Gaining acceptance, insight and ability to act: A process evaluation of a preventive stress intervention as part of a transition-to-practice programme for newly graduated nurses

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Abstract

Aim: To investigate how NGNs perceived and applied an intervention for preventing stress-related ill health embedded in a transition-to-practice programme when entering their professional life.

Design: A qualitative exploratory descriptive design was selected for this study to gain insights and perspectives on the adoption and utilization of the intervention.

Methods: In this qualitative methodology process evaluation, semi-structured and audio-recorded interviews were conducted with a sample of 49 nurses. Data were collected between December 2016 and July 2017, and were sorted in NVivo 12 Plus, followed by thematic analysis.

Results: The analysis resulted in three change processes stimulated by the intervention: (a) Building acceptance of being new; (b) Gaining insight into professional development and health and (c) Practical steps for skills development, healthy habits and better-organized work. In addition to the three themes, barriers that hindered the progression of the processes were also described. Each process influenced the development of the others by stimulating a deeper understanding, motivation to change and courage to act. Several barriers were identified, including the use of cognitively demanding intervention tools, fatigue, high work demands, inconvenient work hours and a hostile social climate on the ward.

Conclusion: This process evaluation showed that newly graduated nurses used knowledge from the intervention and adopted new behaviours largely in accordance with how the intervention was intended to work.

Impact: When entering a new profession, it is crucial to receive a well-thought-out, structured and targeted introduction to the new professional role, tasks and work group. Nurses stated that the intervention increased their understanding of the role as new nurses and their insight into how to develop skills that promoted better functioning and recovery. The intervention also stimulated the development of new health behaviour and some new learning strategies.
1 | INTRODUCTION

Newly graduated nurses (NGNs) encounter substantial pressure and stress, on both a personal and professional level, during their initial years of practice (Rudman & Gustavsson, 2011). This period of professional adjustment is characterized by overwhelming anxiety, uncertainty, inadequacy, and self-doubt (Duchscher, 2009). According to Duchscher and Windey (2018), NGNs often find themselves facing clinical situations in their first month of work that surpass their level of experience and competence, resulting in feelings of failure. This highlights the imposition of potentially unrealistic expectations on NGNs within the healthcare setting. The transition to practice sometimes coincides with an increase in symptoms of burnout that may have long-term health consequences (Rudman et al., 2020). Studies utilizing the Maslach Burnout Inventory, which is one of the most commonly used measures of burnout, have reported high levels of burnout among NGNs, with rates as high as 46% (Edwards-Maddox, 2023). Another review also found moderately high levels of burnout among NGNs (Jarden et al., 2021). Burnout has been positively associated with various factors, including stress, feelings of unpreparedness, inadequate socialization, lack of self-compassion (Edwards-Maddox, 2023) and negative emotions (Xie et al., 2021). Research on transition-to-practice programmes suggests that a structured and well-planned introduction aimed at increasing learning and skills development could improve the transition and socialization process (Bauer et al., 2007; Frögeli, Rudman, & Gustavsson, 2019). Transition-to-practice programmes for NGNs are defined as ‘planned, comprehensive periods of time during which nursing graduates can acquire the knowledge and skills to deliver safe, quality care that meets defined (organization or professional society) standards of practice’ p. 6 (Institute of Medicine, 2011). There are no standards for such programmes, but best practice recommendations suggest including a preceptor or mentor, educational sessions with case studies and rotations that allow the NGNs to gain experience from different clinical areas (Larsen et al., 2018). However, there is a lack of interventions targeting stress among NGNs during the transition from education to practice (Rush et al., 2013), and transition-to-practice programmes have not been found to be effective in reducing the experiencing of stress (Edwards et al., 2015; Kenny et al., 2021). This raises questions as to whether there are underlying causes of the stress experienced by NGNs that are not effectively targeted by typical components of transition-to-practice programmes. Against this background, we have developed and tested an intervention for preventing stress among NGNs within the framework of a transition-to-practice programme (Frögeli et al., 2018, 2020). The aim of the present paper was to investigate how NGNs perceived and applied an intervention for preventing stress-related ill health embedded in a transition-to-practice programme when entering their professional life. This was expected to generate insight that would aid further development of transition-to-practice programmes for NGNs.

2 | BACKGROUND

Adapting to a new professional role is a demanding and stressful experience (Ellis et al., 2015). High levels of stress have been reported by NGNs during their first 3 months following professional entry, and stress was also found to have a negative association with their professional adjustment during the same period (Frögeli, Rudman, & Gustavsson, 2019). Similar results are also found during the first years of practice—that is, greater adjustment to the new profession is associated with lower levels of stress and symptoms of burnout during the first 3 years in the profession (Frögeli, Rudman, Lövgren, & Gustavsson, 2019). Furthermore, the early experiences of stress to which NGNs are subjected have consequences that last over long periods. Specifically, NGNs who reported higher levels of symptoms of burnout at professional entry also reported higher levels of cognitive problems and insomnia 10 years later, compared to individuals who did not experience the same symptoms at professional entry, corrected for ongoing symptoms (Rudman et al., 2020). Transition-to-practice programmes have been developed to facilitate the organizational socialization of new professionals in general and NGNs in particular. However, the programmes have not typically focused on reducing the experiences of stress among new nurses (Rush et al., 2013). For this reason, an intervention to specifically address stress among NGNs that could be implemented as part of a regular transition-to-practice programme would be helpful.

