

RtKW 8: Normalisation as Implementation

Translating an evidence-based dietary pattern approach into routine care in a public health service: evaluation of impacts on practice sustainment

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Normalisation of the complex Family Support Intervention in intensive care units (FICUS): A summative evaluation with ICU health care professionals

Saskia Oesch^{1,2}, Marco Riguzzi^{1,2}, Lotte Verweij^{1,2}, Tracy Finch³, Rahel Naef^{1,2}

Implementation of an evidence-based BEreavement SupportT pathway in Swiss specialised palliative care (BEST for Family): analysis of palliative care staff perceptions at the midpoint of implementation

Myrta Kohler^{1,2}, Marco Riguzzi^{1,2}, Torsten Schwalbach^{1,2}, Rahel Naef^{1,2}

Can implementation outcome measurement be both robust and pragmatic? Systematic review of applications and properties of the NoMAD instrument for assessing implementation outcomes

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Translating an evidence-based dietary pattern approach into routine care in a public health service: evaluation of impacts on practice sustainment

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Research aim

This project utilised the knowledge-to-action cycle to support clinicians in translating evidence for a Mediterranean-style dietary pattern (MDP) into routine care. The current study aimed to determine practice change sustainment and what predicts clinicians' routine MDP use two years after the facilitated implementation period.

Setting

This project involved a metropolitan public health service in Australia. Targeted sites included inpatient, outpatient, and cardiac rehabilitation settings of cardiology and diabetes services in two hospitals and a community clinic where dietitians and other clinicians (nurses, doctors, allied health professionals) provide nutrition care.

Method(s)

In 2021/22, an implementation strategy bundle aligned to identified determinants targeted multi-disciplinary clinicians, including facilitation, clinical champions, consensus discussions and educational materials. In 2024, clinicians were surveyed using an adapted 14-item Normalisation Measure Development (NoMAD) questionnaire. Sustainment was deemed adequate if clinicians self-rated ≥ 7 on a scale from 0 (not at all) to 10 (always) that MDP practice is a normal part of their work. Logistic regression was used to identify predictors of sustainment across four theoretical NPT domains.

Key finding(s)

Six dietitians and 61 other clinicians (83% female, 40% commenced in the setting <2 years prior) completed surveys. All Dietitians and 52% of other clinicians self-reported MDP practice sustainment. Higher scores in NoMAD domains of *Cognitive Participation* and *Collective Action* increased the odds of sustainment (ORs 6.12 95%CI 1.78-27.9 $p=0.009$ and 5.7, 95%CI 1.48-30.1, $p=0.021$). Predictors of sustainment included staff believing the implemented practice is legitimately within their role (OR 15.7, 95%CI 3.23-224, $p=0.007$), the clinical team having a shared understanding of supporting evidence (OR 3.79, 95%CI 1.35-15.8, $p=0.030$) and providing sufficient training (OR 3.03, 95%CI 1.02-10.6, $p=0.057$).

Discussion

Prospectively considering implementation strategies that address key NoMAD domains could improve the sustainment of knowledge translation practice change in healthcare environments with a multi-disciplinary workforce and high staff turnover. Components critical to successful sustainment in the local health service context include establishing expectations early that the practice is supported by evidence and is a legitimate activity across the team and embedding adequate staff training on utilising the practice approach, particularly for non-dietetics clinicians who provide dietary care.

Challenges

Healthcare services experience significant staff turnover, so implementation strategies designed to ensure exposure to new staff who commenced after the implementation period were needed. The project attempted to embed materials into orientation/handover and engage opinion leaders; however, there were challenges in standardising this approach, especially with only one resourced facilitator.

RtKW 84

Normalisation of the complex Family Support Intervention in intensive care units (FICUS): A summative evaluation with ICU health care professionals

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Research aim

This study aims to evaluate the normalisation (integration), acceptability, appropriateness, feasibility, and sustainability of a complex family support intervention (FSI) while identifying predictors of its normalisation, clinical benefit, and sustainability. The FSI combines three interacting family support components and includes the new role of a family ICU nurse.

Setting

Study participants were health care professionals (HP), such as nurses and physicians, in the intervention arm of the FICUS hybrid effectiveness-implementation trial, which took place in eight Swiss ICUs.

Method(s)

This study was guided by the Normalization Process Theory and conducted at the end of the 18 months active FSI implementation phase (September 2023–April 2024). A cross-sectional survey was sent to 518 HPs to assess the level of FSI integration using the German version of the Normalization MeASURE Development questionnaire (G-NoMAD), FSI acceptability, appropriateness, feasibility, necessity, clinical benefit, and the HPs' assessment of whether the FSI will still be delivered in 12 months. Data were analysed by mixed linear effects models and logistic regression with random effects per cluster to explore pre-defined predictors on the level of FSI integration.

Key finding(s)

Overall, 228/518 (44%) HPs completed the survey. The FSI integration level, measured by the G-NoMAD (score range: 20-100) was high (median = 82; 78% of scale range). Higher FSI acceptability and appropriateness were associated with higher integration ($p < 0.01$) and higher perceived intervention benefit for families ($p < 0.05$), patients ($p < 0.05$), and the HPs' own work ($p < 0.01$). FSI feasibility was predictive of integration ($p < 0.01$) and sustainability (12 months, $p < 0.01$). Perceived necessity of the FSI predicted integration ($p < 0.01$) and the benefit of the FSI for interprofessional collaboration ($p < 0.01$).

