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# "Make my burden lighter": Depression and Social Support in persons with disability in Ghana

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## ABSTRACT

Social support is one of the determinants of the general wellbeing of a population. Depression in the general population has been associated with the lack of or inadequate social support. However, evidence from the disability field has been limited. This study investigated the relationship of perceived social support to depression in Persons with Disability (PWDs) using a descriptive survey design. Data was collected from 317 PWDs using the Beck Depression Inventory Scale (BDI) and Multidimensional Scale of Perceived Social Support (MSPSS) and analyzed with Statistical Package for the Social Sciences (SPSS) version 16 software. Findings revealed significant relationship between perceived social support and depression in PWDs; meaningful social support ameliorated severity of depressive symptoms. In addition, respondents who acquired their disability later in life had a significant depression level than those who were born disabled. Implications for the treatment of depression in PWDs are discussed.

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**Key words**: social support, depression, persons with disability, Ghana.

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## INTRODUCTION

The World Report on disability estimates that more than one billion people of the world's population live with some form of disability[50] and or some difficulty in functioning[51]. The Global Burden of Disease estimates that 190 million (3.8%) have "severe disability" – the equivalent of disability inferred for conditions such as quadriplegia, severe depression, or blindness[50].

Depression is now recognized as a common psychological illness in most societies around the world[2, 24] and a leading causing of disability according to a recent World Health Organization estimate[40] and this trend is expected to continue even into the year 2020[52].

Depression is a broad concept characterized by symptoms on individuals' cognitive, emotional, physical and psychological life[17]. About 12% of the world's working population goes on medical leave due to depression with consequent effect on productivity[36, 39]. Despite the fact that depression can lead to disability, the presence of disability does not necessarily imply depression. However, the presence of depression in People with Disabilities (PWDs) could bring overwhelming health problems with social, emotional and economic ripple effects since discrimination and stigma, social exclusion and poverty, are more experienced by PWDs[3].

Previous studies have shown a gender disparity in the rate of depression among men and women, with twice as more women depressed as men[28]. Differences in symptom presentation of depression among children and adults have also been documented [9]. Understandably, poverty and economic vulnerability among women, especially disabled women, is noted to be relatively higher than in men[3, 54]. The risk of depression among women with disabilities will therefore, deepen as disabled women face double discrimination in education, employment and income[1].

Social support eases difficult experiences, including depression. It is the personal network of family, friends, co-workers and peers; the people one turns to for support in good and bad times, to share activities, joys, and sorrows. Social Support is associated with helping people cope with stressful events and enhances psychological well-being of individuals[35, 42].

The role of social support in the depression experienced by PWDs cannot be overemphasized. The 2011 WHO report indicated that most PWDs need assistance and support in order to achieve the quality of life necessary to make their own contribution to society. Yet, most disability groups in different parts of the world have a substantial gap in meeting their need for support[14, 27].

Though there is generally a plethora of literature on depression, and some on depression in the disabled, there is little known about the differences in the level of depression among PWDs. Similarly, there is relatively more known about social support and depression in the general population than among PWDs. Existent studies on the subject have focused on the general population[12, 31, 36]. The importance of examining and understanding the role of social support in depression among PWDs cannot be underestimated because social support is critical to subjective wellbeing of any group, particularly persons who face the additional burden of disability. Yet, empirical evidence on social support and depression among PWDs is woefully inadequate; and those conducted locally, almost non-existent. Therefore, this study aimed to examine the relationship between social support and depression among PWDs in Ghana.

## METHODOLOGY

### Design:

The study was a descriptive cross-sectional survey.

### Participants

The participants were people with hearing, visual, physical and intellectual disabilities. The target population was PWDs in the following institutions: Ashanti School for the Deaf (Jamasi) made up of 654 student population, Akropong School for the Blind (Akropong) made up of 437 students, Offinso Rehabilitation Center (Offinso) consisting of 230 students and the Garden City Special School (Asokore Mampong) with 203 student population. In all, the target population was 1524.