2.1 | The intervention

An intervention was developed to prevent self-reported stress among NGNs (Frögeli et al., 2018). The idea was to be able to prevent NGNs from developing symptoms of stress and ill health during times of uncertainty and challenge—in this case, during the first year of practice.

When the intervention was developed, data from interviews with NGNs were analysed based on the theoretical perspectives of organizational socialization (Frögeli, Rudman, & Gustavsson, 2019), as well as research from the field of nursing (Duchscher, 2009; Rudman et al., 2010), stress (McEwen et al., 2015) and emotion regulation (Gross, 2015). The behaviours of NGNs in relation to perceived stressors were analysed in terms of antecedents, reactions (behaviours) and consequences (Ramnerö & Törneke, 2008). Behavioural change techniques were identified based on this analysis (Michie et al., 2013). The primary mechanisms of change (i.e. behavioural change models)
used in the intervention were behaviour activation and systematic exposure. A logic model of the intervention is presented in Figure 1. In terms of general intervention activities (i.e. format), the intervention included the presentation of information, discussions, group exercises, individual exercises and homework assignments. The specific behavioural change techniques used in the intervention are presented in Table 1, according to the Behaviour Change Techniques taxonomy version 1 (BCTv1) (Michie et al., 2013) describing distinct behavioural change techniques that were developed to improve the reporting of the content of interventions (Michie et al., 2013). The expected output or mediators of the intervention (i.e. behavioural change and information and skills learning) are listed in column three of Figure 1. As an example, increased engagement in recovery behaviour could be to work out or engage in a hobby. Reduced avoidance of proactive behaviour could be the individual ceasing to avoid tasks that make them feel uncomfortable but that are crucial for work. On the other hand, increased engagement could be the individual starting to ask questions when they are uncertain about how to perform a task. In addition to these behavioural change goals, the intervention also sought to increase the knowledge of the NGNs regarding work-related stress and ill health and organizational socialization (i.e. common experiences and needs as NGNs enter the profession). Furthermore, the intervention sought to increase the participants’ knowledge with regard to strategies for learning new skills. Finally, the intervention focused on increasing the participants’ knowledge with regard to the role of proactive behaviour in relation to professional adjustment. The intervention was manual-based and conducted by a registered psychologist, face-to-face in groups of approximately 10 NGNs, over three sessions of 3h each, with a 2-week period in between sessions. A brief version of the manual is freely available at https://ki.se/media/35214/download?attachment. The NGNs were scheduled to attend the intervention as part of their transition-to-practice programme.

This preventive psychological intervention was intended to complement rather than replace traditional transition-to-practice programmes. Consequently, the intervention did not teach new employees about the content of clinical work, or provide training in practical nursing skills. It did not involve restructuring the work organization or changing the workload of the NGNs. The intervention did not teach new employees about how the work should be performed; instead, it sought to allow NGNs to take better advantage of the learning opportunities that were present at work.

2.2 | The randomized controlled trial

The effect of the intervention was tested in a randomized parallel group trial (RCT) with an active control condition. A total of 239 NGNs participated in the trial, which was conducted in 2016–2017 at a university hospital in one of the more densely populated parts of Sweden (Frögeli et al., 2020). Data on the primary outcome measure of stress, as well as the secondary outcome measures of role clarity, task mastery, social acceptance and avoidance of proactive behaviours, were collected 2 weeks before the start of the intervention, and 1 week after the third and last session of the intervention. Effects were analysed using multilevel model analysis and mediation analysis. Compared to ordinary professional introduction, the intervention had a small statistically significant preventative effect on self-reported stress. No between-group effects could be confirmed for the secondary outcome measures. Participants who were more active in terms of changing their behaviour in line with the intervention model experienced a greater preventative effect on stress (Frögeli et al., 2020).

2.3 | Process evaluation

Studies exploring important intervention characteristics and barriers to uptake are rare (de Wijn & van der Doef, 2022). A process
3 | METHODS

3.1 | Design

A qualitative exploratory descriptive design was selected for this study in order to gain comprehensive, expressive and illuminating insights into the understanding and perspectives on the adoption and use of the intervention (Braun & Clarke, 2022). The qualitative approach serves as a process evaluation method, addressing questions related to how, why and for whom the intervention worked or did not work, ultimately aiming to enhance the intervention’s effectiveness and to identify areas for improvement (Moore et al., 2013).

The process evaluation in this study differs from the randomized controlled trial (RCT), which focused on evaluating the intervention’s effect among participants randomized to either the experimental or the control group (Frögeli et al., 2020). Conducting preventive health interventions in complex environments, such as an everyday healthcare practice, requires an exploration of the process and timing necessary to achieve desired outcomes (Skivington et al., 2021). This can be accomplished through a process of evaluation (Moore et al., 2015). In writing this paper, we adhered to the consolidated criteria for reporting qualitative research (COREQ) guidelines (Tong et al., 2007). For a visual representation of the flow chart illustrating the process evaluation in relation to the RCT, please refer to Figure 2, which depicts the various stages and time points of the evaluation within the context of the RCT.

3.2 | Sample/participants

All NGNs who attended the final session of the intervention in the period 2016–2017 were invited by the interventionist, EF, to voluntarily participate in the process evaluation by being interviewed by AR via telephone. The participants were recruited from both the experimental and control groups, as the control group participants also received the intervention after the experimental evaluation (Figure 2). The experimental group received the intervention during the first 7 weeks of their participation in the hospital introduction programme, while the control group received the intervention shortly after. Therefore, all participants received the intervention within the first 3 months of their participation in the introduction programme, which is considered to be the early phase of their careers.

