FNJN

İSTANBUL UNIVERSITY CERRAHPAŞA

Florence Nightingale Journal of Nursing

DOI: 10.5152/FNJN.2025.24203

Research Article

Attitudes of Primary School-Age Children Toward Peers with Disability Enrolled in Inclusive Governmental Schools in Egypt: A Cross-Sectional Study

Hassnaa Alaa Eldin Barakat Elsherbini[1], Lamiaa Amin Awad[2], Wafaa Hamed Elshafie[2]

[1]Technical Institute of Nursing, Mansoura University Faculty of Nursing, Mansoura, Egypt
[2]Community Health Nursing, Mansoura University Faculty of Nursing, Mansoura, Egypt

Cite this article as: Alaa Eldin Barakat Elsherbini, H., Amin Awad, L., & Hamed Elshafie, W. (2025). Attitudes of primary school-age children toward peers with disability enrolled in inclusive governmental schools in Egypt: A cross-sectional study. *Florence Nightingale Journal of Nursing*, *33*, 0203, doi:10.5152/FNJN.2025.24203.

What is already known on this topic?

- *Peer attitudes significantly influence social inclusion of children with disabilities in schools.*
- *Prior contact, parental views, and teacher behaviors shape children's disability attitudes.*
- *Research on disability attitudes in governmental schools in developing regions remains limited.*

What does this study add to this topic?

- *Fills a regional research gap by providing the first empirical assessment of primary school-age children's attitudes toward peers with disabilities in inclusive governmental schools in Egypt, addressing the scarcity of data in developing contexts.*
- *Highlights domain-specific nuances in these attitudes, showing that the behavioral component scored highest, while the affective component scored lowest—insights that can guide targeted inclusive-education efforts.*
- *Demonstrates the influence of gender and personal contact, with girls exhibiting more positive overall attitudes than boys, and children who have a close friend or relative with a disability scoring significantly higher in both behavior and total CATCH measures.*

Abstract

AIM: This study aimed to identify the attitudes of primary school-age children toward peers with disabilities enrolled in inclusive governmental schools.

METHOD: A descriptive design using the Chedoke–McMaster Attitudes Toward Children with Handicaps Scale (CATCH) in addition to sociodemographic data was implemented to gather data from 478 primary school-aged children from (grades 5 and 6) at El-Mansoura inclusive governmental primary schools in Egypt. The data were collected for 2 months (from February 12 to April 12, 2023).

RESULT: Primary school-age children had a positive attitude toward their peers with disabilities (M = 20.93, SD ± 2.88). Among the participants, girls had higher CATCH total scores than boys. The finding suggests that having relatives or friends with disabilities is associated with higher scores in the Behavior domain and the total CATCH score among female and male school-age children.

CONCLUSION: Primary school-age children had a positive attitude toward their peers with disabilities, with the mean score on behavior being the highest while the one on effect was the lowest; girls and boys who had a close friend or family member with disabilities had significantly higher overall scores compared to their peers who did not have such relationships.

Keywords: Attitudes, disability, inclusive schools, school-age children

Introduction

In Egypt, the establishment of inclusive education in government schools is hindered by notable obstacles, such as insufficient financial resources and a need for well-trained instructors capable of adapting the curriculum for students with unique needs (Elzalabany, 2024). The efficacy of inclusive education for children with disabilities, especially those with intellectual disabilities (ID), hinges upon the synergistic endeavors of the government, educators, and parents. The endeavors to enhance inclusive practices in Egypt strive to provide an exceptional education to all students, devoid of bias, in accordance with international and national legislation that advocates for equal opportunity for children with special needs (Metwally et al., 2023a).

