

# FACTORS ASSOCIATED WITH STIGMA EXPERIENCED BY CHILDREN UNDER SIX YEARS OLD WITH DISABILITIES IN BUGESERA DISTRICT, RWANDA

Jean Claude Rukundo<sup>1</sup>, Dr. Charles Nsanzabera<sup>2</sup>

<sup>1</sup> Department of Public Health, Mount Kenya University, Rwanda, Burundi. Email: clauderuk@outlook.com

<sup>2</sup> African Institute of Research for Public Health and Development, Rwanda, Burundi

## Abstract

Over one billion people worldwide, about one in seven, live with disabilities, including an estimated 93 million children. In Bugesera district, the disability prevalence among under 6 children is reported at 3.1% based on a 2021 mapping study. According to the Umbrella of Organizations of Persons with Disabilities in the fight against HIV&AIDS and for Health Promotion, people living with disabilities experience different kinds of stigma. This study aim was to evaluate factors associated with high level of stigma among under six children in Bugesera district. The study employed an analytical cross-sectional design with quantitative data. The study involved 363 respondents, determined using the Yamane formula, and employed bivariate and multivariate analyses, including logistic regression, to assess factors influencing stigma among children with disabilities. The findings revealed that 64.2% of under six children with disabilities had high level of stigma in Bugesera district while 35.8% had low level of stigma. Multivariate analysis showed that the parent of the child having not followed any formal education were 2.3 times significantly associated with high level of stigma with AOR(CI)=2.306(0.974-5.457),  $p<0.037$ . Also, the child not living in special centers for children with disability was five times more likely associated with high level of stigma than living in such centers with AOR 5.292 95% CI (1.650-16.976),  $p<=0.005$  and having a multiple disability was also five times more likely associated to high level of stigma with AOR 5.123 95% CI (2.432-10.792),  $p<=0.001$ . This study concluded that the majority of the respondents experienced a high level of stigma, and three factors (parents' education, area of living and type of disability) were significantly associated with high level of stigma among under six children with disability. As recommendation, the Government should plan and implement a country wide policy for a systematic fight against stigma among children with disability.

Keyword: Stigma, Disabled Children, Bugesera district

## INTRODUCTION

People with disabilities are estimated at more than one billion individuals (WHO, 2021), i.e., approximately one in seven people in the world suffer from a disability and among them, approximately 93 million are children. This means that one in 20 children aged 6 or under lives with a moderate or severe type of disability (UNICEF, 2021). These statistics, according to the Situation of the World's Children report (UNICEF, 2021), are on basis of demographic, and health surveys from different countries. These data provide an exhaustive overview of the needs of people with disabilities, particularly those relating to the problems faced including exclusion, stigma, and discrimination.

Moreover, people with disabilities have poorer health outcomes than their able-bodied peers all over the world (WHO, 2020), but more particularly in developing countries. Indeed, 80% of individuals with disabilities live in these developing countries and, most often, do not have access to the health care they need (Humanium, 2017). Their situation has rarely been the subject of research providing evidence for health programs that can improve their state of health. Also, the first World Report on Disability ever published dates only from 2011, whereas the

situation of the people living with a disability did not wait for this date to reveal itself to be worrying.

The publication of a memorandum by the WHO in November 2012 reports the social exclusion of people with mental disorders in developing countries by stating that 31% have no fixed dwellings and that between 76.1% and 85.2% did not benefit from any social or medical care during the year preceding the survey (Meuter, 2013). In practice, few governments strive to implement specific health programs with the aim of facilitating disabled people, particularly disabled children who are more vulnerable, the social support they need. This is why many of them are completely deprived of education, adequate food, medical monitoring, etc. (Humanium, 2017). Faced with this extremely dismal situation, Hawking states: "Governments around the world can no longer forget the hundreds of millions of people with disabilities who face many problems of stigma" (WB, 2019).

The situation is much more accentuated in the African continent. Indeed, according to the World Health Organization, the data collected in 2017 reveal that only 26% to 55% of the disabled had access to medical rehabilitation meeting their needs and 17% to 35% benefited from the necessary technical aids, while

children are particularly vulnerable to different practices aimed at discriminating against them or considering them as second-class children (WHO, 2022).

Despite both global and regional efforts, the equation of discrimination and stigmatization of children with disabilities remains unresolved, especially since "Only a few countries have reliable information on the real problems related to discrimination and stigma faced by children with disabilities within their population" (UNICEF, 2021).

