RTKW 5 - #EIE2023

european IMPLEMENTATION EVENT

Ride the Knowledge Wave 5

#35- Guidance on a method for the process evaluation of implementing fall prevention interventions in the community: the Dynamic Learning Agenda.

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Research aim

Process evaluations are essential in understanding how implementation of evidence-based interventions, such as fall prevention interventions, works - especially in 'real-world' settings. The aim of this study was to provide guidance on conducting process evaluations in implementation research and/or practice to understand the success and failure of implementation endeavors.

Setting

It is recommended that multifactorial fall prevention interventions are applied in order to reduce the increasing fall rates among community-dwelling older adults. Therefore, it is required that health and social care professionals (e.g. general practitioners, physiotherapists, community nurses) across settings, sectors and organizations work collaboratively in the community setting.

Method(s)

Process evaluations were conducted as part of FRIEND (Fall pRevention ImplEmentatioN stuDy): an implementation research project. A broad selection of health and social care professionals (HSCPs) were involved (n=34). We performed longitudinal process evaluations with a qualitative approach, over 18 months. Multidisciplinary focus groups with HSCPs were held across four districts in the region of Utrecht, the Netherlands. We focused on contextual factors to implementation and experiences of the implementation. We applied the Dynamic Learning Agenda (DLA)-methodology, part of Reflexive Monitoring in Action, which helps to overcome complexities in change processes, by collaboratively formulating learning questions and practical actions.

Key finding(s)

In FRIEND, the DLA-methodology was experienced as a powerful technique to reflect on the dynamics of the implementation project through the perspective of involved stakeholders. It enabled us to sufficiently collect contextual factors to implementation and review experiences and it helped to explore arising challenges during the implementation process and link them with long-term concrete actions. Especially the latter seemed to be important, since stakeholders tended to remain stuck at the stage of identifying the problem and short-term perspectives. In addition, performing the DLA throughout the implementation period helped to identify necessary adoptions and keep track of changes that occured.

Discussion

- During the collection of barriers and facilitators, stakeholders often listed symptoms of system factors, such as "time restraints" and "there is no sufficient funding". Since the contextual factors are the fundament of the following steps of the DLA, the factors have to be concrete and modifiable. How do you handle this issue?
- It is recommended that implementers keep using DLA to assure continuation of implementation activities. However, stakeholders often experience time limitations, so

that when we (as researchers) leave, the process eventually stops. How do you make sure that stakeholders keep using such methods?

Challenges

We had to deal with major shifts in involved health and social care professionals, due to a variety of reasons (e.g. sick leave, other jobs). This may have led to bias, since experienced contextual factors may differ between persons. We have documented all changes and included this in our analysis.

Key highlights

- DLA is a reflexive and actionable method resulting in rich data on contextual factors to implementation and long-term actions.
- DLA is useful in practice; stakeholders can use DLA themselves to identify contextual factors that hinder or facilitate local implementation, draft long-term practical actions and keep track of changes.

#77- Development of Implementation Outcome Indicators (IOI) to accompany the launching of a national CAUTI intervention bundle

Andrea Eggli, Annemarie Fridrich - Swiss Patient Safety Foundation, Zürich, Switzerland

Research aim

Catheter-associated urinary tract infections (CAUTI) are common healthcare-associated infections, linked to increased morbidity, mortality and healthcare costs. Although proven prevention measures exist, these are oftentimes not effectively implemented in practice. To guide implementation, Swissnoso and the Swiss Patient Safety Foundation developed Implementation Outcome Indicators (IOI) for a CAUTI intervention bundle.

Setting

The IOI are intended for use in the acute care setting, specifically for Swiss hospitals. To facilitate implementation in all regions of Switzerland, our goal was to make the IOI available in all three national languages (German, French, Italian).

Method(s)

The development of IOI entailed multiple steps: a) literature analysis to draw on validated implementation concepts and knowledge (e.g., Proctor et al., 2021), b) a pilot study in three Swiss hospitals to evaluate the optimal implementation aspects regarding the CAUTI intervention bundle, c) selecting the most relevant IOI for the CAUTI intervention bundle, d) define and operationalize IOI.

Key finding(s)

With this four-step development process, four IOI on fidelity and three on penetration were developed; each available in German, French and Italian. The indicators were operationalized with the "General Organizational Index (GOI)" response scale, providing face validity of the implementation success on a five-point scale (1 "inadequate implementation" to 5 "full implementation"). The IOI development was completed by providing participating hospitals with a manual, describing and operationalizing each of the seven IOI.

Discussion

- Which methods and procedures would be ideal to test the long-term validity and reliability of these IOI?
- Which barriers exist for these IOI?

Challenges

The current project is time consuming for the participating hospitals and data extraction difficult, due to variations and limitations of the clinical information systems. Furthermore, it was not possible to test the indicators formally. To overcome and adress these challenges, we offered informative workshops and manuals for all participating institutions.