Attitudes significantly impact behavior because they may accurately anticipate and cause it, particularly when firmly ingrained in a person's fundamental beliefs or social loyalties (Johnson et al., 2022). Upon encountering relevant things, these mechanisms are triggered spontaneously and might result in motivated reasoning, influencing humans' perception and interaction with the environment (Johnson et al., 2022). Attitudes play a crucial role not just in psychology but also in other domains such as health care, organizational behavior, and entrepreneurship,

Corresponding author: Hassnaa Alaa Eldin Barakat Elsherbini,
E-mail: hanyeleraky94@gmail.com

Received: August 29, 2024
Revision Requested: November 14, 2024
Last Revision Received: November 20, 2024
Accepted: March 11, 2025
Publication Date: July 21, 2025

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License

influencing decisions about lifestyle and the quality of a person's life (Fava et al., 2023; Kammeyer-Mueller et al., 2024). Furthermore, attitudes strongly correlate with learning and motivation, influencing behavior and the inclination to participate in educational endeavors (Reid & Amanat Ali, 2020). In general, attitudes significantly influence behavior and direct actions, choices, and reactions in several areas of life.

The fastest-growing minority in the world is people with disabilities. Among Egyptian children ages 1–6, a significant frequency of disabilities was discovered. Nine percent of youngsters had one or more disabilities (Metwally et al., 2023a). Early disability screening is recommended to facilitate timely interventions for identified disabilities (Metwally et al., 2023b). With the shame associated with disclosing a disability, it can be presumed that this figure is much higher. When people talk about disabilities, they typically concentrate on the most basic accommodations—like captioning, interpreters, or ramps—related to them (Saia, 2023). The goal of inclusive education is social justice and equality through integrating disabled children into the educational process and making accommodations for them in primary schools. From a social perspective, inclusive education looks at the program and approach rather than the child as the source of the issue (Hasan et al., 2018).

There are several persuasive arguments for supporting inclusionary education (IE). Inclusionary education provides many benefits for schoolchildren with special educational needs (SEN): decreased instances of improper behavior, increased achievement of individual learning goals, participation in future inclusive settings and social interactions, enhanced acquisition and application of skills, and expanded social connections (Van Mieghem et al., 2018).

Regular schools typically provide inclusive classes (those with at least one kid with SEN) and regular classes (those without any students with impairments). Furthermore, the quantity of spots schools provide for kids with SEN limits parents' rights. Although they cannot select the school, parents have the right to enroll their child in an inclusive school (Paseka & Schwab, 2019).

There is a lack of research investigating the specific attitudes of primary school-age children toward their companions with disabilities in inclusive governmental institutions. Although some extant research examines the attitudes of individuals with disabilities in general, there is a need for more focused research that investigates the attitudes of children toward their classmates with disabilities in the school context. Therefore, gaining insight into these attitudes is crucial within the inclusive education framework to develop a nurturing and inclusive atmosphere for all students. It is crucial to identify the attitudes of primary school-age children toward peers with disabilities in inclusive governmental schools in Egypt.

Research Question

- What are primary school-aged children's attitudes toward peers with disabilities enrolled in inclusive governmental schools?

Methods

Study Design

A cross-sectional descriptive.

Sample

Mansoura: El-Khaireia The sample study design and this study adhere to the STROBE Statement's reporting requirements for observational studies. The study was accomplished at Mansoura primary governmental schools located in Dakahlia Governorate, Egypt. The total number of schools was 73, divided into 24 primary schools affiliated with the eastern district and 49 primary schools affiliated with the western district of Mansoura. Researchers randomly chose two schools related to the eastern district of Mansoura: El-Khaireia Primary School in a rural area and another Gezeret Elward Primary School in an urban area in the eastern district. We chose by simple random two schools related to the western district of Mansoura, one of them, Meniat Sandoop Primary School, in a rural area in the western district, and another, Khaled Iben Elwalid Primary School, in an urban area in the western district.

