

# Systematic Review of Stigmas Present against Disabled Children Globally and How These Stigmas Vary across Regions and Population

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## Abstract

**Background:** Current literature shows that disabled individuals are vulnerable compared to their abled body counterparts in a variety of measures, disability varies across regions and cultures and that attitudes toward these disabilities may also vary globally. **Methods:** Literature searches using keyword searches were done based on search strings of “childhood disability” with other phrases. Outcome variables included region, population studied, a general description of the attitudes, a broader category into which the type of attitude falls and whether or not there were persistent negative attitudes toward disability. Meta analyses were done for outcomes. **Results:** An initial 114 articles were screened to be relevant to the topic. 15 articles had data extracted. Descriptive results demonstrated that cultural and religious norms are associated with negative attitudes toward disability. Meta analyses did not demonstrate any statistical significance between the cultural, religious or regional factors in the likelihood of having negative attitudes toward disability. **Discussion:** The association between religion, culture and region and the likelihood of having negative attitudes was not statistically significant. The presence of negative attitudes on the basis of culturally or religiously held beliefs, globally, does appear to exist on review of the literature.

## Introduction

Compared to the abled-bodied, disabled individuals suffer:

- a higher burden of chronic medical conditions
- worse access to care
- insufficient emotional support.

The existence of culturally-based violence and abuse toward disabled individuals worldwide also suggest that:

- there is an association between cultural, religious and regional differences and negative attitudes
- that disabled children are marginalized
- any scientific insight on these relationships has merit in helping determining solutions.

Question: what stigmas are present against disabled children worldwide and how do attitudes toward disabled children vary across regions and populations?

Hypotheses:

- Stigma exists toward disabled children globally and that these stigmas do have significant cultural and/or religious associations
- Consequently, attitudes vary across regions
- Lower income regions, such as Africa and Asia, possess a stronger association with negative perceptions toward disabled children compared to higher income regions, such as North America and Europe.

## Methods

Web of Science, PubMed and Embase databases were used to search for primary research articles discussing childhood disability and its perceptions.

- Negative attitudes defined as those suggesting that individuals felt that disabled individuals were a burden, an embarrassment etc.
- PRISMA flow diagram was used.
- Data were placed in a table for qualitative review.

Meta-analyses were done for outcomes (presence of negative attitude or not) reported in at least two papers.

- Odds Ratio and 95% CI were estimated. 2x2 factorial studies were extracted as two separate experiments.
- Heterogeneity was quantified with the I<sup>2</sup> test.
- Forest plots were drawn to present the effect size and relative weighting for each study and the overall effect size.

## Results

Following PRISMA:

- 114 based on review of titles
- 46 of those papers actually discussed negative attitudes
- 15 in the final selection for this systematic review

Total # of Records	648		
Total # w/o duplicates	523	Total # excluded	125 Reason for Exclusion: Articles were duplicates
Total # screened	114	Total # excluded	409 Reason for Exclusion: Articles not discussing disabled individual and stigma/culture/attitude/religion
Total # of records where outcome variables will be extracted)	46	Total # excluded w/ reason	68 Reason for Exclusion: Articles either not relevant to disabled children directly, do not discuss attitude, discuss public health more than attitudes, do not provide clear associations between attitude/culture/religion and disability
# of studies to be included for synthesis	15	Total # excluded	31 Reason for Exclusion: Articles did not have clear data in the results section of how many participants held negative attitudes and how these attitudes were characterized

