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FERNANDA MARIA DE MIRANDA

TRAINING BRAZILIAN NURSES TO PROMOTE MENTAL HEALTH AT WORK

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TRAINING BRAZILIAN NURSES TO PROMOTE MENTAL HEALTH AT WORK

Thesis presented to the Postgraduate Program in Nursing of the Federal University of São Carlos, for obtaining a PhD in health science.

Line of Research: Work and management in health and nursing.

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DEDICATION

I dedicate this thesis to the futures generations of nurse workers.

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"Será, então, que o trabalho dos cuidados da enfermagem está vivenciando os tantos descuidos que hoje avassalam o ser social que trabalha?" (Antunes, 2020, p. 3)

"It is possible, then, that the work of nursing care is experiencing the many oversights that today overwhelm working-social-beings?" (Antunes, 2020, p. 3, our translation)

RESUMO

MIRANDA, F. M. Formação de enfermeiros líderes para a promoção da saúde mental no trabalho. 2024. Tese (Doutorado em ciências da saúde) – Programa de Pós-Graduação em Enfermagem, Universidade Federal de São Carlos, São Carlos, 2024. 169p.

Introdução: os riscos psicossociais são problemas conhecidos no contexto de trabalho em enfermagem hospitalar. A formação de líderes para promoção da saúde mental no trabalho emerge como potente estratégia, embora ainda limitada no contexto brasileiro. A consciência dos enfermeiros dos riscos psicossociais e dos fatores organizacionais que os afetam, bem como da sua posição na organização como enfermeiros-líderes, pode fortalecer a luta coletiva por ambientes saudáveis. **Objetivo:** avaliar de forma piloto a efetividade de uma intervenção formativa dirigida a enfermeiros-líderes hospitalares para a promoção da saúde mental no trabalho. **Método:** estudo piloto com pré e pós-teste em grupo único com acompanhamento de dois e quatro meses após intervenção formativa online denominada Programa *Lidera-SMT*, projetada a partir do framework canadense "Saúde e Segurança Psicológica no Local de Trabalho". A pesquisa foi realizada em três etapas: Desenvolvimento da intervenção e instrumentos; Validação de conteúdo dos instrumentos; Implementação e avaliação piloto do *Lidera-SMT*. Foram elegíveis para participar da intervenção todos os enfermeiros que atuam em hospitais. A amostra foi não probabilística por conveniência e foram excluídos aqueles que não concluíram o Programa. Os dados foram coletados por meio de questionário sociodemográfico e de avaliação piloto da eficácia da intervenção baseada nos três primeiros níveis de avaliação de Donald Kirkpatrick, usando-se como medidas: nível I – interesse, confiança, atenção, expectativa; nível II – aprendizagem; e nível III – atitudes e empoderamento estrutural percebido. A análise usou o software JAMOVI e incluiu estatísticas descritivas para características dos participantes; ANOVA não paramétrica, modelo linear misto para avaliar a retenção de aprendizagem; Cronbach's alpha para verificar consistência interna dos questionários; teste de correlação de Spearman para identificar correlação entre atitudes e empoderamento estrutural; e teste de Mann-Whitney para comparar grupos por carga horária. A significância adotada foi de 5%. Aspectos éticos foram respeitados e o projeto aprovado (Brasil: parecer n. 5.627.685; CAAE 57917922.9.0000.5504; Canadá: n. 1469900). **Resultados**: o *Lidera-SMT* baseou-se na sala de aula invertida e foi composto de quatro módulos obrigatórios e um opcional, totalizando 8 ou 10 horas. O questionário sociodemográfico, o teste de aprendizagem e o instrumento de atitudes percebidas, que não eram validados, passaram por validação por meio de Técnica Delphi. Participaram 12

especialistas brasileiros (oito acadêmicos e quatro profissionais especialistas em enfermagem). O *Lidera-SMT* foi implementado entre julho e agosto de 2023. Foram 67 os enfermeiros que iniciaram o Programa e 54 os concluintes, demonstrando 81% de adesão. Tanto os dados parciais (n=50) quanto os completos (n=29) foram considerados para a avaliação dos níveis de aprendizagem e comportamento. Nivel I: médias de satisfação acima de 4,46 (SD=0,872), com 94% dos participantes (n=50) acima do ponto de corte. Nível II: score médio aumentou de 3,9 (pré) para 4,41 (2º follow-up), sendo significantes as diferenças pré e pós (p=0,04) e pré e 2º follow-up (p<0,01). Nível III: atitudes percebidas alcançaram scores altos, embora não observadas diferenças significantes entre os momentos de avaliação. A percepção de empoderamento estrutural aumentou significativamente. Existem correlações entre atitudes e empoderamento estrutural. **Conclusões:** no teste piloto o *Lidera-SMT* demonstrou ser uma intervenção efetiva para a promoção da saúde mental no trabalho.

Palavras-chave: Saúde Mental; Saúde do Trabalhador; Enfermagem; Formação Continuada; Hospitais.

ABSTRACT

MIRANDA, F. M. Training Brazilian nurses to promote mental health at work. 2024. Thesis (PhD in Health Sciences) – Postgraduate Program in Nursing, Federal University of São Carlos, São Carlos, 2024. 169p.

Introduction: psychosocial risks are known problems in the context of hospital nursing work. Training leaders to promote mental health at work emerges as a powerful strategy, although still limited in the Brazilian context. Nurses' awareness of psychosocial risks and the workplace factors that affect them, as well as their position in the organization as nurse leaders, can strengthen the collective fight for healthy environments. **Objective:** to pilot a model to evaluate the effectiveness of a training intervention aimed at hospital nurse leaders to promote mental health at work. **Method:** pilot study with pre- and post-test in a single group with follow-up of two and four months after an online training called the *Lidera-SMT* Program, designed based on the Canadian National Standard of Psychological Workplace Health and Safety. The research was carried out in three stages: Development of the intervention and instruments; Validation of instrument content; Implementation and pilot and evaluation of *Lidera-SMT*. All nurses working in hospitals were eligible to participate in the intervention. The sample was non-probabilistic for convenience and those who did not complete the Program were excluded. Data were collected through a sociodemographic questionnaire and pilot testing the intervention was based on Donald Kirkpatrick's first three levels of evaluation, using as measures: level I – interest, confidence, attention, expectation; level II – learning; and level III – attitudes and perceived structural empowerment. Analysis used JAMOVI software and included descriptive statistics for participant characteristics; Non-parametric ANOVA, linear mixed model to assess learning retention; Cronbach's alpha to measure the internal consistency of the questionnaires; Spearman correlation test to identify correlation between attitudes and structural empowerment; and Mann-Whitney test to compare groups by training hours. The significance adopted was 5%. Ethical aspects were respected and the project was approved (Brazil: approval n. 5.627.685; CAAE 57917922.9.0000.5504; Canada: n. 1469900). **Results:** *Lidera-SMT* was based on the flipped classroom and was composed of four mandatory modules and one optional, totaling 8 or 10 hours. The sociodemographic questionnaire, the learning test and the perceived attitudes instrument, which were not validated, underwent validation using the Delphi Technique. Twelve Brazilian experts participated (eight academics and four nursing specialists). *Lidera-SMT* was implemented between July and August 2023. Sixty-seven nurses started the Program

and 54 completed it, demonstrating 81% adherence. Both partial (n=50) and complete data (n=29) were considered to evaluate learning and behavior levels. Level I: satisfaction means above 4.46 (SD=0.872), with 94% of participants (n=50) over the cutoff point. Level II: mean score increased from 3.9 (pre) to 4.41 (2nd follow-up), with significant differences pre and post ($p=0.04$) and pre and 2nd follow-up ($p<0.01$). Level III: perceived attitudes achieved high scores, although no significant differences were observed between the assessment moments. The perception of structural empowerment has increased significantly. There are correlations between attitudes and structural empowerment. **Conclusions:** in pilot work, *Lidera-SMT* demonstrated to be an effective intervention for promoting mental health at work.

Keywords: Mental Health; Occupational Health; Nursing; Education, Continuing; Hospital.

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LIST OF ACRONYMS

ANOVA	Analysis of variance
ARCS	Attention, relevance, confidence and satisfaction system
BCNU	British Columbia Nurses' Union
CAAE	Certificate of Presentation of Ethical Appreciation
CAPES	Coordination for the Improvement of Higher Education
CET-II	Conditions of Work Effectiveness Questionnaire II
CNPq	National Council for Scientific and Technological Development
COFEN	Brazilian Federal Council of Nursing
CONSORT	Consolidated Standards of Reporting Trials
CSA	Canadian Standards Association
EPID@Work	Enhancing Prevention of Injury and Disability @ Work
GFST	Work & Health: Management and Development
HR	Human Resources
ILO	International Labour Office
ISO	International Organization for Standardization
IMMS	Instructional Materials Motivation Survey
IMMS-BRV	Instructional Materials Motivation Survey brief version
IQR	Interquartile range
Lidera-SMT Program	Nurse Leaders Promoting Mental Health at Workplace
LMS	Learning Management System
LMM	Linear mixed model
MH	Ministry of Health
OH	Occupational health
OHS	Occupational Health and Safety
PDSE	Doctoral Sandwich Abroad Program

PHSMS	Psychological Health and Safety Management System
Rs	The Spearman's rank correlation coefficient
SARS	Severe Acute Respiratory Syndrome
SD	Standard deviation
UFSCar	Federal University of São Carlos
WHO	World Health Organization

SUMMARY

PERSONNAL MOTIVATIONS

Nurse training has been my interest since my first contact with scientific research. I started my career as a researcher studying the application of the Significant Learning framework (through the reflective portfolio technique) in the initial training of nurses. During my master's, I had the opportunity to continue studying nurse training and I performed applied research to develop an online intervention based on my previous experience with the reflective portfolio teaching technique (Miranda, 2016).

At the same time, I became a member of the Brazilian research group Work & Health: Management and Development (from portuguese *Gestão, Formação, Saúde e Trabalho* – GFST) in 2016, which is linked to the UFSCar and focuses on two main areas: a) safety and health at work; and b) interprofessional training and practice. I performed two literature reviews bringing aspects of occupational health (OH) into the spotlight in my two published post-graduation monographies: a) Organizational aspects and harassment at work in nursing: an integrated literature review (Miranda *et al.*, 2019) and b) The influence of educational actions in health institutions personnel management (Miranda; Alvares; Petroni, 2019).

Between 2017 and 2022, I worked as a nurse educator at a hospital. My position was linked to Human Resources (HR) and was close to other stakeholders, such as nurse-leaders. On the one hand, this experience showed me how training could be a powerful tool to improve nurses' knowledge, skills, and behaviors as well as organizational results, especially with the alignment of senior leadership and strategic objectives. On the other hand, I saw myself as part of an overloaded, tired, ill working class.

I started my PhD program on March 2nd, 2020 and the outbreak of the COVID-19 pandemic in Brazil was officially declared on March 11th, 2020. It was a challenging time in my career. I was divided between the PhD program and a full-time job as a nurse educator amidst a global health crisis. At this point, I started asking myself about psychosocial risk factors in nursing from a perspective that I had not previously had. In part, the inspiration of this research came from that time. I realized that, as I was part of the nursing workforce and since I had the means, knowledge, and necessary skills, considering my organizational position, I could make improvements in the work (and health) of other nurses through training.

While this research took form, my adviser and I felt that the Canadian experience with the National Standard of Psychological Workplace Health and Safety could help to deepen the discussion regarding approach and implementation of relevant and sustainable strategies to promote mental health at work. I awarded a Doctoral Sandwich Abroad Program (PDSE)

scholarship sponsored by CAPES. Being in Canada for ten months was an immersive and intense experience that transformed both myself and this PhD research.

Myself in the sense of being capable of surpassing challenges to became a better young researcher. Being apart from my family and overcoming language, cultural and socioeconomical barriers were part of the experience abroad. That taught me about patience and resilience. I am able now to reflect more about defensive strategies (which in my case included a lot of crying) and individual and collective coping strategies. I must to highlight the second type, because in opposition of the natural feeling of loneliness, my best coping strategies were built between collectives: our family online gatherings, our Brazilian students group sharing and our off-work activities in Canada.

The abroad experience changed this PhD research in the sense of content, deepness and work process do write it. The director of the EPID@Work (and my dear co-adviser) says that they are building a Research Institute in and for the Northwestern Ontario. So, EPID's members being there, building in-person relationships, strengthens the Institute and consequently its products. That could also be applied for this research, my experience in Canada changed the way that I understand the potentialities and challenges of the Canadian National Standard. The *Lidera-SMT* was built stronger because of that. The expertise of EPID with quantitative design and what I learned from it is also reflected in this thesis.

1 INTRODUCTION

The International Labour Office (ILO) (International Labour Office, 1986, p. 3) defined psychosocial factors at work as follows:

> Interactions between and among work environment, job content, organizational conditions and workers' capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction.

Gollac e Bordier (2011) stratify these risks according to the intensity and duration of work, emotional demands, insufficient autonomy, poor quality of social relationships at work, conflicts of values, and job insecurity. The literature suggests that a work process with considerable control and greater worker choice tends to improve health outcomes. Work processes motivated and driven only by organizational interests are associated with negative health outcomes and poor well-being (Joyce *et al.*, 2010).

Nursing teams have experienced an intensification of work over the years as a result of the neoliberal austerity ideology linked to both the transformation of the welfare state and the depletion of resources for the public sector (Arboit *et al.*, 2020; dos Santos *et al.*, 2020; Selberg, 2013; Souza *et al.*, 2017). Although the strengthening of rationality at work has enabled greater visibility and expansion of the field of nursing and has contributed to the strengthening of health care, it may also result in the intensification of nursing work (Selberg, 2013). This context, together with the lack of resources for health care, can contribute to a rational, intense, fragmented work process in nursing (Souza *et al.*, 2017). Differences between hierarchical positions on the nursing team also influence the perception of work intensity in Brazil; while technical-level workers report more intense work related to direct patient care, nurses associate it with managerial activities (dos Santos *et al.*, 2020).

The intensification of the nursing work process at hospitals is related to factors associated with the complex clinical conditions of patients in addition to organizational and human factors (Arboit *et al.*, 2020). The nursing team deals with other psychosocial risk factors, especially due to the constant demands for attention during work (Silva *et al.*, 2021), exposure to stressful environments, conflicting feelings, and frequent contact with death (Silva *et al.*, 2017). The high psychosocial risk is related to insufficient fairness and respect, including not feeling part of the hospital community when nursing work is not directly linked to patient care (Silva *et al.*, 2021).

These aspects exert impacts on the mental health due to stress (Silva *et al.*, 2020), a low perception of quality of life or well-being (Silva *et al.*, 2020), acts of violence (Zhang *et al.*, 2017), and Burnout syndrome (Faria *et al.*, 2019; Woo *et al.*, 2020). Psychological distress

reduces engagement and productivity at work and magnifies the negative association between psychosocial risks and other aspects of mental health at work (Faria *et al.*, 2019; Schaufeli; de Witte, 2017).

The COVID-19 pandemic has increased psychosocial risks for nursing staff, especially regarding emotional labor and workload, leading to higher levels of anxiety (Sampaio; Sequeira; Teixeira, 2020), depression (Di Tella *et al.*, 2020; Sampaio; Sequeira; Teixeira, 2020) and stress (Sampaio; Sequeira; Teixeira, 2020). Post-traumatic stress symptoms were also identified as a current challenge (Di Tella *et al.*, 2020). A study on the profile of victims showed that women, nursing technicians, and older workers were more susceptible to mental illness caused by work in Brazilian hospitals (Dal'Bosco *et al.*, 2020).

There is an urgent need to strengthen actions for promoting mental health among hospital nursing staff. Canada, Australia, and the United Kingdom became references on developing mental health guidelines for the workplace (Memish *et al.*, 2017). Canada understood workplace mental well-being as a public policy and, in 2013, launched the Canadian National Standard of Psychological Workplace Health and Safety (Canadian Standards Association; Bureau de Normalisation du Québec, 2013). The Canadian Standard is considered the one with highest scores in quality and comprehensiveness of content, achieving "all levels of the integrated approach and [including] extensive guidance and practical tools for the implementation of recommendations at each of these levels" (Memish *et al.*, 2017, p. 218).

The literature describes successful interventions focused on communities and workers in general (Kristman *et al.*, 2019), with an integrated approach (Lamontagne *et al.*, 2014), and aimed at supporting leaders in the early recognition of psychosocial risks to prevent possible harm (Gayed; Lamontagne; *et al.*, 2018; Gayed; Milligan-Saville; *et al.*, 2018).

Interventions are powerful tools for the establishment of cohesion between scholars and the community for a better transmission of knowledge (Ferraz; Pereira; Pereira, 2019). Interventions favor the synthesis, exchange, and application of knowledge to accelerate the benefits of innovation for health and health systems (World Health Organization, 2006). Despite the relevance of implementing interventions, especially for management personnel due to the beneficial effects on knowledge, attitudes, and behavior for the promotion of mental health in the workplace, a limited amount of research on this issue is available (Gayed; Milligan-Saville *et al.*, 2018).