The sample size of 317 was calculated using Slovin's formula:

$$n = \frac{N}{1} + N(a)^2$$

Where n = Sample Size; N = Total population = 1524; a= Margin of error 95%

Number of participants from the various school were obtained based on their population size. Thus quota system using percentages resulted in the following participants from each school:

- 136 persons with Hearing impairment from Ashanti School for the deaf
- 91 persons with Visual impairment from Akropong School for the blind
- 48 persons with Physical disability from Offinso Rehabilitation Centre
- 42 with Intellectual disability from Garden City Special School

Thus, four forms of disabilities (visual, intellectual, auditory, and physical) were selected consistent with the four special schools from which data was collected. After obtaining the total number of participants that must come from each school, the individual participants from each school were selected using simple random sampling method, with the exception of the 42 from the Garden City Special School. Participants from this special school were purposely selected so as to get only those with mild intellectual disability to participate in the study. This was to enable researchers obtain participants who could communicate and understand instructions. Therefore, participants with moderate to severe intellectual disability were excluded from the study.

**Instruments**

The Multidimensional Scale of Perceived Social Support (MSPSS)[53] cited by[18] and Beck Depression Inventory II[16] were used to measure perceived social support and depression respectively. The MSPSS is a 12-item scale that measures perceived support from three domains: family, friends, and significant others. Each of the scales has four items measuring tangible support, emotional support and informational support. Items on the scale include: "My family is willing to help me make decisions"; "I have friends with whom I can share my joys and sorrows"; "There is a special person who is around when I am in need". Items are scored on a 7-point Likert scale ranging from 1 = *very strongly disagree* to 7 = *very strongly agree* on which participants were asked to rate or indicate their level of agreement with each item. Total scores range from 1 to 84, with higher scores indicating greater levels of perceived social support. The MSPSS is easily readable[8] and has cross-cultural Validity[49] and reliability[6].

The Beck Depression Inventory- II (BDI-II) consists of 21 groups of statements that measure the existence and severity of depression. The BDI –II was selected because of its alignment with the DSM-IV criteria for depression. Respondents pick the statement in each group that best describes the way they have been feeling during the past two weeks including the day the respondent is filling the questionnaire. Each corresponds to a particular symptom of depression. The BDI-II is scored on 4-point scale from 0 to 3 with by summing responses to give a total depression score. On two items (16 and 18) there are seven options to indicate either an increase or decrease of appetite and sleep. A total score of 0-13 indicates minimal depression severity, 14- 19 is mild depression, 20-28 is moderate depression and 29-63 indicates depression.

**Procedure and Data Analysis**

Permissions and consent were sought from the various schools by writing to the heads before pupils were solicited for participation in the study. Heads subsequently informed the students about the study in order to solicit their cooperation and assistance. Scheduled meetings were communicated to the participants' seven days ahead of time.

Prior to completing the questionnaire, the researcher explained the purpose of the study and assured the respondents of the necessary confidentiality of the information to be gathered and their informed consent obtained. For those below 18 years, their consent was sought from their teachers at school. In all, 184 participants gave a written consent by signing the consent form while 133 gave verbal consent. All participants were seen at their schools where they completed the questionnaire. Confidentiality was ensured and data was used and analyzed solely for the purpose of the study. In cases where respondents could

not read and write, the researchers were available to help the respondents to answer the questions by reading questions to them and circling the respondent's choice of answer.

The authorities of the schools were made aware of the psychological or psychiatric attention needed by the students, since most of the participants reported significant levels of depression. They were provided with the contacts of the various clinics that will be able to provide treatment for these students. The contact information of Clinical Psychologists at the KNUST Counselling Center was also provided for students who may need their services.

**Ethics Statement**

Ethical approval was sought for and obtained from the Committee on Human Research Publication and the Ethics (CHRPE) of the Kwame Nkrumah University of Science and Technology, Kumasi.

**Data Analysis**

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 16 software. Numerical computations of data were done to provide the frequency distributions, percentages and other descriptive statistics which provided some direction for answering the research questions. Other statistical analysis such as General Linear Model and Simple Linear Regression were performed to establish relationship between social support, depression and other variables.

