

Research Article

Enhancing Neurodegenerative Care: Insights From the nEUROcare Training Program Study

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Abstract

Background: Examine the perspectives of healthcare professionals and students participating in the nEUROcare training program is essential for advancing their knowledge and skills in providing comprehensive care for individuals with neurodegenerative diseases (NDDs). The study explores crucial aspects such as the perceived importance of training modules, the target beneficiaries, optimal training delivery methodologies, and the need for continuous professional development (CPD) opportunities.

Methods: A total of 290 attendees (nursing professionals and students) of the International Conference on Neurodegenerative Disorders in Colombo, Sri Lanka responded to questions pertaining to the nEUROcare project training program.

Results: The participants in this study had a mean age of 33 years, accompanied by an average of 6.2 years of professional experience. Findings revealed that 98.3% of participants recognized the program's relevance, highlighting its strong resonance within the nursing community. The results also indicated that certain modules, such as neurology and medical care, clinical assessment and outcome measurement, and comprehensive care, were deemed more important than others. Additionally, there was a preference for in-person training methods, with 53.8% of participants emphasizing the necessity of CPD.

Conclusions: The nEUROcare training program was highly valued by participants, with almost all recognizing its relevance and several key modules as priorities. The preference for in-person training and the emphasis on CPD highlight the need for specifically designed, hands-on approaches to enhance professional growth and competency in managing NDD. Future training programs should prioritize interactive, in-person delivery methods to maximize engagement and effectiveness.

Keywords: Neurodegenerative diseases, nEUROcare training program, healthcare professionals, continuous professional development (CPD), training methods

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Introduction

Neurodegenerative diseases (NDDs) represent an escalating global health challenge, characterized by complex clinical trajectories and substantial societal impact. As the prevalence of NDDs rises, the imperative to fortify healthcare professionals with specialized skills becomes paramount. NDDs are characterized by the progressive degeneration of the structure and function of the nervous system, crucial for functions such as mobility, coordination, strength, sensation, and cognition (Liu et al., 2012). As of today, no known curative treatment is available for NDDs, and only medication is available for symptom reduction (Peplow et al., 2022).

There is a global estimate of about 10 million people developing NDDs each year, and nearly 60% of this population resides in low- and middle-income countries (Rathnayake et al., 2023). Rathnayake et al. (2023) addressed the necessity of the care of older adults with NDDs in the country of Sri Lanka which has the third highest proportion of the older population in Asia (Samaraweera & Maduwage, 2016) and given that NDDs are a leading cause of disability among the Sri Lankan older population. Rathnayake et al. (2023) argued that there is an absence of a well-established aged care delivery system in the country and that the family of the patient takes on the care of persons with NDDs. Rathnayake et al. (2023) concluded that there is a need to improve the country's healthcare system for patients with NDDs and to educate and train both healthcare professionals and caregivers through a well-structured education program. Utilizing such an approach in Sri Lanka would empower healthcare professionals and caregivers to implement personalized care plans and foster a supportive environment that promotes the overall well-being of persons with NDDs.

For this purpose, the project “nEUROcare - a

European initiative for capacity building to meet the challenges in caring for people with neurodegenerative disorders in Sri Lanka” (<https://neuro-care.lk/>) was developed and gained funding from the European Union’s Capacity Building in the field of Higher Education (CBHE) program (618596-EPP-1-2020-1-SE-EPPKA2-CBHE-JP). The project was developed by partners from Europe and Sri Lanka aiming to develop a postgraduate education curriculum to be taught in each participating university in Sri Lanka. The nEUROcare training program is a pioneering initiative designed to elevate the capacity of healthcare practitioners in Sri Lanka and a critical intervention in addressing the evolving landscape of neurodegenerative care.

The nEUROcare programme developed a total of 10 courses representing 30 credits (1,500 hours) in accordance with the Sri Lanka Qualifications Framework (SLQF) system. Students will have the opportunity to enroll in the developed program at four universities across Sri Lanka. Impacting the healthcare students will then impact patients with neurodegenerative diseases since students will receive the improved provision of care on a regional and national level. The ten modules of the program are: 1) Neurology and medical care in NDDs, 2) Clinical assessment, evaluation, and outcome measurement, 3) Comprehensive care, 4) Psychology, 5) Public health promotion and communication, 6) Communication, 7) Family and societal perspectives, 8) Oral health, speech, and sleep, 9) Person-centered care, 10) Implementation and evaluation. The successful completion of the program will provide either a Postgraduate certificate, Postgraduate diploma, or Master’s degree by coursework at the four participating universities.

The current study aimed to assess the perceptions, preferences, and expectations of

healthcare professionals and students engaged in the nEUROcare training program. This is important as it provides insights into the modules deemed most crucial, guiding the optimization of educational content to align with the diverse needs within neurodegenerative care in Sri Lanka. Additionally, the study sought to identify which specialties within the healthcare professionals are perceived to benefit most from the training, allowing for targeted outreach and engagement and ensuring inclusivity across the healthcare spectrum in Sri Lanka. Lastly, uncovering the preferred training delivery methods offers a roadmap for tailoring educational approaches to align with the preferences of the healthcare community of Sri Lanka.