The COVID-19 pandemic has led the world to (re)think psychosocial risks. This moment may be an opportunity to accelerate cooperation in global research (Buitendijk *et al.*, 2020) and disseminate scientific conversation. Improving mental health in the workplace is an

emerging issue (Ornell *et al.*, 2020) aimed at supporting and protecting workers, patients and society (Giménez-Espert; Prado-Gascó; Soto-Rubio, 2020; Ornell *et al.*, 2020).

Training interventions based on the Canadian Standard may be useful in the context of nursing teams in Brazil, especially after the COVID-19 pandemic. The results of the pandemic have been overwhelming around the world. Brazil is ranked fifth among the countries with the most infections by SARS-CoV-2, with 38,452,504 records of infected individuals, and second in the most accumulated deaths, with 709,963 fatalities from the disease (Brazil, 2023).

Although discrepancies were observed between official data from the Ministry of Health (MH) and specific unions, such as the Federal Nursing Council (from the Portuguese, *Conselho Federal de Enfermagem*), Brazil was one of the countries with the highest rates of illness and deaths by COVID-19 among nursing staff. The Nursing Observatory, which is linked to the Federal Nursing Council, identified 65,029 suspected or confirmed cases of COVID-19 and 872 deaths among nursing staff from the beginning of the pandemic to April 1st, 2023 (Nursing Federal Council, 2023). The MH has measured COVID-19 outcomes using epidemiological weeks as the timeframe. The Ministry counted 53 epidemiological weeks in 2020 (from January 5th, 2020 to January 2nd, 2021) and 52 in both 2021 (January 3rd, 2021 to January 1st, 2022) and 2022 (from January 2nd, 2022 to December 31st, 2022). Up to epidemiological week 5 of 2022, the MH identified 290,818 confirmed cases among nursing staff (Brazil, 2022a, 2022b, 2021, 2020), but, from that point onward, only reported cases and deaths from severe acute respiratory syndrome (SARS), discontinuing the monitoring of total cases. The ministry reported 934 deaths of nursing staff up to epidemiological week 52 (December 25th, 2021 to December 12th, 2022) (Brazil, 2022a). There is no information about deaths of nursing staff on COVID-19 epidemiological reports available for 2023. There is no COVID-19 epidemiological report yet available for 2024.

The general scenario about psychosocial factors for the nursing team, the impact of the COVID-19 scenario on the workload of the nursing team, the psychosocial risks, and the alarming data on illness and deaths in this population underscore the urgent need for strategies that promote mental health in the workplace justify this study. If not prioritized, frontline healthcare workers could experience collective emotional breakdown (Ornell *et al.*, 2020).

2 THEORETICAL FRAMEWORKS

This study is based on two fundamental theoretical frameworks. We used the Canadian National Standard of Psychological Workplace Health and Safety (Canadian Standards Association; Bureau de Normalisation du Québec, 2013) to develop the intervention and we choose Donald Kirkpatrick's evaluation model (Kirkpatrick; Kirkpatrick, 2006) to measure the effectiveness of the *Lidera-SMT* (Nurse-Leaders Promoting Mental Health at Work) Program.

This research project included a sandwich period in Canada. Among the main goals of internship abroad was the immersive study in the Canadian Standards Association framework as well as the study of the applicability of Kirkpatrick's framework to our research. For such, we conducted two literature reviews. The first aimed to identify mental health promotion strategies for hospital nursing staff described in the literature. The second, to understand how Donald Kirkpatrick's framework has been used to evaluate training actions in nursing. These reviews support the writing of this thesis and their full content were prepared for publication in indexed journals.

We also included two sections in this chapter for an in-depth discussion on theoretical aspects of both the pedagogical framework for the *Lidera-SMT* Program and the health and nursing work context, ensuring a full understanding of the object of study. Thus, this chapter will be presented in five parts: 2.1. Canadian National Standard of Psychological Workplace Health and Safety; 2.2. Health and nursing work in Brazil; 2.3 Strategies for mental health promotion among hospital nursing staff; 2.4. Andragogy framework and the flipped classroom technique; and 2.5 Donald Kirkpatrick's Evaluation Framework.

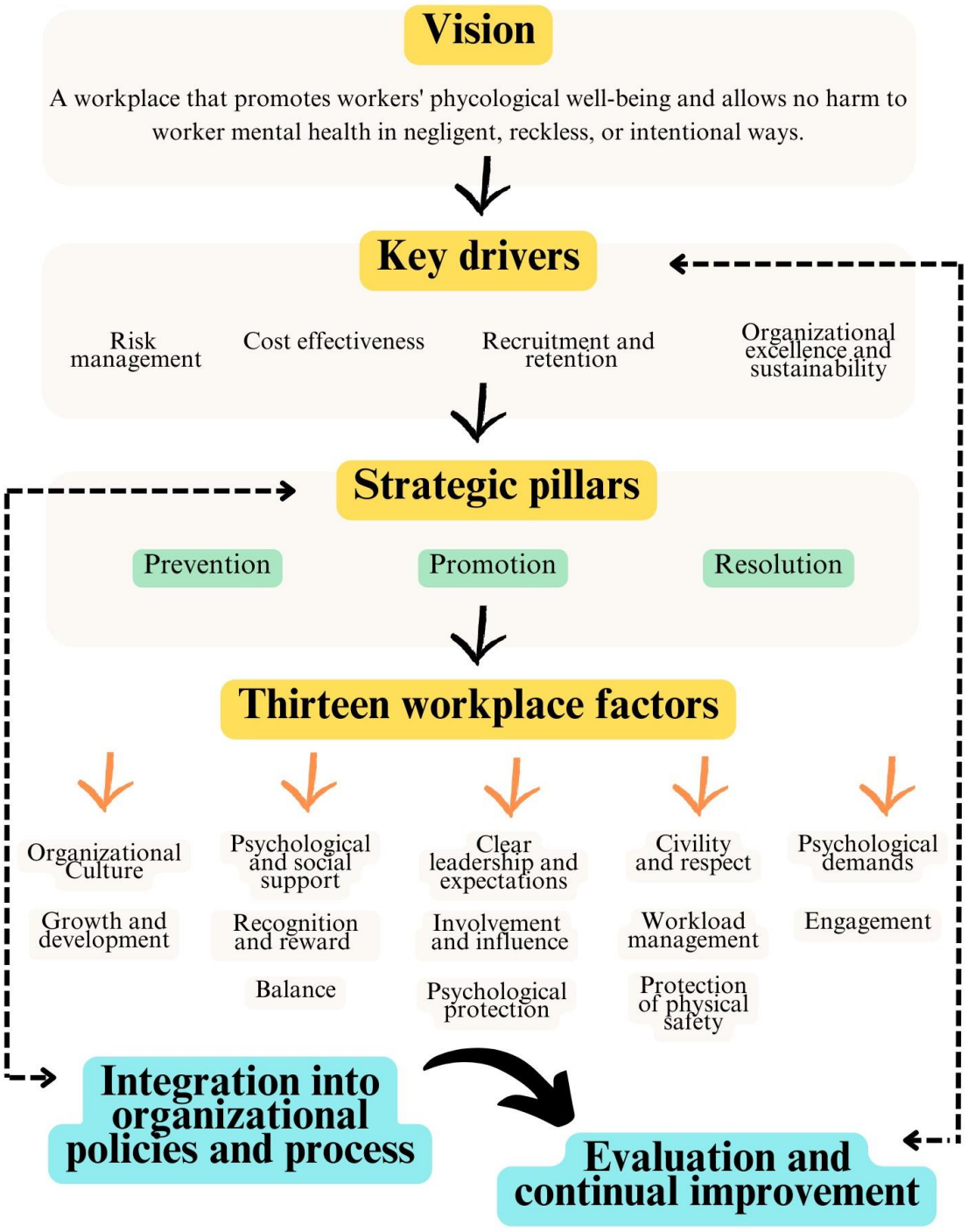
2.1 CANADIAN NATIONAL STANDARD OF PSYCHOLOGICAL WORKPLACE HEALTH AND SAFETY

The Canadian National Standard of Psychological Workplace Health and Safety was implemented by the Canadian Standards Association (CSA) and the Bureau de Normalization du Québec. This Standard offers an integrated approach to addressing mental health in the workplace, addressing systemic causes, workplace factors, and organizational interventions. A psychologically safe work environment is important to the success of health promotion efforts. For such, organizations must evaluate needs and address psychosocial risk factors before promoting health promotion activities (Canadian Standards Association, 2014; Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

The conceptual model (Figure 1) has three strategic pillars – harm prevention, health promotion, and the resolution of incidents or concerns – and thirteen measurable workplace

factors known to impact psychological health and safety (Canadian Standards Association, 2014; Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

Figure 1. Conceptual model Canadian National Standard of Psychological Workplace Health and Safety. São Carlos, 2023



Font: adapted from Canadian Standards Association and Bureau de Normalisation du Québec (2013, p. 24).

Details on how workplace factors can promote psychologically healthy, safe environments are displayed in Table 1.

Table 1. The Thirteen workplace factors at work. São Carlos, 2023

Workplace Factor	How could these factors be positive?
Organizational culture	"Mix of norms, values, beliefs, meanings, and expectations that group members hold in common and that they use as behavioral and problem-solving cues (…). When it is characterized by trust, honesty, respect, civility, and fairness or when it values, for example, psychological and social support, recognition, and reward" (p. 19)
Psychological and social support	"All supportive social interactions available at work, either with co-workers or supervisors (…) they believe their organization values their contributions, is committed to ensuring their psychological well-being, and provides meaningful support if this well-being is compromised" (p. 20)
Clear leadership and expectations	"Leadership is effective and provides sufficient support that helps workers know what they need to do, explains how their work contributes to the organization, and discusses the nature and expected outcomes of impending changes" (p. 20)
Civility and respect	"a work environment where workers are respectful and considerate in their interactions with one another" (p. 20)
Psychological demands	When are "documented and assessed in conjunction with the physical demands of the job. Psychological demands of the job will allow organizations to determine whether any given activity of the job might be a hazard to the worker's health and well being" (p. 20)
Growth and development	When "workers receive encouragement and support in the development of their interpersonal, emotional, and job skills" (p. 21)
Recognition and reward	When workers receive "appropriate acknowledgement and appreciation of workers' efforts in a fair and timely manner" (p. 21)
Involvement and influence	When "workers are included in discussions about how their work is done and how important decisions are made" (p. 21)
Workload management	When the "assigned tasks and responsibilities can be accomplished successfully within the time available" (p. 22)
Engagement	When "workers enjoy and feel connected to their work and where they feel motivated to do their job well. Worker engagement can be physical, emotional, and/or cognitive" (p. 22)
Balance	When "there is acceptance of the need for a sense of harmony between the demands of personal life, family, and work" (p. 22)
Psychological protection	"in a work environment where workers' psychological safety is ensured (…) A psychologically safe and healthy organization actively promotes emotional well-being among workers while taking all reasonable steps to minimize threats to worker mental health." (p. 22)
Protection of physical safety	"When a worker's psychological, as well as physical safety, is protected from hazards and risks related to the worker's physical environment" (p. 23)

Font: based on (Canadian Standards Association; Bureau de Normalisation du Québec, 2013)

Workplace factors can (alone or in combination) contribute to either the promotion or

impairment of psychological health and safety. If addressed correctly, the thirteen factors will positively impact the mental health of workers, participation, and productivity and, through the process of continual improvement, could possibly produce healthier environments. For such, there is a need for the integration of different social actors (organizations, senior managers, workers, etc.), different types of intervention (prevention, promotion, and surveillance), as well as existing and future organizational policies and processes throughout the organizational structure (Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

It is important for all changes favoring the promotion of mental health in the work environment to constitute a complete system of continual improvement and for the organizational culture to be changed. The overall goal of the CSA Standard is "to assist organizations in moving towards a higher position of care and ultimately reaching the goal of carefulness and diligence in protecting worker psychological health and safety" (Canadian Standards Association, 2014, p. 18).

Leadership and organizational commitment and support seem to be a powerful key to the implementation of an effective, systematic initiative as well the avoidance of unintended consequences and non-sustainability. Changes must be understood in an organizational sense, including the responsibilities and legal implications of all stakeholders (Canadian Standards Association, 2014). The CSA also describes six key functions for those responsible for implementing the Standard (Canadian Standards Association; Bureau de Normalisation du Québec, 2013, p. 6):

> a) reinforce the development and sustainability of a psychologically healthy and safe workplace environment based on a foundation of ethics and stated values; b) support and reinforce all line management in the implementation of the PHSMS [Psychological Health and Safety Management System]; c) establish key objectives toward continual improvement of psychological health and safety in the workplace; d) lead and influence organizational culture in a positive way; e) ensure that psychological health and safety is part of organizational decision making processes; f) engage workers and (…) their representative (…).

Implementing the Standard gives employees the perception of support and safety to identify their challenges and improves organizational performance, corporate image, loyalty, recruitment, retention, approachability, and safety along with a reduction in costs, conflicts, and other issues (Kunyk *et al.*, 2016).

Organizations reported the following as key actions for the promotion of psychological health and safety in the workplace from the perspective of the CSA Standard (Wilson; Bradley, 2017, p. 14):

- Enacting and educating all individuals in the workplace through a respectful, tolerant workplace policy.

- Providing assistance programs to employees and their families for early intervention to resolve problems.
- Increasing knowledge on mental health.
- Building resilience among employees.
- Supporting employees so that they continue at work or return to work in an assertive, safe, sustainable way.
- Train managers to respond appropriately to mental health issues among the staff, if needed.

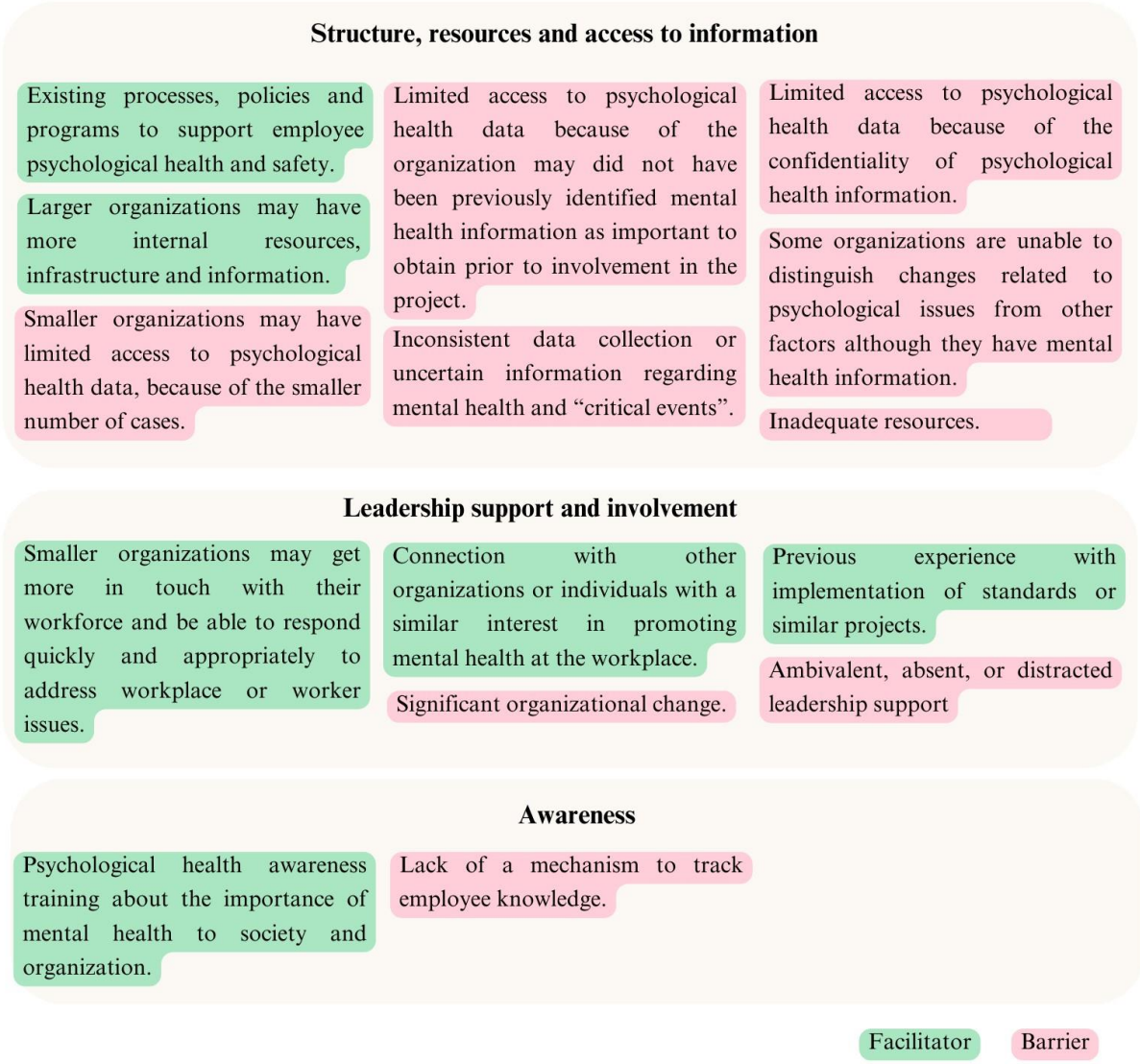
The Mental Health Commission of Canada presented good preliminary results of the implementation in 2017, reporting that the organizations involved in the baseline data collection improved, on average, from 55% to 72% in terms of compliance with the commitment elements (leadership and participation; planning; implementation; assessment and corrective action; management and analysis). The main reasons for the participation of employers were 'doing the right thing', protecting health, and increasing worker engagement (Wilson; Bradley, 2017).