In Rwanda, the DHS 2019-20 puts forward a figure of 450,000 persons with disabilities at the national level or 5% of the entire population. This rate is 4% of children under the age of six living with disabilities, according to the 2019-2020 DHS. Also, as is the case in other African countries, children with disabilities face problems of discrimination and stigmatization, as the National Council of Persons with Disabilities (NCPD) report reveals. Indeed, according to this report, children with disabilities are 22% more likely to miss formal education, 14% more likely to be malnourished, and 35% more likely to be deprived (NCPD, 2021).

In the Bugesera district, the disability prevalence rate among children under 6 years old is 3.1% according to the mapping report which was carried out in 2021 (UPHLS, 2022). According to this same report, children with disabilities live in situations of more accentuated poverty compared to other children of the same age. Access to formal education is limited to a few training centers that have the necessary equipment to support persons with disabilities. However, issues of stigma are commonplace in this district.

In formative research conducted by UNICEF and partners in 2021, people's knowledge of disability and CWDs was limited. The majority (72.1%) regarded disability within the charity model and perceived a CWD as a needy person. Some people (34.5%), especially those with higher levels of education and better knowledge of disabilities demonstrated more balanced views of CWDs and a better understanding of the disability concept (UNICEF, 2021).

Indeed, this way of seeing things is at the root of the culture and norms related to the discrimination and stigmatization from which children with disabilities suffer. The main problem here is the imbalance that exists between the efforts made by the Rwandan government to fight against discrimination and stigmatization of children with disabilities and the persistence of discriminatory practices against these same children.

## MATERIALS AND METHODS

### Research design

In this study, the researcher used a cross-sectional research design and adopted a quantitative research approach.

### Participants

In this study, the total population is composed of all the children under six years old with disability from Bugesera district. According to the mapping report realized by the Umbrella of Organizations of Persons with Disabilities in the fight against HIV&AIDS and for Health Promotion, 3950 children under 6 years old live with disability in Bugesera district (UPHLS, 2022). The sample size for this study is 363 children under six years old with disabilities residing in Bugesera District were involved in research.

### Research instruments

This study used a questionnaire to collect data to the parents of children under six years old with disabilities in the Bugesera district.

### Data analysis procedure

In examining quantitative data, the researcher employed software, specifically SPSS version 21 and Microsoft Office Excel 2010. The handling of information pertaining to objective one of the studies used univariate analysis to determine the level of stigma associated to disability among children under six years old in Bugesera district. Concerning the questions that used a Likert scale, frequency, percentage, and mean were analyzed on each question. Its respective scores were used, with strongly disagree (1), disagree (2), uncertain (3), agree (4), and strongly agree (5). The mean cut-off threshold was set to 3 as high Likert scale mean level of stigma and any item with below 3 was considered as low level of stigma, vis-à-vis (WHO, 2020).

The analysis of information concerning the second objective of the study involved data analysis where bivariate and multivariate analyses helped the researcher to investigate the factors contributing to stigma among children under six years old with disabilities in Bugesera district. On this issue, bivariate and multivariate analyses of binary logistic regression were used to assess the significant demographic factor vis-à-vis stigma of children with disability. The significance level was set at P-value equal to 0.05 and confidence level of 95%.

### Ethical consideration

In this work, the researcher ensured that the ethical actions recommended in the research work are fully respected. To begin, the researcher respected ethical approval procedures. He gave to the respondents a consent form to be filled out as a sign of voluntarily willing to participate in the study. They were informed that their opinion will be kept strict confidentiality. They were assured that there is no risk in participating in the study. They were told how they would benefit from the study, and they were informed on how data will be stored. Finally, concerning information obtained from Bugesera district, this institution received a letter that explains the researcher's objective and interest. In this letter, it was very clear that all information that was received from there will be kept confidential and would be used only as explained.

The findings of this study, as depicted in Table 1, showed that 36.9% strongly agreed that they had experienced unfair treatment in forming or maintaining friendships because of their child's disability (Mean=3.81). About 44.9% agreed that they experienced unfair treatment from their neighbors because of their child's disability (Mean=3.41). Additionally, 44.6% agreed that they had faced unfair treatment in their dating or intimate relationships because of their child's disability (Mean=3.57). However, 47.9% of the respondents disagreed that they had experienced unfair treatment in marriage or separation due to their child's disability (Mean=2.29). Similarly, 46% of the respondents disagreed that they had faced unfair treatment from their family members, including parents, siblings, and other relatives, due to their child's disability (Mean=2.24). About 51.8% of the respondents disagreed that they had faced unfair treatment in their religious practices because of their child's disability (Mean=2.23).