Of the 239 NGNs who were contacted for participation in this study, a total of 49 participants consented to participate. Among the 49 NGNs, 25 were from the experimental group and 24 were from the control group. The number of interviews was estimated to be sufficient for this thematic analysis, considering that the interviews focused on the perception and application of intervention knowledge, and represented one-fifth of the intervention participants. Furthermore, among the participants, the majority were female (n = 44, 90%), and the mean age of the participants was 27.5 years, ranging from 21 to 54. The interviews, on average, took place approximately 3 months after the start of the intervention, with a

<table>
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<tr>
<th>Behavioural change techniques</th>
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<tbody>
<tr>
<td>Credible source</td>
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<tr>
<td>Social support (unspecified)</td>
</tr>
<tr>
<td>Information about health consequences</td>
</tr>
<tr>
<td>Information about emotional consequences</td>
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<td>Information about social and environmental consequences</td>
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<tr>
<td>Social comparison</td>
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<tr>
<td>Information about approval of others</td>
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<tr>
<td>Instruction on how to perform a behaviour</td>
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<td>Information about antecedents</td>
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<tr>
<td>Pros and cons</td>
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<tr>
<td>Comparative imagining of future outcomes</td>
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<tr>
<td>Goal setting (behaviour)</td>
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<tr>
<td>Action planning</td>
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<tr>
<td>Review behaviour goal(s)</td>
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<tr>
<td>Commitment</td>
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<tr>
<td>Mental rehearsal of successful performance</td>
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<td>Exposure</td>
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<td>Behavioural experiments</td>
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<td>Self-monitoring of behaviour</td>
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<td>Self-monitoring of outcomes of behaviour</td>
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<tr>
<td>Feedback on outcome(s) of behaviour</td>
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<tr>
<td>Social reward</td>
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<td>Reduce negative emotions</td>
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<tr>
<td>Discrepancy between current behaviour and goal(s)</td>
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<tr>
<td>Problem solving</td>
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<td>Graded task</td>
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<tr>
<td>Habit reversal</td>
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<td>Habit formation</td>
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| TABLE 1 Components of the intervention as classified according to the BCTv1 (Michie et al., 2013). |
range of 1.5 to 4.5 months. This indicates that, for most participants, the interviews occurred within the first 6 months of their practice. The participants worked in various specialties within the inpatient university hospital, including geriatrics, pediatrics, orthopaedics, emergency care, gynaecology, haematology, internal medicine, infectious diseases, cardiology, surgery, oncology and rheumatology.

3.3 | Data collection

An interview guide (Table 2) was constructed around the causal framework of the intervention and the key areas of uncertainty for understanding how the intervention worked. The interviews were conducted from December 2016 to July 2017, and lasted an average of 22 min (range 10–42 min) and were transcribed verbatim. An initial data quality check showed that the material had enough richness to allow for the identification of patterns across data.

3.4 | Data analysis

The analysis took an inductive approach and was inspired by the description of thematic analysis by Braun and Clarke (2022). The software, NVivo 12 Plus (NVivo, 2012), was used to promote encoding of a total of 415 A4 pages (mean 8.5, and range 4–20 pages per interview). In the first step, all transcribed interviews were read in full in order to obtain an overarching sense of the data, which involved asking what patterns of perceived meaning of the intervention could be found. Initial ideas were noted during this phase. In the next step, the data were encoded in NVivo using appropriate codes, and the codes were iteratively revised and merged until the final set of themes was identified.
second step, all text that could have a bearing on the aim of the study (i.e. text describing how nurses perceived and applied the intervention) was identified and extracted. In the third step, a more manifest sorting and coding of text extracts was conducted related to the effect and hindrances of the intervention—that is, the text extracts were coded based on social, learning, emotional, cognitive, behavioural or physical descriptions (see Table 3). In the fourth step, the text extracts related to each code were re-read, and potential themes were discussed. During this process, latent content in the form of three tentative themes describing processes stimulated by the intervention and explanations of barriers to these processes. In the fifth step, these tentative themes were reviewed, refined, defined and named. The sixth and final step in the analysis was to describe the themes in a consistent and clear manner. This six-step analytical process was not strictly linear, but was rather a continuous iteration with overlapping steps. The analysis was carried out by AR and MSN, who continually discussed codes and themes as they evolved. Once the themes had been identified and described, the result was discussed among all authors and only minor changes were made to the thematic content. AR is a registered nurse and senior researcher in the intervention study, with experience of both quantitative and qualitative methodological research. AR is female and conducted the interviews, and had met the participants prior to the intervention during a lecture. MSN is a registered nurse and a senior, highly skilled qualitative researcher. MSN had no prior involvement in the intervention study, but does have experience in conducting research with similar content and a similar research approach. EF is a registered psychologist and PhD student in the intervention study, who conducted the intervention and did not take part in the qualitative data analysis due to strong involvement with the participants.