Stratified random sampling was used to ensure that the required population of primary school-age children was selected from grades five and six who enrolled in the selected inclusive governmental primary schools in Mansoura city. The required sample size was 478 primary school-age children. Researchers randomly recruited 159 children from the eastern district and 319 from the western district. Using data from the study by Olaleye et al. (2012), the sample size can be computed using the following formula (1), considering a 5% level of significance and an 80% power of study:

$$n = \frac{(Z1-\alpha/2)\text{^}2.SD\text{^}2}{d\text{^}2}. \quad (1)$$

The standard normal variate is $Z1-\alpha/2 = 1.96$ at 5% type 1 error, where SD stands for the variable's standard deviation and d for absolute error or precision. So (2),

$$n = \frac{(1.96)\text{^}2.(3.79)\text{^}2}{(0.34)\text{^}2} = 477.3. \quad (2)$$

Data Collection Tools

After reviewing pertinent literature, the investigator modified a structured interview questionnaire to gather the data (Olaleye et al., 2012). It consisted of two main sections:

Part I: Demographic Structured Interview Questionnaire

This part consisted of the participants' demographic characteristics, such as age, sex, school name, grade of study, and whether they had a close friend or relative with a disability.

Part II: Chedoke–McMaster Attitudes toward Children with Handicaps Scale (CATCH) scale: Arabic version

The CATCH scale, developed by Rosenbaum et al. (1986b), is a self-administered tool designed to assess the attitudes of children aged 9 to 13 toward peers with disabilities (Rosenbaum et al., 1986). The CATCH scale is a questionnaire with 36 items that generate responses on a Likert scale from 0 to 4 (0 = strongly disagree, 4 = strongly agree) (March-Llanes et al.,

2023). Each has twelve items related to affect, behavior, and cognition. In this study, the researchers used an Arabic version (Alnahdi, 2020). The scale's negative items were coded in the opposite direction. A minimum achievable CATCH score of 10 and a maximum of 30 were obtained by averaging all the items on each attitude component—affect, conduct, and cognition—and multiplying by ten. High scores indicated more positive attitudes. To determine each participant's overall CATCH score, the 36 items on the CATCH scale were also subjected to a similar analysis (Alnahdi, 2020). In this study, Cronbach's alpha was 0.89 (this means the tool is highly reliable).

Data Collection

A pilot study was conducted on (n = 48) of the study sample, who were excluded from the main study sample before the start of data collection to evaluate the clarity and applicability of the tools used in the study; no adjustments needed to be mentioned.

The data were collected over 2 months (from February 12 to April 12, 2023). The researchers visited the selected primary schools on Sundays and Mondays weekly from 9 AM to 1 PM. The researchers started the data collection process by introducing themselves to the participants and providing them with a succinct explanation of the purpose and design of the study. Data were gathered in the classes. With the help of the class teachers, questionnaires were given to the pupils, and it took them 20–25 minutes to complete.

Statistical Analysis

The statistical analyses were conducted using SPSS for Windows version 25.0 (SPSS, Chicago, IL). The continuous data were reported as the mean and standard deviation (SD) with a normal distribution. Categorical data were represented using numerical values and percentages. The t-test was used to compare two variables with continuous data. In contrast, the one-way analysis of variance (ANOVA) test was utilized for comparisons involving more than two variables with continuous data.

Ethical Considerations

The researcher obtained approval from the Research Ethics Committee of the Faculty of Nursing, Mansoura University (Date: 13.11.2022; Approval no: IRB00000273). Then, the researchers obtained official approval from the directorate at ansoura Mansoura primary schools in the selected setting for data collection from school-age students. The researcher obtained the guardians' consent from the participants after informing them about the purpose of the study. The researcher assured that participation in the study was voluntary, that the collected data was treated confidentially and used only for the study, and that the participants had the right to withdraw at any time. The results were used as a component of the necessary research, as well as for further publications and education.