## RESULTS

Demographic characteristics of participants are presented in Table 2. The ages of the participants ranged from 9 to 32 years (M = 18.17, SD = 4.32), indicating that majority of them were adolescents. There were more males than female participants, suggesting that more males with disabilities are enrolled at schools for the disabled. Majority of the participants were Christians and few were Muslims. Many had Junior High School education, some had vocational training, and a few had not gone beyond primary education. Although the average age of completing the Junior High School (JHS) in Ghana is 15 years, most of the respondents were 15 years and yet were still below JHS 3; suggestive of a consequence of developmental delays in PWDs. It was interesting to note that more than half of those studied had acquired the disability later in life, emphasizing the point that everyone is susceptible to disability. Since the selection of participants was based on the populations of the various schools, most of the participants were those with hearing disability, followed those with visual disability. All the participants were unmarried.

**Prevalence and Severity of Depression in Persons with Disability**

The study explored the prevalence and severity of depression in PWDs in the selected special institutions in Ghana. Prevalence of depression was indicated by the overall mean depression score attained by participants on the BDI-II, while severity was assessed using the BDI-II cut-off points. Results are presented in table 3.

As indicated in table 3, a mean depression score of M =35.59 (SD=8.70) suggests a high prevalence of depression among PWDs in these institutions. Specifically, all the respondents either reported moderate (74, 23.3%) or severe (243, 76.7%) levels of depression. It is noteworthy that none of the participants reported minimal or mild depression; suggesting that all participants were in need of clinical attention. To examine depression among the various demographic indicators, a Univariate General Linear Model was performed. The results are presented in table 4.

For gender, female was the reference, while disability acquired later in life was the reference for etiology of depression. The results indicated that males reported depression more than females [$F(1,316)=5.56$, $p<0.05$]. The specific parameter estimate was B=-2.07, t=-2.36 $p<0.05$. The findings further suggest that level of education did not significantly ameliorate level of depression: [$F(2,316) = 0.87$, $p>0.05$]. Table 4 also indicates the relationship between depression and type of disability. Respondents were divided into four groups according to their disability (Intellectual; Physical; Hearing and Visual). There was a statistically significant difference in the level of depression among the four disability groups [$F(3, 316) =7.27$, $p<.001$]. A post-hoc comparisons using the Tukey HSD test (see table 5) indicated that the greatest statistical difference in means was for intellectual disability and hearing disability. This was followed by the difference between the means of intellectual and visual disability. A statistical difference was also found between the means of physical and visual disability. However, there were no significant differences between the means of intellectual and

**Table 1. Proportion of Each School Population**

| Name | Population | Percentage % | Sample Size |
|---|---|---|---|
| Ashanti School for the Deaf | 654 | 654/1524*100= **42.91** | 42.91/100*316.84=**135.96** |
| Akropong School for the Blind | 437 | 437/1524*100=**28.67** | 28.67/100*316.84=**90.84** |
| Offinso Rehabilitation Centre | 230 | 230/1524*100=**15.10** | 15.10/100*316.84=**47.84** |
| Garden City Special School | 203 | 203/1524*100=**13.32** | 13.32/100*316.84=**42.20** |
| TOTAL | **1524** | **100** | **316.84** |

**Table 2. Demographic Characteristic of Respondents**

| ***Variables*** | ***Characteristics*** | ***Frequency*** | ***Percentage*** | ***M*** | ***SD*** |
|---|---|---|---|---|---|
| **Age** | | | | 18.17 | 4.32 |
| **Gender** | Male | 199 | 62.8 | | |
| | Female | 118 | 37.2 | | |
| **Religion** | Christianity | 282 | 89.0 | | |
| | Islamic | 35 | 11.0 | | |
| | Traditional | - | - | | |
| **Marital status** | Married | - | - | | |
| | Single | 317 | 100.0 | | |
| **Education** | Primary | 38 | 12.0 | | |
| | JHS | 210 | 66.2 | | |
| | Vocational | 69 | 21.8 | | |
| **Disability** | Intellectual | 42 | 13.2 | | |
| | Physical | 48 | 15.1 | | |
| | Visual | 91 | 28.7 | | |
| | Hearing | 136 | 42.9 | | |
| **Etiology of disability** | Born with | 143 | 45.1 | | |
| | Acquired later | 174 | 54.9 | | |

