

ORIGINAL ARTICLE

Educational Introspections of Medical Students Post Disability Competencies Training: A Qualitative Study

Ashwini Lonimath¹, Suthanthira Kannan², Vinaya M³, Deepthi R⁴, Shivakumar A⁵

^{1,4,5}ESIC Medical College and PGIMSR, Rajajinagar, Bengaluru

²ESIC Medical College, Chennai

³Adichunchungiri Institute of Medical sciences, Mandya

CORRESPONDING AUTHOR

Dr Deepthi R, Associate Professor, ESIC Medical College and PGIMSR, Rajajinagar, Bengaluru 560010
Email: drdeepthikiran@gmail.com

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ABSTRACT

Background: Despite the substantial presence of persons with disabilities (PWD) in the population, they face many barriers in healthcare. Competency-Based Medical Education (CBME) is increasingly used to address these gaps. **Aims and Objective:** This study assesses the impact of disability competencies training on medical students' attitudes towards PWD. It aims to explore new perspectives, identify attitudinal shifts, evaluate training effectiveness, and promote solution-oriented learning. **Materials and Methods:** Five Focus Group Discussions (FGD) with 8 participants each, a series of themes related to the understanding of disability and empathy were explored. The participants, who had undergone training in disability competencies. The FGDs were facilitated by trained moderators and analysed employing thematic analysis and generating tree maps. **Results:** Key themes evolved from the students' new perspectives towards PWD, which included Inclusion and Responsibility, Empathy and Understanding, Managing patients with disabilities, Equity and rights, and Acceptance. Themes also emerged regarding the impact of training, revealing an Attitudinal Shift, Engagement and Interaction, Personal Impact, and Solution-Oriented Learning. **Conclusion:** Disability competency training significantly transforms medical students' attitudes, fostering a more inclusive, empathetic approach in healthcare. This shift is crucial for integrating disability competencies into medical education, especially in developing countries

KEYWORDS

Disability, Medical Students, Qualitative research, Focus Groups, Thematic analysis.

INTRODUCTION

Disability is integral to the Sustainable Development Goals (SDGs), particularly Goal 10, which focuses on reducing inequalities and promoting inclusion for persons with disabilities (PWD) across various sectors. (1)

Over one billion people, about 15% of the global population, have disabilities and face significant healthcare access barriers, leading to poorer health outcomes and quality of life.(2,3,4) People with disabilities have long faced systemic discrimination, including in

healthcare, where professionals often prioritize medical over emotional needs, leading to inadequate care.(5,6,7,8) While 56.5% of doctors welcome these patients, only 40.7% feel confident in providing equal quality care. (9)

Recent developments emphasize inclusivity in healthcare, mandated by the Rights of Persons with Disabilities Act, 2016, aligning with the UNCRPD. Medical education now focuses on empathy and equity, integrating disability competencies essential for recognizing the rights and dignity of persons with disabilities. (10) In response to the UNCRPD, Southeast Asia, including India's NMC, launched a competency-based curriculum in 2019 focusing on disability competencies. (11,12) This study explores the impact of disability competency training on medical students with the following objectives:

1. Explore new perspectives towards inclusion and empathy.
2. Identify attitudinal shifts from sympathy to equality.
3. Assess training effectiveness.
4. Investigate solution-oriented learning approaches.

MATERIAL & METHODS

Study type: Qualitative Study

Study Design: Grounded theory approach

Study setting: Medical College

Study population: Medical Undergraduate Students

Study duration: Dec 2022 to April 2023

Sample size calculation: In this study, we employed purposive sampling to select participants who have undergone disabilities competencies training, aligning with our grounded theory methodology. The sample size was determined based on the principle of saturation, where data collection continued until no new relevant information emerged from participant interviews and focus groups.

Inclusion criteria: Students who had undergone educational intervention on disability competencies

Exclusion criteria: Students who did not consent for the study.

Strategy for data collection: The *disability competencies* sessions spanned over three days and featured a total of seven hours dedicated to teaching and learning activities, as outlined in Table 1. Prior to the intervention, a pretest was administered, consisting of 25 questions. These questions assessed various critical aspects related to disabilities, including knowledge about disability laws and rights, different models of disability, promoting inclusive behavior encompassing disability etiquette, effective verbal and non-verbal communication, non-discriminatory conduct, and considerations of accessibility. For the present study a total of five FGDs were conducted, each with 8 participants, ensuring a diverse and representative sample. The research designed on grounded theory approach, rooted in the constructivist paradigm, offering a dynamic framework for exploring the intricate social phenomena within the context of medical students' post-disability competencies training. The constructivist approach allows for the exploration of these diverse perspectives. This approach's emphasis on reflexivity ensures the researcher's continuous awareness of their influence on the research process and the potential impact on the findings. Through the lens of the constructivist paradigm, the grounded theory approach offered a robust methodology to unravel the intricate layers of medical students' reflections following their disability competencies training, contributing to a nuanced understanding of their educational experiences.

