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# Teacher Attitudes Towards Inclusive Education: A Meta- Analysis

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# Inclusive Education

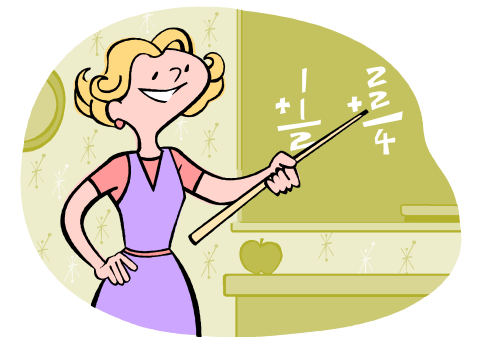
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- What is inclusion?
- Educational legislations which mandate inclusion are now in effect across the world
  - (United Nations Convention on the Rights of the Child, 1989, 2006; UNESCO Salamanca Statement, 1994; No Child Left Behind Act, 2001; Convention on the Rights of Persons with Disabilities, 2006, 2014)
- How does this impact teachers' roles
  - Classroom adaptations must be made
  - Mixed evidence to support the use of these
- Evidence suggests that teachers' inclusive classroom behaviour is influenced by their attitudes towards inclusion (e.g. Monsen et al., 2014; Wilson et al., 2016, 2018)

# Teacher Attitudes

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- Research has focussed on teacher attitudes towards inclusion
- Inconsistent findings;
  - Some have reported teachers to have positive attitudes towards inclusive education (e.g. Avramidis, et al., 2000; Avramidis & Kalyva, 2007; Segal & Campbell, 2012; Wilson et al., 2016)
  - Others report attitudes to be neutral (e.g. Galovic, et al., 2014; Kuyini & Mangope, 2011; Memisevic & Hodzic, 2011)
  - Or negative (e.g. Alquraini, 2012; Rakap & Kacmarek, 2010; Symeonidou & Phtiaka, 2009; Thaver & Lim, 2014)
- This variability raises questions regarding the nature of teacher attitudes
- Further, few studies investigate why these attitudes differ



# Previous Meta-Analysis

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- Scragg and Mastropieri (1996) were the first to use meta-analysis to examine teachers' perceptions of inclusion
  - Results from 28 studies demonstrated that around two thirds of the sample supported the concept of inclusion but a smaller number were willing to include a child with a disability
  - Only around half of the sample believed there were benefits of inclusion
- Limitations
  - Out of date?
  - A need to consider attitude strength
  - Didn't examine origin of attitudes

# Factors which may influence attitudes

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## Study characteristics

- Year of publication
- Type of disability
- Questionnaire response rate

## Participant characteristics

- Type of teacher
- Teacher sex

# A role of culture?

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- Given that inclusive education legislation is enforced globally, research on teacher attitudes towards inclusion has been conducted in many countries.
- Very little work examining the role of culture on teacher attitudes
- Leyser, et al. (1994) conducted a cross-cultural study of teacher attitudes towards inclusive education
  - USA, Germany, Israel, Ghana, Taiwan and the Philippines
  - Results suggested that there were differences in attitudes between countries with teachers in the USA and Germany holding the most positive attitudes. Attitudes of teachers in the other nations represented were predominantly neutral
- Country specific factors affect teacher attitudes – resources and lack of training?
- Importance of Hofstede's (1984, 2001) six cultural values; power distance, individualism, masculinity, uncertainty avoidance, long term orientation and indulgence. These components are commonly considered in cross-cultural research.

# Our study

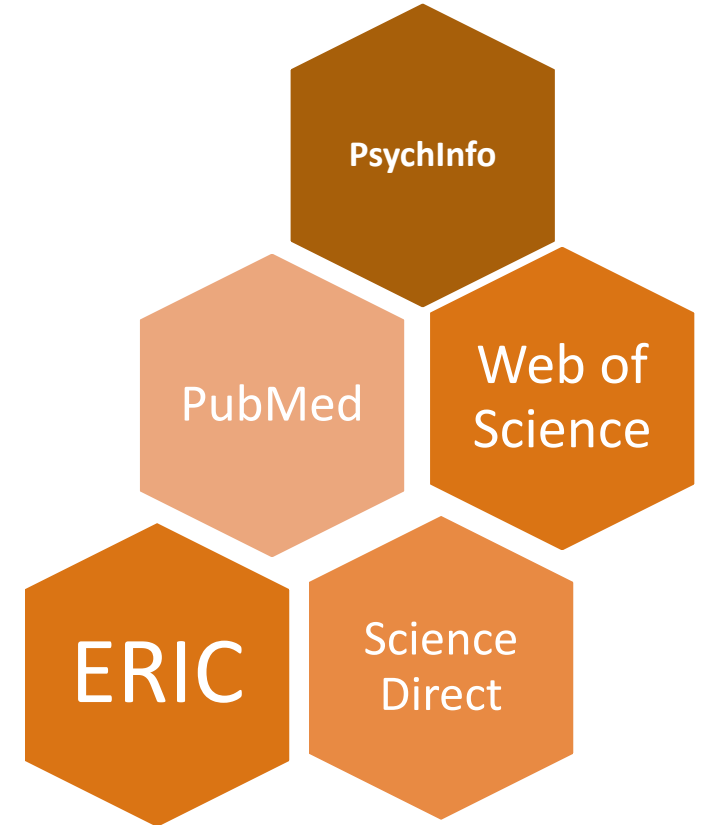
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- Three gaps in the inclusion literature
  1. We need to determine teachers' general attitudes towards inclusive education
  2. We need conclusive evidence as to whether study characteristics or personal demographics influence attitudes
  3. We need to assess the impact of cultural factors
  