### Table 3

<table>
<thead>
<tr>
<th>Manifest code</th>
<th>Number of text units</th>
<th>Number of participants representing the code</th>
<th>(n = 49)</th>
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<tbody>
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</tr>
<tr>
<td>Effect behavioural</td>
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<tr>
<td>Effect social</td>
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<td></td>
</tr>
<tr>
<td>Effect emotional</td>
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<td>32</td>
<td></td>
</tr>
<tr>
<td>Effect learning</td>
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<td>32</td>
<td></td>
</tr>
<tr>
<td>Effect physical</td>
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<td>24</td>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
</tr>
<tr>
<td>Hindrance social</td>
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<td>17</td>
<td></td>
</tr>
<tr>
<td>Hindrance learning</td>
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<td>14</td>
<td></td>
</tr>
<tr>
<td>Hindrance emotional</td>
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<td>11</td>
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<tr>
<td>Hindrance cognitive</td>
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<td>10</td>
<td></td>
</tr>
<tr>
<td>Hindrance behavioural</td>
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<td>9</td>
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<tr>
<td>Hindrance physical</td>
<td>9</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>103</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 3.5 Ethical considerations

The study was conducted in accordance with the ethical principles for medical research involving human subjects (World Medical Association Declaration of Helsinki, 2014). Participation in the process evaluation was voluntary and separate to participation in the intervention (Frögeli et al., 2020). An informed consent form was signed after the last module of the intervention was completed. The participants were informed that all data were confidential and that their employer would not gain access to any information that could be traced to an individual person. Ethical authorization of the study was received from the Research Ethics Committee at Karolinska Institutet (Reg. no. 2014/1531-31/5).

#### 4 FINDINGS

The results of how NGNs perceived and applied the intervention produced three themes that illustrate three processes: (a) Building acceptance of being new; (b) Gaining insight into professional development and health; (c) Practical steps for skills development, healthy habits and better organized work. In addition to the three themes, barriers were described that hindered the progression of the processes: Barriers to insight and practical steps. Figure 3 provides an illustration of the interplay between the three themes and the intervention itself. It shows how these themes are interconnected and influenced by various barriers. The figure highlights the central role of the intervention in initiating and facilitating the interrelated processes. It demonstrates how the intervention serves as a catalyst for promoting insight and enabling participants to take practical steps towards desired outcomes. Moreover, the figure emphasizes the presence of barriers that can impede progress within these processes. It visualizes how barriers, such as external challenges or internal obstacles, can interfere with the acquisition of insight and hinder the ability to implement practical steps effectively. By illustrating the dynamic relationships between the themes and the impact of barriers, Figure 3 provides an overview of the complex dynamics at play in intervention uptake. The interviews revealed that participants mentioned different contexts, including intervention sessions, the introduction programme, the workplace and home. The following three themes were identified from the analysis, along with a description of the barriers. Each of these themes is discussed in detail below.

#### 4.1 Building acceptance of being new

This theme describes how the intervention initiated a process leading towards a more comprehensive understanding of the experience of being in a new professional role. This understanding was characterized as insight into the newcomer process, and was observed to operate on multiple levels, including theoretical, emotional and social dimensions. The NGNs explained how they had previously felt lost in their roles and struggled with feelings of inadequate competence.
They described how the intervention provided much-needed validation that it is acceptable to be new, offering them a more objective and realistic perspective on their role as newcomers.

“[…] for me, it became so clear when I saw this picture that she drew, and then I saw the different parts of what we spend time on. And it becomes obvious that, as a new [nurse], there is a lot of focus on work and leisure time – sleep and exercise are not prioritised. You waited for motivation, you waited for the energy, but then it also became so clear that you could be waiting forever.” (11)

NGNs described how embracing their newness led to better self-care at work. They felt that they had been granted permission to be new and to prioritize their own needs and well-being. In alignment with this, they also recognized the importance of prioritizing enjoyable and stimulating activities outside of work, which was made evident through the intervention.

“[…] I thought it was very interesting, and much of what was brought up was very helpful. I often felt that, ‘Aha, I’m not alone who thinks like that, or feels this way.’ The obstacles I encounter or the things I find difficult – there are others who experience the same thing. And the sense of community makes things a bit less difficult, quite simply.” (27)

In the group sessions, participants described how they were able to discuss various experiences and challenges in a respectful manner. Through these discussions, experiences became visible and were shared among participants, leading to insights into the different experiences of being a ‘new’ nurse. One NGN expressed this by saying:

“[…] it wasn’t just me who experienced feelings like this but, apparently, it’s common to feel like this, and that’s OK.” (15)

NGNs further explained how embracing their newness resulted in a different approach towards their colleagues. By releasing self-imposed pressure, such as the belief that they had to handle everything on their own and could not bother others with questions, their stress levels decreased. They found that, when they were kinder to themselves and eased self-imposed demands in their interactions with colleagues, workplace relationships improved. Eventually, they realized that their initially high self-imposed demands and requirements were gradually becoming unrealistic.

4.2 | Gaining insight into professional development and health

This theme highlights how the intervention facilitated the process of developing new insights regarding professional development and health. The intervention content played a significant role in promoting a new way of thinking, with respondents often referring to a ‘new mindset’
... could apply in their everyday lives, serving as a tool for pausing and reflecting. This "[...] tool, to sort of pause and think," "What am I actually doing?" (14) allowed them to better understand and interpret their work experiences. Participants described acquiring these tools (13, 17, 26, 28, 29), enabling them to better manage their work experiences. Participants also emphasized the importance of being mindful of stress signals, with the intervention serving as a daily reminder, like a small alarm clock.