Preparation: A guide was developed to outline the key questions and topics that would be explored during the FGDs. The discussion guide included questions related to the themes identified earlier, such as inclusion, empathy, managing patients with disabilities, equity, and acceptance.

Conducting the FGDs: The FGDs were facilitated by trained moderators, who guided the discussions using open-ended questions. Each session lasted approximately 90 minutes and was audio-recorded with the permission of the participants.

Ethical issues & informed consent: The study was conducted in accordance with ethical

guidelines, and approval was obtained from the Institutional Ethics Committee and permission from respective authorities were obtained, reference no No.532/L/11/12/Ethics/ESIC-MC & PGIMSR/Estt.Vol.IV dated 03.06.2022. Participants were recruited through purposive sampling, ensuring a mix of gender.

Written informed consent was obtained from all participants. The consent form detailed the purpose of the study, the nature of participation, and assured confidentiality.

Data analysis - software, flow diagram:

Transcripts were prepared from the audio recordings and manually coded. Two independent coders then transcribed the same set of recordings and compared their transcriptions to ensure consistency. Any

discrepancies were resolved through discussion and consensus. Following transcription, researchers conducted quality checks by reviewing transcripts for accuracy and completeness. They also adhered to established transcription conventions to enhance readability. Additionally, peer debriefing sessions were held to discuss the transcription process and ensure trustworthiness in representing participants' experiences accurately. Inductive data analysis using thematic coding was employed to identify the key themes, patterns, and insights from the data. Triangulation of the data was done. The treemaps presented in Figures 1 and 2 helped to visualize the frequency of mentions of various codes and themes.

Table 1 : Lesson plan of curriculum to implement disability curriculum among medical students.

Disability Competency	Domain and level	Teaching learning method	Duration
1. Describe disability as per UNCRPD, demonstrating respect for the differences and capacities of persons with disabilities as part of human diversity and humanity.	Knows & Knows How	Interactive Lecture, Doctors Narratives of Treating PWD, Self-directed learning on Rights of persons with disability in India	Day 1 120 min
2. Demonstrate awareness of the disabilities included in the RPWD Act,2016			
3. Compare and contrast medical and social model of disability.	Knows & Knows How	Interactive Lecture, Buzz Groups and exercises	
4. Build an understanding on the disability etiquettes with PWDs	Shows/Attitude & Shows How	Role Play, interactive lecture followed by Small Group Discussions with PWDs , Doctors with disabilities and caregivers	Day 2 120 min
5. Demonstrate the use of verbal and non-verbal empathetic communication techniques while communicating with PWDs			
6. Understanding of accessible healthcare settings for patients with disabilities, including Universal design.	Knows/ Knows How	Interactive Lecture & field visit of campus for surveying accessibility checklist by students.	
7. Demonstrate a non-discriminatory behavior towards patients or caregivers with disabilities	Attitude & Shows How	Forum theater for the oppressed Classroom Session	Day 3 180 min
8. Advocate social inclusion by raising awareness of the human rights of persons with disabilities.	Knows/ Knows How	interactive talk by disability social activist running an NGO Poster display on social inclusion by students	

RESULTS

Figure 1 presents a treemap of codes on newer "Perspectives developed following training" on disability competencies where interview codes are organized by themes and displayed according to the frequency of their mentions,

descending from the most to the least quoted by participants.

Figure 2 shows a treemap showing "Impact codes following training" where codes are organized by themes and displayed according to the frequency of their mentions, from the most to the least quoted by participants.

Figure 1: New Perspectives towards PWDs developed following training.