Results

Demographic Characteristics of Primary School-Age Children

Table 1 shows that about 51.5% of the primary school children were aged 12 to less than 13 years old. Regarding gender, females constituted about 51.0%. Among the schools, Khaled Ibn El-Walid primary school composed about 39.9% of the selected sample, with level six constituting the highest percentage of all study samples at about 51.5%. Concerning relatives or friends with disabilities, about 60.7% of primary school children had them. Finally, primary school children who had a mother with a disability represent 32.1%, and those with a father with a disability represent 32.1%.

Table 1.
Demographic Characteristics of Primary School-Age Children (Sample Size = 478)

Items	No	%
Child's age (years)		
11 to < 12	232	48.5
12 to < 13	246	51.5
Gender		
Male	234	49.0
Female	244	51.0
School name		
El-Khaireia School	65	13.6
Gezeret Elward Primary School	94	19.7
Meniat Sandoop Primary School	128	26.8
Khaled Ibn El-Walid Primary School	191	39.9
Grade of study		
Grade 5	232	48.5
Grade 6	246	51.5
Relatives or friends with disability		
No	188	39.3
Yes	290	60.7
If yes, who (n = 290)		
Sibling	23	7.9
Relatives of mother's family	93	32.1
Relatives of father's family	93	32.1
Friend	81	27.9

The mean scores for *CATCH domains of school-age students*

Table 2 illustrates that primary school-age children showed compassion for their classmates who were disabled (M = 20.93, SD ± 2.88). Specifically, the mean scores for affect, behavior, cognition, and the total CATCH score are relatively close, ranging from 20.79 to 21.06. The total CATCH score has a mean of 20.93, with a standard deviation of 2.88, suggesting a moderately positive attitude.

Table 2.
The Mean Scores and Standard Deviations for CATCH of School- Age Students 'Response

Items	Mean ± SD
Affect	20.79 ± 1.88
Behavior	21.06 ± 7.65
Cognition	20.92 ± 2.67
CATCH total score	20.93 ± 2.88

Note: SD = standard deviation.

Tables 3 and 4 display that among the participants, female school-age children scored higher overall than male school-age children. Female school-age children with a close friend or family member with a disability scored considerably higher overall ($M = 22.46$, SD ± 2.29) ($T = 12.294$, $p < .001$) compared to their classmates without such a relationship ($M = 18.89$, SD ± 1.96). However, the total scores of male school-age children who did not have a close friend or relative with a disability were much lower ($M = 18.90$, SD ± 2.14) ($T = 9.056$, $p < .001$) compared to those who did ($M = 21.97$, SD ± 2.86). Tables 6 and 7 show a similar pattern in the differences between the scores of male and female school-age children participants on effect, behavior, and cognition. The finding also suggests that having relatives or friends with disabilities is associated with higher scores in the behavior domain and the total CATCH score among female and male school-age children. Tables 3 and 4 also show a similar pattern in the differences between the scores of male and female school-age children participants on effect, behavior, and cognition. The finding also suggests that having relatives or friends with disabilities is associated with higher scores in the behavior domain and the total CATCH score among female and male school-age children.

Discussion

This study aimed to investigate how elementary school-aged children felt about their classmates who were enrolled in inclusive governmental schools but had disabilities. Generally speaking, the attitudes that children with disabilities' peers develop toward them from a young age have a significant impact on their lives. Positive affective attitudes are not innate; they can be acquired via exposure, education, and the encouragement of an inclusive society.

This indiscriminate positivity may be the result of a gender-specific response bias rather than real gender disparities in perceptions of disabled children. One possible explanation for girls' optimism could be their heightened emotional sensitivity, empathy, compassion, or propensity for prosocial conduct Gökbulut et al. (2017), all of which are probably the outcome of historical variations in expectations and social conventions, as well as socialization techniques between genders.

