

Understanding how responses to social and medical models differ by socio-economic characteristics: results from a comprehensive survey

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“UNECE/UNICEF expert meeting on statistics on children”

Geneva, Switzerland, 4–6 March 2024

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Motivation

- A better understanding of how responses to social and medical models differ by socio-economic characteristics would help to identify effective strategies to improve the health and well-being of children with disabilities.
- In this study, we explore the associations between two different measures of disability: Self-reported functional limitations based on the Washington Group / UNICEF Child Functioning Module questions and objectively screened clinical impairments.
- We use a recent comprehensive survey in Türkiye that assesses both reported functional limitations and clinical impairments.

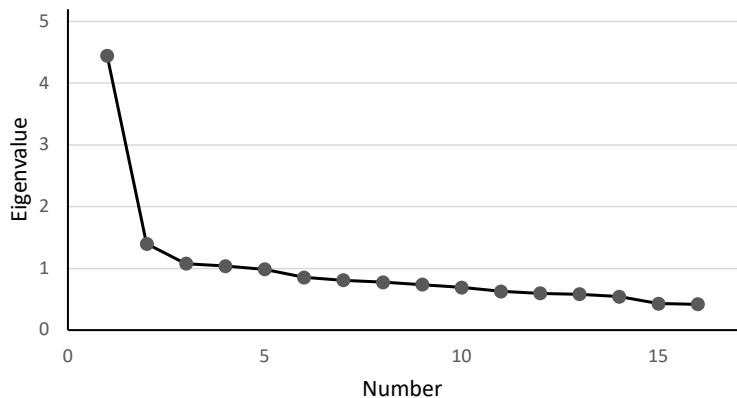
- We use Türkiye Child Survey, 2022.
- TURKSTAT conducted the survey in cooperation with the UNICEF Türkiye between October 10 and December 16, 2022.
- The sample size is 14,705 children from 9,010 households, each with at least one child in the 0-17 age group.
- Information was obtained mainly from mothers.
- This survey collects information on both children's personal information and household information.

- For disability data, the survey collects information on objectively-screened clinical impairments by asking whether a child has a disability report issued by a medical board for mental, hearing, seeing, orthopedic, speech, learning, and pervasive developmental disorder.
- In addition to these questions, the CFM translated questions were also included in the survey.
- The survey has questions on all domains of the CFM module including vision, hearing, mobility, self-care, communication, learning, remembering, concentrating, accepting change, controlling behavior, making friends, anxiety, and depression.

Empirical specification

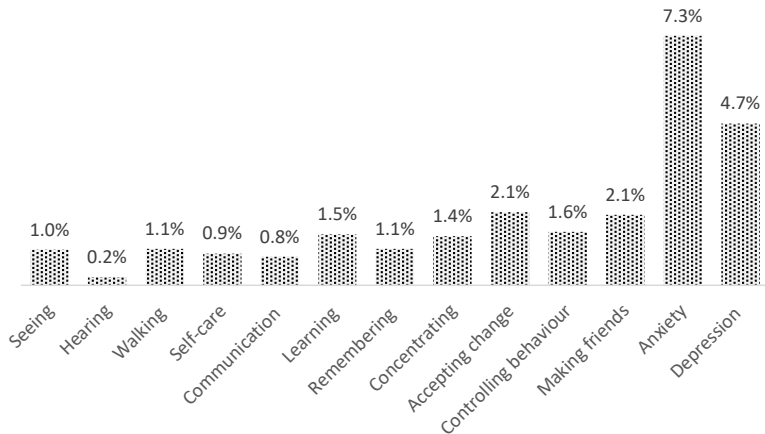
- We use binary logistic regression to compare disability prevalence and association across definitions.
- The dependent variable is binary that indicates whether a person is reported to have some difficulties according to the CFM module.
- Age, gender, household income, and mother's years of schooling are used as control variables.
- The survey also includes 16 variables related to items the child has at home. Since these are highly correlated and measure similar characteristics, we apply Principal Component Analysis (PCA) to reduce the dimensions for them.

Empirical specification



Scree plot of eigenvalue versus number of component

Descriptive analysis



Percentage distribution of overall disability by CFM domains

Odds of reporting a functional limitation amongst children with medical disability report

	Dependent variable: Children aged 5-17 years with functional difficulty					
	Physical, sensory and cognitive		Social		Emotion	
	[1]	[2]	[3]	[4]	[5]	[6]
Children aged 5-17 years with a medical disability report	42.8 (7.2) ^{***}	36.2 (7.1) ^{***}	14.5 (2.3) ^{***}	10.7 (2.1) ^{***}	3.0 (0.5) ^{***}	2.3 (0.5) ^{***}
Control variable:						
Gender	Yes	Yes	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes	Yes	Yes
Years of mother education	Yes	Yes	Yes	Yes	Yes	Yes
Income	Yes	Yes	Yes	Yes	Yes	Yes
PC1	No	Yes	No	Yes	No	Yes
PC2	No	Yes	No	Yes	No	Yes
# of observations	10,698	9,545	10,698	9,545	10,698	9,545

Note: Observations are weighted using the sampling weights so that the results are nationally representative. Robust standard errors are in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Results

Percentage distribution of children aged 5-17 by total population and disability groups according to socio-economic characteristics

	Total Population	Medical	Physical, sensory and cognitive	Social	Emotion
Total	100.0	2.0	4.6	4.2	8.5
Gender					
Male	51.3	66.6	55.2	55.7	50.9
Female	48.7	33.4	44.8	44.3	49.1
Age					
5-9 years	39.4	44.0	42.9	41.2	35.3
10-14 years	38.0	37.0	35.4	36.9	38.0
15-17 years	22.6	19.0	21.6	22.0	26.7
Attendance to education					
Attending	94.6	82.0	88.2	89.5	93.3
Not Attending	5.4	18.0	11.8	10.5	6.7
Mother's education					
Pre-primary or none	16.9	21.5	20.7	15.5	14.8
Primary	51.3	49.8	49.6	48.3	50.3
Secondary	17.8	16.5	18.0	21.7	20.1
Higher	14.1	12.1	11.7	14.6	14.9
Wealth index quintile					
Poorest	11.8	15.4	16.6	13.7	12.0
Second	26.6	28.6	32.0	27.9	25.3
Middle	17.7	17.2	18.8	18.3	17.6
Fourth	21.7	20.3	18.5	20.5	22.1
Richest	22.3	18.5	14.2	19.6	23.1

Note: Observations are weighted using the sampling weights so that the results are nationally representative.

Concluding Remarks

- The choice of disability measure strongly influences the prevalence, composition and outcomes of people identified as disabled.
- We find that there are three mainly sub-populations within the 14.1.
- Among these CFM groups, the physical, sensory and cognitive domains has a similar distribution of socioeconomic characteristics as the medical disability group.
- The other two CFM populations have weaker relationships with the medical group. In particular, the emotion group describes groups of people with different socioeconomic characteristics.

Concluding Remarks

- The Washington Group/UNICEF Child Functioning Module would be a good complement to the medical model.
- The main benefit of the CFM module is that it provides comparable global and regional estimates.
- The main role of this comparable disability prevalence should be to raise public awareness, much like the OECD's Program for International Student Assessment (PISA) scores.
- This impact could be further enhanced if three prevalence rates are disclosed for the 13 domains instead of one.