Key highlights

Currently there is a lack of validated IOI, especially on fidelity, hindering the systematic evaluation of implementation success. For the advancement of implementation science, our study successfully a) introduced and ran an IOI development procedure and b) introduced seven new IOI for repositories to uptake for health care practice free-of-charge.

#80- Schools differ in their levels of implementation – but why?

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Research aim

Intention to implement a program can predict future implementation. However, individual and organizational capacities may influence the intention to implement. This study aims to develop an Implementation Capacity Measure (ICM) and test whether it associates with the intention to implement KiVa antibullying program.

Setting

The ICM was answered by 375 teachers working in 24 Finnish schools implementing the KiVa program. The schools are located all over the country, both in urban and rural areas. Typically, primary school teacher provide education for children aged between 7-12.

Method(s)

The ICM is based on theoretical frameworks and qualitative studies suggesting individual and organizational capacities which favor high level implementation of a bullying prevention program. The ICM assesses several individual (5 domains e.g., knowledge and skills regarding bullying prevention) and organizational (6 domains e.g., resources, leadership, and collaboration) domains. Pilot data (n=76) and preliminary data (n=312) from teachers were collected during 2022. The psychometric properties of the measure was examined with Mplus and SPSS. Teachers' intention to implement KiVa was regressed on the domains included in the ICM, while controlling for several background variables, such as work experience.

Key finding(s)

Several ICM domains, such as motivation ($\beta = .458$, $p < .001$) and skills linked to KiVa ($\beta = .351$, $p<.001$)) were significantly associated with the intention to implement KiVa. Previous experience with KiVa program on the other hand, was negatively associated with intention to use the program ($b= -.143$, $t(299) = -2.138$, $p<.05$). Overall, the model explained 49% of total variance in teachers' intention to implement KiVa ($R2 = .489$).

Discussion

In this study, motivation and skills had positive effect on implementation intention whereas previous experience with the program was inversely related to intention. The main themes I want to discuss with the audience include

- what the audience believes could be the individual and/or organizational characteristics that may lead to success or challenges during the implementation process and how those differences should be measured.

- Furthermore, I am interested in discussing and sharing ideas on how individual teachers and schools could be supported so that they would have the capacities for high-quality implementation.

Challenges

A challenge during ICM development has been understanding how accurately the questions reflect reality and how respondents understand them. For example, it seems like teachers working in newer school buildings report having overall very good resources, despite the fact that in reality they might have a poor student-teacher ratio.

Key highlights

My work can help program developers and decision makers to better understand factors that influence the process of implementing school-based interventions. Deeper understanding regarding these factors can be useful when supporting schools to implement a particular program with high fidelity and to achieve meaningful results.

#125- Validation of the German Normalization Process Theory Measure G-NoMAD: Translation, Adaptation, and Pilot Testing

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Research aim

Derived from the Normalization Process Theory, the NoMAD questionnaire provides an instrument to examine the implementation of health care innovations. Two versions of the German NoMAD existed, independently translated from the original English version by two research groups. This study aims to pilot and validate a unified G-NoMAD version.

Setting

Survey data (N = 539) from different German health care settings (implementation of a digital application addressing medication management of patients, implementation of digital health interventions for the prevention or treatment of depression) are combined into a validation data set.

Method(s)

A measurement invariance analysis was performed comparing latent scale structures between groups of respondents to both versions. After determining the baseline model, the questionnaire was tested across samples for different degrees of invariance. A confirmatory factor analysis for three models (a four-factor, a unidimensional and a hierarchical model) was used to examine the theoretical structure of the G-NoMAD. Finally, psychometric results were discussed in a consensus conference and the final wording of the items, scale format and instructions were agreed.

Key finding(s)

The results of the measurement invariance analysis showed configural, partial metric and partial scalar invariance indicating that the questionnaire versions are comparable. The internal consistency ranged from acceptable to good ($0.79 \leq \alpha \leq 0.85$). Both the four-factor model and the hierarchical model achieved the highest fit with indices from acceptable (SRMR=0.08) to good (CFI=0.97; TLI=0.96). However, the RMSEA value of both models was only close to acceptable (RMSEA=0.10). Since the fit is similar in both models, priority should be given to the practical relevance of the hierarchical model.

Discussion

- What has been your experience with using the NoMAD questionnaire (in English, Dutch, Swedish, Brazilian Portuguese, etc.)?
- Unlike the original English NoMAD, participants were instructed that if an item was not applicable, the middle/neutral position 3 should still be chosen. This could have led to confounding of responses with different meanings. What might be the advantages and disadvantages of a "not applicable" option for the response format?

Challenges

In developing a standardized version of G-NoMAD, we found that we lacked the linguistic expertise to assess the meaning of phrases. Thanks to the support of an external editor, we were able to finalize the items.

Key highlights

Pragmatic quantitative measures to reliably assess and monitor implementation processes are powerful tools facilitating the implementation. The G-NoMAD provides a reliable and promising tool to measure the degree of normalization among individuals involved in implementation activities in German implementation settings.