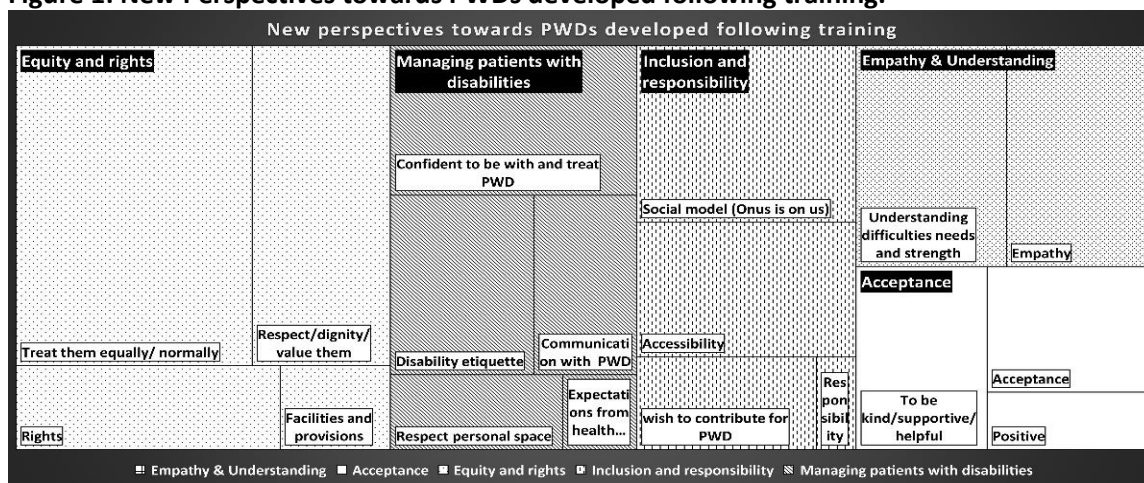
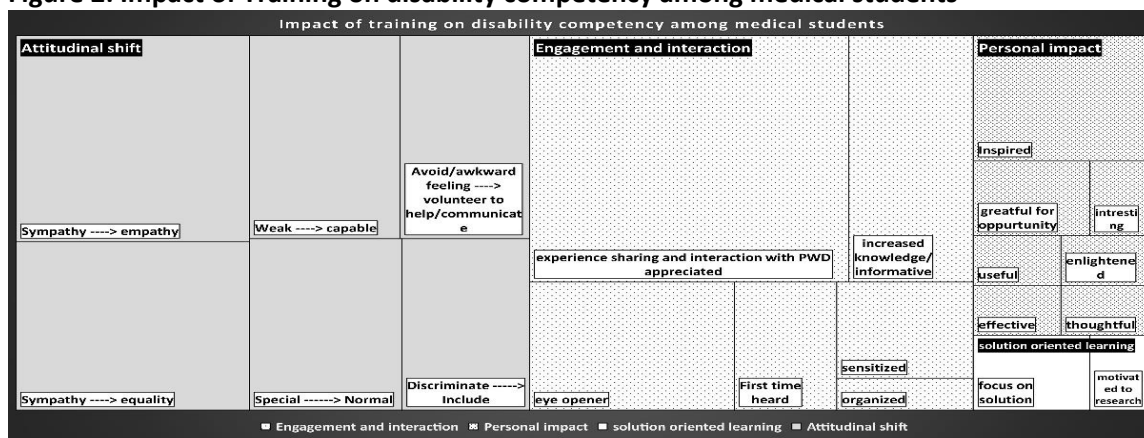


Figure 2: Impact of Training on disability competency among medical students



Drawing from the reflective writing and manual coding, the following themes have the potential to surface from the students on the new perspective developed towards persons with disabilities:

1. **Inclusion and Responsibility:** This theme could include "Social model (Onus is on us)", "Responsibility", "Wish to contribute for PWD" and "Accessibility" all speak of Inclusive responsibility, enabling accessibility for persons with disability. **One student said under the code "Social model (Onus is on us)"** "The perspective that the disabled is not a fault of his medical shortcoming but the shortcomings of the society inclusion of various strata of disability was eye opening" **One student said under the code "Accessibility"** "I thought nowadays every Street has one school or college for normal students at the same time not every school

or every college accommodate persons with disability that should happen"

2. **Empathy and Understanding:** This theme encompasses "Empathy", "Understanding difficulties, needs and strength", These codes reveal a new understanding and empathy for the experiences of people with disabilities. **One student said under the code "Understanding difficulties, needs and strength"** "I always thought that disabled people expected others to help them but now I realise that they are capable of doing all the things that other people can do but in their own way."
3. **Managing patients with disabilities:** This theme encompasses "Communication with PWD", "Disability etiquette", "confident to treat PWD", "Respect their personal space" and "Expectations from healthcare workers". These codes reveal

confidence in empathetic disability-inclusive care and communication

One student said under the code "Disability etiquette" *"It will be most appropriate if we ask the person if they need any help and then help them"*.