On the other hand, a larger study (Sheikh; Smail-Crevier; Wang, 2018) informed that only 17% (95% CI: 13.8% to 20.7%) (n = 226) of 1010 companies reported being aware of the Standard. It also identified that only 1.7% (95% CI: 1.0% to 2.9%) of the organizations had implemented the Standard and 20.3% (95% CI: 16.6% to 24.5%) had implemented some elements. Among the companies that did not implement any element, 71.4% showed interest in doing so.

It appears that organizations most in need of improving psychological health and safety in the workplace may be the least receptive to implementing the Standard (Kunyk *et al.*, 2016). There is a recognition for further studies to "determine strategies for improving receptivity to implementing the Standard in organizations that would most benefit" (Kunyk *et al.*, 2016, p. 46).

Some key elements to implementing the Standard are related to a) leadership, support, and involvement, b) structure, resources, and access to information, and c) awareness. Those elements may help or hinder an organizational implementation of the Canadian standard. So, it is important to recognize that here is room for improvement even in the Canadian experience with the standard. Figure 2 presents some barriers and facilitators with regards to these elements.

Figure 2. Comparative of facilitators and barriers identified by Mental Health Commission of Canada for standard implementation. São Carlos, 2023



Font: based on (Wilson; Bradley, 2017, p. 30-4).

Moreover, employers suggest that leadership awareness of the Standard is not enough, as highest level of consent needs to be obtained for funding, staffing, planning, and implementation. The Standard could be more manageable if organizations either break it into smaller pieces or simplify implementation in a "step by step" guide (Kunyk *et al.*, 2016).

There are some attempts to go further in the discussion for global advances regarding workplace mental health guidance. In 2021, the ISO 45003 was published by the International Organization for Standardization (ISO), aiming complement a previous general ISO 45001

guideline for occupational health and safety, adding guide for managing psychosocial risk within an occupational health and safety management system. This publication advocates for a holistic approach and it advanced in establish the organizational responsibility in order to implement polices regarding workplace mental health in a global perspective. It details actions for leadership commitment for managing psychosocial risk factors. However, although the ISO standard to consider needs and expectations of workers and other stakeholders and it describes workplace factors such as inclusion, recognition, reward, development and growth and social support, those elements are not so systematically labelled or linked to management actions (International Organization for Standardization, 2021).

The World Health Organization (WHO) and ILO also recently published a report entitled "Mental health at work: policy brief". Both the Canadian Standard and WHO/ILO framework are in agreement regarding the pillars and workplace factors. Consistent with the Canadian Standard pillars, the WHO/ILO also suggest that strategies must help stakeholders present exposure to psychosocial risks at work to prevent problems as well as promote mental health and well-being at work and support individuals with mental health conditions to participate and thrive at work (World Health Organization; International Labour Office, 2022). However, the Canadian Standard is more complete than the WHO/ILO framework regarding the coverage of workplace factors. Table 2 shows the similarities between the two frameworks concerning workplace factors.

Table 2. Similar concepts between workplace factors of the Standard and WHO/ILO's 2022 report. São Carlos, 2023

Standard's workplace factors	**WHO/ILO's aspects of work**
Psychological support	No similar concept
Organizational culture	Organizational culture
Clear leadership and expectations	(Clarification of) Roles in organization
	Interpersonal relationships at work
Civility and respect	Interpersonal relationships at work
Psychological job demands	(Clarification of) Roles in organization
	Workload and work pace
	Job content/ task design
Growth and development	Career development
Recognition and reward	No similar concept
Involvement and influence	Job control
Workload management	Work schedule Job
	Job control
	Workload and work pace

Engagement	No similar concept
Balance	Work schedule Job
	Home-work interface
Psychological protection	Interpersonal relationships at work
Protection of physical safety	Environment and equipment

Font: research authorship, 2024.

The WHO/ILO reinforced the global commitment for new strategies to address mental health at work and highlighted the importance of the strengthening of public policies on promoting mental health (World Health Organization; International Labour Office, 2022), such as the Canadian Standard.

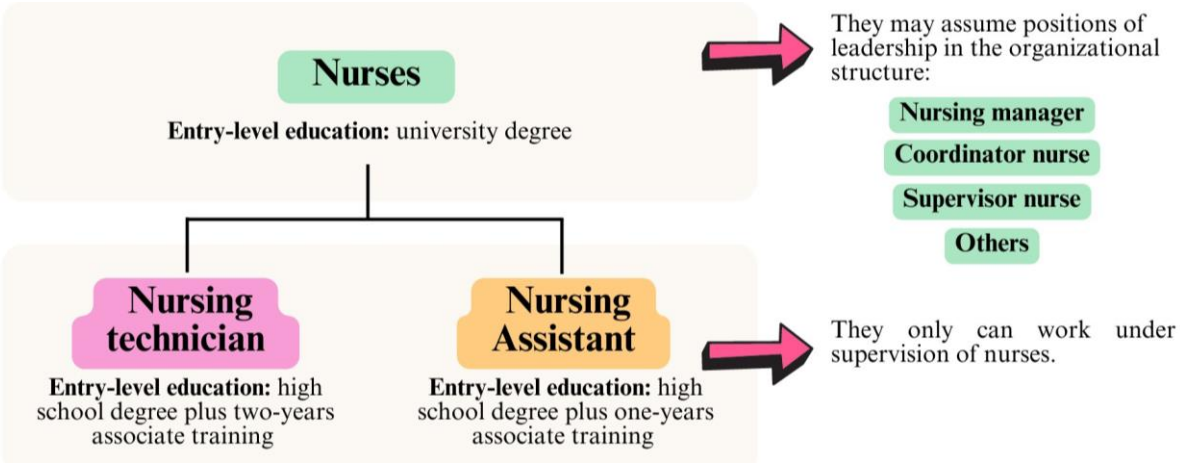
2.2 HEALTH AND NURSING WORK IN BRAZIL

Nursing work in Brazil is strongly influenced by classic administration models, with a focus on hospital and biomedical aspects. However, new work and management models are beginning to take hold. There are five main work processes in nursing: care, management, education, research and political participation (Sanna, 2007). There is an effort on the part of organizations to overcome the division between doing and thinking, but the division remains between the attributes of nurses and technical nursing team, which arises in prescribed and actual work in addition to the structure of the organization itself (Oro *et al.*, 2019).

Due to the historical and social division of nursing work (Matos Filho *et al.*, 2018; Oro *et al.*, 2019), nurses usually perform more complex care at hospitals (Oro *et al.*, 2019) and take on a fundamental role in the management of nursing work, especially with regards to personnel, materials, and the coordination of health care (Lorenzetti *et al.*, 2014; Matos Filho *et al.*, 2018; Oro *et al.*, 2019). According to Sanna (2007) nurses are main agents for personnel nursing training and patient education in research and educational processes. Nursing technicians and assistants carry out most of the direct care provided to patients under the supervision of nurses (Oro *et al.*, 2019). Political participation is diffused in other processes, the aspects of which integrate all nursing professional activities (Sanna, 2007).

These assignments were regimented by Decree 94.406/1987 that regulates the Law 7.498/1986, which provides guidance for nursing practice in Brazil (Brazil, 1986). This legislation put nurses officially in a supervisor role over the other nursing professions. For a better understanding, Figure 3 illustrates the structure of the nursing team in Brazil based on educational level.

Figure 3. Nursing team professions in Brazil. São Carlos, 2023



Font: research authorship, 2024.

Nurses indicate that the challenges in their work processes are leadership and the maintenance of relationships that may comprise nursing work and the continuity of nursing care (Buss Thoferhn *et al.*, 2019). Evidence has been published on the positive influence of nurse leadership on the nursing team (Silva *et al.*, 2016) as well as the challenges regarding leadership roles among nurses (da Costa *et al.*, 2017; Gomes *et al.*, 2021; Silva *et al.*, 2016). Nurses are not fully prepared to be a leader and lack knowledge on the leadership concept itself (da Costa *et al.*, 2017). Opposing the perception of "innate leadership", nurses in management positions exercise only moderate leadership; although they promote practices for transformational leadership, there are aspects that need to be improved in their competence in order to lead effectively (Silva *et al.*, 2016).

In the present study, leadership is considered a professional competency (Silva *et al.*, 2016). The theoretical choice to include all nurses in our intervention was in recognition of the organizational leadership positions that nurses could assume at hospitals in the present or future, but also because all nurses have some level of responsibility in leading, supervising, and coordinating or similar roles on the nursing team in the Brazilian work context.

Leadership is a concept that has been changing over the years due to advances in theories as well as administration and management models. Effective leadership must focus on dynamic relationships between the values and competencies of leaders and the organizational context and culture, including a high level of awareness of oneself, the team, and the organization (Al-Sawai, 2013). The leadership styles of supervisors can exert an influence on the occurrence of psychological distress among nursing staff (Al-Sawai, 2013).

Toxic leadership behaviors can lead to poorer job satisfaction, higher levels of stress, absenteeism, and the intention to leave the nursing profession (Labrague; Nwafor; Tsaras,

2020). In contrast, inclusive leadership behaviors, good interpersonal relationships, and supportive organizational practices can promote psychological health and safety among the nursing staff (Al-Sawai, 2013; Canadian Standards Association; Bureau de Normalisation du Québec, 2013; O'donovan; Mcauliffe, 2020; Wei *et al.*, 2020). There is also evidence of the positive aspects of collective leadership in health care with regards to professional practice, inpatient mortality, and the well-being of the staff despite the ongoing challenges (Silva *et al.*, 2022).

During the COVID-19 pandemic, Canadian leaders were considered important to establishing resiliency on the individual, organizational, and systemic levels. This could be improved through the practice of compassionate leadership, effective interpersonal behavior, bidirectional communication, participation in practice networks/communities, balanced commitments, applied systems, and commitment to the Canadian Standard (Grimes *et al.*, 2022).

The nature of the Canadian Standard and its emphasis on organizational commitment support the participation of frontline leaders. For some organizations, the implementation of the entire Standard would be impractical. In such cases, the CSA suggests a model for when "senior leadership has not yet committed to this Standard". Thus, the Standard enables managers on the frontline to adopt some aspects, programs, or initiatives to demonstrate the value to the organization (Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

Training leaders is directly related to their knowledge, self-efficacy, attitudes, and intention to promote mental health at work (Gayed; Lamontagne *et al.*, 2018). There is a positive association between the training of leaders and a reduction in disability claims, self-reported stress, sick leave, and levels of psychological distress in the short-term as well as positive effects on well-being, performance, and perceptions of supervisor support (Gayed; Lamontagne *et al.*, 2018).

While studies addressing workplace interventions have described different strategies, such as counseling, debriefing, job redesign, meditation, motivational or empowerment programs, physical activity, rehabilitation, relaxation techniques, support groups or focus groups, participatory activities, teamwork, therapy as well as workshops, courses, and training (Enns *et al.*, 2016), studies focusing on leaders mostly describe training programs and early awareness activities (Gayed; Milligan-Saville; *et al.*, 2018).

We believe that the *Lidera-SMT* Program could provide useful information for Brazilian nurses on the aspects of the Canadian Standard and help these individuals develop knowledge

and skills for the promotion of mental health in the workplace.

2.3 STRATEGIES FOR MENTAL HEALTH PROMOTION AMONG HOSPITAL NURSING'S STAFF

The literature describes the hospital as a propitious environment for promoting mental health in the workplace through the perspective of the Canadian Standard (Wilson; Bradley, 2017). The British Columbia Nurses' Union (BCNU) became the first union to negotiate the Standard into its collective agreement with the government in 2016. The MH agreed to require the adoption of the Standard as an obligation for health authorities (British Columbia Nurses' Union, 2020). There is some empirical evidence suggesting that the strategies based on the Standard may be powerful in protecting the psychological health and safety of healthcare workers in crisis situations, such as the COVID-19 pandemic in Michael Garron Hospital (Mantler, 2022).

The nursing workforce was also used to assess the reliability of an instrument (Guarding Minds @ work) developed to evaluate the thirteen workplace risk factors of the Standard (Havaei; Park; Astivia, 2021). Although the instrument needs further research for its validation (Havaei; Park; Astivia, 2021; Smith; Oudyk, 2022), half of the participants identified nine factors in their work and considered psychological protection, workload management, and balance to be the most important workplace factors (Havaei; Park; Astivia, 2021).

We conducted a literature review (Santos *et al.*, 2023) that identified eleven articles reporting mental health strategies for the workplace. No evidence was found on the implementation of strategies completely based on the Standard for hospital nursing staff, but we analyzed the sample using the perspective of the thirteen workplace factors as the theoretical framework. One study addressed change on the organizational level (Rickard *et al.*, 2012) and one identified some strategies on the supervisor level (Perry *et al.*, 2017). The other strategies addressed nursing staff members on the individual level, although they may approach the topic intervened to some workplace factor.

Psychological support was the factor most addressed in the articles (Amaral *et al.*, 2022; Bolier *et al.*, 2014; Ketelaar *et al.*, 2014; Perry *et al.*, 2017; Sampson; Melnyk; Hoying, 2020; Zhang *et al.*, 2021), followed by psychological job demands (Amaral *et al.*, 2022; Bolier *et al.*, 2014; Ketelaar *et al.*, 2014) and growth and development (Caldi *et al.*, 2022; Perry *et al.*, 2017), work/life balance (Jacques *et al.*, 2018; Viero *et al.*, 2017) and workload management (Perry *et al.*, 2017; Rickard *et al.*, 2012). Clear leadership and expectations and engagement factors appeared in only one article (Perry *et al.*, 2017). Organizational culture also appeared in only

one article (Viero *et al.*, 2017). None directly addressed the domains of civility and respect, recognition and reward, involvement and influence, or engagement and protection of physical safety.

Brazil was the country with the most studies implementing strategies (Amaral *et al.*, 2022; Caldi *et al.*, 2022; Jacques *et al.*, 2018; Viero *et al.*, 2017; Santos; Mendes; Martins, 2021). The Brazilian Ministries of Labor and Employment, Health and Social Security published a National Policy on Safety and Health at Work in 2011 with the goal of promoting health, improving the quality of life of workers, and preventing accidents and health problems through the elimination or reduction of risks in the work environment (Brazil, 2011). A year later, the MH also published the National Workers' Health Policy to define principles and guide the strategies of managers of the Brazilian Healthcare System for the development of comprehensive care for workers' health (Brazil, 2012). However, little progress has been made to fortify intra- and inter-sectoral articulation and the participation of stakeholders (Hurtado *et al.*, 2022) or to formulate integrated public policies for promoting health in the Brazilian workplaces (da Silva, 2021).

We found both opinions or qualitative outcomes (Amaral *et al.*, 2022; Caldi *et al.*, 2022; Perry *et al.*, 2017; Viero *et al.*, 2017) and quantitative evidence (Bolier *et al.*, 2014; Ketelaar *et al.*, 2014; Rickard *et al.*, 2012; Sampson; Melnyk; Hoying, 2020; Zhang *et al.*, 2021) of strategies for the promotion of mental health in the workplace. The strategies and most reported workplace factor and outcome are displayed in Appendix A.

Considering the lack of a Brazilian policy, the concepts of the Standard may be a good theoretical instrument to guide Brazilian organizations and researchers in the creation and evaluation of workplace interventions for the promotion of mental health. However, it is not our aim to propose the implementation of the Canadian Standard as Brazilian public policy at this point. We understand that building a sustainable system takes time and support from policy makers and organizations. In this study, we intend to train nurses to influence and lead others from a systemic perspective as well as to address and multiply this new understanding in the work context. We understand that, as workers, nurses are not in charge of promoting mental health at work, but their awareness of the psychosocial risks and workplace factors that exert an effect on such risks as well as their organizational position as nurse-leaders could strengthen the collective fight for healthy environments.

