II and analyzed the relationship between female and male scores and found a difference in the adaptive behaviour functions between males and females, but the differences were not statistically significant. Similar to this finding, the present study confirmed that there was no statistically significant relationship between female and male scores of all domains of adaptive behavioural functions.

The present study identified that there was significant relationship between marital status and all domains of adaptive behavioural functions. Those children with intellectual disability who were living with mother/mother figure and father/father figure have higher adaptive behavioural functions when they were compared with a single mother, separated, divorced and widowed parents. In addition to this study found there was relationship between parent's educational status and all domains of adaptive behavioural functions of children with intellectual disability; however, the differences were not significant. These revealed that children whose mothers'/mother figures' were graduated from college and those whose mothers/mother figures were dropped out from schools didn't had as such significant difference in the level of adaptive behavioural functions.

5. Conclusion

The current study reported correlations between domains of adaptive behaviour and domains of the socioeconomic & demographic status of parents/caregivers of children diagnosed with intellectual disability. Assessment & interventions targeting adaptive behaviour could be confronting such socioeconomic and demographic determinants of health. Whatever policy developed and how much gold standard these policies are, regarding children with intellectual disabilities, if it doesn't address the profile of parents/caregivers it would be difficult to be implemented and become fruitful. Since parents/caregivers are key participants in the identification, assessment and intervention process; it would be very important to be aware of their socio-economic and demographic profile. Thus, in underdeveloped nations like Ethiopia, description of socio-economic and demographic correlates of intellectual disabilities in children diagnosed with intellectual disability is crucial for designing a meaningful and useful policy and strategy for early identification and intervention of children with intellectual disability.

6. Limitation of the Study

Limitations of the current study include the small sample size, which is likely to affect generalisation, the single setting for data recruitment, and the reporting bias (parents'/caregivers' reports alone), as data were based only on parents'/caregivers' reports.

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