RESULTS

Table 1. Social factors of stigma among children under six years old with disabilities in Bugesera district, 2024 (n=363)

|                                                                                                                                             | Strongly disagree<br>n(%) | Disagree<br>n(%) | Uncertain<br>n(%) | Agree<br>n(%) | Strongly agree<br>n(%) | Mean |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|-------------------|---------------|------------------------|------|
| Has your child, or have you, experienced unfair treatment in forming or maintaining friendships because of your child's disability?         | 14(3.9)                   | 54(14.9)         | 53(14.6)          | 108(29.8)     | 134(36.9)              | 3.81 |
| Have you experienced unfair treatment from your neighbors because of your child's disability?                                               | 40(11)                    | 67(18.5)         | 26(7.2)           | 163(44.9)     | 67(18.5)               | 3.41 |
| Have you faced unfair treatment in your dating or intimate relationships because of your child's disability?                                | 35(9.6)                   | 53(14.6)         | 26(7.2)           | 169(46.6)     | 80(22)                 | 3.57 |
| Have you experienced unfair treatment in marriage or separation due to your child's disability?                                             | 65(17.9)                  | 174(47.9)        | 81(22.3)          | 41(11.3)      | 2(0.6)                 | 2.29 |
| Have you faced unfair treatment from your family members, including parents, siblings, and other relatives, due to your child's disability? | 83(22.9)                  | 167(46)          | 71(19.6)          | 26(7.2)       | 16(4.4)                | 2.24 |
| Have you faced unfair treatment in your religious practices because of your child's disability?                                             | 93(11.7)                  | 188(51.8)        | 28(7.7)           | 13(3.6)       | 41(11.3)               | 2.23 |
| Have you experienced unfair treatment in your social life because of your child's disability?                                               | 16(4.4)                   | 28(7.7)          | 20(5.5)           | 156(43)       | 143(39.4)              | 4.05 |
| Have you experienced avoidance or shunning from people who are aware that you have a child with a disability?                               | 27(7.4)                   | 26(7.2)          | 41(11.3)          | 108(29.8)     | 161(44.4)              | 3.96 |
| Have you encountered unfair treatment or discrimination in any other aspects of your life due to having a child with a disability?          | 32(8.8)                   | 29(8)            | 22(6.1)           | 114(31.4)     | 166(45.7)              | 3.97 |
| Have you encountered an issue to access the services due to the condition or type of disability of yourself or for your child?              | 19(5.2)                   | 45(12.4)         | 29(8)             | 155(42.7)     | 115(31.7)              | 3.83 |

Source : Primary data, 2024

Table 2. Security factors of stigma among children under six years old with disabilities in Bugesera district, 2024 (n=363)

|                                                                                                                                    | Strongly disagree<br>n(%) | Disagree<br>n(%) | Uncertain<br>n(%) | Agree<br>n(%) | Strongly agree<br>n(%) | Mean |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|-------------------|---------------|------------------------|------|
| Have you experienced unfair treatment while utilizing public transportation due to your child's disability?                        | 27(7.4)                   | 23(6.3)          | 23(6.3)           | 103(28.4)     | 187(51.5)              | 4.10 |
| Have you faced unfair treatment by the police or other security authorities because of your child's disability?                    | 117(32.2)                 | 129(35.5)        | 70(19.3)          | 31(8.5)       | 16(4.4)                | 2.17 |
| Have you faced unfair treatment concerning your personal safety and security, either for yourself or your child with a disability? | 14(3.9)                   | 27(7.4)          | 28(7.7)           | 149(41)       | 145(39.9)              | 4.06 |
| Have you experienced aggression (physical, emotional, verbal) related to the type of disability?                                   | 14(3.9)                   | 31(8.5)          | 30(8.3)           | 118(3.2)      | 170(46.8)              | 4.10 |

Source : Primary data, 2024

The findings of this study, as depicted in Table 2, showed that 51.5% strongly agreed that they had experienced unfair treatment while utilizing public transportation due to their child's disability (Mean=4.10). Additionally, 35.5% of the respondents disagreed that they had faced unfair treatment by the police or other security authorities because of their child's disability (Mean=2.17). Furthermore, 41% of the respondents agreed that they had faced unfair treatment concerning their personal safety and security, either for themselves or their child with a disability (Mean=4.06). Interestingly, 46.8% strongly agreed that they had experienced aggression (physical, emotional, verbal) related to the type of disability of their child (Mean=4.10).