2.4 ANDRAGOGY FRAMEWORK AND THE FLIPPED CLASSROOM TECHNIQUE

Implementing lifelong learning actions and continuing professional development could

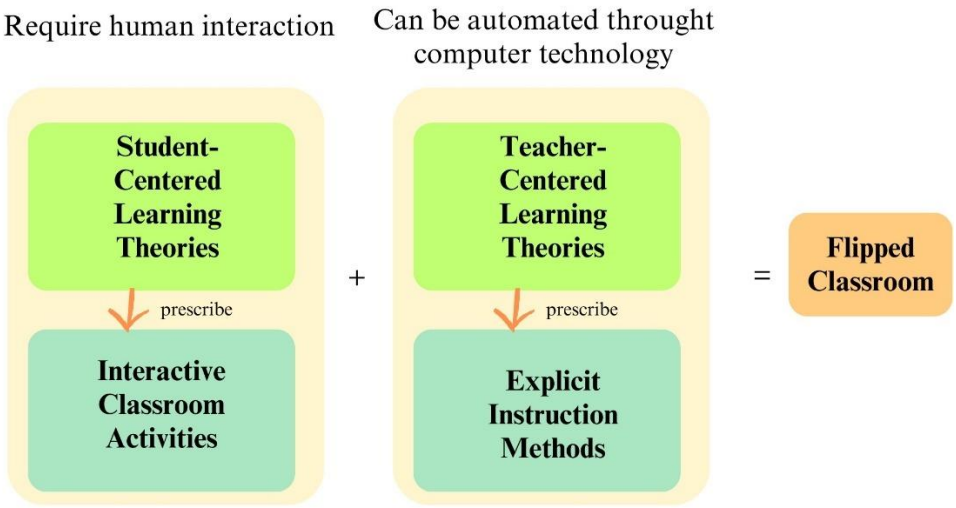
be challenging. Literature indicates that training needs to be more attainable, realistic and relevant to engage nurses (Mlambo; Silén; Mcgrath, 2021). Andragogy is a term used to refers to adult education frequently in opposition to pedagogy. However, this is an ambiguous concept considering that it can be used for expressing a distinguished framework. In this sense, in this research we will consider the North American strand of andragogy based on Knowles Theory. This theory defines adult learning as a self-directed, task oriented and problem-centered approach, and also considers the accumulative experiences and the internal motivation of the learners (Decelle, 2016; Loeng, 2023). It also requires collaboration between trainers and trainees (Decelle, 2016).

A large bibliometric analysis shows that andragogy is regularly used in the literature including in the nursing education context (Ahmad *et al.*, 2021). Studies recognize that nurse educators must move away from traditional teaching strategies and that nursing curricula need to move from content-driven to engage students to prepare themselves for practice (Decelle, 2016; Lelean; Edwards, 2020). The flipped classroom is also used in continuing education considering its potentiality among adult learning (Decelle, 2016). Training and development initiatives in healthcare setting are also found among residents (Vesco *et al.*, 2024) newly-contracted professionals (Zhang; Liu; Yu, 2017) as well as among experienced professionals from academic and healthcare organizations (Jones-Bonofiglio; Willett; Ng, 2018)

It is known that traditional classroom settings for nurses are difficult to implement, due to their varied shifts and the work overload, which culminates in low adherence, demanding dynamic and flexible education practices (Silva *et al.*, 2021). To overcome this challenge, nurses educators can apply the concept of andragogy in online learning strategies, using several integrated activities to promote student-centered and problem-based learning, such as: asynchronous or live discussions that promote critical thinking and peer interaction; online testing and assessment surveys; video clips, use of hyperlinks and online reading, etc. (Decelle, 2016).

The flipped classroom concept as described by Bishop (2013, p. 6) for online environments as “an educational technique that consists of two parts: interactive group learning activities inside the classroom and direct computer-based individual instruction outside the classroom” is a design based on that. It is an expansion of the curricula with a higher level of autonomy for the student. Thus, activities are conducted outside the classroom, such as video lectures, closed-ended quizzes, and practice exercises, in addition to interactive classroom activities, such as question & answer sessions and group-based problem solving (Bishop, 2013). Figure 4 brings the structure for a flipped classroom design.

Figure 4. Flipped classroom structure. São Carlos, 2023



Font: adapted from Bishop (2013, p. 6).

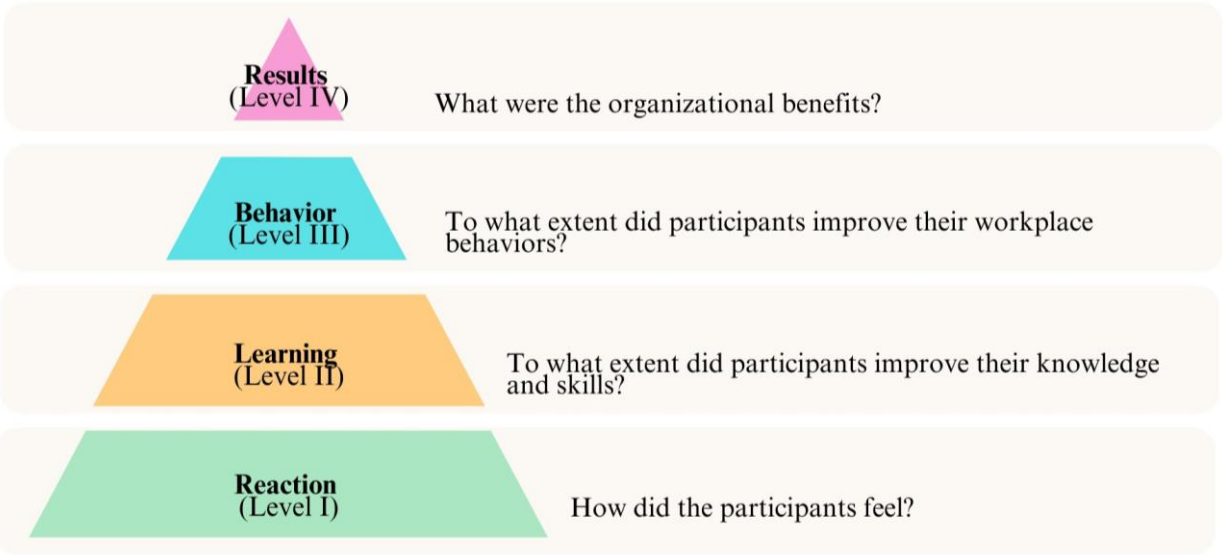
The flipped classroom brings advantages for professional development as the assignments can be done during working hours, at home or, via mobile devices, while traveling (Chao *et al.*, 2022; McDonald; Smith, 2013). Besides, video lectures can help with learning difficulties, as the student can pause and replay them as many times as needed (McDonald; Smith, 2013), and the active participation of students in online tasks helps to improve the learning process (Oktaria; Rahmayadevi, 2021). Therefore, nurses are in favor to flipped classroom than traditional learning designs considering its higher location, tool and time's flexibility and promotes reflection due discussion, which hospital nurses favor (Chao *et al.*, 2022).

Professors and training designers must be aware that flipped classroom works really well in some cases but not in all circumstances, meaning that they need to take in consideration the participants context, preferences and previous learning. Also, discrepancies between student expectations versus real training hours and/or activities not being perceived as useful would reflect on participants' satisfaction in flipped classroom activities (Låg; Sæle, 2019).

2.5 DONALD KIRKPATRICK'S EVALUATION FRAMEWORK

Donald Kirkpatrick's framework was used to evaluate the effectiveness of the *Lidera-SMT* Program. This framework was developed in 1959 to help managers measure training outcomes among employees in organizational settings in terms of the participants' reactions, learning, and behavior as well as the evaluation of the organizational results. Figure 5 illustrates the four levels of evaluation of the model (Kirkpatrick; Kirkpatrick, 2006).

Figure 5. Conceptual model "Evaluating training programs: the four levels". São Carlos, 2023



Font: adapted from (Kirkpatrick; Kirkpatrick, 2006, p. 21-26).

Level I refers to participation and includes the participants' perceptions of the learning experience, organization, presentation, content, teaching methods and instructional aspects, materials, and the quality of instruction. Level II is related to learning, i.e., changes in perceptions, knowledge, and skills. Level III regards the transfer of learning to the workplace or the participants' willingness to apply new knowledge and skills through behaviors (Kirkpatrick; Kirkpatrick, 2006; Yardley; Dornan, 2012). Lastly, Level IV evaluates the applicability of the results of the intervention to change organizational practices and, in healthcare, improve patient health outcomes (Kirkpatrick; Kirkpatrick, 2006). It is important to encompass all levels for a more complete evaluation process (Kirkpatrick; Kirkpatrick, 2006). Implementing a single level is not recommended and skipping lower levels of evaluation assuming that higher levels lead to better results is not encouraged (Reio Jr *et al.*, 2017).

Given its focus on evaluating the outcome of the intervention rather than the artifacts or devices used to achieve it, the framework can be applied to online interventions. The authors of the framework discuss the application of the Kirkpatrick model for e-learning experiences, resolving all concerns level by level. Level I enables investigating the emotional acceptance of the participants. To be successful, training must overcome the participants' natural skepticism and inertia in relation to virtual environments. Online experiences may simplify the evaluation on Level II, as tests can be taken, scored, recorded, and reported automatically, which reduces the difficulty of implementing this level. As changes in behavior and results occur outside the

virtual environment itself, there is no concern about the application of the framework on Levels III and IV (Kirkpatrick; Kirkpatrick, 2006).

The literature reports some limitations of this framework regarding its summative approach, outcome-and-objective orientation, and the existence (or non-existence) of causal relationship between levels (Cahapay, 2021; Reio Jr *et al.*, 2017; Rosa, 2018). Despite all constructive criticism, the majority of evaluation models still are based on notions of the original four-level model proposed by Donald Kirkpatrick (Reio Jr *et al.*, 2017) and this framework is considered appropriate and applicable even after 60 years since its first publication (Alsalamah; Callinan, 2022). The framework supports the evaluation of hospital training and interventions conducted in the healthcare setting have been used to discuss the effectiveness of the framework itself (Choy *et al.*, 2022; Heydari *et al.*, 2019; Huang *et al.*, 2021; Khurshid; De Brún; Mcauliffe, 2022; Malhotra *et al.*, 2022).

We conducted a literature review to understand how the framework has been used in the training of nurses. We found thirteen[1] articles reporting mostly a combination of the first three levels (Castro Filho; Motta, 2018; Lamar, 2017; Machado; Sampaio, 2021; Maloney *et al.*, 2011; Parmar *et al.*, 2022) or the entire four-level model (Bijani *et al.*, 2018; Huang *et al.*, 2021; Knobel *et al.*, 2020; Lahti; Kontio; Välimäki, 2016; Liaw *et al.*, 2016). One article reported a combination of only Levels I and II (Jobst *et al.*, 2020) and one reported using only Levels III and IV (Koto-Shimada *et al.*, 2022). This constitutes evidence opposing the criticism that the Kirkpatrick framework can lead to a greater likelihood of using only the lower levels (Cahapay, 2021; Reio Jr *et al.*, 2017; Rosa, 2018) and shows that researchers are listening to advice on the use of the complete model for greater accuracy (Kirkpatrick; Kirkpatrick, 2006; Yardley; Dornan, 2012).

Nursing staff training studies have reported different data sources, theories, and methodological aspects that lead us to comprehend the evaluation through triangulation (Santos *et al.*, 2020). This view converges with the New World Kirkpatrick Model, which suggests 'chains of evidence' rather than implying a causal relationship between levels (Kirkpatrick; Kirkpatrick, 2016). However, concerns remain regarding the lack of evidence on causal chains among the levels (Cahapay, 2021) or a more complex perspective of analysis (Maudsley; Taylor, 2020).

Level I mainly uses a five-point Likert scale composed of items such as satisfaction

[1] Manuscript *"*Use of Kirkpatrick's model to evaluate training in the nursing team: integrative review" by Miranda, dos Santos, Kristman and Mininel (under review by the Brazilian journal "Revista Latino-Americana de Enfermagem").

(Bijani *et al.*, 2018; Jobst *et al.*, 2020; Knobel *et al.*, 2020; Liaw *et al.*, 2016; Maloney *et al.*, 2011; Parmar *et al.*, 2022; Santos; Mendes; Martins, 2021). Immersion (Knobel *et al.*, 2020; Lamar, 2017), relevance (Liaw *et al.*, 2016) and confidence (Liaw *et al.*, 2016) have been used. Questionnaires with open-ended questions (Lahti; Kontio; Välimäki, 2016), interviews (Machado; Sampaio, 2021), narratives (Castro Filho; Motta, 2018), and program attendance (Huang *et al.*, 2021; Maloney *et al.*, 2011) have also been used to evaluate reactions.

On Level II, both knowledge and awareness approaches have been used. Learning tests are most common (Bijani *et al.*, 2018; Castro Filho; Motta, 2018; Jobst *et al.*, 2020; Lamar, 2017; Maloney *et al.*, 2011; Santos; Mendes; Martins, 2021). We found also open-ended questionnaires or interviews (Knobel *et al.*, 2020; Lahti; Kontio; Välimäki, 2016; Machado; Sampaio, 2021), self-rated questionnaires (Parmar *et al.*, 2022) and adherence after the first month of the course (Castro Filho; Motta, 2018) to measure learning.

Listening to trainees and measuring their perception of the transfer of knowledge to the workplace constitute the most common approaches for Level III. Few studies have evaluated changes in behavior considering real practices or outcomes in clinical practice (Maloney et al, 2011; Koto-Shimada et al., 2022), management practices (Koto-Shimada et al., 2022), or changes in the patient care process (Machado; Sampaio, 2021). Both closed-ended questionnaires (Knobel *et al.*, 2020; Lahti; Kontio; Välimäki, 2016; Liaw *et al.*, 2016; Maloney *et al.*, 2011) and open-ended questionnaires or interviews (Knobel *et al.*, 2020; Koto-Shimada *et al.*, 2022; Lamar, 2017; Machado; Sampaio, 2021; Parmar *et al.*, 2022) are reported.

Level IV is important because it “highlights the added value to society of a given educational program, as it enables the evaluation of not only the application of intervention projects in the professional's practice, but the results of development in the local context” (Castro Filho; Motta, 2018, p. 539). However, some studies designed to evaluate training effectiveness were not able to do so (Castro Filho; Motta, 2018; Jobst *et al.*, 2020; Lamar, 2017; Machado; Sampaio, 2021; Parmar *et al.*, 2022). Measuring elements of Level IV is challenging and researchers have discussed how difficult it is to perform medium- and long-term follow-up (Machado; Sampaio, 2021) as well as how complex it is to distinguish outcomes from the many other factors that could cause bias (Lamar, 2017). The data from our review also point to the dilemma between the relevance of Levels III and IV levels and the difficulty of implementing these levels reported by Rosa (2018), but we stress the importance of these levels for a complete evaluation of training.

Researchers must carry out the development of instruments carefully to improve the success of training evaluations, as “there do not seem to be specific methodological standards

to guarantee the validity and reliability of the information collected" (Rosa, 2018, p.26). Despite the importance of this type of study, we did not find validation studies in the sample of our literature review. The only instrument fully translated to Portuguese and that presented previous validation data was the Instructional Materials Motivation Survey (IMMS) for the reaction level (Cardoso-Júnior; Faria, 2021, 2022) used by Liaw et al (2016). A validated instrument denominated the Nurse Innovative Behavior Scale was used by Huang et al (2021) for the behavior level, but besides the publication being in English, we were unable to obtain access to an English version of the scale or a version translated and culturally adapted to Brazilian Portuguese (Bao; Wang; Zhang, 2012). Our review was able to identify attempts to increase reliability of instruments through Cronbach's alpha coefficient (Bijani *et al.*, 2018; Huang *et al.*, 2021; Jobst *et al.*, 2020; Liaw *et al.*, 2016; Maloney *et al.*, 2011; Parmar *et al.*, 2022), pilot tests (Koto-Shimada *et al.*, 2022) and the Delphi Technique (Parmar *et al.*, 2022).

Kirkpatrick's model seems to be a good theoretical framework, especially for studies with follow-up after the intervention. This model has a good foundation and the scientific conversation is building high-level evidence for improving its use in the evaluation of workplace training.

3 OBJECTIVES AND HYPOTHESES

3.1 MAIN GOAL

To pilot a model to evaluate the effectiveness of a training intervention aimed at hospital nurse leaders to promote mental health at work.

3.2 SPECIFIC OBJECTIVES

- Objective 1: To develop the online training program addressing mental health in the workplace.
- Objective 2: To select primary outcomes and measurement instruments for evaluating the training program.
- Objective 3: To validate the evaluation instruments with experts using the Delphi Technique.
- Objective 4: To implement the online training and measurement instruments in a pilot group of nurse-leaders.

3.3 HYPOTHESES

- Hypothesis 1: Participants will express positive reactions in terms of interest, confidence, attention, and expectation after participating in the *Lidera-SMT* program.
- Hypothesis 2: The *Lidera-SMT* program will be associated with improvements in learning.
- Hypothesis 3: Participants post-training learning retention will remain stable over time.
- Hypothesis 4: Participants post-training attitudes will improve over time.
- Hypothesis 5: Associations between perceived structural empowerment and attitudes will be found in pre-and-post training moments.
- Hypothesis 6: No differences will be found between nurses without management positions and nurses in management positions in learning and attitudes levels.
- Hypothesis 7: No differences will be found between individuals who participated in the intervention with a minimum adherence of 75% and those who completed it with 100% participation.
- Hypothesis 8: No differences will be found between individuals who participated only in mandatory modules and those who participated in both mandatory and extra module.

4 MATERIALS AND METHODS

4.1 STUDY DESIGN AND SETTING

A pilot study (Díaz-Muñoz, 2020; In, 2017) was conducted with pre- and post-test measures in a single group and follow-up two and four months after the training intervention. This method was chosen due to its potential to evaluate the feasibility and acceptability of an intervention as well as the selection of the most appropriate primary outcome measure. Pilot studies are useful for collecting preliminary data for the calculation of the sample size for the primary outcome in larger effectiveness studies (In, 2017).

