

Prevalence of autism in different ethnic groups in Europe, North America, and Oceania, 2021-23

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Abstract

Background: There is a large amount of research looking at the prevalence of autism in majority White population countries in Europe, North America, and Oceania. However, there is limited research on autism prevalence according to different ethnic groups. We conducted this study to ascertain the current prevalence of autism in different ethnic groups in these continents.

Aims: To examine the current prevalence of autism according to different ethnic groups in Europe, North America, and Oceania between 2021 and 2023.

Methods: MEDLINE and PsycInfo databases were searched for autism prevalence studies in Europe, North America and Oceania published between 2021 and 2023.

Results: 18 studies reported on autism prevalence in Europe, North America, and Oceania. 14 papers did not provide enough information or did not report on ethnicity. The median prevalence was 316 per 10,000 for White children (range: 42-516; mean: 300), 212 for Black children (range: 50-522; mean: 261), 83 for Asian children (range: 60-106; mean: 83) and 230 for Hispanic children (range: 93-322; mean: 225).

Conclusions: With few studies reporting ethnicity data, it is hard to get an accurate representation of autism prevalence in different ethnic groups across Europe, North America, and Oceania. More research is needed to better understand the autism prevalence in different ethnic groups.

Results

During 2021-23, 18 studies reported on autism prevalence in Europe, North America, and Oceania. 14 papers did not provide enough information or did not report on ethnicity, leaving only 6 papers with ethnicity data (see Table 2 and 3). The median prevalence was 316 per 10,000 for White children (range: 42-516; mean: 300), 212 for Black children (range: 50-522; mean: 261), 83 for Asian children (range: 60-106; mean: 83) and 230 for Hispanic children (range: 93-322; mean: 225).

Conclusions

An increasing number of countries are reporting annual autism prevalence numbers (e.g., UK, USA); however, few studies are reporting on the autism prevalence in different ethnic groups. More work is needed to represent these seldom reported groups. This is especially important as we found no recent reports on ethnicity from Oceania, therefore there is no current understanding of the prevalence of autism in different ethnic groups within Oceania. More research is needed to better understand the autism prevalence in different ethnic groups globally.

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Methods

Published papers were screened from PsycInfo and MEDLINE databases. Parameters of the search are shown in the Prisma flow diagram¹ (Figure 1).