Table 3. Health factors of stigma among children under six years old with disabilities in Bugesera district, 2024 (n=363)

|                                                                                                                                             | Strongly disagree<br>n(%) | Disagree<br>n(%) | Uncertain<br>n(%) | Agree<br>n(%) | Strongly agree<br>n(%) | Mean |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|-------------------|---------------|------------------------|------|
| Have you experienced unfair treatment when seeking assistance for physical health issues due to your child's disability?                    | 32(8.8)                   | 31(8.5)          | 21(5.8)           | 138(38)       | 141(38.8)              | 3.90 |
| Have you encountered unfair treatment from health providers while caring for your child with a disability?                                  | 30(8.3)                   | 70(19.3)         | 14(3.9)           | 117(32.2)     | 132(36.4)              | 3.69 |
| Have you experienced unfair treatment regarding the privacy levels of your child or yourself while caring for your child with a disability? | 28(7.7)                   | 42(11.6)         | 14(3.9)           | 120(33.1)     | 159(43.8)              | 3.94 |
| Have you encountered unfair treatment when considering starting a family or planning for other children due to your child's disability?     | 14(3.9)                   | 55(15.2)         | 41(11.3)          | 134(36.9)     | 119(32.8)              | 3.80 |
| Have you experienced unfair treatment in your role as a parent while caring for your children with disabilities?                            | 76(20.9)                  | 105(28.9)        | 49(13.5)          | 70(19.3)      | 63(17.4)               | 2.83 |

Source : Primary data, 2024

The findings of this study, as depicted in Table 3, showed that 38.8% strongly agreed that they had experienced unfair treatment when seeking assistance for physical health issues due to their child's disability (Mean=3.90). Additionally, 36.4% of the respondents strongly agreed that they had encountered unfair treatment from health providers while caring for their child with a disability (Mean=3.3.69). Furthermore, 43.8% of the respondents strongly agreed that they had experienced unfair

treatment regarding the privacy levels of their child while caring for their child with a disability (Mean=3.94). Moreover, 36.9% of the respondents agreed that they had encountered unfair treatment when considering starting a family or planning for other children due to their child's disability (Mean=3.80), while 28.9% of the respondents disagreed that they had experienced unfair treatment in their role as a parent while caring for their children with disabilities (Mean=3.83).

**Table 4. Educational factors of stigma among children under six years old with disabilities in Bugesera district, 2024 (n=363)**

|                                                                                                                                                            | Strongly disagree<br>n (%) | Disagree<br>n (%) | Uncertain<br>n (%) | Agree<br>n (%) | Strongly agree<br>n (%) | Mean |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|--------------------|----------------|-------------------------|------|
| Have you faced unfair treatment in your education due to your child's disability, or has your child been expelled from school because of their disability? | 79(21.8)                   | 146(40.2)         | 45(12.4)           | 53(14.6)       | 40(11)                  | 2.53 |
| Have your child encountered an issue to access to education due to insufficient means to adapt himself to the school?                                      | 19(5.2)                    | 71(19.6)          | 16(4.4)            | 115(31.7)      | 142(39.1)               | 3.80 |

Source: Primary data, 2024

The findings of this study, as depicted in Table 4, showed that 40.2% disagreed with having faced unfair treatment in their education due to their child's disability (Mean=2.53).

Meanwhile, 39.1% strongly agreed that their children encountered issues accessing education due to insufficient means to adapt themselves to the school (Mean=3.80).