The Consolidated Standards of Reporting Trials (CONSORT) checklist was used since the conception of the study to guide us through a reliable, complete report, seeking sources of bias or imprecision as well as the magnitude, direction, and consequences of such bias and imprecision (Schulz; Altman; Moher, 2010). The use of the CONSORT is still recommended considering the nature of the pilot test, and in 2016 a CONSORT extension for Pilot and Feasibility Trials was published (Eldridge *et al.*, 2016). The use of this extension for reporting pilot studies is suggested, including in cases of single-arm and/or non-randomized design. Items that are not applicable, caused by missing elements of the trial, can be ignored (Lancaster; Thabane, 2019).

The study was conducted at a public university in Brazil. Online learning and internet-based technologies were used to deliver the training, which is denominated by the *Lidera-SMT* Program. This is an effort to extend the range of the intervention to a wider audience and build a feasible, safe proposal in a post-COVID-19 context as well as strengthen the relationship between the community and the university.

4.2 POPULATION AND SAMPLE

The study was developed at the UFSCar, Brazil, which is the main institution, and recruited nurses who are currently working at hospitals, regardless of the location. All nurses who work in a hospital setting were eligible to participate whether or not they have a formal leadership position in the organizational structure. Nurses who have a leadership position (supervisors, managers, etc.) were invited to participate in an additional module after training.

Recruitment was performed through the dissemination of the *Lidera-SMT* Program on social media (e.g., Instagram and Facebook), in press vehicles (e.g., radio and journalistic websites), on Nursing Council websites, through the electronic addresses of hospitals and universities available on their institutional websites, through research groups and networks, and instant messaging applications (e.g., WhatsApp and Telegram). We intended to produce

consistent dissemination material and good communication with the target audience to increase the reach and involvement in the training program. Examples of communicating with participants can be found in Appendix B. Recruitment occurred between 2023 May 29 and June 30.

The sample was non-probabilistic (convenience) and based on the voluntary response of the participants. We excluded individuals who did not finish the Program, meaning less than 75% participation in the training program. The design of this pilot study does not include a formal sample size calculation. We expected our preliminary data collection to clarify the acceptability of the intervention and provided precise information on the expected change in primary outcomes for the sample calculation of further studies. Similar pilot studies (Gayed; Lamontagne; *et al.*, 2018; Jones *et al.*, 2022) used samples of around 60 people. With a sample of that size, it is possible to detect problems with a rate of at least 5% (with 95% confidence) in a pilot study (Díaz-Muñoz, 2020).

4.3 DATA COLLECTION AND ANALISYS

This section is organized in three topics: Phase 1 describes the methods for developing both the intervention and the measures instruments (linked to specific objectives 1 and 2); Phase 2 describes methods for instruments' content validation through Delphis Technique (linked to specific objective 3); and Phase 3 for Program implementation and its pilot evaluation using levels I to III of Kirkpatrick framework (linked to specific objective 4 and main goal).

4.3.1 Phase 1: development of intervention and measures instruments

The *Lidera-SMT* Program is an online training program designed to develop understanding on the part of nurses regarding psychosocial risks, workers' needs, and strategies for promoting mental health in the workplace (Canadian Standards Association, 2014; Canadian Standards Association; Bureau de Normalisation du Québec, 2013). The design of the program involved three steps: 1) selection of a framework for the learning process; 2) selection of a framework for the promotion of mental health in the workplace; and 3) Design of learning and assessment strategies.

We used the following layers to evaluate the *Lidera-SMT* Program: (1) a questionnaire addressing sociodemographic and occupational information created specifically for this purpose, with questions for the characterization of the participants and their work; (2) Reaction evaluation (Level I - Kirkpatrick Model), which seek to measure the participants' perceptions of the experience with *Lidera-SMT* Program; (3) Learning evaluation (Level II - Kirkpatrick

Model) to assess knowledge and skills; and (4) Behavior evaluation instrument (Level III - Kirkpatrick Model) to measure the application of the previous levels through behaviors and attitudes in the workplace. We decided to not include Level IV, as this level requires a longer follow-up time after the intervention, which would not be feasible in this pilot study design.

The design of evaluation instruments for *Lidera-SMT* Program involved four steps: 1) Design of the sociodemographic and occupational questionnaire; 2) Selection of the reaction level instrument; 3) Design of the learning level instrument; and 4) Selection of the behavior level instrument. The development of the intervention and measurement instruments were performed in partnership[2] with researchers from the EPID@Work Research Institute at Lakehead University involved in projects targeting mental health in the workplace, such as Superior Mental Wellness @ Work (Kristman et al., 2019).

4.3.2 Phase 2: instruments' content validation

We conducted validation of the content of the measurement instruments using the Delphi Technique (Drumm; Bradley; Moriarty, 2021), which is recommended for drafting clinical practice guidelines, determination of uniform term designations, and content validation. With this method, content validation is performed through rounds of evaluation with experts using a Likert scale to determine the content validity index as well as receive written feedback from the experts (Drumm; Bradley; Moriarty, 2021; Yusoff, 2019). Considering that our literature review on the Kirkpatrick model revealed a small number of validated instruments for measuring Levels I to IV, we selected the most reliable instrument possible for each level.

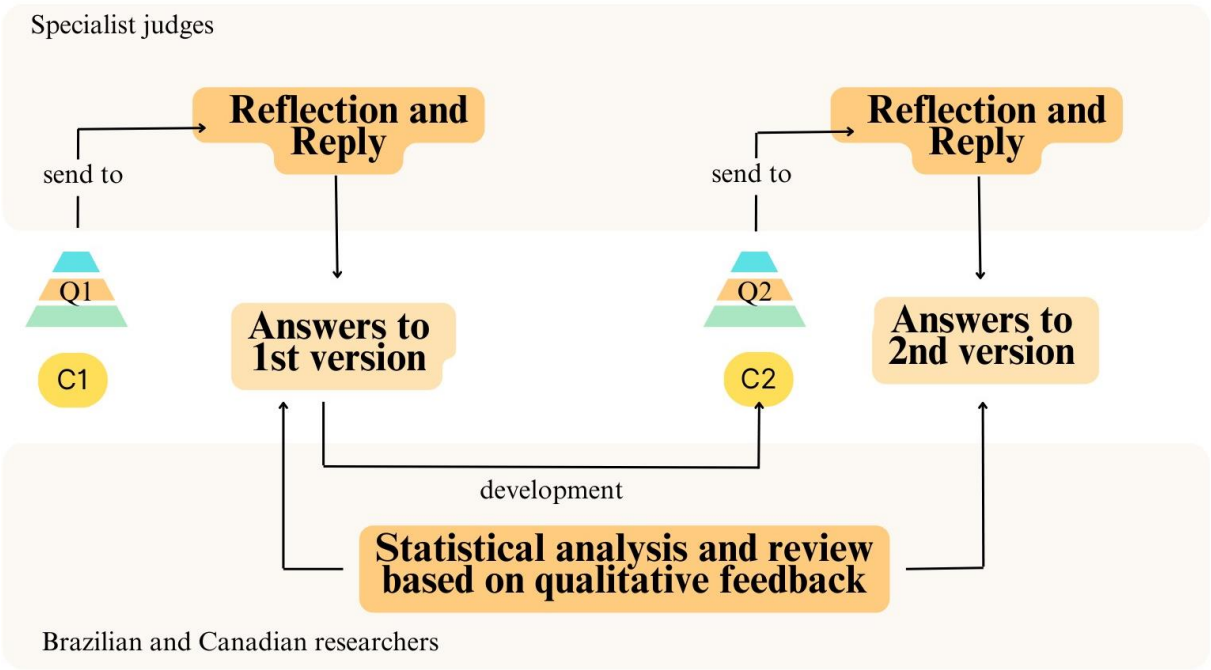
To be considered an expert the inclusion criteria were: a) be classified as an academic, referring to researchers with doctoral degrees and with experience in nursing management, occupational health or similar; or b) be classified as a practitioner, referring to nurses within a work position evolving occupational health or nursing training. The list of potential experts was defined from the research group directories at LATTES curriculum, academic data storage platform used by the National Council for Scientific and Technological Development (CNPq). The recruitment was through email. During this phase, when an invited academic or practitioner identified another possible specialist, their LATTES was evaluated for possible inclusion.

Rounds of implementation of the Delphi Technique can vary from two to four. More

[2] The partnership was fortified with 10-months scholarship of the PhD Candidate at EPID@work, Lakehead University, Canada. Activity funded by the PDSE-CAPES grant. The international experience is detailed in the manuscript "Internationalization experiences in the training of the young researcher: experience report" by Miranda, Borges and Mininel (manuscript under review by Brazilian Journal of Postgraduation).

rounds are not recommended due to the difficulty of implementation and the fact that there are no significant changes of opinion on the part of the experts in later rounds (Marques; Freitas, 2018). We chose to use two rounds for the assessment of the content (C) characterization instrument and data collection questionnaires (Q) based on Kirkpatrick framework, as shown in Figure 6.

Figure 6. Generic schema of implementation of the Delphi Technique with two rounds. São Carlos, 2023



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To measure relevance and representativeness, the following was the response options: 1 = not relevant or not representative; 2 = item needs major revision to be representative; 3 = item needs minor revision to be representative; and 4 = relevant or representative item. The index score is calculated by summing items scored “3” or “4” by the judges divided by the total number of judges. Items that received a score of “1” or “2” need to be revised or deleted.

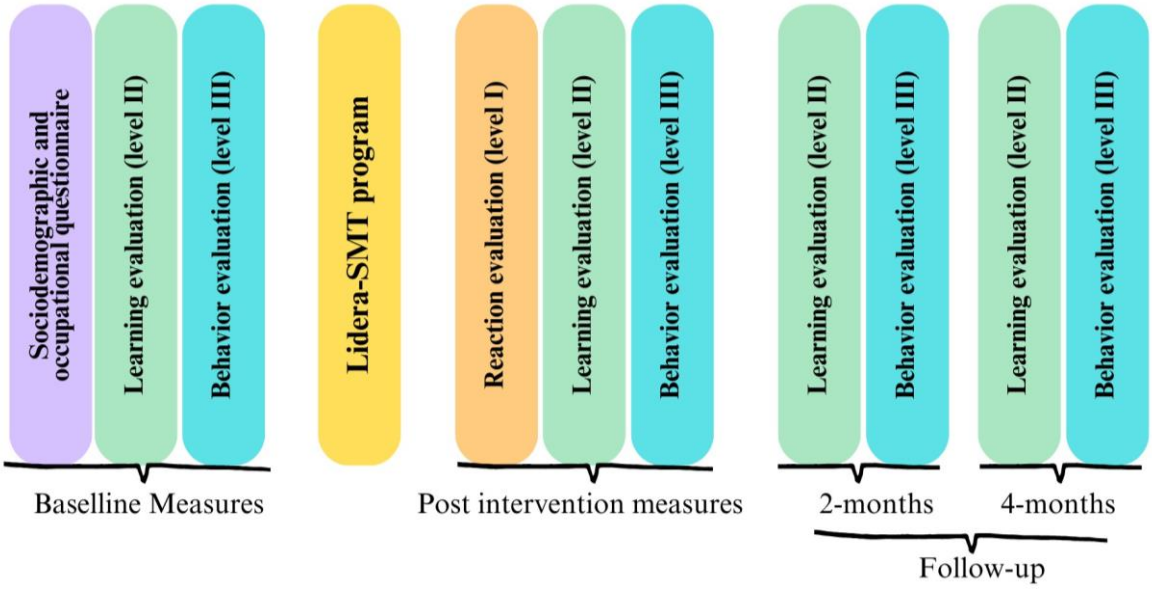
Literature shows that if the number of judges is less than five, it is necessary for all to agree with the item (consensus). If the number is between six and eight, an agreement index above 0.83 is considered adequate. If the committee is composed of nine or more judges, agreement greater than 0.78 is considered adequate (Yusoff, 2019). We invited 29 experts (21 academics and 8 practitioners), of which 12 (41,4%) agreed to participate (eight academics and four practitioners). So, we considered 0.78 as the cut point. The rounds were performed virtually

with Brazilian experts. The analysis of the data obtained in the different stages was carried out in partnership with Canadian researchers from EPID@Work Research Institute at Lakehead University.

4.3.3 Phase 3: Program implementation and pilot evaluation

Data collection begun after the Delphi validation and the input of the final version of the Leader-SMT Program in the Learning Management System (LMS). Figure 7 offers an overview of the study design, including the four data collection points (baseline, post-intervention, two-month follow-up, and four-month follow-up) and the correspondence to Kirkpatrick Levels I to III (Kirkpatrick; Kirkpatrick, 2006). We choose to have two follow-ups with the same structure to analyze the occurrence of different outcomes regarding learning retention (Mulhim, 2021) in the short-term (two months) and mid-term (four months) and determine the occurrence of an improvement in attitudes (behavior level) over time in favor of promoting mental health. A long-term follow-up was not possible considering the pilot design.

Figure 7. Study design and respective steps for data collection. São Carlos, 2023



Font: research authorship, 2024.

The measures were first administered prior to the intervention (baseline) on July 2023. The measures were administered a second time immediately after the intervention (July-August 2023) and then again two (October 2023) and four (December 2023) months after the intervention.

For better understanding of our data collection and analysis, we are presenting here a summary of measures and instruments. However, the selection of primary outcomes and measurement instruments for evaluating the training program was a research objective.

Therefore, the complete information about the instruments is presented in results' section (item 5.2).

We selected: Level I – interest, confidence, attention, expectation, measured by Instructional Materials Motivations survey brief version (IMMS-BRV); level II – learning, measured by a 5-questions learning test; and level III – attitudes, measured by "Self-reported questionnaire on perceived training transfer at the workplace" and perceived structural empowerment, measured by Conditions of Work Effectiveness Questionnaire II (CET-II).

Data were analyzed descriptively, by calculating measures of central tendency and variability in the JAMOVI program (Pohlert, 2021; R Core Team, 2021; The Jamovi Project, 2023). The Shapiro-Wilk normality test was applied to the learning, attitudes and structural empowerment scores. As the data did not present a normal distribution ($P<0.05$), the Friedman test (non-parametric repeated measures analysis of variance – ANOVA) was applied to compare the evaluation moments, followed by the Durbin-Conover multiple comparison test to identify the moments in which the differences were significant or Wilcoxon test for comparation of two specifics timeframes. In learning evaluation, we included Bonferroni and Wilcoxon tests as complementary post hoc test in order to deeper the discussion. Linear mixed Model was performed to evaluate learning retention.

Cronbach's alpha was calculated for the IMMS, attitudes and CET-II questionnaires to verify the internal consistency. Correlation between the attitudes scale and structural empowerment was calculated using Spearman's non-parametric correlation test, interpreted according to the proposal of Portney and Watkins (Portney; Watkins, 2009): 0.00 to 0.25 – little or no relationship; 0.25 to 0.50 – fair relationship; 0.50 to 0.75 – moderate to good relationship and above 0.75 – good to excellent relationship.

Comparison between groups according to training hours was carried out using the Mann-Whitney test for learning and attitudes. The significance level adopted was 5%.

4.4 ETHICAL CONSIDERATIONS

This study respects the ethical precepts of research involving human beings stipulated in Resolution No. 466/2012 of the Brazilian National Board of Health. The researchers are committed to establishing the responsibilities of the participants and ensuring their rights as well as identifying and mitigating risks associated with participation. The dignity and autonomy of the participants was respected. We emphasized the voluntary nature of their contribution and participation through a statement of informed consent.

The research project received approval from the Human Research Ethics Committee of

the UFSCar, Brazil (Certificate of Presentation of Ethical Appreciation (CAAE) 57917922.9.0000.5504 and substantiated document nº 5.627.685) (Annex 1), as well as from the Ethics Office of Lakehead University (process number: 1469900) (Annex 2), in respect of Canadian Research Ethics Boards (Tri-Council Policy Statement), even considering that no data was collected from Canadian participants (Canadian Institutes of Health Research; Natural Sciences and Engineering Research Council of Canada; Council Social Sciences and Humanities Research, 2018).

Recruitment and data collection are performed only after approval. Volunteers were included only after signing two copies of the statement of informed consent (Appendix C – Delphi Technique judges and D – *Lidera-SMT* Program participants).

We complied with all the following procedures: explain the purpose and nature of the study to all participants, obtain informed consent from participants, and offer a pre-study conversation, ensuring the confidentiality of the required information without the need to state the name on the questionnaire. We also ensured voluntary participation in the study for all participants and withdrawal at any time with no negative consequences.

The participants were informed that a robust intervention was created to strengthen knowledge, enabling nurses to transform the work context and promote mental health at work in the hospital setting. The participants also were informed of the possibility of risks related to the study, which refer to the psychological aspect and a breach of confidentiality or the loss of information on the participants or the loss of integrity of the information provided by the judges. Psychological risk may arise from some questions related to participation in the course and previous experiences, which may cause some discomfort, evoke unpleasant feelings of evaluation or judgment, or lead to fatigue during or after completing the data collection instruments.

We considered the following risk mitigation actions:

- The participant could interrupt data collection, withdrawal consent to participate, or resumed participation at another time.
- Mediators could intervene immediately to direct participants to the objectives of the *Lidera-SMT* Program and mitigated more heated differences of opinion.
- Participants were constantly reminded that all nurses were considered leaders during the intervention and, therefore, they had the same hierarchical level regardless of the position they occupy in the workplace.