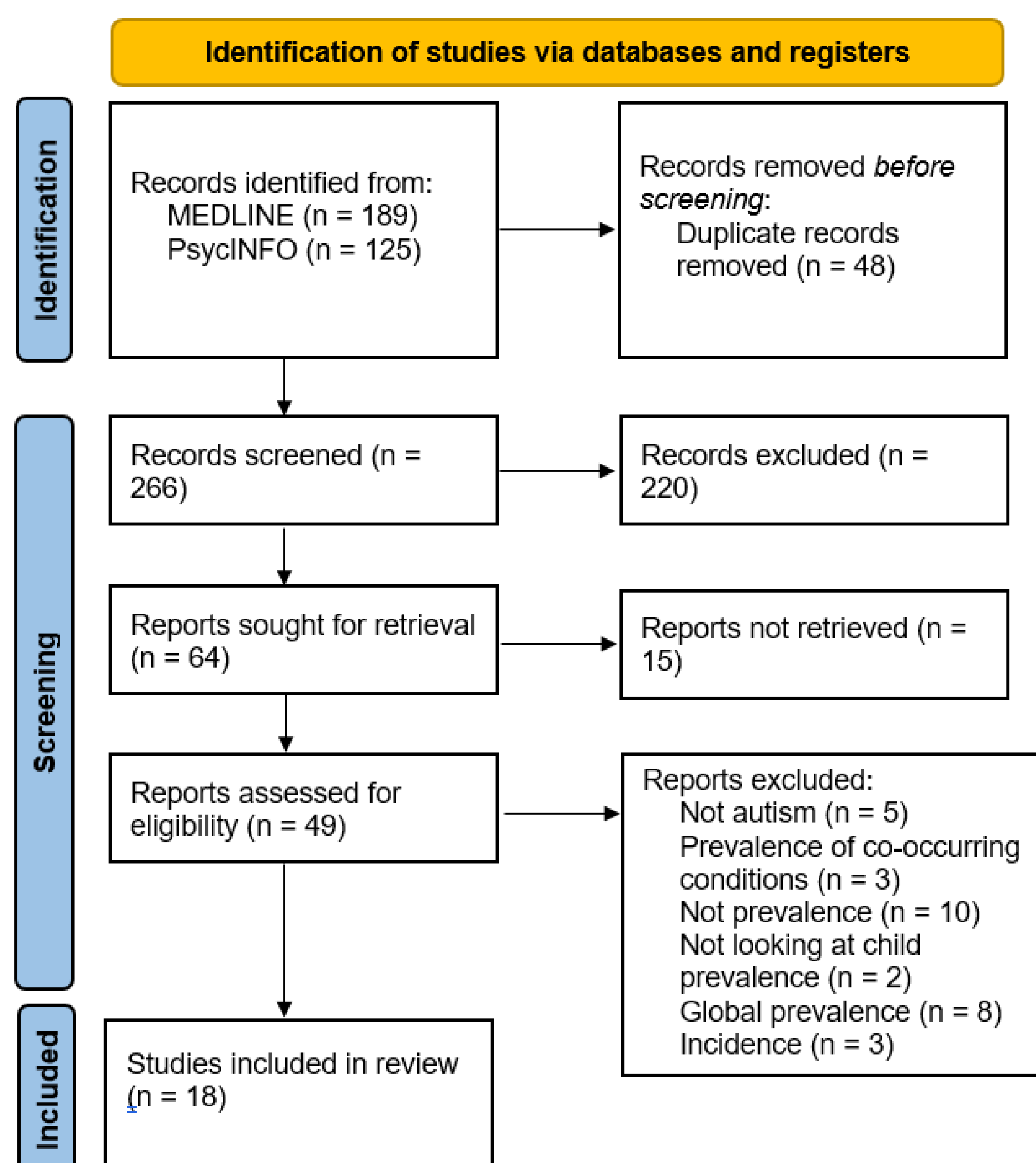


Figure 1. Prisma search and review flow diagram.

The final database search was conducted on 17th February 2023². Search terms included "autism" and "autism" prevalence. For full list of search terms, see Table 1. Studies between 2021 and 2023 were extracted. Prevalence data per 10,000 population were extracted and prevalence according to ethnicity was calculated.

Key concept	Search terms used
Autism	Autism OR Autism Spectrum Disorder
Prevalence	"autism prevalence" "autism disorder prevalence" "autism epidemiology" "incidence" "prevalence"

Table 1. Search terms used.

Area/Region	First Author/Year of Publication (Year of Prevalence Estimate)	Age Range	Ethnicity (per 10,000)	Diagnostic Criteria/Tools	Case Detection Based On	ASD Prevalence per 10,000	95% CI
England, UK	Roman-Urrestarazu et al., 2021 (2017) ³	2-21	184 (White), 106 (Asian), 211 (Black), 159 (Chinese), 85 (Roma/Irish Traveler), 188 (Mixed)	ICD-10	Spring School Census 2017 from the Pupil Level Annual Schools Census of the National Pupil Database	176	175-177

Table 2. Prevalence studies from Europe.

Area/Region	First Author/Year of Publication (Year of Prevalence Estimate)	Age Range	Ethnicity (per 10,000)	Diagnostic Criteria/Tools	Case Detection Based On	ASD Prevalence per 10000	95% CI
USA (National)	Maenner et al., 2021 (2018) ⁴	8-year-olds	516 (White), 212 (Black), 205 (Hispanic), 60 (Asian/Pacific Islander), 6 (American Indian/Alaska Native)	ICD-9, ICD-10	Health, service, or education records	230	223-236
USA (National)	Yuan et al., 2021 (2014-2019) ⁵	3-17	265 (Non-Hispanic White), 285 (Non-Hispanic Black), 194 (Hispanic)	Unknown	National Health Interview Survey	253	229-268
USA (National)	Li et al., 2022 (2019-2020) ⁶	3-17	Non-Hispanic White (316 in 2019, 318 in 2020), Non-Hispanic Black (208 in 2019, 522 in 2020), Hispanic (254 in 2019, 322 in 2020)	Unknown	National Health Interview Survey (NHIS)	279 (2019), 349 (2020)	234-324 (2019), 181-415 (2020)
New Jersey, USA	Shenouda et al., 2022 (2016) ⁷	8-year-olds	460 (Non-Hispanic White), 340 (Non-Hispanic Black), 280 (Hispanic)	DSM-5	Population-based surveillance for ASD, developed by the CDC-National Centre on Birth Defects and Developmental Disabilities (NCBDDD)	360	340-380
New York-New Jersey Metropolitan Area	Shenouda et al., 2023 (2018) ⁸	8-year-olds without ID	42 (Non-Hispanic White), 50 (Non-Hispanic Black), 93 (Hispanic)	DSM-IV-TR, DSM-5	Data from 2000 to 2016 active Autism and Developmental Disabilities Monitoring (ADDM) Network surveillance	96 in 2000, 318 in 2016	85-107; 2000; 300-338 in 2016

Table 3. Prevalence studies from North America.

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