**Table 5. Economic factors of stigma among children under six years old with disabilities in Bugesera district, 2024 (n=363)**

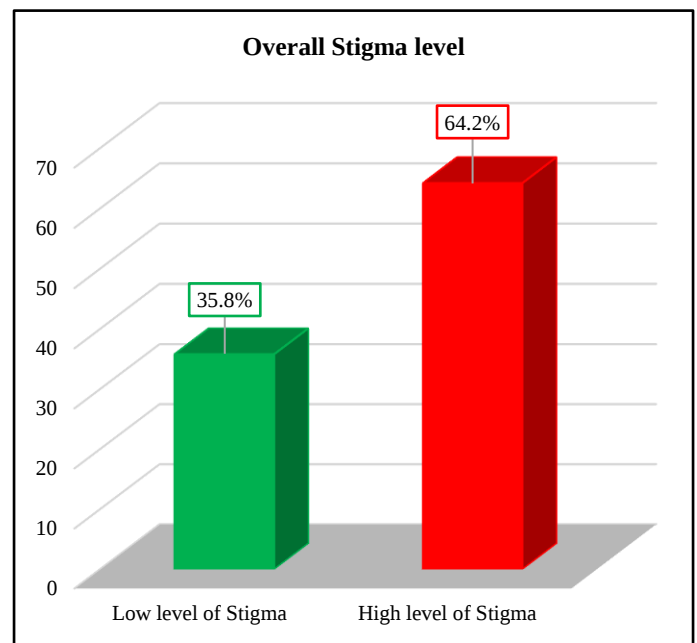
|                                                                                                                          | Strongly disagree<br>n(%) | Disagree<br>n(%) | Uncertain<br>n(%) | Agree<br>n(%) | Strongly agree<br>n(%) | Mean |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|-------------------|---------------|------------------------|------|
| Have you experienced unfair treatment in housing, (including cases of homelessness), because of your child's disability? | 93(25.6)                  | 147(40.5)        | 40(11)            | 41(11.3)      | 42(11.6)               | 2.43 |
| Have you encountered unfair treatment in your job search due to your child's disability?                                 | 13(3.6)                   | 27(7.4)          | 26(7.2)           | 108(29.8)     | 189(52.1)              | 4.19 |
| Have you faced unfair treatment in maintaining employment due to your child's disability?                                | 46(12.7)                  | 95(26.2)         | 30(8.3)           | 78(21.5)      | 114(31.4)              | 3.33 |
| Have you encountered unfair treatment in accessing welfare benefits (Ubudehe) or disability eligible funds?              | 71(19.6)                  | 152(41.9)        | 30(8.3)           | 43(11.8)      | 67(18.5)               | 2.68 |

Source : Primary data, 2024

The findings of this study, as depicted in Table 5, showed that 40.5% of the respondents disagreed that they had experienced unfair treatment in housing (including cases of homelessness) because of their child's disability (Mean=2.43). Additionally, 52.1% of the respondents strongly agreed that they had encountered unfair treatment in their job search due to their child's disability (Mean=4.19). Furthermore, 31.4% of the respondents strongly agreed that they had faced unfair treatment in maintaining employment due to their child's disability (Mean=3.33), while 41.9% disagreed that they had encountered unfair treatment in accessing welfare benefits (Ubudehe) or disability eligible funds (Mean=2.68).

As the questions used a Likert scale, frequency, percentage and mean were analyzed on each question. Its respective scores were used, with strongly disagree (1), disagree (2), uncertain (3), agree (4), and strongly agree (5). The mean cut-off threshold was set to 3 as high Likert scale mean level of stigma and any item with below 3 was considered as low level of stigma, vis-à-vis (WHO, 2020).

The findings showed that among children under six years old with disabilities in Bugesera district, 64.2% experienced a high level of stigma, while 35.8% experienced a low level of stigma, as depicted in Figure 1.



**Figure 1. Proportion of level of stigma among children under six years old with disabilities in Bugesera district**

Table 6. Bivariate analysis of factors associated to stigma among children under six years old with disabilities in Bugesera district.