Discussion

Based on the results, FSI acceptability, appropriateness, and perceived necessity were strongly associated with higher levels of FSI integration. How do you think these predictors could be effectively identified and strengthened during the planning and implementation phases of similar interventions? How do you see the application of implementation theories such as the Normalization Process Theory in your own work, particularly in understanding how complex interventions are integrated into routine practice and maintained over time?

Challenges

A key challenge in our project was the time capacity of healthcare professionals, particularly regarding data collection. It required significant effort from the study team to manage the logistical and time constraints within busy ICU settings, ensuring comprehensive data.

RtKW 225

Implementation of an evidence-based BEreavement SupportT pathway in Swiss specialised palliative care (BEST for Family): analysis of palliative care staff perceptions at the midpoint of implementation

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Research aim

To assess healthcare professionals' (HCP) perceptions of (1) the degree of normalisation in daily practice and (2) the acceptability, appropriateness, and feasibility of a newly developed, evidence-based bereavement support pathway at the midpoint of a one-year active implementation phase.

Setting

Specialised palliative care (PC) services in two major urban teaching hospitals in German-speaking Switzerland.

Method(s)

Cross-sectional mid-implementation survey that is part of a mixed-methods study with multiple time points (before, during and after implementation). Data were collected between August and October 2024 from nurses, physicians, chaplains, psychologists, and social workers working directly with family members of dying patients. Guided by Normalisation Process Theory and Proctor's Conceptual Model of Implementation Research, normalisation of the evidence-based bereavement support pathway was measured using the 20-item Normalisation MeASURE Development questionnaire (NoMAD) (4 subscales), and acceptability (AIM), appropriateness (IAM), and feasibility (FIM) implementation outcomes were also assessed using psychometrically validated rating instruments.

Key finding(s)

Of the 51 eligible HCPs, 25 (49%) participated, of which 13 (52%) were nurses and 5 (20%) were physicians. Normalisation was high at the midpoint of the implementation phase, achieving a median score of 76% of the instrument range (NoMAD overall score). The subscale for 'cognitive participation' was rated highest while 'collective action' was rated lowest at the median. Acceptability, appropriateness, and feasibility each reached a median of 75% of the respective scale range. Outcomes were slightly higher among nurses compared to the other health professions at the median.

Discussion

Normalisation of the new bereavement support pathway was at a high level at the midpoint of the implementation phase. However, the moderate discrepancy between cognitive participation and collective action indicates that there may still be barriers hindering full implementation. The overall high level of implementation can be considered a success, but nurses rated the implementation more favourably than other HCPs. Questions:

- The values of nurses tend to be higher than those of doctors. Have you observed similar patterns in your studies?
- What are your experiences, and what strategies have you used to promote collective action?

Challenges

Co-design of the pathway and staff openness to bereavement support promoted implementation, but limited staff resources and high workload of HCPs meant that implementation of the pathway and participation in data collection was challenging. A high level of support and commitment was required from leadership and the implementation team.

RtKW 270

Can implementation outcome measurement be both robust and pragmatic? Systematic review of applications and properties of the NoMAD instrument for assessing implementation outcomes

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Research aim

The NoMAD survey assesses factors influencing the normalisation of new practices during implementation. Since 2015, it has been widely used in health research and translated into multiple languages. This systematic review evaluates literature on NoMAD's use, application across studies, and its properties as an implementation outcome measurement tool.

Setting

The identified studies were conducted in diverse settings (clinical, health, social care, public health, and education), focusing on specialised clinical services and general practices. The most common interventions implemented were categorised as diagnostics and therapeutics, while the least common focused on guideline/evidence implementation and policy change.

Method(s)

We systematically searched the bibliographic database PubMed for articles reporting empirical data in peer-reviewed journals. A citation search was undertaken in Google Scholar for primary NoMAD publications. Studies were eligible for inclusion if they: (a) specify using NoMAD as a method and report results from using it, and/or (b) report a translation and/or validation study of NoMAD's measurement properties. Screening of abstracts and full-text articles was done independently by two researchers. Data extraction was structured to allow collection and descriptive synthesis of data on study characteristics, use of NoMAD, psychometric results, and authors' reflections and recommendations.

Key finding(s)

A total of 61 studies were included in this review, with the highest number of studies first authored by researchers from the UK, followed by The Netherlands, Australia, and Canada. Across all studies, 10,390 participants completed the survey. NoMAD was predominantly used alongside qualitative data collection. Most studies administered NoMAD in a cross-sectional format. More than half of the studies used NoMAD without significant adaptations, with item exclusions being the most common modification. Eight studies focused on psychometrically validating NoMAD, including five that involved translating the original version into different languages. The variability in usage reflects NoMAD's versatility across settings.

Discussion

- How can we ensure that pragmatic tools remain valid and reliable despite being used flexibly across various projects or research settings?
- How can we ensure that pragmatic measurement instruments remain sensitive to the outcomes that matter most to end users (e.g., patients, communities, practitioners)?

Challenges

The varied use of NoMAD made data synthesis challenging, although it showed that flexible use is beneficial. We acknowledge that this can be a challenge for NoMAD users and hope that this work offers insight into NoMAD's flexibility, helping future users confidently apply the survey appropriately to their specific project needs.