**Table 1:** Cumulative table of articles pulled from the three databases following a PRISMA flow for systematic reviews

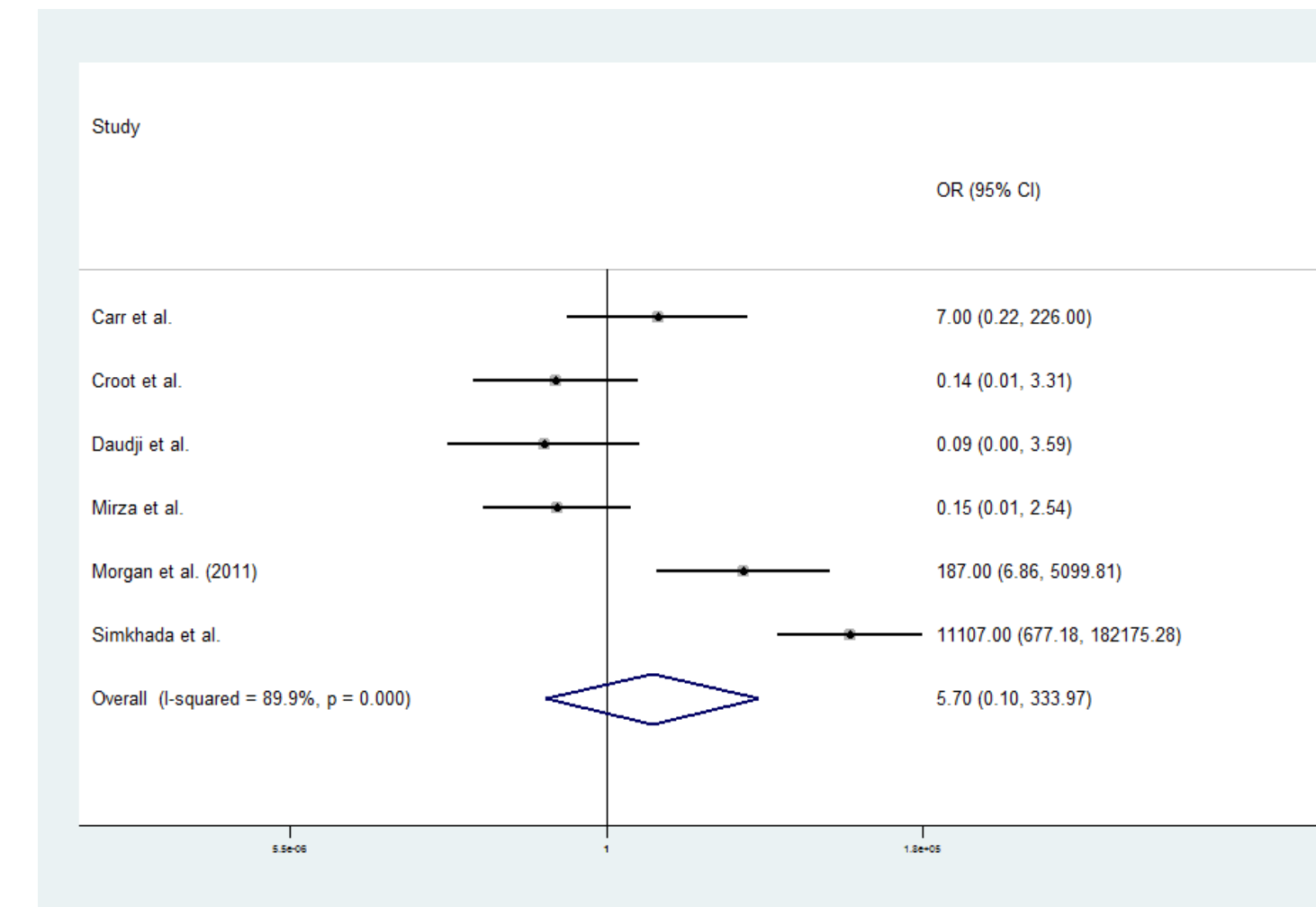
Common observations:

- Negative attitudes toward disability were based on belief that disabled individuals were viewed as unequal in their societies
- Disability was viewed as a punishment
- Many participants or those in their community had a strong sense of pity toward disabled children
- Cultural and religious themes of karma, “the evil eye” or divine punishment appeared more prevalent in both African and Asian societies and ethnic groups
- In North American studies, biomedical causes were prevalent in how participants chose to explain disability
- Favorable views included the idea that having a child with a disability was a blessing

