




STUDY PROTOCOL

Developing a Mental Illness Nursing Diagnoses subSET: study protocol for a e-Delphi survey (MINDSET study)

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Findings:

This paper is a multiphase online Delphi study protocol to develop a subset of nursing diagnoses for mental health settings.

ABSTRACT

INTRODUCTION: Nursing care, despite constituting a significant portion of healthcare costs, often remains overlooked in healthcare data systems, which primarily focus on medical data. Incorporating standardized nursing language (SNL) into electronic health records has shown promise in predicting outcomes across various clinical settings. However, nurses' unfamiliarity with standardized terminologies poses a significant barrier to their implementation. NANDA-International (NANDA-I) nursing diagnoses (NDs) offer a standardized framework, yet their application in mental health (MH) settings remains underexplored.

OBJECTIVES: The MINDSET study aims to establish a consensus among mental health nurses to develop a subset of nursing diagnoses tailored for MH and addiction EHRs.

METHODS: A multi-phase e-Delphi study will involve mental health nurses experienced in NANDA-I NDs from various countries. Through successive rounds of surveys, experts will assess the relevance of NDs in MH settings, with consensus determining the final subset.

RESULTS: The expected outcome is a concise subset of nursing diagnoses agreed upon by experts, facilitating their integration into clinical practice. This subset may offer nurses a manageable set of diagnoses closely aligned with MH contexts, enhancing their applicability and utility in daily care. Subsequent research could explore the prevalence of these diagnoses in MH settings and their associations with patient outcomes.

IMPACT: The development of a tailored subset of nursing diagnoses holds potential to enhance nursing practice in MH settings, enabling more effective assessment and intervention strategies, ultimately improving patient outcomes.

KEYWORDS: *e-Delphi survey, Mental disorder, Mental health, NANDA-I, Nursing diagnoses, Standardized nursing language*

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PROTOCOLLO DI STUDIO

Sviluppo di un subset di Diagnosi Infermieristiche per la salute mentale: protocollo di studio per un'indagine e-Delphi (studio MINDSET)Claudia Fantuzzi¹ , Valentina Zeffiro¹, Gianfranco Sanson²¹ Dipartimento di Biomedicina e Prevenzione, Università di Rome "Tor Vergata"² Dipartimento di Scienze mediche, chirurgiche e della salute, Università di TriesteRiscontri:

Questo è un protocollo di studio Delphi online multiphase finalizzato a sviluppare un sottoinsieme di diagnosi infermieristiche per i contesti di salute mentale.

ABSTRACT

INTRODUZIONE: L'assistenza infermieristica, pur rappresentando una parte significativa dei costi sanitari, è spesso trascurata nei sistemi informativi, che si concentrano principalmente sui dati medici. L'integrazione di un linguaggio infermieristico standardizzato nelle cartelle cliniche elettroniche ha dimostrato di poter predire gli esiti in vari contesti clinici. Tuttavia, la scarsa familiarità degli infermieri con le terminologie standardizzate rappresenta un ostacolo significativo. Le diagnosi infermieristiche (DI) di NANDA-I offrono una valida opzione, ma la loro applicazione nei contesti di salute mentale è ancora poco esplorata.

OBIETTIVI: Questo studio mira a stabilire un consenso tra gli infermieri di salute mentale per sviluppare un sottoinsieme di DI adatto ai contesti di salute mentale e dipendenze.

METODI: Lo studio e-Delphi multifase coinvolgerà infermieri di salute mentale esperti in DI da vari Paesi. Attraverso round successivi di sondaggi online, gli esperti valuteranno la rilevanza delle DI NANDA-I nei contesti di salute mentale, ottenendo il consenso per il sottoinsieme finale.

RISULTATI: Il risultato atteso è un sottoinsieme ristretto di DI concordato tra esperti, che faciliterà l'integrazione nella pratica clinica poiché sarà più gestibile e strettamente pertinente ai contesti di salute mentale, migliorando l'applicabilità e l'utilità nella pratica quotidiana. Ricerche successive potrebbero esplorare la prevalenza di queste diagnosi e le loro associazioni con gli esiti per l'utenza.

IMPATTO: Lo sviluppo di un sottoinsieme personalizzato di DI potrebbe migliorare la pratica infermieristica nei contesti di salute mentale, consentendo strategie di valutazione e intervento più efficaci, migliorando in ultima analisi gli esiti per l'utenza.