**Table 3. Prevalence and Severity of Depression in Participants**

| *Severity of Depression* | *Frequency* | *Percentage* | *M* | *SD* |
|---|---|---|---|---|
| Overall Minimal | - | - | 35.59 | 8.70 |
| Mild | - | - | | |
| Moderate | 74 | 23.3 | | |
| Severe | 243 | 76.7 | | |

**Table 4. A Univariate General Linear Model for Gender, Education, Type of Disability and Etiology of Disability Differences in Depression**

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Gender | 301.20 | 1 | 301.20 | 5.56 | <0.05 |
| Education | 94.19 | 2 | 47.10 | 0.87 | >0.05 |
| Type of Disability | 1181.89 | 3 | 393.96 | 7.27 | <0.001 |
| Etiology of Disability | 1.60 | 1 | 1.60 | 2.03 | <0.05 |
| Error | 16743.02 | 309 | 54.19 | | |
| Total | 23891.92 | 316 | | | |

physical disability; as well as hearing and visual disability. The result clearly indicates that participants with hearing disability and visual disability reported being more depressed than those with physical and intellectual disability. Additionally, etiology of disability was significantly related depression. Two categories of responses were used for this variable: born with disability and acquired (later in life). In the analysis "Acquired" was the redundant or reference response. The result indicated that those who acquired the disability in later life reported higher levels of depression: [F(1,316)=2.03, p<0.05]. The specific parameter estimate was B=-1.15, t=-1.17 p<0.05.

**The Nature of Social Support in Persons with Disability**

This study also sought to assess the nature of social support experienced by PWDs in the selected institutions in Ghana. In order to assess the acuity or level of social support in the respondents, the study analyzed the proportion of the respondents with social support based on established Multidimensional Scale of Perceived Social Support cut-off points. The results are presented in table 6.

The mean score (M=59.23, SD=14.99) reported by participants indicated that majority of the respondents had the needed social support. Table 6 also shows that a greater number of the participants reported high perceived social support (126, 39.7%), followed by moderate perceived social support (109, 34.4%) with a smaller proportion reporting low social support (82, 25.9%). To determine how the various demographic information relate with social support, a univariate general linear model analysis was carried out. The results are presented in table 7. These findings indicate that males and females did not differ significantly in terms of perceived social support. However, significant differences were found at the various level of education [F(2,316) =4.36, p=0.01] and among the different type of disabilities [F(3,316) =8.55, p<0.001]. It appeared that there was significantly greater social support among the PWDs at the JHS level of education relative to the primary and vocational levels of education. This is indicated by a post hoc Tukey HSD in table 8.

Table 9 also shows a post-hoc the Tukey HSD test comparing the differences in social support among the various types of disabilities. It showed no statistical difference in the means of Intellectual and physical disability [M (*I-J) = 6.49, p>0.05*)]. The difference in means of intellectual and hearing disability was also not significant [M (*I-J) = 4.21, p>0.05*)]; so did that of intellectual and visual disability [M (*I-J) = -2.32, p>0.05*)]. However, the mean difference between physical and visual disability was significant. [M (*I-J) = - 9.73, p=0.001*)]; so was that of hearing and visual disability [M (*I-J) = -7.45, p=0.001*)]. Thus respondents with visual disability received more social support, followed by intellectual disability, then visual disability. The physically disabled received less social support among the different disabilities studied.

**The Relationship between Social Support and Depression**

To establish the relationship between social support and depression among PWDs in the selected special schools, a simple linear regression of depression and social support was carried out and results are presented in table 10.