| Particulars               | Level of stigma    |                   | Chi-square | P-value |
|---------------------------|--------------------|-------------------|------------|---------|
|                           | High level<br>n(%) | Low level<br>n(%) |            |         |
| Sex of the child          |                    |                   | 1.842      | 0.175   |
| Male                      | 146(67)            | 72(33)            |            |         |
| Female                    | 87(60)             | 58(40)            |            |         |
| Age of the child          |                    |                   | 2.310      | 0.805   |
| 1 year                    | 28(58.3)           | 20(41.7)          |            |         |
| 2 years                   | 68(65.4)           | 36(34.6)          |            |         |
| 3 years                   | 46(68.7)           | 21(31.3)          |            |         |
| 4 years                   | 34(58.6)           | 24(41.4)          |            |         |
| 5 years                   | 41(66.1)           | 21(33.9)          |            |         |
| 6 years                   | 16(66.7)           | 8(33.3)           |            |         |
| Ubudehe category          |                    |                   | 1.411      | 0.703   |
| Category 1                | 80(68.4)           | 37(31.6)          |            |         |
| Category 2                | 52(61.9)           | 32(37.1)          |            |         |
| Category 3                | 83(62.9)           | 49(37.1)          |            |         |
| Category 4                | 18(60)             | 12(40)            |            |         |
| Parents' education        |                    |                   | 13.493     | 0.004   |
| Uneducated                | 65(61.3)           | 41(38.7)          |            |         |
| Primary                   | 118(72.8)          | 44(27.2)          |            |         |
| Secondary                 | 39(57.4)           | 29(42.6)          |            |         |
| University                | 11(40.7)           | 16(59.3)          |            |         |
| Area of living            |                    |                   | 9.582      | 0.002   |
| Home                      | 229(65.8)          | 119(34.2)         |            |         |
| Special center            | 4(26.7)            | 11(73.3)          |            |         |
| Type of disability        |                    |                   | 21.039     | 0.001   |
| Physical disability       | 37(45.7)           | 44(54.3)          |            |         |
| Visual disability         | 97(66.4)           | 49(33.6)          |            |         |
| Hearing/Speech disability | 43(64.2)           | 24(35.8)          |            |         |
| Multiple disability       | 56(81.2)           | 13(18.8)          |            |         |

Source : Primary data, 2024

The findings of this study showed that the relationship of three factors (parents' education, area of living, and type of disability) with a high level of stigma among children with disabilities was statistically significant with p<0.05. Specifically, having a parent who had not received any formal education was associated with a high level of stigma at 61.3%, X2=13.493, p<0.004. Similarly, children not living in special centers for children with disabilities were associated with a high level of stigma at 65.8%, X2=9.582, p<0.002. Additionally, children with multiple disabilities were associated with a high level of stigma at 81.2%, X2=21.039, p<0.001. On the other hand, the relationship of other factors (sex of the child, age of the child, and ubudehe category) with a high level of stigma was not statistically significant at p<0.05.

Table 7. Multivariate analysis of factors associated to stigma among children under six years old with disabilities in Bugesera district.

| Particulars        | AOR   | 95% C.I |        | P-value |
|--------------------|-------|---------|--------|---------|
|                    |       | Lower   | Upper  |         |
| Parents' education |       |         |        |         |
| University         | Ref.  |         |        |         |
| Secondary          | 0.591 | 0.351   | 0.996  | 0.048   |
| Primary            | 1.179 | 0.634   | 2.190  | 0.603   |
| Uneducated         | 2.306 | 0.974   | 5.457  | 0.037   |
| Area of living     |       |         |        |         |
| Special center     | Ref.  |         |        |         |
| Home               | 5.292 | 1.650   | 16.976 | 0.005   |

| Type of disability        | Ref.  |       |        |       |
|---------------------------|-------|-------|--------|-------|
| Physical disability       | 2.404 | 1.099 | 5.262  | 0.028 |
| Visual disability         |       |       |        |       |
| Hearing/Speech disability | 2.176 | 1.087 | 4.357  | 0.028 |
| Multiple disability       | 5.123 | 2.432 | 10.792 | 0.001 |
| AOR: Adjusted Odds ratio  |       |       |        |       |
| CI: Confidence interval   |       |       |        |       |

Source : Primary data, 2024

The findings of this study, as shown in Table 7, demonstrated that parents of children who had not received any formal education were 2.3 times more significantly associated with a high level of stigma, with an adjusted odds ratio (AOR) of 2.306 (95% CI: 0.974-5.457), p<0.037. Additionally, children not living in special centers for children with disabilities were five times more likely than those living in such centers to be associated with a high level of stigma, with an AOR of 5.292 (95% CI: 1.650-16.976), p<0.005. Moreover, having multiple disabilities was also five times more likely to be associated with a high level of stigma, with an AOR of 5.123 (95% CI: 2.432-10.792), p<0.001.