Primary school-age participants in this study ($M = 20.93$, SD ± 2.88) showed good attitudes toward their peers with impairments. In inclusive classrooms, students with disabilities frequently struggle with friendships, peer relationships, and acceptance. This study investigated how these issues with social engagement relate to the opinions that typically developing teenagers who are generally developing have about their classmates with disabilities. A study by Petry (2020) involved 1866 typically developing classmates, 86 children with autism spectrum disorder (ASD), and 61 children with sensory and motor difficulties (FYS) enrolled in secondary school for the first time. According to the results, students with ASD and FYS experienced lower levels of peer acceptance, fewer reciprocal friendships, and decreased peer engagement compared to their typically developing peers. Additionally, typically developing adolescents' attitudes toward their classmates with disabilities were found to be neutral at the class level. This aligns with prior research that has shown that when typically developing youngsters interact and get an education alongside children with disabilities, it fosters more favorable views toward those with disabilities (Gumus & Oncel, 2020).

In the current study, the behavior category had the greatest mean score, while the effect category had the lowest. Similarly, the CATCH questionnaire outcome measure revealed no statistically significant difference in the total attitude scores for the control group. However, the experimental group's total CATCH attitude scores and cognitive and affective components did show statistically significant changes (Gulya & Fehérvári, 2023).

Among the participants, girls had greater scores on the CATCH than males. This is in line with Wang and Qi (2019), who indicated that girls were positive toward the inclusion of students with disabilities. Also in agreement with (Dias et al. 2020; Wang & Qi, 2019), who stated girls have more positive attitudes than boys. The total scale scores of the female students in the study were substantially higher than those of male students ($p < .001$). A notable disparity was also seen between female students'

Table 3.
Association Between Having Relatives or Friends with Disability With the CATCH Domains and Total Score for Male School-Age Children

	I Do Not Have Relatives or Friends With Disability		I Have Relatives or Friends With Disability		Student's *t*-test	
Items	**Mean ± SD**		**Mean ± SD**		***t***	***P***
Affect	(Maximum range = 24)		(Maximum Range = 26)			
Mean score	20.53 ± 1.65	85.54%	20.87 ± 2.01	80.26%	1.385	.167
Behavior	(Maximum range = 30)		(Maximum range = 30)			
Mean score	15.68 ± 5.36	52.26%	23.75 ± 7.61	79.16%	9.104	<.001**
Cognition	(Maximum range = 25)		(Maximum range = 26)			
Mean score	21.09 ± 2.88	84.36%	20.97 ± 2.81	80.65	0.320	.748
CATCH total score	(Maximum range = 25)		(Maximum range = 26)			
Mean score	18.90 ± 2.14	75.60%	21.97 ± 2.86	84.50%	9.056	<.001**

Note: SD, = standard deviation. *Statistically significant *p*-value at ≤ .05.

Table 4.
Association Between Having Relatives or Friends With Disability With the CATCH Domains and Total Score for Female School-Age Children

	I Do Not Have Relatives or Friends With Disability		I Have Relatives or Friends With Disability		Student's *t*-test	
Items	**Mean ± SD**		**Mean ± SD**		***t***	***p***
Affect	(Maximum range = 24)		(Maximum range = 26)			
Mean score	20.89 ±1.65	87.04%	20.84 ± 2.01	80.15%	0.198	.842
Behavior	(Maximum range = 30)		(Maximum range = 30)			
Mean score	15.84 ± 4.95	52.8%	25.07 ± 6.47	83.56%	11.585	<.001**
Cognition	(Maximum range = 25)		(Maximum range = 25)			
Mean score	20.48 ± 2.49	81.92%	21.01 ± 2.52	84.04%	1.585	.114
CATCH total score	(Maximum range = 22)		(Maximum range = 26)			
Mean score	18.89 ± 1.96	85.86%	22.46 ± 2.29	86.38%	12.294	<.001**

Note: SD = standard deviation. *Statistically significant *p* value at ≤ .05

interaction/acceptance and avoidance sub-dimensions (Gumus et al., 2021).