The results indicate that variables fit the model [F(1,315)= 15.11, p<0.001] and that social support accounts for only 5% of variance in depression ($R^2$ = 0.05); suggesting that other variables apart from social support account for depression in PWDs. However, the higher one perceived social support, the lower the level of depression as shown by the equation (B= -0.12, β=-0.2.14; p < 0.001).

**DISCUSSION**

Everyone is vulnerable to disability. In this study, relatively more participants acquired their disability status later in life than by birth affirming the observation that disability can be the lot of anyone at any time. Disability is surrounded by many problematic issues such as stigma, misconceptions about the origin, causes and treatment of disability and social support for PWDs. These, if not carefully attended to, can lead to depression.

Consistent with earlier works[20, 21, 22, 30, 33, 36, 44] and a report by the Kintampo Health Research Center (2014) which showed depression to be a leading health problem in Ghana, this study found many of the PWDs at risk for depression and in need of clinical attention. Disability is a stressful condition that increases the risk

**Table 5.Tukeys HSD Multiple Comparison Summary Table (I-J) for Type of Disability and Depression**

| | Type of parent | Mean 2 | Group (J) 3 | 4 |
|---|---|---|---|---|
| Mean Group (I) | 1 Intellectual | -3.75 | -12.34*** | -11.37*** |
| | 2 Physical | | -8.59*** | -7.62*** |
| | 3 Hearing | | | -0.975 |
| | 4 Visual | | | |

*** p<.001

**Table 6. Levels of social support based on Multidimensional Scale of Perceived Social Support**

| ***Level of Social Support*** | ***Range*** | ***Frequency*** | ***Percentage*** | ***M*** | ***SD*** |
|---|---|---|---|---|---|
| Overall | | | | 59.23 | 14.99 |
| Mild | 12-48 | 82 | 25.9 | | |
| Moderate | 49-68 | 109 | 34.4 | | |
| High | 69-84 | 126 | 39.7 | | |

**Table 7. Univariate General Linear Model for Gender, Education and Type of Disability Differences in Social Support**

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Gender | 162.39 | 1 | 162.39 | 0.78 | >005 |
| Education | 1824.08 | 2 | 912.04 | 4.36 | 0.01 |
| Type of Disability | 5371.18 | 3 | 1790.39 | 8.55 | < 0.001 |
| Error | 16743.02 | 310 | 209.34 | | |
| Total | 71042.73 | 316 | | | |

**Table 8:Tukeys HSD Multiple Comparison Summary Table (I-J) for Educational Level and Social Support**

| | | Mean | Group (J) |
|---|---|---|---|
| | Educational Level (J) | 2 | 3 |
| Mean Group (I) | 1 Primary | -3.96** | 1.22 |
| | 2 JHS | | 2.74*** |
| | 3 Vocational | | |

***p<0.01 ***p<0.001*

**Table 9. Tukeys HSD Multiple Comparison Summary Table (I-J) for Type of Disability and Social Support**

| | | Mean | Group (J) | |
|---|---|---|---|---|
| | Type of disability | 2 | 3 | 4 |
| Mean Group (I) | 1 Intellectual | 6.49 | 4.21 | -2.32 |
| | 2 Physical | | -2.28 | -9.73*** |
| | 3 Hearing | | | -7.45*** |
| | 4 Visual | | | |

****p< 0.001*

**Table 10. Simple Linear Regression of Depression and Social Support**

| Variable | B | SE | β | t | R | $R^2$ | $\Delta R^2$ | F |
|---|---|---|---|---|---|---|---|---|
| Constant | 42.95 | 1.95 | | 22.03 | | 0.05 | 0.05 | 15.11 *** |
| Social support | -0.12 | 0.03 | -2.14 | -3.89 | -0.21 | | | |

**** p<.001*

of depression[5, 26]. It is not surprising that all the participants in this study reported high levels of depression.

However, in this study unlike earlier findings [23, 36, 47], depression was greater in males than females. Findings of earlier studies may be attributable to the nature of depression in males which is often concealed, ignored, and or not reported[37]. The higher rates of depression in males in this sample could be attributed to the Ghanaian cultural setting where greater expectations are placed on males than females; a situation that may put more stressful burden on males and thus contribute to the greater depression.