Geographic Location	Population	Article	Description	Category	Overall Negative Attitude
United Kingdom	British Pakistanis	Croot et al.	Families face stigmas within cultural groups. Many families cite theological reasons for disability	Religious	Yes
Pakistan	Urban Pakistani (parents)	Mirza et al.	Concern that children will be abused by community members. Parental beliefs that caring for a child was a pious act for Allah, despite stigma	Religious	Yes
Libya and United Kingdom	University students/staff at disabled children's schools	Benomir et al.	Compared to UK counterparts, Libyan participants had higher rates of feeling that disabled individuals should be more excluded from society	Regional	Yes
Canada	South Asian immigrants	Daudji et al.	All mothers described child's disability on medical terms, many felt God had a role. Strong belief in child's cognitive abilities and rehabilitation. Mothers felt less stigma in Canada than back in South Asia	Religious	Yes
Cambodia	Cambodian Parents of disabled children	Morgan et al.	Of the study participants, some parents attributed biomedical causes to a child's disability, while an equal amount believed in more traditional causes, like spirits or karma	Cultural	No
Vietnam	Vietnamese caregivers of disabled children	Ngo et al.	Parents felt that they and their children faced greater social exclusion than their counterparts. Participants often felt that a child with a disability will not be able to get a job or get married.	Cultural	Yes
Netherlands	Parents	de Boer et al.	Primary school parents felt disabled children were included in a classroom/social group at their local school positively. Parents felt less strongly about those children with profound intellectual and mental disability	Regional	No
Malawi	HIV + children and their siblings	Devendra et al.	HIV + much more likely to have a disability compared to their HIV - siblings. Parents often report that they faced stigma toward disability as a medical barrier for their HIV + children	Regional	Yes
United States	Mexican American parents	Mardiros et al.	Parents easily attributed a child's disability to a particular medical diagnosis and remained hopeful that science and God would help find a cure “someday”. A variety of religious reasons and bases were given for why mothers had disabled children. Children not considered ill or sick	Religious	No

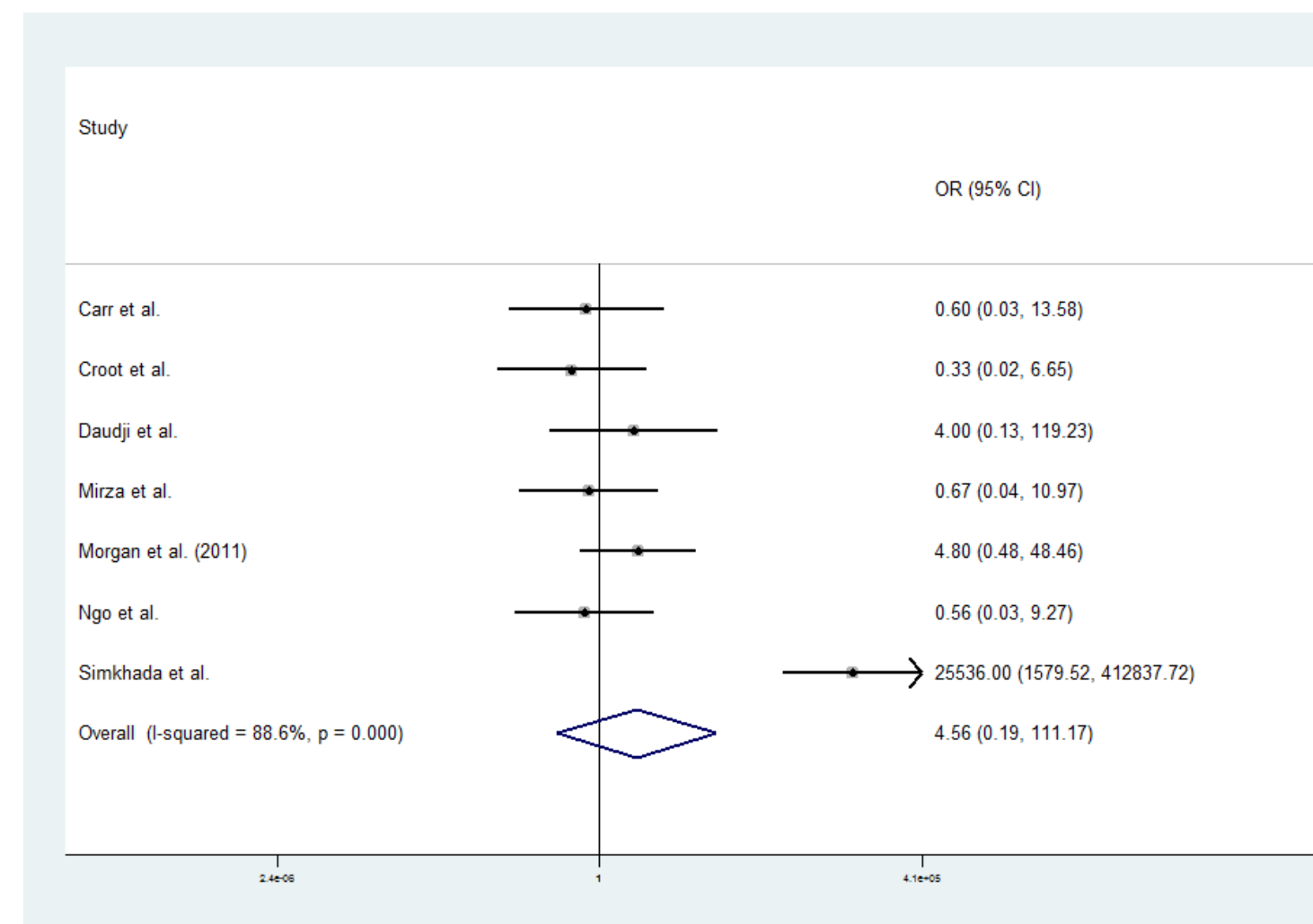
**Table 2:** Categorical and descriptive data pulled from the fifteen primary research articles at the end of the PRISMA flow