- To address these gaps
  1. We conducted a meta-analysis of teacher attitudes towards inclusion to determine the direction and strength of attitudes
  2. We then conducted moderator analyses to investigate potential study, individual and cultural factors that moderate these attitudes

# Search Strategy

Search terms used were:  
Teacher\* AND attitude\* OR  
belief\* AND inclusive education  
OR inclusion OR mainstream\*  
OR child\* with disability\*

Published 1995– 2019 (included  
2019 early access)





# Inclusion Criteria

- To be included, studies needed to quantitatively investigate teachers' attitudes towards inclusion of children with disabilities

Excluded



Used a qualitative design



Did not report attitudes



Focused on attitudes towards specific students teachers worked with



Used vignette to gauge responses in hypothetical situation



Involved subject specific teachers rather than those who teach the whole curriculum

# Moderators

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## Study Characteristics

- Year of pub
- Type of disability
- Response rate

## Participant Characteristics

- -Type of teacher
- Teacher sex

## Cultural Factors

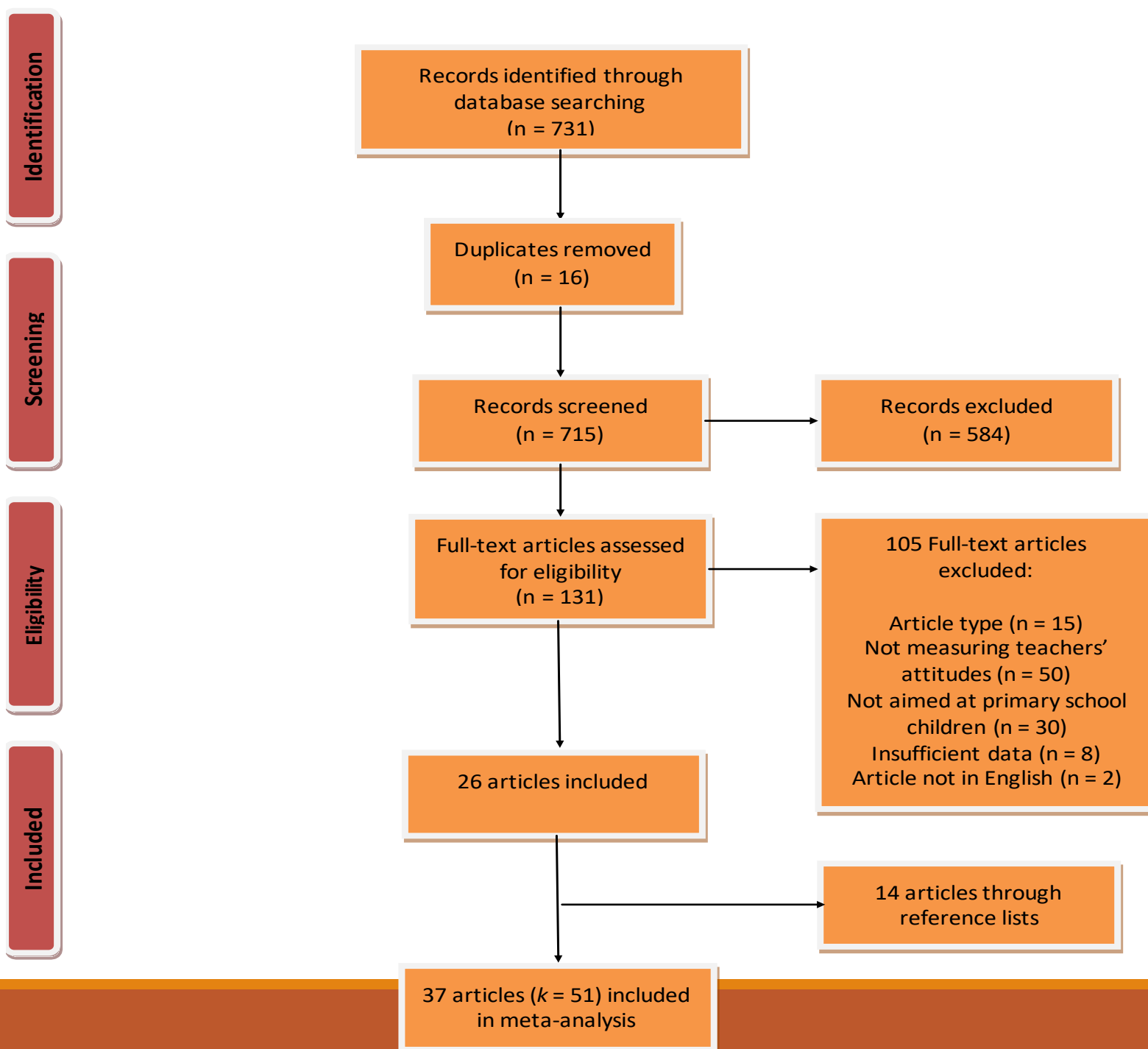
Hofstede's cultural dimensions (power distance, individualism, masculinity, uncertainty avoidance, long-term orientation and indulgence)