"[...] it came at a very opportune time for me personally, because I was just about to get into something, the stress pressure, without really noticing it. So, I'm incredibly happy, it was very, very good." (47)

"[...] and then I thought it was important that we talked about whether we were paying attention to symptoms of exhaustion. That we deal with it in time, so it does not aggravate – that is, to make sure that it does not aggravate." (19)

"[...] but it was like it was put into words [how stress should be prevented] in a different way. And we could think more actively about it based on what was discussed in the course, during our daily work." (24)

The newfound insights also enhanced the NGNs' ability to interpret and understand the reactions of others. However, the level of engagement with the intervention content varied among the NGNs, in terms of breadth and depth. Some NGNs acknowledged that they had never encountered the topics addressed in the intervention before, while others had prior experience of working with similar issues, such as in various cognitive-behavioural therapies, and were familiar with the approach of working with thoughts, feelings and reactions. Regardless of prior experience, NGNs commonly described gaining personal insights into their own avoidance and proactive behaviours. They expressed how this new knowledge allowed them to recognize avoidant behaviour that they were previously unaware of, and how different behaviours could have significant consequences for their future professional development. Moreover, they appreciated how the intervention contributed to gaining insight into their own behaviour and actions, enabling them to process multiple perspectives simultaneously.

"[...] but I really got what NN [the intervention leader] said – that it might be good not to avoid things that we think are difficult, because then we will never learn. And that it may take time." (30)

For some individuals, the emotional aspect of the work brought forth unresolved personal needs and expectations. For example, some NGNs stated that they gained a deeper understanding of the interconnectedness between their private and work lives, recognizing the significance of this realization. One NGN expressed the impact of the intervention in her own words:

"[...] I can actually change my mindset, and I can actually work on pieces at home that are missing right now that I have prioritised away because I'm so involved in doing my job. I thought that was very good, so it's a good reminder that you need from the beginning, that you can't only immerse yourself completely in the job, but that there are actually elements in your private life that you need to work on as well, and it can also make it easier once you're working." (13)

4.3 Practical steps for skills development, healthy habits and better-organized work

This theme illustrates how the intervention played a role in fostering the development of specific actions to promote healthier behaviours, professional growth and better-organized work. Participants described the intervention as facilitating concrete behavioural steps, often seen as the initial stages of making lifestyle changes. The 'homework' assigned at the start of the intervention was viewed as a motivating factor for them to 'try' new behaviours and gain experience. For example, NGNs shared their experiences of actively engaging in enjoyable activities instead of simply going home and passively resting.

Several participants emphasized that they now engaged in enjoyable activities, such as meeting friends or spending time with family, instead of simply lying down due to a lack of energy. Additionally, many descriptions emerged regarding how nurses developed behaviours to promote good sleep and reduce stress, both before and after work. These practical steps, in turn, resulted in positive experiences and increased energy.

"[...] I didn't think I had time to meet friends, and I didn't make contact or set a meeting time with them. But during [the intervention], I did. I contacted friends and asked to meet up, and tried to plan meetings myself, instead of me just waiting for someone else to do it." (4)

Several NGNs also expressed how the intervention facilitated behavioural changes in their daily work. They described attempting to take regular planned pauses or breaks, rather than waiting until they were exhausted. One NGN shared her experience of deciding to take breaks despite feeling time-constrained, and how this decision resulted in positive outcomes and eventually became a permanent habit.

Some NGNs mentioned that, during the intervention, they were encouraged to create task lists to gain control over their work situations. These lists provided an overview and allowed for reflection on how work could be performed more efficiently. This approach not only reduced stress but also enhanced learning and contributed to a greater sense of effectiveness in the workplace.

"[...] we found strategies that worked well, as I normally do every morning or every night when I read the
and independently undertaking new tasks at work, leading to strength-
to a learning opportunity. The quote below describes how one NGN turned a difficult care situation
challenges was emphasized in the statements from the NGNs. The intervention was also noted as assisting NGNs in consciously
and independently undertaking new tasks at work, leading to strengthened learning and confidence. Some NGNs described how, after the intervention, they gained the courage to tackle particularly challenging tasks. A common example was their ability to identify and handle tasks that previously made them feel uncertain—tasks that they would previously have postponed or delegated to a colleague. Mastering these tasks was associated with increased job satisfaction, self-confidence, skill development and reduced stress.

"[...] when I had to do a new practical assignment, that I had never done before – removing a CVC. At first I was scared and didn’t want to make a mistake, thinking that I should postpone it and let someone else do it who was competent. Then instead I thought that I can find out how to do it before I decide not to do it. So then I read about it in the handbook, and it did not look so difficult, it was just that I had to remove stitches, and I have done that before, and then pull like a urinary catheter, which I have also done before, so when by putting these two procedures together, it didn’t feel so difficult. And then I just asked a colleague if there was anything else I needed to think about, and then I got some more tangible tips, like having compresses nearby in case it starts to bleed, and so on. And then I went in and did it, and I felt great afterwards." (1)

The importance of collegial support in successfully tackling these challenges was emphasized in the statements from the NGNs. The quote below describes how one NGN turned a difficult care situation into a learning opportunity.