- We supported the participants in the referral to the services of the Health Care Network of the Brazilian public healthcare system and subsequent referral to psychological support sectors, if necessary.
- We ensured full, free assistance for immediate or delayed, direct or indirect harm related to participation in the study. This assistance may occur at any time, not only during or after the end of the data gathering, but also later, if problems related to participation in the study are detected.
- We will keep any recordings of the *Lidera-SMT* Program agreed between the participants, the completed data gathering forms, and other documents in an individual computer protected by a personal, non-transferable login and password. Only the researchers have access to the data.
- We used Google Forms®, which is offered to professors and students of the Federal University of São Carlos and enables restricted, controlled access when data collection or part of it occurs in a virtual format.
- We will not keep data in the 'cloud', only on local electronic devices (all records in a shared virtual environment or cloud will be deleted).
- All data collected, whether in documents, notes in a field diary, or others, were anonymized to impede the identification of individuals and workplaces.

5 RESULTS AND DISCUSSION

This section is divided according to the research objectives: 5.1 Developing an online training program addressing mental health in the workplace; 5.2 Selecting outcomes and measurement instruments for evaluating the *Lidera-SMT* Program; 5.3 Validating the evaluation instruments with experts using the Delphi Technique; 5.4 Implementing the *Lidera-SMT* Program in a pilot group of nurse-leaders; 5.5 Pilot evaluating the *Lidera-SMT* Program; 5.6 Discussing the effectiveness of the *Lidera-SMT* Program; 6.7 Limitations.

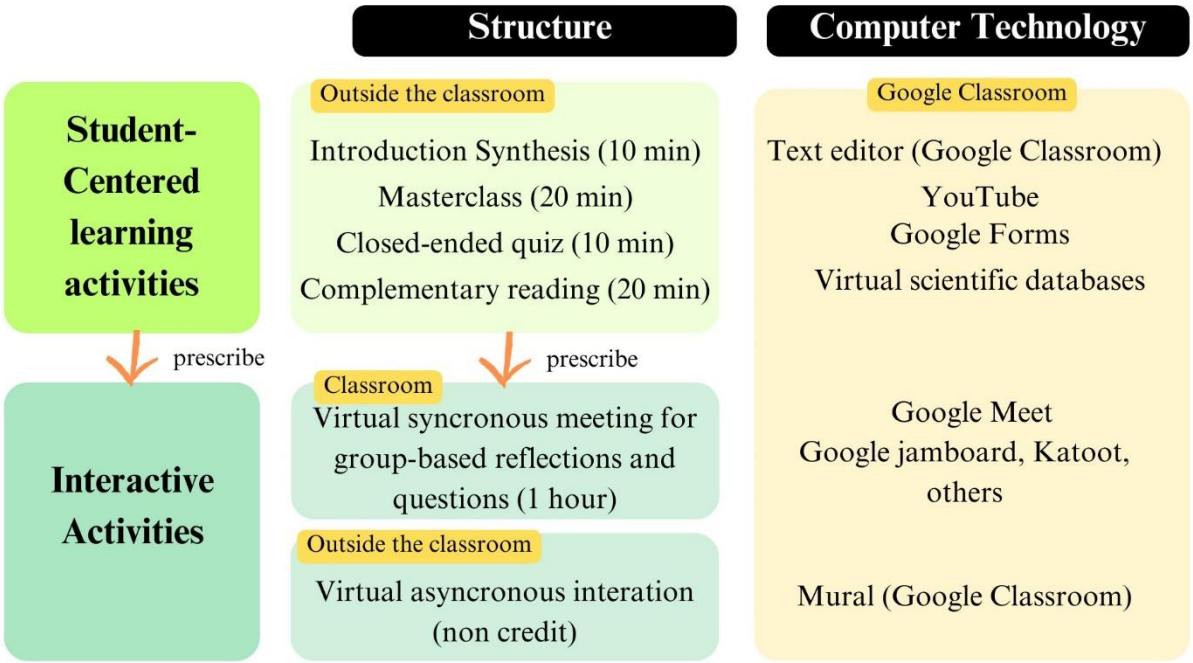
5.1 DEVELOPING AN ONLINE TRAINING PROGRAM ADDRESSING MENTAL HEALTH IN THE WORKPLACE

This section will be described according the three steps labelled in the methods.

5.1.1 Step 1: Selection of a framework for learning process

The *Lidera-SMT* Program was based on andragogy (Lewis; Bryan, 2021). We used a flipped classroom design, as our intervention is directed at hospital nurses and previous experiences have indicated this design for healthcare environments considering a student-centered learning environment (Låg; Sæle, 2019; Li; Lund; Nordsteien, 2021). All modules of the *Lidera-SMT* Program have the structure shown in Figure 8.

Figure 8. Pedagogical structure of the *Lidera-SMT* Program. São Carlos, 2023



Font: based on Bishop (2013, p. 6).

The “student-centered training activities” structure was designed through asynchronous

virtual activities: a) Introduction: welcoming and overview of the weekly content to capture attention of the student regarding the relevance of the topic; b) Masterclasses: in-depth discussion of the content by a specialist; c) Closed-ended quiz: check point with five true-or-false statements based on the content learned that week; d) Complementary reading: suggested reading focused on the practical implementation of the content in the hospital setting.

The "interactive activities" structure was designed based on synchronous virtual meetings and asynchronous participation in the *Lidera-SMT* Program. To increase the flexibility and participation of nurses, synchronous activities are encouraged but not mandatory. Participation in the program is considered by access of the content and answers to the closed-ended quiz. All participants who accessed the content and answered three of the four mandatory quizzes are considered eligible for the training evaluations.

5.1.2 Step 2: Selection of a framework for the promotion of mental health in the workplace

We chose the Canadian National Standard of Psychological Workplace Health and Safety considering its three strategic pillars (prevention, promotion, and resolution) and thirteen workplace factors (Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

The *Lidera-SMT* Program was created as a 10-hour training program involving four two-hour modules per week for general nurses and an additional two-hour module for nurses in leadership positions, as these individuals have different responsibilities on the nursing team. Training content is based on the Canadian Standard pillars.

- Module 1. Learning from the Canadian experience: Present the *Lidera-SMT* Program, introduce mental health promotion at work as a necessity for nurses as potential leaders, and present an overview of the Standard.
- Module 2. Prevention: Understand work as a determinant of the health-disease process and identify psychosocial risks and their repercussions in the hospital setting.
- Module 3. Promotion: Outline actions and strategies to be developed or improved in the work context to promote psychologically healthy, safe work.
- Module 4. Resolution: Strengthen health surveillance to monitor events and concerns related to mental health in the workplace.
- Module 5 (extra) Supervisor: Reflect on the engagement of leadership for promoting mental health in the workplace.

The training occurred, as planned, between July 1st and August 4th, 2023. We present the syllabus of the *Lidera-SMT* Program in Appendix E.

5.1.3 Step 3: Design of learning and assessment strategies

We selected Google Classroom® as the LMS. This platform was chosen based on positive experiences reported in the literature, especially with regards to learning activities after the COVID-19 pandemic (Santos *et al.*, 2021; Fauzi *et al.*, 2021; Oktaria; Rahmayadevi, 2021; Swaminathan *et al.*, 2021).

Students consider Google Classroom® useful, easy to use, and a good tool for improving independent learning (Fauzi *et al.*, 2021; Oktaria; Rahmayadevi, 2021). The integration with other Google Tools, such as Google Forms® and Google Meet® (Santos *et al.*, 2021) and the free access of Google® (Swaminathan *et al.*, 2021) may ensure positive experiences with Google Classroom®.

The content development process took place between November 2022 and April 2023. We invited four professors to the masterclasses based on research expertise in each topic. Each curriculum was analyzed considering the initial field of education, research expertise in occupational health, and the development of projects involving the nursing work process. A video (https://www.youtube.com/watch?v=JHDxvaUbmmw), a briefing matrix (Table 3), and both elementary documents on the Standard (Canadian Standards Association, 2014; Canadian Standards Association; Bureau de Normalisation du Québec, 2013) were sent to guide the content of the masterclasses.

Table 3. Briefing for masterclasses development. São Carlos, 2023

Mod.	Briefing
1	1. Introduction (brief description of your experience, especially with mental health at work); 2. Introduce the relevance of a national standard in Canada for promoting mental health at work; 3. Briefly description of the development process: who are the organizations involved? What did they base the standard on? 4. Masterclass of the Canadian National Standard of Psychological Workplace Health and Safety elements; 5. Discussion on the implementation of the Standard: what do you have experienced in almost ten years of standardization (Try to balance the good aspects of the standard and the challenges regarding real workplaces)?; 6. Reflecting on the opportunities/challenges to use the Standard as a guide in Brazilian hospitals.
2	1. Introduction (brief description of your experience, especially with mental health at work); 2. Masterclass of Social Determinants of Health, mailing considering "work" as a determinant of global and mental health; 3. Introducing the concept of "harm" and "hazards" considering the hospital environment and the nursing team work process; 4. Deep discussion of the psychological risks and how

	to prevent them in hospital nursing settings considering the workplace factors; 5. Reflecting about the PHSMS and psychological hazards on occupational map risks laid down by the standard, 6. Reflecting about the levels of participation in the prevention process (individual, team, supervisors, and organization).
3	1. Introduction (brief description of your experience, especially with mental health at work); 2. Masterclass about strategies to promote mental health at work by focus (individual, team and organizational level) and workplace factors; 3. Reflecting about the levels of participation in the prevention process (individual, team, supervisors, and organization).
4	1. Introduction (brief description of your experience, especially with mental health at work); 2. Masterclass about health surveillance strategies (resolution pillar), reflecting on the inclusion of incidents and concerns mental health at work; 3. Reflecting about the intrasectoral (individual, team, supervisors, and organization) and intersectoral (organization, unions, government) levels of participation in the resolution process.
Extra	1. Introduction (brief description of your experience, especially with mental health at work); 2. Masterclass about supervisor role and mental health at work; 3. Reflecting about the concept of champion proposed by the standard and how strategies supervisors' nurses could use to promote mental health at work, considering their role in the organization.

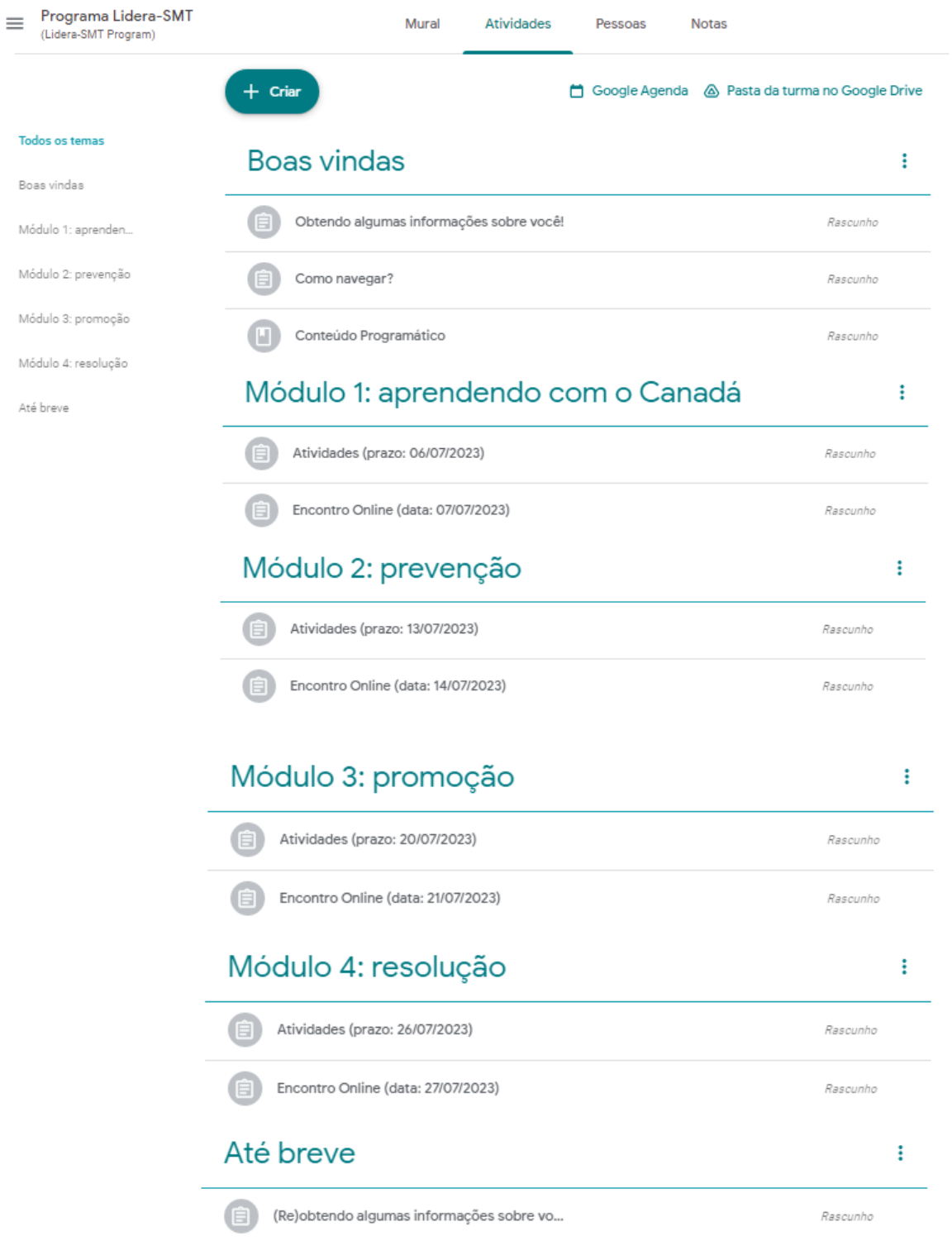
Font: research authorship, 2024.

In the five modules, we counted with the participation of two Brazilians professors and two Canadians. The masterclasses in English were translated into Portuguese through subtitles and are available as unlisted videos on YouTube.

We developed a five-item quiz for each module with true-or-false questions to assess participation and check the training progress of the participants. The quizzes were organized using Google Forms. Thus, immediately after making a choice, the participants are redirected to commented feedback.

All content created was directly sent to the *Lidera-SMT* Program folders in Google Classroom® to facilitate the visualization of the entire training program. Two folders (English and Portuguese versions) were created in Google Classroom® to organize the content of the *Lidera-SMT* Program and ensure full understanding by the Canadian experts. Figure 9 illustrates the content structure in the developer profile. Figure 10 offers an overview of the platform layout in Portuguese language.

Figure 9. The *Lidera-SMT* Program content structure. São Carlos, 2023



Font: research authorship, 2024.

Figure 10. The *Lidera-SMT* Program main view. São Carlos, 2023

Font: research authorship, 2024.

Google Classroom® has four tabs: stream, classwork, people, and grades. “Stream” is where professors and participants post information to facilitate asynchronous communication among the participants. “People” lists all professors and classmates. “Grades” is only available for the tutors’ planning and not appear for the participants. These three tabs only are used organically along the progress of the *Lidera-SMT* Program. In “classwork”, we organized the entire content of the *Lidera-SMT* Program.