# Meta-analysis strategy

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- Attitude mean and SD were extracted. If a study reported multiple means and standard deviations these were transformed into a single mean and SD by averaging the means and pooling the SDs
- The resulting mean scores were standardised in order to obtain an effect size and to calculate the variance
  - The effect size should be positive if the sample holds a positive attitude and negative if they hold a negative attitude
- The effect size is calculated as:  $d = (\text{Mean} - \text{Neutral Point}) / \text{Standard Deviation}$
- The sampling variance was estimated as:  $\text{Variance} = 1/n + d^2 / (2 * n)$
- The inverse variance was used as weighing factor for each study. A random-effects model was fitted to the data with moderator analyses carried out. The metafor-package for R was used to run the analysis (Viechtbauer, 2010)

# Results



# Results; Overall

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- The 51 comparisons were the basis for our meta-analysis
- We found a medium sized, positive effect indicating that overall, teachers hold positive attitudes towards inclusion of children with disabilities in mainstream schools ( $d+ = 0.42$ , 95%CI [0.20, 0.65])
- No publication bias
  - The possibility of publication bias affecting the overall effect size was investigated using the trim and fill method (Duval & Tweedie, 2000b, 2000a).
  - As the studies in the meta-analysis report attitudes towards inclusion, rather than experimental effects or relationships, we did not expect to find a publication bias, and indeed no such bias was detected with the trim and fill method

# Results; Moderators

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- **No significant effect of response rate on teachers' attitude was found  $Q(1) = 0.60, p = 0.44$**
- **Year of publication**
  - Average increase in attitude of 0.036 per year, suggesting attitudes towards inclusion are becoming more positive as time passes (Zscore = 2.08,  $d+ = 0.04$ , 95%CI [0.00, 0.07],  $p = 0.04$ ).
- **Type of teacher**
  - pre-service teachers show significantly more positive attitudes towards inclusion than primary school teachers (Zscore = 4.02,  $ddiff = 0.96$ , 95%CI [0.49, 1.42],  $p < .0001$ )
- **Teacher Sex**
  - Negative effect of teacher sex when all moderators are included (Zscore = -3.32,  $d+ = -0.02$ , 95%CI [-0.03, -0.01],  $p < .001$ ), indicating that men hold more negative attitudes towards inclusion than women
- **Type of disability**
  - There was also no significant effect of type of disability in the model that includes all moderators (Zscore = -1.01,  $ddiff = -0.31$ , 95%CI [-0.92, 0.29],  $p = .31$ )
- **Cultural dimensions**
  - Masculinity (Zscore = 2.46,  $d+ = 0.04$ , 95%CI [0.01, 0.07],  $p = .014$ ), uncertainty avoidance (Zscore = 3.68,  $d+ = 0.02$ , 95%CI [0.01, 0.03],  $p < .001$ ), long term orientation (Zscore = 3.50,  $d+ = 0.03$ , 95%CI [0.01, 0.04],  $p < .001$ ) and indulgence (Zscore = 4.45,  $d+ = 0.04$ , 95%CI [0.02, 0.05],  $p < .0001$ ) showed positive effects, meaning that increases in countries' scores on these variables is related with more positive attitudes towards inclusion of children with disabilities in mainstream schools

# What does this mean?

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- Our findings indicated that overall, teachers had a positive attitude towards inclusion
- Attitudes are likely the result of a complex interplay of various demographic and cultural factors
  - Individual differences do play a role
- The moderating effects of cultural factors are evidence that attitudes differ across countries
  - Masculinity (cultures which value stereotypically masculine traits such as assertiveness, competition, and material success)
  - Uncertainty avoidance (society's tolerance for ambiguity)
  - Long-term orientation (cultures which encourages perseverance toward results)
  - Indulgence (societies in which individuals have personal control over their lives and decisions)
  - Countries with clear aims, commitment and determination to succeed will be more positive towards inclusive education
- The study brings us closer to understanding the nature of teacher attitudes towards inclusion and can inform the development of interventions aimed at enhancing these beliefs

# Thanks for listening!

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