KEYWORDS: *e-Delphi survey, Mental disorder, Mental health, NANDA-I, Nursing diagnoses, Standardized nursing language*

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PRACTITIONER POINT:

- Tailored Nursing Diagnoses: Implementing a subset of nursing diagnoses specific to mental health settings can improve assessment and intervention strategies.
- Expert Consensus: Using an e-Delphi survey approach involving experienced mental health nurses ensures the relevance and applicability of selected diagnoses.
- Enhanced Clinical Decision-Making: The consensus-driven selection of nursing diagnoses facilitates more informed and effective clinical decision making in mental health practice.

INTRODUCTION:

Although nursing care constitutes a significant portion of healthcare costs (1), data produced by health systems are almost entirely based on medical data (e.g. diagnosis-related groups, DRGs). Consequently, nursing care is essentially ignored in defining a patients' complexity and their clinical and economic outcomes (2). As a result, nursing care is completely invisible to assessment systems regarding policy, payment procedures, and quality of care (3,4). It has been widely demonstrated that the use of standardized nursing language (SNL) predicts important outcomes (e.g. mortality, length of stay) in a variety of clinical settings (5–10). Moreover, studies have shown that medical data are not homogeneous in regard to nursing care (2), documenting that

healthcare predictive models can be improved when nursing and medical data are considered together, strengthening the need to include standardized nursing data in electronic health records (5,8). Unfortunately, nurses represent the main barrier in implementing SNLs, mainly because they are not familiar with the standardized terminologies (11–14).

Among SNLs used worldwide, NANDA-International (NANDA-I) is, at present, the most used and the only one where nursing diagnoses (NDs) are based on scientific evidence, updated every three years. A ND is defined as 'a clinical judgment concerning a human response to health conditions/life processes, or a vulnerability for that response, by an individual, family, group or community' (15). NANDA-I has classified the existing 267 NDs into 13 domains and 47 classes (15). NDs can help define phenomena of professional interest and quantify the cost of nursing services (16), as they provide a solid base to select nursing outcomes to be achieved by nursing interventions (9,15). NANDA-I NDs have been shown to be adaptable to different categories of patients (6,10,17,18).

By their very epistemological meaning, in the field of mental health (MH) NDs may describe the human response not only to a mental health disorder, but to a wide range of human conditions, such comorbid physical diseases, nutrition and hydration status, sleep habits, self-care capacities, ability to communicate, coping responses, family relationships, disturbs in





one's body image, role performances, sexual identity and function, stress, values and beliefs, and so on. NDs have proven effective in describing issues of MH nursing disciplinary interest (16,19,20), characterized by long-term care, a focus on the relationship and in knowledge of the life history of the person being cared for (21). Only a few studies have investigated the use of NANDA-I NDs in MH, mainly in inpatient psychiatric settings (19,22–29) and rarely in community MH (16).

NDs intercept a wide pool of human responses of interest for the nursing profession. Before implementing NDs in MH settings, it could be strategic to limit their number in order to allow nurses to increase confidence in their use in daily clinical practice. Accordingly, a pivotal step should consist in identifying a subset of NDs which are more likely to be found in MH practice.

OBJECTIVES:

The aim of the MINDSET (Developing a Mental Illness Nursing Diagnoses subSET through e-Delphi technique) study is to find consensus among mental health nurses in creating a subset of nursing diagnoses to be implemented in mental health and addiction Electronic Health Record (EHR).

MATERIALS AND METHODS:

A multi-method and multi-phase e-Delphi study will be carried out (30). Based on the guidance on Conducting and REporting DELphi Studies

(CREDES) guidelines (31), four main stages will be followed.

Stage 1: Preliminary Identification of Stakeholders and Composition of Possible Panellists

Nurses with experience in both mental health and in NANDA-I NDs from different countries will be recruited, to ensure that different mental health practices are included. We anticipate recruiting at least 20 experts to participate in the study according to the latest evidence from the literature (30,31). We have initiated preliminary requests for participation in the study from several professional networks of experts and have received a number of declarations of interest. Specifically, we contacted the NANDA-I Network, ACENDIO (Association for Common European Nursing Diagnoses, Interventions, and Outcomes), and SISISM (Italian Society of Mental Health Nursing Sciences), as well as other renowned professionals in the MH field. Potential participants will receive personal emails requesting confirmation of interest in participating in the study. A brief video in English, available online, will be attached to the email. This video will provide a detailed explanation of the study's purpose, the use of the e-Delphi technique, and the study timelines. The project manager will be available to participants via email or team collaboration applications to answer any question about the project.