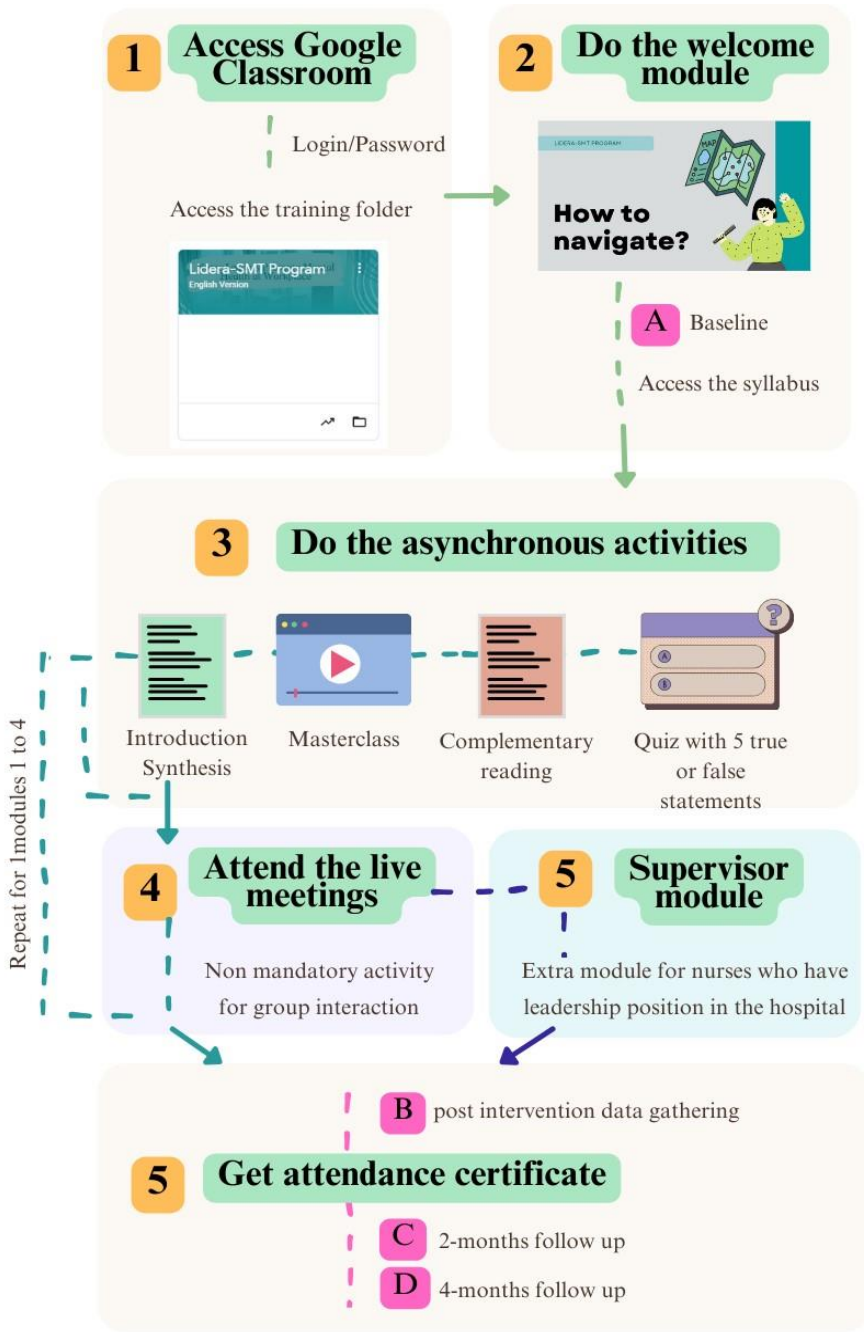
All four modules have the same visual structure. There is a quick content menu on the left and the platform gives the participant direct access to their Google Agenda® and a Google Drive® folder. We included welcoming instructions, a link to Google Forms® for the baseline questionnaires, a tutorial with navigation instructions, and our syllabus. Asynchronous activities of the mandatory modules and information on the online meetings are presented next. At the end, a farewell message and a link to Google Forms® for post-intervention questionnaires appears. Follow-up questionnaires were sent by email and also appeared on the platform.

The *Lidera-SMT* Program was registered as a refresher course in UFSCar (ProEx register 23112.019338/2023-78). In this university, extension courses are those with a minimum credit hour of eight hours and are classified as: 1) Introductory Courses - generally of short duration, their objective is to disseminate a specific topic and offer introductory notions in a specific area, and does not require previous education or professional experience prerequisites; 2) Refresher Courses - course that mainly aims to update and expand knowledge, skills or techniques in an area of knowledge; 3) Training and Professional Qualification Courses - course that mainly aims to train and qualify in specific professional activities (Federal University of São Carlos, 2020). All students with more than 50% correct answers on three or more quizzes (75% attendance of the general content) earns a participation certificate after the end of the training program.

The development phase of the *Lidera-SMT* Program was more difficult than expected.

This phase was initially planned to last two months, but lasted twice as long. It is comprehensible considering the complexity of the training and the availability of professors who voluntarily agreed to participate in the project, but required a schedule adjustment. Figure 11 resumes all paths passed through participants in the *Lidera-SMT* program and its evaluation, considering the activities proposed and the data collection for the effectiveness evaluation of the Program.

Figure 11. Resume of *Lidera-SMT* Program path for research's participants.



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5.2 SELECTING OUTCOMES AND MEASUREMENT INSTRUMENTS FOR EVALUATING THE *LIDERA-SMT* PROGRAM

This section will be described according the four steps labelled in the methods.

5.2.1 Step 1: Design Sociodemographic and occupation characteristics

A questionnaire was created to collect sociodemographic and occupational characteristics, such as sex, age, marital status, schooling level, time since graduation, time working at the institution, position held, other employment relationships, income, and work sector (Appendix F)

5.2.2 Step 2: Selection of a reaction instrument (Level I - Kirkpatrick Model)

We decided to use the short version of the IMMS, the IMMS-BRV (Annex 3), considering the relevance of Likert measures for the determination of reactions (Bijani *et al.*, 2018; Castro Filho; Motta, 2018; Jobst *et al.*, 2020; Knobel *et al.*, 2020; Lamar, 2017; Liaw *et al.*, 2016; Maloney *et al.*, 2011; Parmar *et al.*, 2022; Santos; Mendes; Martins, 2021). The IMMS (extended version) was used in a previous nurse training program (Liaw et al., 2016) and is a reliable instrument for assessing motivation in continuing education activities of instructional materials that have self-directed characteristics (Cardoso-Júnior; Faria, 2021; Keller, 2010). The IMMS-BRV has four domains: Interest, Confidence, Attention, and Expectation. These constructs were based on the attention-relevance-confidence-satisfaction (ARCS) method proposed by Keller to explain factors and phenomena that affect motivation for learning (Cardoso-Júnior; Faria, 2021; Keller, 2010).

The scale was translated and validated for Brazilian Portuguese (Cardoso-Júnior *et al.*, 2020) and a shorter alternative version was proposed based on the psychometric assessment of IMMS one year later (Cardoso-Júnior; Faria, 2021). IMMS-BRV has the same four domains as the full version and a 25-item scale with Likert response options with good internal consistency. Cronbach's alpha coefficient for the complete IMMS-BRV instrument is 0.95 (Interest dimension: $\alpha = 0.93$; Confidence dimension: $\alpha = 0.87$; Attention dimension: $\alpha = 0.76$; Expectation dimension: $\alpha = 0.78$) (Cardoso-Júnior; Faria, 2021). IMMS-BRV considers low, moderate, and high scores and does not suggest a cutoff point. However, similar studies considered a moderate to high score to be more than 3.7 points (Cardoso-Júnior; Faria, 2022; Liaw *et al.*, 2016).

IMMS-BRV converges with the framework of the *Lidera-SMT* Program and its four domains cover most of the aspects considered important in other reaction instruments that

evaluate asynchronous online training using Likert scales (Jobst *et al.*, 2020; Lamar, 2017; Parmar *et al.*, 2022). As we intended to use the Portuguese version, we contacted the corresponding author of the Brazilian publications (Cardoso-Júnior *et al.*, 2020; Cardoso-Júnior; Faria, 2021, 2022) and obtained authorization (Annex 4).

5.2.3 Step 3: Design of learning instrument (Level II - Kirkpatrick Model)

Previous experiences (Jobst *et al.*, 2020; Lamar, 2017; Maloney *et al.*, 2011; Parmar *et al.*, 2022) used closed-ended tests to determine the knowledge of the participants. The literature reports experiences with 10-question (Parmar *et al.*, 2022), nine-question (Jobst *et al.*, 2020) and five-question tests (Lamar, 2017). We also found a study that did not describe the total number of questions, presenting the test as a "one-hour knowledge test" (Maloney *et al.*, 2011).

We elaborated a five-question closed-ended test with four multiple choice responses and one correct answer for each module (Appendix G). The final score ranges from 0 to 5 (1 point by question) and the same test were applied in the baseline, post-intervention, and follow-up evaluations. The extra module for supervisors does not have a learning question since it was optional.

The complexity level for cognitive tests (basic, intermediary, and advanced) (Bollela; Borges; Troncon, 2018) as well as the cognitive (knowledge, logic, etc.) and affective (valor, opinion, judgment, attitudes, etc.) domains from Bloom's Taxonomy (Anderson *et al.*, 2001) served as the basis of content development. Good practices for writing multiple choice tests and exam composition were followed (Bollela; Borges; Troncon, 2018). Table 4 shows the correspondence of each question to the content of the *Lidera-SMT* Program.

Table 4. Briefing for Learning test development. São Carlos, 2023

Question	Module	Domain	Complexity	Type
1	I	Cognitive	Intermediary	Understand/Interpret
2	II	Cognitive	Intermediary	Apply
3	III	Cognitive	Intermediary	Apply
4	IV	Cognitive	Intermediary	Apply
5	I to IV	Affective	Advance	Analyze/Evaluate

Font: research authorship, 2024.

5.2.4 Step 4: Design of behavior instrument (Level III - Kirkpatrick model)

For Level III, we also chose a quantitative approach using a Likert scale considering its mastery to evaluate behavior (Huang et al, 2021; Santos; Mendes Martins; 2021; Knobel et al, 2020; Bijani et al, 2018; Liaw et al, 2016; Maloney et al, 2011).

Our study design does not enable a full evaluation of changes in behavior on an organization level. Thus, we determined that it is important to understand the behavior evaluation (Level III) with regards to two aspects for our pilot study (perceived attitudes and perceived empowerment of the participants), since the Canadian National Standard of Psychological Workplace Health and Safety was used as the framework for the *Lidera-SMT* program is focused on a systemic perspective. We intend to identify whether the *Lidera-SMT* program has a positive influence on the attitudes of nurses and whether the nurses feel empowered to make changes or improvements in their work context.

We did not find a validated instrument for attitude outcomes that could be administered in our study. We selected the "Perceived attitudes towards training transfer among nurses" (Annex 5), which has five-point Likert response options. This questionnaire was adapted and modified from a previous study (Liaw et al., 2016) to fit our situation and the training goals of the *Lidera-SMT* Program (Appendix H). The previous study reported Cronbach's alpha of 0.94 (Liaw et al., 2016), denoting high internal consistency. As adaptation was inevitable, the Delphi Panel validated the content of new version and Cronbach's alpha was calculated for the determination of reliability.

Liaw et al (2016) evaluated the participants attitudes with regards to transferring the learning acquired from training to their practice. The authors analyzed data considering mean scores and significant differences between registered nurses and enrolled nurses. The average ranged from 3.39-4.13 for each item and no significant differences were found between the two groups. For the evaluation of the *Lidera-SMT* Program, we intend to use a similar understanding considering possible differences between who participated or not in the extra module.

Empowerment is understood in an organizational (structural) way. This perspective arises from Kanter's theory of structural power, which relates the perception of power to better working conditions and the process of organizational development, such as access to information, organizational support, resources, among others (Bernardino *et al.*, 2013). By measuring structural empowerment, we were able to identify the extent to which the nurses have the ability to mobilize resources and achieve goals in their work context (Goedhart; Van Oostveen; Vermeulen, 2017). Despite no studies included in our literature review on the

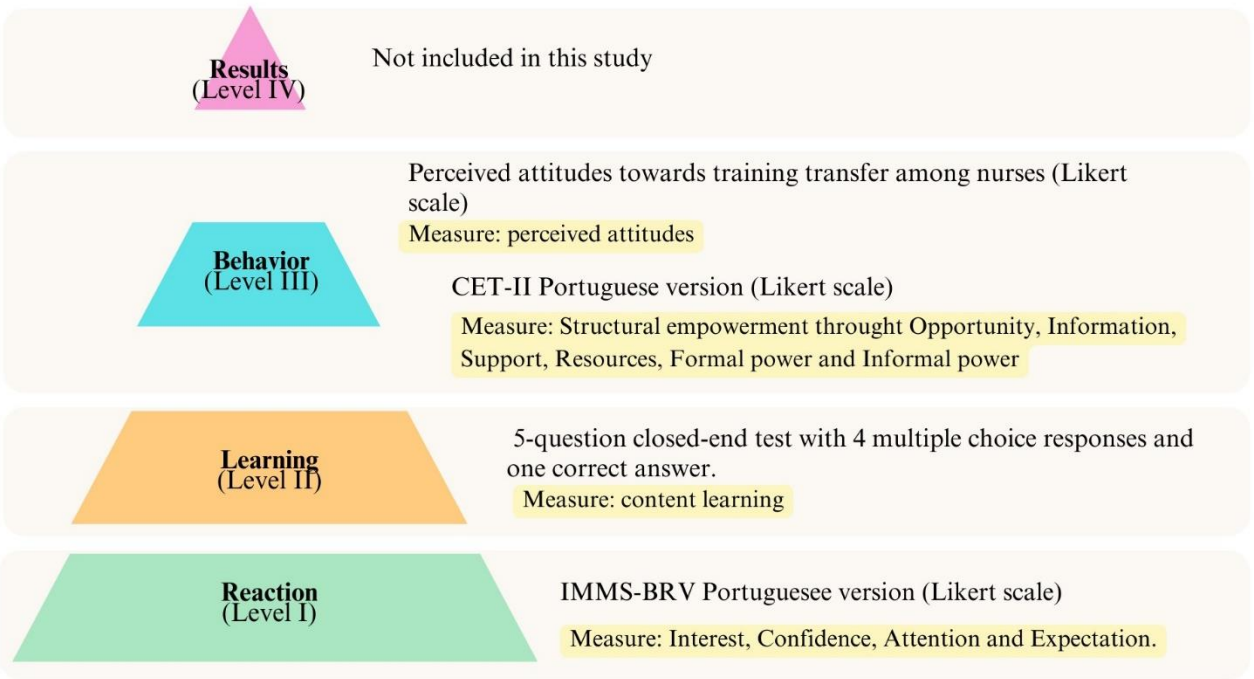
Kirkpatrick model including a structural empowerment evaluation, we believe that this evaluation could give us some perspective on real behavior changes opportunities.

We also used the Portuguese version of the CET-II (Annex 6), which measures the structural empowerment components found in the nurses' work environment, considering 21 items and seven components (Opportunity, Information, Support, Resources, Formal Power, and Informal Power; Global empowerment). This instrument was translated and validated for Brazilian nurses in 2013 in two hospital settings, achieving Cronbach's Alpha of 0.86 at the first hospital and 0.88 at the second (Bernardino *et al.*, 2013). We contacted the corresponding author of the Brazilian publications (Bernardino *et al.*, 2013) and obtained authorization (Annex 7).

5.3 VALIDATING THE EVALUATION INSTRUMENTS WITH EXPERTS USING THE DELPHI TECHNIQUE

Figure 12 summarized outcomes measurements and tools included in this pilot study and their distribution among the levels of the Kirkpatrick Model.

Figure 12. Resume of instruments for training evaluation. São Carlos, 2023



Font: research authorship, 2024.

Four instruments were selected to evaluate the 3-levels of Kirkpatrick Framework and one for sociodemographic and professional characterization. Of those, two were already validated for Brazilian Portuguese (IMMS-BRV and CET-II), one was adapted (Perceived

attitudes towards training transfer among nurses) and two were created by the researchers (learning test and the sociodemographic and occupational questionnaire). Considering that, three instruments were included in the Delphi's phase for validation. The initial inquiries and the index score of agreement between judges in the first round are described in Table 5.

Table 5. Items included in Delphi experts panel and index scores of agreements between judges in the first round. São Carlos, 2023

Item	Index	Decision
Sociodemographic and occupational questionnaire		
Sex	1	Achieved
Birth Date	1	Achieved
Marital Status	0,916	Achieved
Are you responsible for young children or other people who need care?	0,916	Achieved*
Education Degree	1	Achieved
How long have you been trained as a nurse?	1	Achieved
How long have you been working in your primary workplace?	1	Achieved
Role/Position	1	Achieved
Do you have a working relationship with another institution(s)?	0,916	Achieved
Income	0,833	Achieved
Work department	0,916	Achieved
How many hours do you work in a week?	1	Achieved
Where are you accessing the *Lidera-SMT* Program?	**0,666**	Not achieved
Where did you find out about the *Lidera-SMT* Program?	0,833	Achieved
Learning test (level II)		
Question 1	1	Achieved
Question 2	1	Achieved
Question 3	1	Achieved*
Question 4	1	Achieved
Question 5	0,916	Achieved*
Self-reported questionnaire on their perceived training transfer at the workplace		
I will make a plan to put into practice what I have learned after I get back to the workplace.	1	Achieved
I will work as hard as possible to put into practice what I have learned for the nursing workers' benefit.	1	Achieved*

My work is more organized after I have put into practice what I have learned from the *Lidera-SMT* Program.	1	Achieved*
It would be a shame if I do not put into practice what I have learned from the *Lidera-SMT* that I attended.	**0,75**	Not achieved
I am sure that what I have learned from the *Lidera-SMT* is put into practice for the workers' benefit.	1	Achieved
I feel motivated toward my role in promoting mental health at work after having attended the *Lidera-SMT* Program.	1	Achieved
My commitment towards my role in patient deterioration has increased as a result of attending the *Lidera-SMT* Program.	1	Achieved*
Supervisors or peers have told me that my performance has improved following the *Lidera-SMT* Program.	0,916	Achieved*
I work with more confidence after putting into practice what I learned at *Lidera-SMT*.	0,916	Achieved*
I have changed my behavior in order to be consistent with the material taught in the *Lidera-SMT* program.	0,833	Achieved*
I knew I would benefit from the *Lidera-SMT* Program.	0,916	Achieved
My work performance improved after I participated in the *Lidera-SMT* Program.	1	Achieved
My work will be rewarded if I put into practice what I have learned.	**0,75**	Not achieved
I am capable of putting into practice what I have learned from the training even though I am busy.	1	Achieved*

Note: *despite these items reached an index > 0.78, experts made interesting suggestions of improvements, so we decide to make some adjustments and send in the 2nd round for validation.