Meta analyses showed that those with strong religious attitudes and beliefs are 5.7 times as likely to hold negative attitudes toward disabled individuals than those without religious beliefs. However, this association was determined not to be statistically significant.



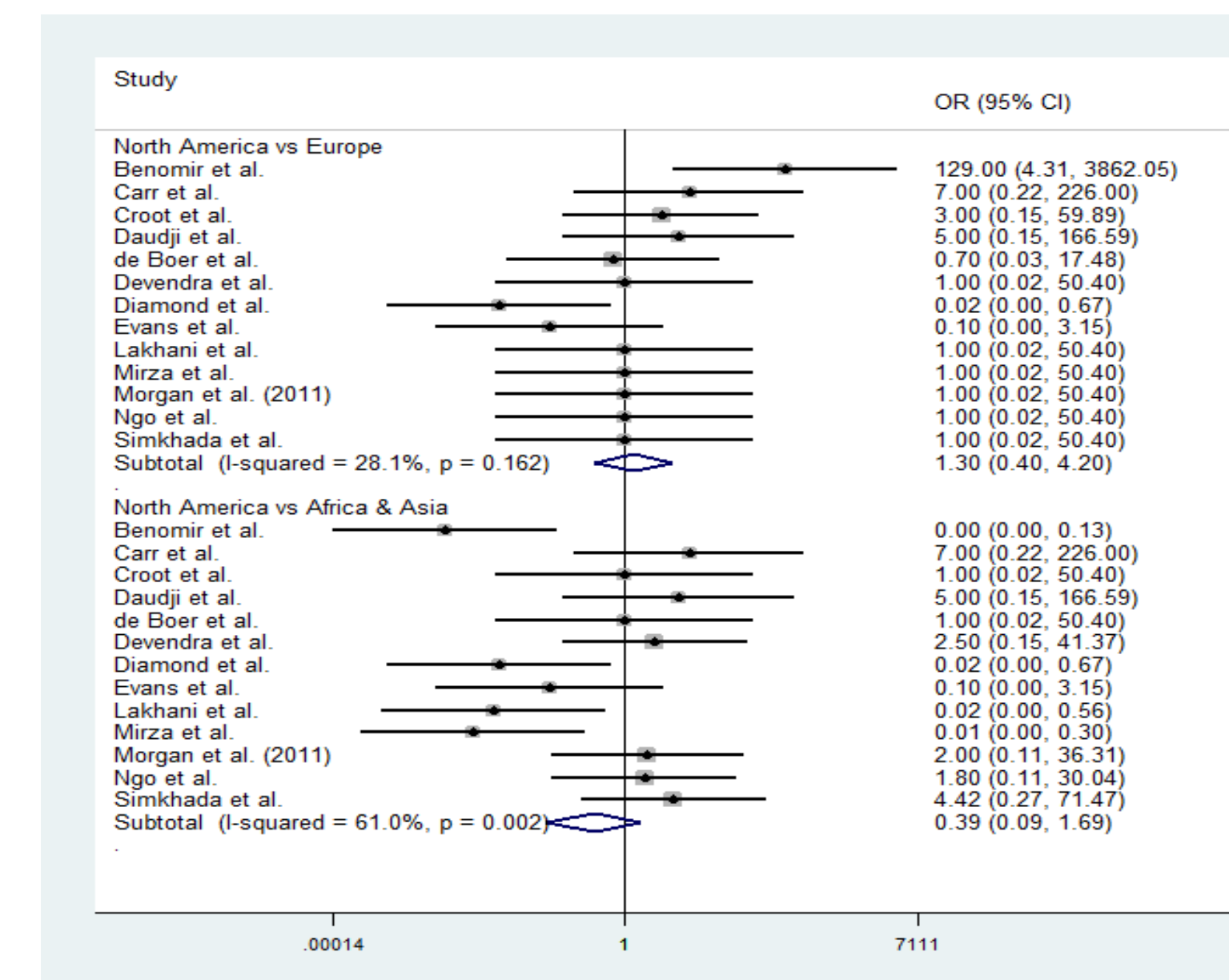
**Figure 1:** Forest plot of likelihood of negative attitude on the basis of religion. Combined Odds Ratio 5.70 (0.10, 333.97)