Gender is the most common personal characteristic that influences attitudes toward children with special education needs (SEN). Studies by Schwab et al. (2018) found that girls have more positive attitudes than boys. From the researcher's point of view, several factors may contribute to girls generally having more positive attitudes toward those with disabilities compared to boys. Here are a few possible explanations: Socialization and empathy: Girls may be socialized differently than boys, with greater emphasis placed on empathy, nurturing, and caring behaviors. This socialization can increase sensitivity and understanding of others' experiences, including those with disabilities.

It may be related to communication and emotional expression: girls often develop language and communication skills earlier than boys. This may enable them to understand and express emotions better, facilitating greater empathy and positive attitudes toward children with disabilities. In addition, girls typically engage in more collaborative and inclusive play than boys. This greater emphasis on social relationships and cooperation may contribute to more positive attitudes toward peers with disabilities and a willingness to include them in social activities.

According to the current study's results, pupils with a family member or close acquaintance with a handicap scored much higher overall than their classmates who did not. Numerous authors' investigations, such as those of Alnahdi (2019) and Gonçalves and Lemos (2014), are consistent with these findings. The results showed that attitudes are more favorable in the affective, cognitive, and behavioral dimensions, as well as in the total scale scores, when the peers have greater proximity to and contact with others with disabilities. The frequency of contact or the actual amount of time spent with a person with a disability is a factor shaping people's attitudes. Negative attitudes of children with impairments impede their social engagement in academics, organized sports, and other activities. Positive attitudes will provide enhanced advantages from inclusive programming, including classroom and learning environment integration. Interaction may enhance favorable perceptions of children with disabilities among their non-disabled peers. Essential factors like gender, culture, age, financial background, and interactions with individuals with disabilities may affect the attitudes of peers without disabilities toward children with disabilities (Bradburn et al., 2024).

From the researcher's point of view, this may be due to personal experience and empathy; having a close friend or relative with a disability allows students to develop firsthand experience and understanding of disability-related challenges. This personal exposure can foster empathy and a greater appreciation for the abilities and strengths of individuals with disabilities. Also, interacting regularly with a friend or relative who has a disability can normalize disability and reduce stigma. As a result, students may feel more comfortable and accepting when interacting with their disabled peers, as they are already accustomed to the unique needs and experiences of individuals with disabilities.

This study has certain drawbacks. Initially, despite the researcher's best efforts to include many participants, the sample was selected to guarantee the students' participation in completing the questionnaire. The researcher used a stratified cluster sampling technique to select schools where data could be accessed and gathered. Second, this survey solely included government schooling institutions. As a result, it is possible that the study's findings do not accurately reflect all Egyptian students. It is imperative to underscore the significance of expanding upon the findings in subsequent research using distinct samples from the Egyptian populace.

Conclusion and Recommendations

The current study's results, which showed that primary school-age children had the highest mean behavior score and the lowest mean affect score, indicated a good attitude toward their friends with disabilities. Female and male school-age children who had a close friend or relative with a handicap also had significantly higher total scores than their contemporaries without such a relationship. However, female school-age children who were close to someone with a disability received much higher scores overall.

Based on the current study's findings, the following recommendations are suggested: for community health nurses: carrying out continuous educational programs and refreshing workshops for the role of community nurses in changing negative attitudes of primary school-age children toward peers with a disability enrolled in inclusive governmental schools. Developing standardized care policies or guidelines to reduce negative attitudes of primary school-age children toward peers with a disability enrolled in inclusive governmental schools.

Study Limitations

The sample was limited to government schools and selected through stratified cluster sampling, which may affect the generalizability of the findings. Future research could include a broader range of schools and participant demographics. The assumption was made that the students in the present study had comparable socioeconomic levels. However, this may be very different from what happens. In addition, the CATCH scale did not provide any precise definition of impairment. This approach is justified since children with any handicap evoke identical attitudes regarding quality, even if they may evoke varying attitudes in quantity.