Methodology

Design

A cross-sectional survey design was employed to assess participants' perceptions of the nEUROcare program presented at the International Conference on Neurodegenerative Disorders in Colombo, Sri Lanka. Participants were selected using convenience sampling, targeting those who attended the program presentation.

Participants

The study encompassed a cohort of 290 participants who attended the International Conference on Neurodegenerative Disorders in Colombo, Sri Lanka, where the modules of nEUROcare project were presented. Of this group, 57.9% were qualified healthcare professionals, predominantly nurses, and 42.1% were nursing students of all levels aspiring to join the healthcare workforce. The participants in this study had a mean age of 33 years, accompanied by an average of 6.2 years of professional experience. This demographic profile suggests a sample characterized by early- to mid-career

individuals who likely possess foundational professional competencies alongside some depth of workplace experience.

Questionnaire

The final version of the questionnaire was developed with input from all project managers of the nEUROcare program, including those from every discipline involved in the initiative. These project managers were consulted throughout the process to ensure that the questionnaire accurately reflected the multidisciplinary perspectives and objectives of the program. Although the questionnaire was not formally piloted, it was reviewed by three students to assess clarity, grammar, and overall comprehensibility. This informal review process helped ensure that the language used in the questionnaire was clear and accessible, though no broader pilot testing was conducted prior to its distribution.

The questionnaire aimed to discern participant opinions on the relative importance of various modules, identify the primary target beneficiaries for each module, explore the most effective methods for delivering training, and assess the potential need for developing individual continuing professional development (CPD) modules. This comprehensive approach ensured that the questionnaire addressed the diverse needs and perspectives relevant to the program's design and implementation.

Procedure

The study received ethical approval from Neapolis University Institutional Review Board (Protocol number 86/2022). Participants received an informed consent form detailing the study's objectives, procedures, and ethical considerations, ensuring they were fully informed of the purpose and nature of the research. After obtaining informed consent, participants completed a structured questionnaire. The

responses were then compiled into an SPSS data file, where frequency distributions were calculated for each question across all modules addressed in the survey. This analysis provided detailed insights into the response patterns, allowing for an examination of how frequently each answer option was selected, thus offering a clear representation of participant responses within each module.

Research questions

The study sought to answer the following research questions:

- What are the perceived levels of importance assigned by healthcare professionals and students to specific modules within the nEUROcare training program?
- Which healthcare professionals are deemed to benefit the most from the nEUROcare training program, and conversely, which specialties may require targeted outreach for increased engagement?
- What are the preferred training delivery methods among participants, and how do these preferences inform the optimization of educational approaches within neurodegenerative care?
- Is there a perceived need for individual modules to be offered as continuous professional development opportunities, and if so, which modules are considered most beneficial, and in what healthcare settings?

Results

Overall, findings revealed that 98.3% of participants expressed a keen sense of the program's relevance, underscoring its resonance within the nursing community. Concerning research question 1 pertaining to module importance (Table 1), results

indicated that: a) Neurology and medical care of neurodegenerative disorders, b) Clinical assessment and outcome measurement, and c) Comprehensive care for people with neurodegenerative disorders emerged as the top three modules, collectively garnering over 77.5% of responses as most important. Implementation and evaluation and family and societal perspectives were deemed as the least important by approximately one-third of participants.

Concerning research question 2, pertaining to Target Beneficiaries and the participants' opinions on which healthcare professionals would benefit most from the training (Table 2), nurses, geriatricians, neurologists, and psychiatrists emerged as the top four, underscoring the interdisciplinary nature of effective neurodegenerative care. Dieticians had the lowest percentage of agreement, signaling a potential area for focused outreach and engagement.

For research question 3, which concerns the optimal training delivery method, practical face-to-face training emerged as the resounding preference (71.3% reported the most suitable and 13.5% as suitable), followed by the Hy-flex method (i.e. combining hybrid - learning that integrates complementary face-to-face (synchronous) and online learning (asynchronous) experiences; 31.4% reporting as most suitable and 40.1% as suitable). Online training garnered the least favor (only 4.5% reported as suitable). This preference for in-person interaction reflects a broader sentiment within the healthcare community, underscoring the value placed on real-time, immersive learning experiences in Sri Lanka.

Concerning the final research question, which investigated the necessity for individual CPD modules, the results revealed a complex and nuanced perspective. Specifically, 53.8% of participants expressed

Table 1: Percent of importance assigned to each module by participants

Module	Most importance	Medium importance	Least importance
1. Neurology and medical care in NDDs	89.8%	6.3%	3.9%
2. Clinical assessment, evaluation, and outcome measurement	84%	13.7%	2.3%
3. Comprehensive care	77.5%	18.9%	3.6%
4. Psychology	58.3%	28.5%	13.2%
5. Public health promotion and communication	60.8%	26.3%	12.9%
6. Communication	58.8%	28.3%	12.9%
7. Family and societal perspectives	51.8%	23%	25.2%
8. Oral Health, speech, and sleep	55.2%	22.2%	22.6%
9. Person-centered care	60.3%	27.9%	11.8%
10. Implementation and evaluation	49.5%	23%	27.2%

support for the concept, indicating a majority consensus in favor. However, this percentage also suggests that there is a significant portion of the respondents who may have reservations or alternative views about the implementation of individual CPD modules. This mixed feedback highlights the importance of further exploration into the specific needs and preferences of professionals to ensure that CPD offerings are tailored effectively to enhance their skills and knowledge

