Myanmar Information Management Unit
Disability in Myanmar (2014-2019)
Methodology guide - August 2021

Contents

I. Disability Prevalence Rate

I.A. Methodology

The disability prevalence rate is the percentage of population with disabilities. It was calculated for individual disabilities or combined disabilities. The mathematical formulas to calculate the indicators of disability prevalence rate are:

For one disability I:

$$Disability\ prevalence\ rate\ for\ I = \frac{\sum_i \mathbb{1}_i \times Y_i}{Total\ Population}$$

- with i = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_i = 0$ if i = "No – no difficulty", else $\mathbb{1}_i = 1$, and
- with Y_i = number of people with level i of disability I where $\sum_i Y_i = Total\ Population$.

When it comes to calculating the disability prevalence rate of combined disabilities, it is about calculating the disability prevalence rate of any disability which is equivalent to at least one disability given the number of disability types. There are four disability types in the 2014 Myanmar Population and Housing Census and six in the 2019 Intercensal Survey. It is also called the disability prevalence rate.

For four combined disabilities/any disability/at least one disability I, J, K and L:

$$Disability\ prevalence\ rate = \frac{\sum_l \sum_k \sum_j \sum_i \mathbb{1}_{i,j,k,l} \times Y_{i,j,k,l}}{Total\ Population}$$

- with i, j, k, l = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_{i,j,k,l} = 0$ if $i = j = k = l$ = "No – no difficulty", else $\mathbb{1}_{i,j,k,l} = 1$, and
- with $Y_{i,j,k,l}$ = number of people with level i, j, k and l of disabilities I, J, K and L respectively where $\sum_l \sum_k \sum_j \sum_i Y_{i,j,k,l} = Total\ Population$.

For six combined disabilities/any disability/at least one disability I, J, K, L, M and N:

$$Disability\ prevalence\ rate = \frac{\sum_n \sum_m \sum_l \sum_k \sum_j \sum_i \mathbb{1}_{i,j,k,l,m,n} \times Y_{i,j,k,l,m,n}}{Total\ Population}$$

- with i, j, k, l, m, n = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_{i,j,k,l,m,n} = 0$ if $i = j = k = l = m = n$ = "No – no difficulty" else $\mathbb{1}_{i,j,k,l,m,n} = 1$, and
- with $Y_{i,j,k,l,m,n}$ = number of people with level i, j, k, l, m and n of disabilities I, J, K, L, M and N respectively where $\sum_n \sum_m \sum_l \sum_k \sum_j \sum_i Y_{i,j,k,l,m,n} = Total\ Population$.

I.B. 2014 Myanmar Population and Housing Census
Data Source: Redatam software (offline version)
Available Levels:
- Countrywide, State/Region, District and Township (except for combined disabilities) levels and
- Union, Urban and Rural levels.

Available Indicators:
- Disability prevalence rate (combined) (calculated)
- Disability prevalence rate for seeing (calculated)
- Disability prevalence rate for hearing (calculated)
- Disability prevalence rate for walking/climbing steps (calculated)
- Disability prevalence rate for remembering/concentrating (calculated)

The report of the 2014 Myanmar Population and Housing Census provided any indicator of the disability prevalence rate from the age 0 while the 2019 Intercensal Survey starts from age 5. It was necessary to recalculate each disability prevalence rate using the age group 5 and over to compare with the 2019 Intercensal Survey. All calculations were possible using the Redatam software. The calculations for each indicator were made at both:
- state/region, district and township and
- union, urban and rural.

For the disability prevalence rate of at least one disability, it was possible to calculate it at the state/region and district level but not at the township level as the available software Redatam did not have the capacity to do it.

I.C. 2019 Intercensal Survey
Data Source: Department of Population: https://dop.gov.mm/en/data-and-maps-category/main-report-1.

Available Levels:
- Countrywide, State/Region, and District and
- Union (all levels), Urban and Rural (only Countrywide level).

Available Indicators:
- Disability prevalence rate (combined)
- Disability prevalence rate for seeing
- Disability prevalence rate for hearing
- Disability prevalence rate for walking/climbing steps
- Disability prevalence rate for remembering/concentrating
- Disability prevalence rate for self-care
- Disability prevalence rate for communication

II. Population/Estimated population with disabilities

II.A. Methodology

The populations with disabilities for each individual or combined disabilities were found in or calculated from the 2014 Myanmar Population and Housing Census.