Data Availability: The datasets used in the research can be obtained from the corresponding author upon request.

Ethics Committee Approval: The researchers received ethical permission for this study and data collection from the Research Ethical Committee (REC) of El-Mansoura University's Faculty of Nursing (Date: 13.11.2022; Approval no: IRB00000273).

Informed Consent: Written consent forms were obtained from all participants who provided informed consent.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – H.A.E.B.E.; Design – H.A.E.B.E.; Supervision – L.A.A.; Resources – H.A.E.B.E.; Materials – H.A.E.B.E.; Data Collection and/or Processing – W.H.E.; Analysis and/or Interpretation – W.H.E.; Literature Search – H.A.E.B.E.; Writing Manuscript – H.A.E.B.E.; Critical Review – L.A.A.

Declaration of Interests: The authors declare that they have no competing interest.

Funding: The authors declared that this study has received no financial support.

References

Alnahdi, G. H. (2019). The positive impact of including students with intellectual disabilities in schools: Children's attitudes towards peers with disabilities in Saudi Arabia. *Research in Developmental Disabilities*, *85*, 1–7. [CrossRef]

Alnahdi, G. H. (2020). The construct validity of the Arabic version of the Chedoke-Mcmaster attitudes towards children with handicaps scale. *Cogent Education*, *7*(1), 1745540. [CrossRef]

Bradburn, S. M., Ryan, M. C., & Leung, W. (2024). Factors influencing children's attitudes toward their peers with disabilities. *Journal of Physical Education, Recreation and Dance*, *95*(3), 56. [CrossRef]

Gumuş, E. C., & Öncel, S. (2020). Validity and reliability of the Chedoke-McMaster attitudes towards children with handicaps scale in Turkey: A methodological study. *Florence Nightingale Journal of Nursing*, *28*(1), 1–12. [CrossRef]

Dias, P. C., Mamas, C., & Gomes, R. (2020). Attitudes of students towards peers with special educational needs in mainstream Portuguese schools. *European Journal of Special Needs Education*, *35*(5), 636–647. [CrossRef]

Elzalabany, S. R. (2024). Exploring school leaders' and parents' attitudes toward implementing an organizational system for academic diversity and inclusion in international schools in Egypt. *International Journal of Developmental Disabilities*, *70*(6), 998–1009. [CrossRef]

Fava, G. A., Cosci, F., Sonino, N., & Guidi, J. (2023). Understanding health attitudes and behavior. *American Journal of Medicine*, *136*(3), 252–259. [CrossRef]

Gökbulut, Ö. D., Gökbulut, B., & Yeniasır, M. (2017). Social acceptance of students with special needs from peer viewpoint. *Eurasia Journal of Mathematics, Science and Technology Education*, *13*(11). [CrossRef]

Gonçalves, T., & Lemos, M. (2014). Personal and social factors influencing students' attitudes towards peers with special needs. *Procedia – Social and Behavioral Sciences*, *112*, 949–955. [CrossRef]

Gulya, N., & Fehérvári, A. (2023). The impact of literary works containing characters with disabilities on students' perception and attitudes towards people with disabilities. *International Journal of Educational Research*, *117*, 102132. [CrossRef]

Gumuş, E., Alan, H., Taşkıran Eskici, G., & Eşkin Bacaksız, F. (2021). Relationship between Professional Quality of Life and work alienation among healthcare professionals. *Florence Nightingale Journal of Nursing*, *29*(3), 342–352. [CrossRef]

Hasan, M., Kumar Halder, U., & Debnath, D. (2018). *Inclusive education and education for all*, *5*. http://ijrar.com/

Johnson, B. T., Martinez-Berman, L., & Curley, C. M. (2022). Formation of attitudes: How people (wittingly or unwittingly) develop their viewpoints. In *Oxford research encyclopedia of psychology*. Oxford University Press. [CrossRef]