Discussion

The accelerating prevalence of NDDs demands a dynamic and informed healthcare workforce, especially in low-middle socioeconomic countries such as Sri Lanka. The nEUROcare training program represents a strategic response to this need, seeking to empower healthcare professionals and

students with the knowledge and skills necessary for delivering nuanced and person-centered care to individuals with NDDs. The purpose of the current study was to assess the perceptions, preferences, and expectations of healthcare professionals and students engaged in the nEUROcare training program. Results indicated that some modules were considered as more important than other modules. Specifically, Neurology and medical care of NDD, clinical assessment and outcome measurement, and comprehensive care for people with NDD were considered to be the most crucial modules. This finding aligns with the multifaceted nature of neurodegenerative care (Marcos-Rabal et al., 2021). These modules embody the holistic approach required to address the complex needs of individuals facing NDDs. However, the perceived lower importance

Table 2: Percent of opinion of what specialization would benefit most from the training

Specialization	Would be beneficial	Would not be beneficial
Neurologists	77.2%	22.8%
Geriatricians	83.4%	16.6%
General practitioners, Family physicians	55.2%	44.8%
Nurses	98.3%	1.7%
Physiotherapists	62.1%	37.9%
Occupational therapists	60.3%	39.7%
Speech and language therapists	65.9%	34.1%
Psychiatrists	74.1%	25.9%
Psychologists	69%	31%
Palliative care specialists	60.7%	39.3%
Rehabilitation physicians	60%	40%
Dieticians	47.9%	52.1%
Social workers	52.4%	47.6%

implementation and Evaluation and Family and Societal Perspectives underscores the necessity for targeted communication to elucidate the great impact these components can have on overall care quality. This finding emphasizes the need for targeted strategies to convey the crucial significance of these two modules with the least importance. It is important to add a clear and concise rationale for these modules, including the cultural considerations specifically pertaining to Sri Lanka, so that students and healthcare professionals can recognize the value attributed to these significant modules.

Implementation and evaluation can be vital in effective treatment and management, such as ensuring that research findings, treatment protocols, and care strategies are put into

practice effectively. The continuous assessment of these interventions helps determine their efficacy, safety, and areas needing improvement. It can also be important in resource allocation and evaluating care strategies that help determine the most efficient use of resources such as financial investments, personnel training, and infrastructural development. Finally, implementation and evaluation ensure that interventions are theoretically sound and practically beneficial, addressing symptoms and enhancing quality of life (McGinley et al., 2021).

Family and societal perspectives can also be vital in addressing holistic care since NDD affect not just the individuals diagnosed but also their families and caregivers.

Additionally, the module encompasses emotional and psychological support since families often experience significant emotional and psychological stress when a loved one is diagnosed with a neurodegenerative disorder. Finally, it is imperative for persons with NDDs and their families to be socially included and that can happen through education and awareness, all components of the module and important in advocacy and policy development (Park et al., 2021).

Results also identified nurses, geriatricians, neurologists, and psychiatrists as the healthcare professionals benefitting most from the training, as also stated above, this underscores the collaborative and interdisciplinary nature of effective neurodegenerative care (Marcos-Rabal et al., 2021). This emphasizes the need for a cohesive healthcare approach, where diverse specialties contribute their expertise to address the multifaceted challenges presented by NDDs (Marcos-Rabal et al., 2021). The lower priority from dieticians suggests a potential area for targeted outreach and engagement since the literature does state that a more inclusive approach, including diet, is essential to neurodegenerative care (Ó Breasail et al., 2022).

Findings also suggested a strong preference for practical face-to-face training, followed by the Hy-flex method, which reflects the healthcare community's appreciation for immersive and interactive learning experiences (Meyer et al., 2022). The hesitancy towards online training underscores the unique nature of neurodegenerative care education, where the human connection and experiential learning play pivotal roles. These findings underscore the importance of tailoring training delivery methods to the specific needs and preferences of healthcare professionals in Sri Lanka.

Lastly, results showed a divided opinion

regarding the need for individual CPD modules. This suggests a diverse landscape of professional development preferences within the healthcare community in Sri Lanka. Over half of the participants supported the concept. Further exploration indicated a consistent alignment with the modules identified as most crucial in the initial questionnaire. This finding emphasizes the enduring relevance of certain topics for ongoing professional development, reinforcing the need for flexible and tailored CPD opportunities (Surr et al., 2023).

In spite of the significant contribution of this study, it also has some limitations under which the results should be interpreted. Specifically, the sample of the study consisted of the individuals who attended the International Conference on Neurodegenerative Disorders in Colombo, Sri Lanka, and therefore, cannot be considered representative or generalizable. Therefore, future studies can focus on collecting a more diverse sample, possibly including qualitative data, to dive further into the nuances of the findings above.

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