DISCUSSION

The findings of this study, regarding the level of stigma among children under six years old with disabilities as presented in Figure 1, demonstrated that 64.2% of children in Bugesera district experienced a high level of stigma, while 35.8% experienced a low level of stigma. These results align with those found by Chatan in his 2014 study conducted in Ghana. According to Chatan, children with disabilities often face denial of rights and injustice after completing school, particularly affecting those with motor disorders. Despite completing their schooling without interruption in a non-specialized establishment, 90% of people with motor disorders reported experiencing discrimination, compared to 36% of those still in school (Chatan, 2014). This similarity may be due to the resemblance in the populations targeted by these studies and the shared societal beliefs regarding disability among children.

In comparison to other studies, the level of stigma appears to be higher than that reported by Eide in his 2019 study. According to Eide (2019), children with disabilities face stigma for various reasons depending on their disability and/or state of health. These children are particularly vulnerable to a lack of services such as health care, rehabilitation, and support. Data from four southern African countries showed that only 26-55% of children received the necessary medical rehabilitation, 17-37% had access to necessary technical aids, 5-23% were receiving adequate vocational training, and 5-24% received necessary social support services (Eide, 2019). Overall, 49% of children with disabilities experienced a high level of stigma, 51% experienced a low level of stigma, but almost every child with a disability experienced some form of stigma. This disparity could be attributed to differences in the populations targeted by the two studies, as the present study focused on a rural population in Bugesera district, while Eide's study included both rural and urban children.

The findings of this study, regarding the factors associated with stigma experienced by children with disabilities, as depicted in Table 7, showed that having a parent who had not received any formal education was significantly associated with a high level of stigma at 61.3%, X2=13.493, p<0.004. Additionally, children not living in special centers for children with disabilities were

significantly associated with a high level of stigma at 65.8%,  $X^2=9.582$ ,  $p<0.002$ , and children with multiple disabilities were significantly associated with a high level of stigma at 81.2%,  $X^2=21.039$ ,  $p<0.001$ . The relationship of other factors (sex of the child, age of the child, and ubudehe category) with a high level of stigma was not statistically significant at  $p<0.05$ .

Contrary to these findings, McFarlane (2020) found that children from poor families are the most affected by stigma among children with disabilities, with 66% of children from poor families encountering stigma compared to 42% among children from healthier families. Data from 51 countries in the World Health Survey indicated that children with disabilities living in poor families were twice as likely to experience stigma compared to other children (McFarlane, 2020).

Bayaka (2017) suggested that girls with disabilities suffer more stigma compared to boys. However, the present study found no significant relationship between the sex of the child and the level of stigma. Girls with disabilities may face more preventable secondary health problems, co-occurring morbidities, and age-related issues. Some studies have indicated that girls with disabilities engage in risky behaviors and unhealthy eating more frequently than boys, and they are also at a greater risk of violence. Unmet needs for rehabilitation services (including assistive devices) can lead to poorer overall health, activity limitations, participation restrictions, and a lower quality of life for girls with disabilities compared to boys (Bayaka, 2017).

In contrast to the present study, Kugar (2020) found that children living in specialized centers experience less discrimination than those living with their families. Additionally, the type of disability also plays a role in stigma, with 62% of people with cognitive impairments and 42% of people with sensory disorders experiencing stigma. For people with motor disorders, those in specialized establishments experienced 25% discrimination, compared to 8% for those still educated in a specialized establishment or not and who have had an interruption of schooling. However, Kugar (2020) found similar results to the present study regarding multiple disabilities, which were significantly associated with a high level of stigma.

Oliver (2017) noted that discrimination particularly affects people with sensory impairments, such as deaf or blind individuals, with 85% feeling discriminated against due to limited integration measures. Discrimination for people with sensory impairments often stems from learning difficulties and the need for human assistance, which are not always provided. Discrimination is also attributed to prejudice and a lack of awareness among able-bodied individuals. This type of discrimination is two times less likely for motor-impaired individuals and three times less likely for cognitively impaired individuals (Oliver, 2017). The similarities in findings may be due to the studies being conducted in African and Asian countries, regions with differing cultural beliefs regarding disability compared to Rwanda.

Studying the factors associated with stigma experienced by children under six years old with disabilities can provide valuable insights into the challenges they face and inform interventions to support their well-being. However, such a study has its strengths and limitations. Strengths include the identification of key factors, early intervention opportunities, a holistic perspective, and potential long-term impact. Limitations include the complexity of stigma, methodological challenges, bias and subjectivity, and limited generalizability. Findings from a single study may not be generalizable to all children under six years old with disabilities, as experiences of stigma can vary widely depending on factors such as disability type, cultural

background, and access to support services. Replication studies across diverse populations are needed to enhance the generalizability of findings.