Kammeyer-Mueller, J. D., Rubenstein, A. L., & Barnes, T. S. (2024). The role of attitudes in work behavior. *Annual Review of Organizational Psychology and Organizational Behavior*, *11*(1), 221–250. [CrossRef]

March-Llanes, J., Mas-Ruiz, L., Moya-Higueras, J., Rius-Torrentó, J., Estrada-Plana, V., Bañeres, J., Lavega-Burgués, P., & Opportunity Team (2023). Chedoke-McMaster attitudes towards children with handicaps scale for traditional sporting games (CATCH-TSG): Initial validation in 7 different languages in adult and young populations. *Frontiers in Psychology*, *14*, 1254580. [CrossRef]

Metwally, A. M., Salah El-Din, E. M., Abdel-Latif, G. A., Nagi, D. A., El Etreby, L. A., Abdallah, A. M., Khadr, Z., Bassiouni, R. I., Abdel Raouf, E. R., Elsaied, A., Elkhatib, A. A., Sallam, S. F., El-Sonbaty, M. M., Shehata, M. A., Elghareeb, N. A., Badawy, H. Y., Ahmed, D. E., Ibrahim, N. A., Emam, H., et al. (2023a). A national screening for the prevalence and profile of disability types among Egyptian children aged 6–12 years: A community-based population study. *BMC Public Health*, *23*(1), 1–16. [CrossRef]

Metwally, A. M., Salah El-Din, E. M., Abdel-Latif, G. A., Nagi, D. A., El Etreby, L. A., Abdallah, A. M., Khadr, Z., Bassiouni, R. I., Abdel Raouf, E. R., Elsaied, A., Elkhatib, A. A., Sallam, S. F., El-Sonbaty, M. M., Shehata, M. A., Elghareeb, N. A., Badawy, H. Y., Ahmed, D. E., Ibrahim, N. A., Emam, H., Abd El Dayem, S. M., et al. (2023b). A national screening for the prevalence and profile of disability types among Egyptian children aged 6–12 years: A community-based population study. *BMC Public Health*, *23*(1), 1599. [CrossRef]

Paseka, A., & Schwab, S. (2019). Parents' attitudes towards inclusive education and their perceptions of inclusive teaching practices and resources. *European Journal of Special Needs Education*, *35*(2), 254–272. [CrossRef]

Petry, K. (2020). The relationship between class attitudes towards peers with a disability and peer acceptance, friendships and peer interactions of students with a disability in regular secondary schools. In S. Schwab, M. Nel & F. Hellmich (Eds.). *Social participation of students with special educational needs in mainstream education* (pp. 92–106). Abingdon, UK: Routledge. [CrossRef]

Reid, N., & Amanat Ali, A. (2020). Beliefs and attitudes: Why do attitudes matter? In *Making sense of learning* (pp. 253–279). Springer International Publishing. [CrossRef]

Rosenbaum, P. L., Armstrong, R. W., & King, S. M. (1986). Children's attitudes toward disabled peers: A self-report measure. *Journal of Pediatric Psychology*, *11*(4), 517–530. [CrossRef]

Saia, T. (2023). Embracing disability culture in schools. *Language, Speech, and Hearing Services in Schools*, *54*(3), 794–798. [CrossRef]

Schwab, S., Sharma, U., & Loreman, T. (2018). Are we included? Secondary students' perception of inclusion climate in their schools. *Teaching and Teacher Education*, *75*, 31–39. [CrossRef]

Van Mieghem, A., Verschueren, K., Petry, K., & Struyf, E. (2018). An analysis of research on inclusive education: A systematic search and meta review. *International Journal of Inclusive Education*, *24*(6), 675–689. [CrossRef]

Wang, L., & Qi, J. (2019). Effect of student-related factors on their attitudes towards peers with disabilities in physical education: Evidence from elementary schools in China. *Asia Pacific Journal of Education*, *40*(2), 143–153. [CrossRef]