One student said under the code "Respect their personal space" *"I will make sure to not invade their personal space and not to look down upon them rather will treat them equally"*.

One student said under the code "Communication with PWD" *"My aunt suffers from an auditory nerve dysfunction and she has to wear ear plugs to help her hear better. I realised that so many times I used to talk to her rudely now I realised what I was doing wrong I will definitely change my attitude"*

4. **Equity and rights:** The theme includes "Treat them equally/normally", "Respect/dignity/value them" "facilities and provisions" and "Understand rights", all speak to treating equally with respect and understanding their rights which is crucial in including and treating people with disabilities as equals.

One student said under the code "Treat them equally/normally" *"Earlier to the session whenever I complimented a person with disability, I used the words despite of your shortcomings but this help me understand that when they themselves did not consider their condition as a shortcoming I was no one to bring it up they just want us to treat them normally"*

5. **Acceptance:** The theme includes "To be kind/supportive/helpful", "Positive" and "Acceptance". These codes are crucial especially in conditions which cannot be changed, which in turn changes the way a person behaves and takes care of a PWD.

One student said under the code "Positive" *"See the ability not disability"*

One student said under the code "To be kind/supportive/helpful" *"I feel that people should be appreciated for what they do rather than for who they are"*.

Drawing from the reflective writing and manual coding, the following themes have

emerged towards the impact of training on disability competency and medical students .

1. **Attitudinal shift:** This theme includes "sympathy to empathy", "sympathy to equality", "Weak to capable", "Avoid/awkward feeling to volunteer to help/ communicate", "special to normal" and "Discriminate to include". It was interesting to observe how the shift happened in the attitude towards the way PWDs were perceived.

One student said under the code "Avoid/awkward feeling to volunteer to help/ communicate", *"In the past I have been very guarded, reserved and cautious, afraid that I would unknowingly offend them by my tone subconsciously pitiful not because I look down upon them but because I sympathized with them this session taught me to be empathetic and now, I know how to speak to them, respect them and acknowledge them in a mindful manner"*

2. **Engagement and Interaction:** "first time heard", "sensitized", "eye-opener", "increased knowledge/informative" and possibly "interaction with PWDs" are codes that indicate the participants found the training to be well-structured and interactive. The training provided opportunities for engaging discussions and sharing experiences with persons with disabilities (PWD). These codes suggest that the training was successful in informing and educating the students about disabilities, thus raising their awareness and understanding.

One student said under the code "eyeopener" *"This training made me understand that all human except Persons with Disability are temporary normal and we can get disability anytime from any of the circumstances like road accident or slipping in the washroom"*

3. **Personal Impact:** Codes such as "inspired", "thoughtful", "useful", "effective", "grateful for opportunity", and "motivated me to research further" suggest that the training had a positive personal impact on the participants. It inspired them, made them reflect, found it useful and effective, and made them grateful for the

opportunity to participate. Some were even motivated to learn more on their own.

One student said under the code “grateful for opportunity” - *“It not only helped me in becoming a better medical professional but also helped me imbibe certain humanitarian values”*.

One student said under the code “enlightened” - *“I am seeing things which I never saw before those that were right in front of me”*.

4. **Solution-Oriented Learning:** The "focus on solution" code suggests a theme of solution-oriented learning, where participants were not only educated about disabilities but also focused on seeking solutions to problems that PWD face.

One student said under the code “focus on solution” *“I like the way one should communicate with them and no decision about them should not be made without them.”*

DISCUSSION

The present study identified ‘Inclusion and Responsibility’, ‘Empathy and Understanding’, ‘Managing patients with disabilities’, ‘Equity and rights’ and ‘Acceptance’ as themes from the study participants on the newer perspectives developed towards PWD.

Among the study participants ‘Attitudinal Shift’, ‘Engagement and Interaction’, ‘Personal Impact’ and ‘Solution-Oriented Learning’ were the themes that emerged towards the impact of training on disability competency.

These reflections highlight the positive impact of early interactions with real-life PWDs, leading to a reduction in stereotypes and prejudices. Students also learn not to make assumptions about PWDs and recognize the importance of treating them with equal care and respect.