Despite these limitations, research on factors associated with stigma experienced by young children with disabilities holds promise for informing policies and practices aimed at promoting their inclusion and well-being. By addressing these challenges and building on strengths, researchers can contribute to creating more inclusive and supportive environments for all children. The collected data provides valuable insights into the prevailing stigma related to disability among children under six years old in Bugesera district, and the suggested recommendations present potential solutions to tackle this issue.

## CONCLUSION

In conclusion, this study has revealed that the majority of the respondents experienced a high level of stigma. Additionally, the study found that three factors: parents' education, area of living, and type of disability were statistically significant in relation to a high level of stigma among under six children with disabilities. As recommendation, the Government should plan and implement a country wide policy for a systematic fight against stigma among children with disability.

## Acknowledgement

I wish to extend my heartfelt appreciation to the individuals who have played a role in bringing this work to fruition. Foremost, my gratitude goes to the Almighty. I am also indebted to the administrative and academic leaders of Mount Kenya University. I do appreciate my wife and children's support to accept share their quality time with the dissertations and other research activities. I would like to offer special gratitude to my supervisor Dr. Nsanzabera Charles, whose guidance and instruction were invaluable throughout the process of writing this study. His insightful advice has significantly contributed to its development.

## Author Contributions

**Conceptualization:** Jean Claude Rukundo.

**Data curation:** Jean Claude Rukundo, Charles Nsanzabera.

**Formal analysis:** Jean Claude Rukundo, Charles Nsanzabera.

**Funding acquisition:** No funding

**Investigation:** Jean Claude Rukundo, Charles Nsanzabera.

**Methodology:** Jean Claude Rukundo, Charles Nsanzabera.

**Project administration:** Charles Nsanzabera.

**Supervision:** Charles Nsanzabera.

**Validation:** Charles Nsanzabera.

**Visualization:** Jean Claude Rukundo, Charles Nsanzabera.

**Writing – original draft:** Jean Claude Rukundo.

**Writing – review & editing:** Charles Nsanzabera.

**Data Availability:** All relevant data are within the paper.

**Funding:** This study was not funded by any organization.

**Competing interests:** The authors have declared that no competing interests exist.

## References

1. Bayaka, M. (2017). *Socio-professional adaptation and reintegration of the blind and visually impaired. Working report of the 7th general assembly of OCHA, Nairobi*
2. Eide K. Et al. (2019). *Education's missing millions: including disabled children in education through EFA FTI processes and national sector plans. Milton Keynes, World Vision UK*

3. *Chatan J. (2014). Children with disabilities and denial of rights and injustice after school. Montreal: Ediconseil Inc.*
4. *Kugar C. (2020). Denial of rights and injustice after school and children with disabilities. Los Angeles: SAGE Publications*
5. *Humanium (2017). Disabled children. London: Routledge*
6. *McFarlane L, McLean J. (2020). Education and training for direct care workers. Social Works Education, 2020,22:385-399. Doi: 10.1080/02615470309140*
7. *Meuter J. (2013). The white paper on access to care and prevention for people with mental disabilities. The Lancet Global Health, Volume 2, Issue 4, Pages e225 – e234.*
8. *National Institute of Statistics of Rwanda, Rwanda, & DHS Program (Eds.). (2021). Rwanda demographic and health survey, 2019-20: Final report. National Institute of Statistics of Rwanda, Ministry of Finance and Economic Planning; Ministry of Health; The DHS Program, ICF International.*
9. *NCPD (2021). Annual Report. Kigali: NCPD*
10. *Oliver K. (2017) Discrimination of children with sensory impairments. Health Care for people with Disability International, 18(1), p. 58-65.*
11. *UNICEF (2021). The situation of the World's Children 2021 report. New York: UNICEF*
12. *UPHLS (2023). Mapping Data Report. Kigali: UPHLS*
13. *WHO (2020). World report on disability. Geneva: WHO.*
14. *WHO (2022). Global report on health equity for persons with disabilities. Geneva: WHO*
15. *WHO and WB (2021). Summary of the World Report on Disability. Geneva: WHO*
16. *World Bank (2019). Disability and Development and the World Bank. New York: WB*