Those with strong cultural attitudes are 4.56 times as likely hold negative attitudes to disabled individuals than those without strong cultural attitudes. This was also shown to not actually be statistically significant.



**Figure 2:** Forest plot of likelihood of negative attitude on the basis of culture. Combined Odds Ratio 4.56 (0.19, 111.17)

The European region was associated a 30% increased likelihood of holding negative attitudes toward disabled children compared to the North American region. The African and Asian region had a 61% decreased likelihood of holding negative attitudes compared to the North American region. Regardless, both relationships were not significant as Odd's Ratios also included 1.



**Figure 3:** Forest plot of how likely region (Europe in top half and Asia & Africa in bottom half) are associated with holding negative attitudes when compared to North America. Combined Odds Ratio for North America vs. Europe is 1.30 (0.40, 4.20). Combined Odds Ratio for North America vs. Africa and Asia is 0.39 (0.09, 1.69).

## Discussion

It is evident that different the variety of beliefs encompassing disability is diverse. Meta analyses demonstrated that while there appear be associated with cultural and religious beliefs with negative attitudes toward disability, these associations are not statistically valid.

Poignant examples in the literature and pervasive discrepancies in how disabled children fare globally suggests that stigma is truly present against disabled children, though the broader association to culture and religion at large is unclear.

Statistical analyses refuted our initial hypotheses. We failed to reject the null hypothesis—for this systematic review based on aforementioned analyses.

We consider the possibility of a type II error. Our relatively small sample size of primary research articles for the analyses conducted may have contributed to this phenomenon.

The majority of primary research articles on the topic themselves employ a small number of participants, further increasing the likelihood of a type II error.

Larger sample sizes both in primary research articles for meta analyses may lead to statistically significant findings, it may have altered the results obtained.

## Conclusions

The stigma against disabled children is present though highly difficult to quantify.

The plight that disabled children face worldwide warrants more research to both determine and clarify why these stigmas are present.

By delving into further research on the topic, specific interventions aimed combat these attitudes can be created.

The goal of this body of work is to ensure that disabled children receive equal and fair treatment, both in medicine and in their communities.

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