In this study persons with visual or auditory disability reported significant levels of depression than those with intellectual or physical disability. Could the observed differences in depression be a reflection of more adverse societal constraints on persons with visual and auditory challenges? Are the intellectually and physically challenged "better off" in terms of socioeconomic status since individuals with higher socioeconomic status report lower depression[10, 48]. The observed differences warrant further investigation.

Findings of this study also revealed that there are more males than females in the educational institutions for the disabled in Ghana; a situation that possibly reflects the widespread cultural and gender biases that limit the education of the girl child, including those with disabilities. Although in global terms 51% of disabled people are women, disabled girls and women have even less access to education, health care, and employment than disabled boys and men[41]. The estimates suggest that women and girls with disabilities fare less well in the educational arena than their disabled male or nondisabled female counterpart[41], a finding corroborated in this study. PWDs face many more challenges than their non-disabled fellow citizens and are routinely discriminated against and excluded in many spheres of life including education. They face multiple barriers to gaining access to primary and secondary school. Once enrolled, obtaining equitable education is sometimes problematic because of attitudinal and architectural barriers[13, 43].

Being a female person with a disability worsens one's plight as females with disability face a double discrimination of gender and disability. Many of the participants disclosed that they do not want to marry partly because of their disability and mostly because of people's attitudes toward them. They perceived a discrimination and stigmatization because of their disability; a perception that they are asexual and or that their children too would be disabled[19]. These stigmas negatively impact the confidence level of PWDs and dampens their desire to find a suitable partner.

Another interesting finding of this study was the relationship of depression to etiology of disability. Persons who acquired their disability later in life were significantly more depressed than those who were born with the disability. Understandably, these persons have gone from being able-bodied to being dependent on others for assistance. The struggle to accept their present disabled status with memories of their former able-bodied selves can trigger depression.

**The Nature of Social Support and Depression in PWDs**

Findings from this study revealed that most respondents received moderate and high social support. Majority of them had evidence of each of the 12-item scale of perceived social support from family, friends and significant others, indicating a high social support. A mean score of 59.23 suggested that most respondents had the needed social support. Is the generally high social support reflective of the Ghanaian perception of disability and PWDs as vulnerable, pitiable, tragic, victims, incapable, inadequate, inferior, unhealthy, dependent on charity, and such derogatory perceptions which elicits a tendency to shield and protect[46] or simply a genuine desire to assist the needy? The intricacies of this finding need to be explored in subsequent studies.

An inverse relationship of social support to depression is well established[7, 45]. Findings from this study corroborate earlier works[23, 25]. The greater the social support received, the less depression is experienced. However, since the strength of the relationship observed in this study, though significant, was not strong it suggests that other variables aside perception of social support account for depression in PWDs such as deficiencies in certain neurotransmitters due to genetic vulnerabilities[29, 34] health status, comorbidity of some disease conditions[15, 32], excessive use of alcohol[4, 11] and climatic conditions[38].

## Limitations of the Study

This study is not without some limitations. Study was based on a self-reported questionnaire and in some cases, the researcher had to assist respondents to answer the questions so the possibility that some respondents answered questions in a socially desirable manner exist. As the questionnaire was somewhat lengthy participants may not be motivated to provide the 'appropriate' or expected answers and may have skewed findings. Inclusion of qualitative data, such as interviews and focused-group discussions, in future studies would be illuminating. These limitations notwithstanding, the findings of the study provide germinal insights into social support and depression in PWDs in Ghana. Most previous studies on depression have focused on the general population than this vulnerable group – the disabled. Therefore, this study provides significant contribution to the existing literature.

## Conclusion

The study results demonstrated that there is indeed high depression among PWDs in Ghana, particularly males and persons who acquire the disability later in life. Social support helps ameliorate the severity of depression in PWDs; a finding that has implications for clinical practice as well as educators who work with PWDs. Efforts to provide and to expand the social support network of persons with disability would be steps in the right direction.

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