"[...] it was an idea about avoidant behaviour. That we say we have a problem and so, instead of actually trying to tackle the problem, we try to avoid it all the time. One thing that I’ve had problems with is that I still find it very difficult to take blood samples from people, because I kind of assume that I will fail. But now I’ve made it a habit that I always take blood samples from my patients. So if I have patients who are going to give blood samples, then I had always tried at least three times, and I’ve also started the habit that, if I ask for help with the blood samples, then I’ll now stay in the room and watch while my colleague takes the blood samples – then I can at least learn something, and so on. Because in the past I’ve felt so ashamed to ask for help, so then I haven’t wanted to be in the room, I’ve only asked for help – ‘Please can you do this for me?’ Not. ‘Please can you show me how to do this?’ And that’s quite a big difference. ‘Can you do this for me?’ is not the same as ‘Please help me to understand this.’" (35)

In the interviews, there were descriptions of how NGNs took actions to improve the work environment and the quality of care. They initiated discussions on the ward about the importance of taking breaks, sharing workloads, scheduling lunch breaks and engaging in collective reflection before leaving work. These measures were recognized as effective in reducing stress and promoting better recovery. The intervention also empowered NGNs to share their newly acquired knowledge about stress and burnout with their colleagues, or to raise workplace issues that affected their well-being, such as staff shortages. It also fostered the courage to take action to improve the quality of nursing work, even in the face of resistance from more experienced colleagues, such as ensuring thorough nursing documentation.

Overall, NGNs described how the intervention helped them become better at actively seeking feedback and support from colleagues. They felt more comfortable asking for help, delegating tasks they could not handle during their shifts and expressing their own needs to colleagues and sometimes challenging the prevailing departmental culture.

4.4 | Barriers to insight and practical steps

The descriptions provided by the NGNs also highlight the presence of clear barriers to implementing the intervention content. These barriers are related to the NGNs’ ability to apply and utilize the suggested techniques and materials, as well as barriers within the work context.

The NGNs described the lack of perseverance and energy as hindrances to their ability to absorb and process information during the intervention sessions and to work effectively with the intervention content. Some found the group discussions to be tiring and lengthy, which could result in difficulties in maintaining focus and engaging in deeper reflection during these meetings. Statements such as: "It feels hard to deal with all the problems" (22), "I got tired" (8), "It was a little late in the afternoon" (44), "too much" (19), "three occasions was too much" (25) or "would have been better with shorter sessions" (15) indicate that the work during the meetings was laborious and demanding.

"[...] I remember that when we started with [the intervention] I thought, ‘God, this would have been great, but I am so tired, because I was new, and this is great information and I wanted to absorb it, but I don’t have the mental capacity to do it now.’" (27)
Some participants also found it challenging to connect the theoretical models to the practical aspects of their work. Applying the intervention content to specific situations within a complex reality was considered to be demanding. Furthermore, there were individual reasons mentioned for finding the work particularly challenging during the intervention, such as a lack of prior professional experience in healthcare, or experiencing high emotional strain, such as heartache.

The group dynamics during the group discussions were also identified as a barrier. Some participants felt that not everyone had an equal opportunity to speak, while others dominated the discussions. Moreover, the large number of participants in the group limited the time available for in-depth discussion.

“[…] some people talk non-stop. […] Someone who is quiet might not say much when everyone else is chatting. If [the groups] were smaller, maybe everyone would have had time to finish talking, before others got involved […]” (34)

In some cases, the lack of individual adaptation of the intervention was seen as a barrier to making behavioural changes. NGNs expressed a desire for more tailored strategies, such as guidance on handling recovery as a parent of young children, or coping strategies for difficult and tragic situations. Some NGNs also felt that a longer process and additional support, such as integrating the intervention into their educational training or providing additional courses during the introductory year, would be beneficial.

However, the majority of criticisms indicated barriers to applying the intervention in their work, including difficulties in initiating changes, identifying and articulating problems and remembering to use the intervention content in their daily routines. Maintaining a regular circadian rhythm during shift work, for example, was highlighted as a challenging task that required determination. Changing behaviour in situations where NGNs had limited control, such as high demands or lack of support, was particularly difficult.

When it came to sustaining behavioural changes, NGNs often found it challenging and reported relapses into unwanted patterns of behaviour. For example, in a stressful and productivity-driven work environment, establishing regular breaks for recovery and meals proved to be challenging, and required constant attention for most NGNs. One NGN expressed their struggle as follows:

“[…] so what I think is still most difficult is getting to prioritize yourself when you work. I have a very hard time with this, like kind of letting go of my patients when I want to go and have lunch. But I would like to try to draw up a plan, I could try to make a plan in the morning and think that, at this time, in this gap, for lunch. But it always takes a little longer than I had imagined, and something always comes up. And I know I have colleagues who are very good at doing this, no matter how it is. And then they just leave everything and go and have lunch. And I wish I could do that. I draw up my plan and I try to follow it, but then I have a hard time letting go of it if it doesn’t work out properly.” (2)

The NGNs also described how the social work environment itself could act as a barrier. In some cases, it was not socially acceptable to delegate tasks or seek assistance from colleagues. This type of work culture created a perception that NGNs should already possess the necessary skills, which hindered their motivation to apply the strategies discussed during the intervention.