The estimated populations with disabilities for were calculated from the 2019 Intercensal Survey since only percentages of population with disabilities for each individual or combined disabilities were provided. The estimated population with disabilities were calculated using:
- the total population and
- the percentage of population with disabilities.

Population with disabilities
For one disability I:

$$Population\ with\ disability\ I = \sum_i \mathbb{1}_i \times Y_i$$

- with i = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_i = 0$ if i = "No – no difficulty", else $\mathbb{1}_i = 1$, and
- with Y_i = number of people with level i of disability I where $\sum_i Y_i = Total\ Population$.

For four combined disabilities/any disability/at least one disability I, J, K and L:

$$Population\ with\ disabilities = \sum_l \sum_k \sum_j \sum_i \mathbb{1}_{i,j,k,l} \times Y_{i,j,k,l}$$

- with i, j, k, l = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_{i,j,k,l} = 0$ if $i = j = k = l$ = "No – no difficulty", else $\mathbb{1}_{i,j,k,l} = 1$, and
- with $Y_{i,j,k,l}$ = number of people with level i, j, k and l of disabilities I, J, K and L respectively where $\sum_l \sum_k \sum_j \sum_i Y_{i,j,k,l} = Total\ Population$.

For six combined disabilities/any disability/at least one disability I, J, K, L, M and N:

$$Population\ with\ disabilities = \sum_n \sum_m \sum_l \sum_k \sum_j \sum_i \mathbb{1}_{i,j,k,l,m,n} \times Y_{i,j,k,l,m,n}$$

- with i, j, k, l, m, n = ("No – no difficulty"; "Yes – some difficulty"; "Yes – a lot of difficulty"; "Yes – cannot do at all"),
- with $\mathbb{1}_{i,j,k,l,m,n} = 0$ if $i = j = k = l = m = n$ = "No – no difficulty" else $\mathbb{1}_{i,j,k,l,m,n} = 1$, and
- with $Y_{i,j,k,l,m,n}$ = number of people with level i, j, k, l, m and n of disabilities I, J, K, L, M and N respectively where $\sum_n \sum_m \sum_l \sum_k \sum_j \sum_i Y_{i,j,k,l,m,n} = Total\ Population$.

Estimated Population with disabilities
For both individual or combined disabilities:

$$Estimated\ population\ with\ disabilities = Total\ population \times Disability\ prevalence\ rate$$

II.B. 2014 Myanmar Population and Housing Census
Data Source: Redatam software (offline version)

Available Levels:
- Countrywide, State/Region, District and Township (except for combined disabilities) levels and
- Union, Urban and Rural levels.

Available Indicators:
- Population with disabilities (combined)
- Population with disability in seeing
- Population with disability in hearing
- Population with disability in walking/climbing steps
- Population with disability in remembering/concentrating

II.C. 2019 Intercensal Survey
Data Source: Department of Population: https://dop.gov.mm/en/data-and-maps-category/main-report-1.

Available Levels:
- Countrywide, State/Region, and District and
- Union (all levels), Urban and Rural (only Countrywide level).

Available Indicators:
- Estimated population with disability (combined) (calculated)
- Estimated population with disability seeing (calculated)
- Estimated population with disability hearing (calculated)
- Estimated population with disability walking/climbing steps (calculated)
- Estimated population with disability remembering/concentrating (calculated)
- Estimated population with disability self-care (calculated)
- Estimated population with disability communication (calculated)

III. Data Limitations
- Urban and rural levels are not available at state/region and district level in the 2019 Intercensal Survey
- DPR is not available at the township level in the 2014 Census
- Communication and self-care disability types were not available in the 2014 Census
- DPR for combined disabilities cannot be compared between the 2014 Census and the 2019 Intercensal Survey. Only DPR ranks can be compared.
- DPRs for individual disabilities can be compared. There is an unexpected increase between results from the 2014 Census and the 2019 Intercensal Survey. Further research is needed but it appears there may have been a difference in the data collection.