A qualitative study conducted by Edwards AP, Nash AJ among nursing students on disability competencies reported three major themes: A positive shift in perspective of PWD (attitudes), impact of the experience on students' practice with PWD (comfort, confidence, awareness and motivation), and revelations from the experience (attitudes and resource

awareness).(13) Similar findings were found in the present study in accordance with attitude & perspective changes.

A qualitative study conducted by Ryan TA, Scior K among medical students identified Key themes such as medical students’ worries about working with patients with intellectual disabilities, and their wish for more medical teaching on, and direct experience with, this patient group. Examples of themes included - 1) ‘The influence of direct experience with people with intellectual disabilities’ - One of the interviewee said, ‘I didn’t understand people with learning disabilities... but looking after this little girl with learning disabilities has definitely improved my attitude towards them’; 2) ‘Medical students’ positive attitudes to people with intellectual disabilities’ - One of the interviewee emphasized the value of classes that provide medical students with opportunities to listen to, and learn from, people with intellectual disabilities and/or their family members.(14)

A mixed method study conducted by Chardavoyne PC among medical students to understand the attitudes towards and experiences with persons with disabilities and disability education showed that 80% felt their disability education during medical school has been inadequate. Furthermore, 64% of respondents indicated that they have had a significant educational experience involving PWD. Despite their attitudes, education, and experiences, respondents reported feeling less comfortable obtaining a history, performing a physical exam, and establishing a differential diagnosis when working with PWD. (15) This gap is addressed in the present study by implementing awareness & training on inculcating inclusive behavior for PWDs. The responsibility falls into the hands of treating physicians for all the patients irrespective of their disability status.

A study conducted by Moriña A, Perera VH, Carballo R. addressed three topics in the results: profile of academics according to their previous training, the importance of such training for them and the reasons for training, and the contents considered essential for training. The study highlighted that the participants thought that if they knew how to

identify specific cases during the first contact, they could gain time to design the relevant adaptations. Example “I would like to know how to recognise each of the disabilities, to know what adaptations I can provide to assist them; and strategies, real strategies”. (18)

A study conducted by Singh and colleagues have highlighted the need for Indian medical graduates to attain disability competencies in line with those established by the medical councils of other leading nations, to ensure global applicability. Essential disability competencies, such as obtaining informed consent from a patient with a disability, referral processes, providing health education to patients with disabilities, and maintaining integrity when treating potentially exploitable patients with disabilities, are currently under represented. (19)

The present study fills a crucial void in developing nations by tackling the disparities and uncertainties in healthcare services for Persons with Disabilities (PWD). It specifically addresses the rights of PWD and their equitable access to healthcare services delivered by competent healthcare professionals.

The study limitations are as follows. The use of purposive sampling focused on specific medical students and a single location limits generalizability. Cultural and curricular variations might hinder universal applicability. The qualitative approach allows subjective interpretations, lacking quantitative analysis and a control group for robust evidence. Directly attributing changes to training becomes challenging. Positive response bias could stem from participants' positive views on their training. The study overlooks diverse disability types, affecting broader relevance. A three-day intervention timeframe restricts assessing long-term impact. Reliance on self-reported data through focus groups could introduce recall or social desirability biases.

CONCLUSION

The study offers insights into the transformative power of disability competency training on medical students' attitudes and empathetic care. Results indicate a shift from traditional medical views to a more inclusive,

humanistic approach. The training has proved to be eye-opening and informative, influencing medical students to treat PWD with equity and dignity. By highlighting these outcomes, the study contributes to the broader discourse on integrating disability competencies into medical education and underscores the need for further improvements in disability competencies in healthcare.

RECOMMENDATION

To enhance healthcare inclusivity, it is recommended to expand disability competencies across all levels of medical education, ensuring all professionals are equipped to provide empathetic and effective care. Regular assessments and updates of disability training programs are crucial to maintain relevance and address emerging healthcare needs. Promoting interdisciplinary training and collaboration can also improve understanding and service delivery for persons with disabilities.

LIMITATION OF THE STUDY

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RELEVANCE OF THE STUDY

This study underscores the transformative impact of disability competency training on medical students, highlighting its critical role in fostering inclusive and empathetic healthcare practices. It adds to current knowledge by demonstrating how structured educational

interventions can effectively shift attitudes and enhance the preparedness of future healthcare professionals to meet the needs of persons with disabilities.

AUTHORS CONTRIBUTION

All authors have contributed equally.

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Nil

CONFLICT OF INTEREST

The authors declare no conflict of interest

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DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/ AI assisted technologies in the writing process.

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