Furthermore, the absence of conversations with colleagues about the intervention, or the lack of time for reflection and planning for behavioural change, were identified as additional barriers. One NGN expressed this sentiment:

“[…] it happens so much at work anyway, so you don’t have time to think so much, you just do […] or sometimes it’s not possible to have a break. It’s just like that on my ward […]” (05)

5 | DISCUSSION

This process evaluation demonstrated that NGNs utilized the insights and knowledge gained from the intervention, and took steps towards new behaviours in alignment with the proposed mediators outlined in the logic model (Figure 1). The first theme, ‘building acceptance of being new’, provides support for the validity of the suggested mediators in the intervention. As depicted in the logic model, it was anticipated that the intervention would enhance knowledge regarding work-related stress, ill health and organizational socialization. The NGNs reported that their participation in the intervention fostered a sense of acceptance of being new, leading to a more tolerant self-view within their professional roles. They expressed that a better understanding of the challenges commonly faced by newcomers resulted in decreased levels of stress and fear, which aligns with the intended outcomes of the intervention. This increased acceptance of their new roles empowered the NGNs to actively engage in self-care practices, both in their work environment and in their personal lives. These behavioural changes are significant considering the findings of Edwards-Maddox (2023), which demonstrated that the acquisition of skills to counteract feelings of unpreparedness and low self-compassion can alleviate symptoms of burnout among NGNs. The findings indicate that, at work, the NGNs allowed themselves to embrace their new and uncertain status, seeking support and prioritizing their own needs, resulting in a reduced experience of stress and supporting the intervention logic model (Figure 1). In their personal lives, they recognized the importance of engaging in enjoyable and energizing activities outside of work, indicating the effective implementation of the behaviour activation mechanism and supporting the proposed mediator of increased engagement in recovery behaviours.

The second theme, ‘gaining insight into professional development and health’, suggests that the intervention acted as an eye-opener for
some participants, providing them with a new mindset. The results indicate that the information presented in the intervention, related to organizational socialization, work stress and learning techniques, effectively increased participants’ knowledge. The NGNs described developing a cognitive map that helped them interpret and understand their work experiences. Consistent with the intervention logic model (Figure 1) and proposed mediators, they acknowledged the importance of recognizing signals of stress and understanding the role of proactive behaviours (or the avoidance of them) in the process of learning and adapting to their new professional role.

The third theme, ‘practical steps for skills development, healthy habits and better organized work’, revealed various behavioural changes that occurred as a result of participating in the intervention. These changes are aligned with the intervention activities and proposed mediators. Participants provided examples of behavioural modifications related to recovery behaviours, such as incorporating more enjoyable activities during work, establishing improved sleep habits, taking regular breaks before exhaustion and adopting a strategic approach to managing their workload based on their recovery needs. These behavioural changes were perceived to increase energy and reduce stress, thereby supporting the anticipated outcomes of the logic model (Figure 1). Furthermore, in line with the intervention activities and proposed mediators, participants described changes in their proactive learning behaviours. They shared instances where they had previously avoided situations due to insecurity but were now proactively engaging in them. They also mentioned actively seeking feedback. Consistent with the expected outcomes, these changes led to an increased sense of task mastery and reduced stress. Interestingly, participants also reported increased job satisfaction, extending the findings beyond the expected outcomes. Another noteworthy finding was that participants described how their participation in the intervention motivated them to act to improve the work environment and the quality of care in their clinical wards, resulting in further stress reduction and increased opportunities for recovery.

The NGNs in this study described how the intervention helped them gain role clarity and accept the challenges of being new in their professional role. Role clarity is identified as one of the proposed proximal outcomes, and the acceptance of being new can be understood in relation to the mediator of increased understanding of the organizational socialization process. This finding is supported by Kramer et al. (2012), who also found that NGNs struggled with the belief that their colleagues expected more from them than they could deliver, which made them less proactive in seeking feedback and asking questions. Furthermore, Kramer et al. (2012) also identified challenges in identifying effective strategies for integrating practice into clinical settings and evaluating results. The current intervention targeted this specific issue, and as expected, based on the intervention logic model (Figure 1), it helped nurses understand the sources of avoidant behaviours and their consequences. This understanding led to reduced stress, increased learning and a greater sense of effectiveness in the workplace. Similarly, Kramer et al. (2012, 2013) emphasized the importance of strategies to get “back on the learning track”. Seeking relevant feedback was identified as being crucial for NGNs to grow, develop and maintain a focus on learning. These findings align with the outcomes of the current intervention, where participants described changes in their proactive learning behaviours and increased engagement in seeking feedback.

Overall, the study’s findings shed light on the barriers and challenges faced by nurses in applying the intervention, particularly in situations with excessive workload and insufficient support. These findings are in line with the broader body of research that explores the transition experiences of NGNs in clinical ward settings (Edwards-Maddox, 2023; Jarden et al., 2021; Xie et al., 2021). The focus on stress in this intervention is significant, especially considering the review conducted by Kenny et al. (2021), which revealed that, of the 130 studies analysed, only a limited number of transition-to-practice programmes addressed psychological or emotional well-being. Instead, the majority of these programmes primarily focused on skills and competency development. In a recent review conducted by de Wijn and van der Doef (2022), it was pointed out that there is a lack of studies examining intervention characteristics and barriers to the uptake and implementation of interventions. This highlights the significance of the results from this study, as it contributes new knowledge in this area. Descriptions of how cognitive load hindered active engagement with the intervention content indicated that the length and timing of the intervention meetings were significant barriers. When developing the intervention, careful consideration was given to the challenges and potential exhaustion experienced by NGNs as they navigate their new profession. Through piloting and feedback, a rigorous selection process was employed in order to include only the most crucial content. However, it became evident that the 3-hour sessions held in the afternoon had a negative impact on uptake for some participants, due to fatigue. The cognitive and emotionally demanding nature of the intervention content was perceived as challenging to absorb under such circumstances. The low uptake can be attributed to a lack of energy resulting from these factors. Based on these results, a revision of the content of the intervention is recommended. The intervention format in this study included information presentations, discussions, group exercises, individual exercises and homework assignments, as outlined in the logic model. Although all of these components are likely to contribute to the flow of information and learning, it is important to carefully consider their implementation within the intervention. This could involve adjusting the duration and timing of sessions, incorporating interactive and engaging activities and providing additional support to ensure participants can actively participate in, and benefit from, the intervention. Within the intervention context, group dynamics and compositions were sometimes described as obstacles to intervention uptake, such as when certain individuals dominated the discussions while others had less opportunity to contribute. These barriers align with previously identified challenges for NGNs in the workplace, including feeling overwhelmed by information overload, the need to simultaneously monitor multiple patients and the fear of missing important details (Edwards-Maddox, 2023; Kramer et al., 2012; Kramer et al., 2013).
5.1 | Strengths and limitations