The survey will be conducted on the EU-survey (a platform supported by the European Commission).





Informed consent will be obtained from participants before starting the study. Each participant will be assigned a unique identifier to use in the following e-Delphi rounds. Demographic data, including country, age, professional status, years of experience in MH, educational background, and previous experience with ND will be collected. These data will be treated separately from the answers of the e-Delphi rounds and will be used only for the demographic description of the expert panel.

Stage 2: e-Delphi Round 1

In the first round of survey participants will be asked to include or exclude the ND considered pertinent in MH settings by considering the whole set of 267 NDs, according to their specific relevance in the practice of MH. The relevance will be scored using a 9-point scale referred to the original RAND UCLA method, where 1 means that the ND is absolutely not relevant, 5 neither relevant nor irrelevant and 9 that the ND is very relevant in MH practice (32). Participants will be asked to complete the first round of the e-Delphi survey over a 4-week period. The study project manager will send a 'reminder' email to the participants after two weeks and three days before the deadline. Only responses from participants who will rate at least 50% of the NDs will be included in the analysis (33).

Descriptive statistics will be used to determine the overall scores. NDs with median scores in the range of 1-3 will be classified as 'not relevant', those in the

range of 4-6 as 'uncertain', and those in the range of 7-9 as 'relevant'. All NDs with an interquartile range (IQR) > 5 will be considered with disagreement and therefore classified as 'uncertain' as meaning a lack of consensus (32). NDs marked as 'relevant' will be inserted into the final subset of MH NDs, those marked as 'not relevant' immediately excluded and those marked as 'uncertain' will be inserted in the second e-Delphi round (31). Data analyzes will be performed using Microsoft Excel® and the Jamovi statistical spreadsheet (34).

Stage 3: e-Delphi Round 2

If 'uncertain' NDs are identified in the initial round, a second e-Delphi round will be conducted over a two-week period. Participants will receive a new email containing the updated link to the survey, which they will access by entering their identifier. They will be asked to indicate 'yes' or 'no' for the inclusion of each uncertain ND. NDs with at least 80% 'yes' will be added to the previously included subset (31).

Stage 4: Development of the final subset

The NDs included by the e-Delphi process in the previous three stages will constitute the MH NDs subset to be used for future research.

Ethical Considerations:

The collected data will be anonymized and stored in a Microsoft Excel® file, protected by a password known only to the researchers, and kept on a removable USB drive in a suitable locked cabinet.



The study will be conducted in accordance with GCP, ethical principles derived from the Helsinki Declaration, and current regulations regarding observational studies. The research protocol has been approved by the Ethics Committee of the University of Trieste (n.5 - 04/27/2024).

IMPLICATIONS:

A limited subset of nursing diagnoses, based on expert consensus, could facilitate smoother implementation in clinical practice. Nurses would thus be trained to use a reduced number of nursing diagnoses, which they may see as directly applicable in daily clinical practice because they are closely related to the context of mental health and addictions. From this subset, further research could be conducted on the prevalence of nursing diagnoses in these settings, while simultaneously exploring potential associations between them and sociodemographic and health variables, as well as the impact of certain diagnostic clusters on patient outcomes. This would allow for a prognostic prediction of the evolution of user needs.

Data availability statement:

The data generated and analyzed during the MINDSET (Developing a Mental Illness Nursing Diagnoses subSET through e-Delphi technique) study will be made available upon reasonable request. Due to the nature of the study involving the participation of expert mental health nurses, data sharing will be subject to ethical considerations and participant consent. Requests for data access can be

directed to the corresponding author, following approval from the Ethics Committee of the University of Trieste. Anonymized data will be stored securely and in compliance with relevant regulations, ensuring confidentiality and privacy.

Funding statement

The MINDSET (Developing a Mental Illness Nursing Diagnoses subSET through e-Delphi technique) study will be conducted without external funding support. All aspects of the study, including design, implementation, and analysis, will be carried out by the authors voluntarily and without financial assistance from any funding agency.



Conflict of Interest disclosure:

The authors declare that there are no conflicts of interest to disclose regarding the publication of this study.

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