In this process evaluation, there were concerns regarding the mechanisms of 'change' or intervention components aimed at preventing excessive stress and lack of energy after an average of 3 months from the start of the intervention (rather than immediately after the final intervention session, when data for the effectiveness evaluation were collected, as shown in Figure 2). To provide a more confident interpretation of how the intervention was received by NGNs, we decided to invite participants regardless of whether they were in the experimental group or control group of the effectiveness evaluation. The findings of this study highlight the importance of exploring a structured process to prepare NGNs on an individual level, enhancing their awareness of stress symptoms and teaching them techniques for recovery and proactive behaviour. However, relying solely on behavioural change interventions may not be sufficient for promoting long-lasting positive outcomes in the socialization of NGNs into the profession. The support of the organization in which the new graduates work is crucial to sustaining changes and achieving positive outcomes. A recent systematic review on the effectiveness of interventions to reduce nurses’ burnout (Yıldırım et al., 2023) concluded that interventions targeting individuals are effective at low and medium levels, and it is essential to combine interventions that address both the individual and the organization to effectively address stress-related psychological health issues.

A review conducted by Tamminga et al. (2023) indicated that individual-level stress interventions among healthcare workers may have a stress-reduction effect that can last up to 1 year after receiving the intervention. However, a knowledge gap regarding long-term follow-ups has been highlighted in the literature by de Wijn and van der Doef (2022). The 3-month duration on average, from the start of the intervention to the time of the process evaluation interviews, might have been insufficient to evaluate the long-term goal of reducing burnout, as stated in the logic model (Figure 1). It is important to acknowledge that the lack of longer-term follow-ups in this study can be seen as a limitation, as it prevents a comprehensive understanding of the intervention’s impact over an extended period. Nonetheless, this approach can also be seen as a strength, as participants could recall their experience of the intervention.

Another limitation was that the intervention, which consisted of three sessions lasting for 3 h each, was relatively brief given the demanding nature of the NGNs’ work life. However, research by Cohen et al. (2017) demonstrated that significant improvements can be achieved by modifying a limited number of key elements, and thereby influencing a process in a meaningful way (Cohen et al., 2017).

6 | FUTURE RESEARCH

Based on the findings of this study, which suggest that experiences of stress may have impeded the adoption of the intervention, it is crucial for future research to address these issues and adapt the intervention content to better align with the challenges faced by newly graduated nurses, such as fatigue and the demands of their work environment. Furthermore, future research should focus on filling the knowledge gap regarding long-term follow-ups, and examining the sustained effects of stress-reducing interventions within transition-to-practice programmes beyond the initial months of transition.

To gain a broader perspective on the study’s findings, it would have been interesting to explore the experiences of co-workers regarding the actions of NGNs in their daily work after participating in a preventive stress intervention. Studying contextual factors, such as access to senior colleagues, mentors or managers, the learning environment at the unit, working hours and workload, could contribute to a deeper understanding of the working conditions that influence the outcomes of a preventive stress intervention, which are suggested to be important in complex interventions (Skilvington et al., 2021). Additionally, there is a need to conduct intervention studies to support graduate nurse transition to practice in settings outside of acute hospital environments, as suggested by Kenny et al. (2021).

In addition, it is important to enhance our understanding of how organizational support from nurse leaders and colleagues can effectively facilitate successful professional socialization for NGNs. Conducting empirical investigations to evaluate structured strategies for transition-to-practice programmes, including exploring the optimal timing and duration of onboarding activities, would be beneficial. Finally, it would be valuable to investigate the specific methods and behaviours of nurse leaders that are associated with the well-being and job performance of NGNs.

7 | CONCLUSION

This study reveals three developmental processes, represented by three themes, which were stimulated by a preventive stress intervention for NGNs. These processes are closely linked to the socialization of NGNs as new nurses, ensuring adequate recovery and rest, and creating effective learning environments to cope with nursing assignments. The results also highlight organizational barriers that impede the adoption of these processes by NGNs, which can be addressed by healthcare organizations to support the health and learning of NGNs.

The knowledge derived from this study may be valuable for organizers of preventive stress programmes and transition-to-practice programmes, as well as for managers and supervisors, to gain a better understanding of how to support the health and learning of NGNs. This study can also be helpful for NGNs themselves, as it provides insight into the processes that contribute to their well-being and learning.

AUTHOR CONTRIBUTIONS

Ann Rudman conceived the study concept, developed the process evaluation and conducted the data collection. Ann Rudman and Maria Skyvell Nilsson developed the qualitative data analysis, interpreted findings and produced the first drafts of the manuscript, with


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