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Three items (9%) that did not achieve a minimum index score of 0.78 were included in the second round evaluation (Drumm; Bradley; Moriarty, 2021). The qualitative feedback of the experts resulted in major revision in another ten validated items, so we decided to include those items in the second round too, even considering their satisfactory index score. Also, one item about ethnicity/race was added to the Sociodemographic and occupational questionnaire as a result of experts' suggestion. Two experts dropped off in the second round, so we adjusted the index score calculation. The items included in the second round and its index score are shown in Table 6.

Table 6. Items included and Index Scores of agreements between judges in the second round. São Carlos, 2023

Item	**Index**	**Decision**
Sociodemographic and occupational questionnaire		

How would you best describe yourself regarding ethnicity/race?	0,9	Achieved
Do you have young children or other dependents in your care who need care?	1	Achieved
When are you participating in the *Lidera-SMT* Program?*	1	Achieved
Learning test (level II)		
Question 3 (new version)	1	Achieved
Question 5 (new version)	1	Achieved
Self-reported questionnaire on their perceived training transfer at the workplace		
I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers.	1	Achieved
My work process became more organized after I put into practice what I learned in the *Lidera-SMT* Program.	0,8	Achieved
I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program.*	1	Achieved
I feel more engaged in promoting mental health at work after participating in the *Lidera-SMT* Program.	1	Achieved
Supervisors and/or colleagues have recognized my efforts to promote a safer and healthier environment.	1	Achieved
I feel safer when promoting SMT actions after participating in the *Lidera-SMT* Program.	1	Achieved
I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program.	1	Achieved
Workers under my supervision will benefit if I put what I've learned into practice.*	1	Achieved
I am able to put into practice what I learned in the *Lidera-SMT* Program despite the demands at work.	1	Achieved

Note: * Items revised because of a low index score in the first round.

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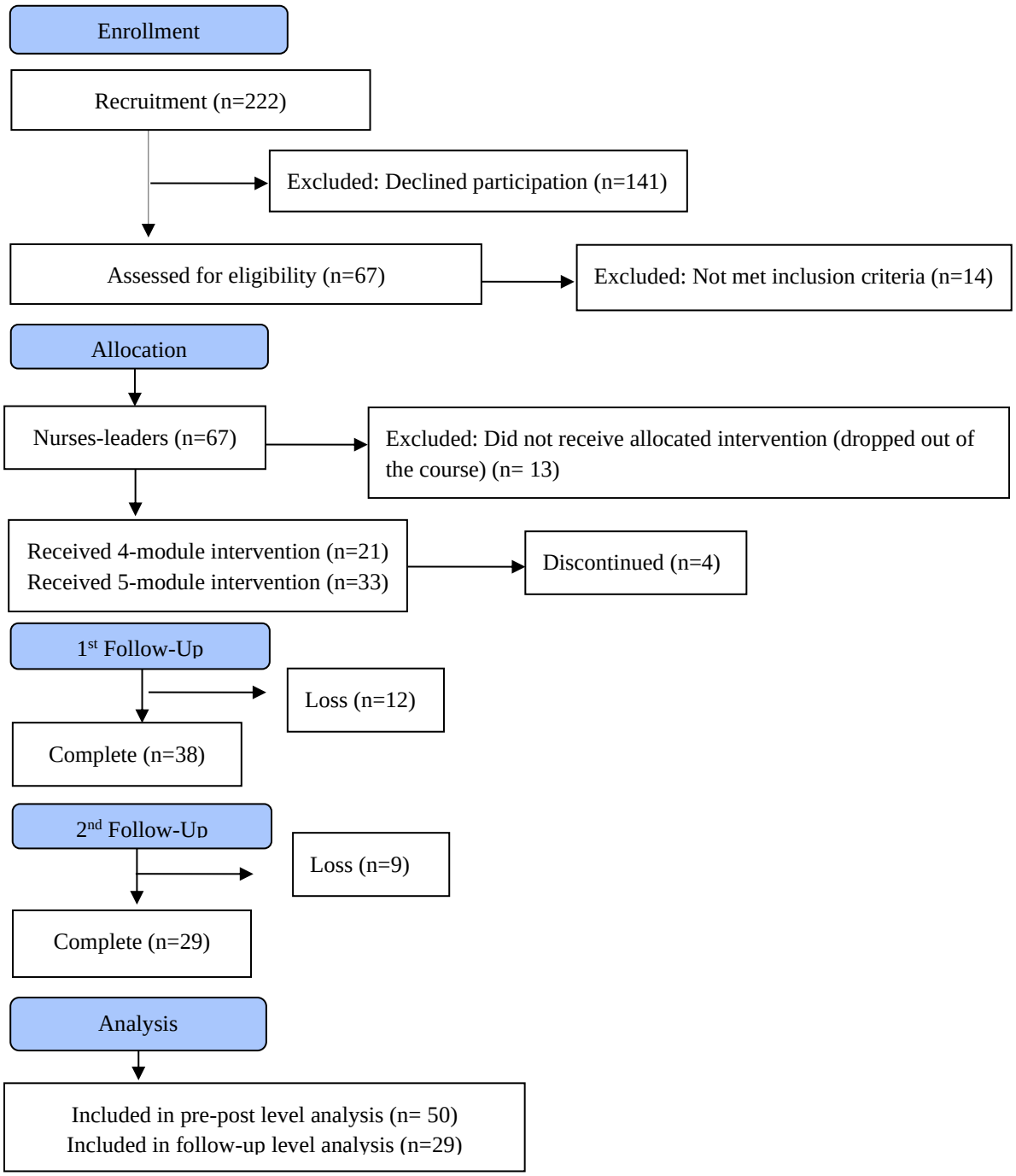
All items achieve content validation. The panel considered all items as relevant and appropriated for the evaluation set, allowing us to offer a standardized instrument as previously used in nursing field (Nora; Zoboli; Vieira, 2018).

Considering attitudes instrument be based on the *Lidera-SMT* experience, the Self-reported questionnaire on their perceived training transfer at the workplace (included as level III) was included only in the post-intervention and in the follow-ups.

5.4 IMPLEMENTING THE *LIDERA-SMT PROGRAM* IN A PILOT GROUP OF NURSE-LEADERS

Figure 13 shows the data from the recruitment to the final sample of our study

Figure 13. CONSORT flowchart. São Carlos, 2023



Font: adapted from Schulz; Altman; Moher (2010)

There was a high number of nurses that demonstrated initial interest on the *Lidera-SMT*, reflecting a wide dissemination of study recruitment information. Despite that, only 32,2% responded to the first contact with the researchers in order to collect data for eligibility assessment.

This research presents a single-group intervention (4-modules required). All participants were allowed to participate in the extra optional module, that was directed for nurses in management positions, which can explain why not all participants were interested in it. Thus, we allocated the participants (n = 67) in two groups ("nurses" and "manager nurses") for better presentation of the results, considering the extra optional module adherence.

We implemented the mandatory modules of the *Lidera-SMT* between July 1st 2023 and July 28th 2023, with one additional week for the extra module or any need for extension in the deadline for achieve participation criteria. We were open to negotiating other deadline extensions with the participants, but it was not need. The final content implemented is available in appendix I, as well as illustration of Program's implementation per module are available in appendix J.

Although optional, live meetings were enriching. In this activity, participants discussed and reviewed the content learned in each module. The thirteen workplace factors guided the majority of discussions. Psychosocial risks and the workplace factors that affect them and their team in the nursing hospital work were the main theme. They argued how these factors affect them and their teams and which ones are more applicable in their workplace. Also, the autonomy and resources required to implement strategies of prevention, promotion and resolution appeared a lot. Factors involving co-workers' control, such as "civility and respect" and "engagement" were frequently mentioned. Converging in the participants perception of how strategies based on those factors are near to be implemented at the teams' level.

As the content of *Lidera-SMT* was focused on the collective aspects of work, the discussions encouraged collective strategies to promote mental health at work. This is an important advance because literature report a lot of individual-level interventions (Santos, *et al.*, 2023), that are not showing additional or appropriate outcomes in improving well-being among workers (Fleming, 2024).

Regarding participation, 54 (78.3%) of the participants *Lidera-SMT* completed the Program, highlighting that nurses consider training as a core value to professionalism and lifelong learning (Mlambo; Silén; Mcgrath, 2021). Further discussion about differences in adherence of nurses and managers, as well as about the participation in the extra module will

be reported in the section 5.5.

Both brief online session (Shann *et al.*, 2018) and longer training interventions (Gayed; Lamontagne; *et al.*, 2018) with similar scope observed moderate to high rates of participants' dropout. Despite this, our adherence showed a good engagement of the target audience, the Program held less interest of those without a formal leadership position in their organizational structure. Our data do not discern the reason for this. Still, the literature suggests barriers to continuing professional development: lack of relevance of the program, poor staffing levels, heavy workloads, lack of study time, anti-intellectualism and lack of organizational support (Mlambo; Silén; Mcgrath, 2021).

We used the YouTube studio to monitor the participation in the asynchronous activities and the Google Meet automatic report to monitor live participation; however, only the monitoring through email address registration in the Google Forms Quiz was considered for certificate purposes. The role of the monitor was essential so that this closer following of participants could happen. Table 7 summarized the participation in each assignment monitored per number of views considering Google counting of views or assignments delivered by participants.

Table 7. Participation monitored in each assignment by module. São Carlos, 2023

Module	Assignment*	Monitoring by	Views/deliveries
1	Masterclass	YouTube Studio	181
	Live meeting	Google Meet report	22
	Recording of the live meeting	YouTube Studio	15
	Quiz	Google Forms report	61
2	Masterclass	YouTube Studio	83
	Live meeting	Google Meet report	16
	Recording of the live meeting	YouTube Studio	3
	Quiz	Google Forms report	54
3	Masterclass	YouTube Studio	81
	Live meeting	Google Meet report	19
	Recording of the live meeting	YouTube Studio	1
	Quiz	Google Forms report	54
4	Masterclass	YouTube Studio	64
	Live meeting	Google Meet report	16
	Recording of the live meeting	YouTube Studio	5
	Quiz	Google Forms report	50
Extra	Masterclass	YouTube Studio	48
	Live meeting	Google Meet report	14

	Recording of the live meeting	YouTube Studio	2
	Quiz	Google Forms report	33
Total			822

Note: *We were not able to monitor the complementary reading assignment.

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We also had some stream interaction, but this resource was mostly used for professors' instructions and group feedback. During interactions, the monitor role was essential for answering doubts and improving engagement.

The usability of the Google Classroom structure was fine, but not all students were able to link the response in the quiz form to the "assignments delivery" resource in the LMS Platform. Aiming to minimize any problem regarding participation, we decided to send a weekly individual email for all participants showing the weeks achievements and reminder to do the new activities. An exclusive email account (lidera.smt@gmail.com) was used for that and registered 266 emails in the period of the course.

Regarding to the participation in the data collection, for the initial number of allocations (n = 67) we included 92.6% of the sample (n = 50) for analysis of the primary outcomes that required participation in pre- and post- measures (sociodemographic characteristics showed in Table 8). For the follow-up measurements, we achieve 70.4% of the sample (n = 38) in the first wave, decreasing to 58% (n = 29) in the second one. This represents a loss of 24% between post and 1st follow-up and 23.7% between follows-ups. Loss reported was within expectations, considering general guidelines for prospective studies (Fewtrell *et al.*, 2008; Kristman; Manno; Côté, 2004).

Considering the training background, dropout rates near to 50% in training evaluation research are expected even in just pre- and post-measures designs (Gayed; Lamontagne; *et al.*, 2018). A systematic review (Gayed; Milligan-Saville; *et al.*, 2018) identified two trainings among leaders with a 6-months total of following up, similar to the *Lidera-SMT* evaluation design. The participation rate in those studies was diverse, from 50% (Milligan-Saville *et al.*, 2017) to 95% (Nishiuchi *et al.*, 2007).

Table 8. Sociodemographic and occupational characteristics of participants in the *Lidera-SMT* (n = 50). São Carlos, 2023

Characteristics	**N**	**%**
Sex		
Female	41	82
Male	9	18
Color		

White	26	52
Brown	9	18
Yellow	2	4
Black	1	2
Undeclared*	12	24
Age		
20 to 29 years	7	14
30 to 39 years	21	42
40 to 49 years	18	36
50 to 59 years	4	8
Marital status		
Single	19	38
Consensual marriage	8	16
Married	21	42
Divorced	2	4
Have dependents who need care		
No	31	62
Yes, one	10	20
Yes, two	9	18
Educational level		
University	2	4
Residency/Specialization	30	60
Master's	15	30
Doctorate	2	4
Post doctoral	1	2
Training time as a Nurse		
<1 year	1	2
1 to 5 years	5	10
6 to 10 years	5	10
11 to 15 years	22	44
> 16 years	17	34
Workplace time		
<1 year	5	10
1 to 5 years	20	40
6 to 10 years	6	12
> 10 years	19	38
Occupation		
Nurse	28	56
Nursing Supervisor/Coordinator/Manager	22	44
Number of employments		

One	45	90
Two	4	8
Three or more	1	2
Income		
2 to 3 MMW**	4	8
3 to 4 MMW	15	30
4 to 5 MMW	9	18
> 5 MMW	22	44
Workplace sector		
Clinical/Surgical Units	11	22
Emergency	8	16
Psychiatry/Mental Health	6	12
Nursing Coordination/Management/Board	4	8
Training and Development	4	8
Adult ICU	4	8
Surgical/Obstetric Center	3	6
Specialty Clinic	3	4
Material and Sterilization Center	1	2
Endoscopy	1	2
Maternity	1	2
Occupational Health Service	1	2
Radiotherapy	1	2
Neonatal/pediatric ICU	1	2
Epidemiological Surveillance	1	2
Weekly working hours		
< 30 hours	5	10
30 to 39 hours	18	36
40 to 49 hours	24	48
50 to 59 hours	3	6
Participation in *Lidera-SMT*		
Within working hours	17	34
Outside working hours	33	66
Means of recruitment for the *Lidera-SMT*		
Social media (Facebook, Instagram, etc.)	15	30
Workplace	13	26
University	11	22
Friends	5	10
Email	4	8
Google	1	2
Other	1	2

Note: * We sent a rectification in the 1st follow-up to include race, due to a gap in the data collection instrument. The 12 participants who did not respond to the follow-up were classified as undeclared. **MMW: monthly minimum wage = R$ 1320 ≅ USD 268,44.

Font: research authorship, 2024.

Social media (30%) and workplace dissemination (26%) were the most frequent recruitment source, reflecting our effort in both informal and formal ways to engage nurses to participate. Despite institutions publicizing the *Lidera-SMT*, the majority of participants take the Program outside working hours (66%). This shows a dichotomy about organizational support, since it publicizes the Program for nurses' participation, but did not release them from their duties to participate in what could be a pilar stone to engage workers and further to improve institutional results (Mlambo; Silén; Mcgrath, 2021), especially considering that is a program based on the premise of organizational engagement to promote mental health at work (Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

The *Lidera-SMT* was composed mainly by white (52%) women (82%) aging 37.9 years old (DP=7.05; median 37.5, interquartile range (IQR) – 8.25) and ones married or living as if married (58%). Participation was higher in nurses without children or other dependents (62%). This was consistent with the Brazilian nurse profile, predominantly composed of white woman (Machado, 2017) since we did not include nursing technicians and auxiliars. That exposes that the Brazilian nurse profile remain the same considering its relationship with aspect such as social division of nursing work and color/race (Marinho *et al.*, 2022).

Sectors as clinical/surgical wards was most prevalent (22%), followed by emergency (16%) and psychiatry/Mental Health (12%). This was also expected, considering that care sectors which deal with unstable patients are pointed out as concerning workplaces regarding psychosocial risks in the hospital setting (Silva *et al.*, 2017) and the perception of psychiatric nurses lack of academic training and ability in mental health as one psychosocial risk itself (Scozzafave *et al.*, 2019).

Only 4% had just the entry university level. The most frequent degree was residency/specialization (60%) followed by master's degree (30%). This finding is similar to a previous study that indicated high educational level comparing nurses with other professional managers of the Brazilian public health system (de Carvalho *et al.*, 2020). Most participants had at least 11 years of experience (78%), with a single employment relationship (90%). However, two bigger groups were observed regarding the time of relationship with the current workplace: 1-5 years (40%) or more than 10 years (38%). Our research does not allow us to go further in this discussion.

5.5 PILOT EVALUATING THE *LIDERA-SMT* PROGRAM

The evaluation of the Program's effectiveness is presented based on each of the eight hypotheses outlined. At the end of the section, there is a subitem summarizing the evaluation of the effectiveness of the *Lidera-SMT*.

5.5.1 Hypothesis 1: Participants will express positive reactions in terms of interest, confidence, attention, and expectation after participating in the *Lidera-SMT* program

This hypothesis was tested based on post-intervention IMMS-BRV measurement (n = 50 participants), which resulted in Cronbach' Alpha (α) = 0.890 (Interest: α = 0.865; Confidence α = 0.683; Attention α = 0.791; Expectation α = 0.636). All items were above 0.6 indicating a good internal consistency. Although similar results were found to previous studies for the overall α (Cardoso-Júnior; Faria, 2021, 2022), we found moderated scores for the confidence and expectation. In the Psychometric assessment of the IMMS-BRV for remote learning environment, the authors considered α > 0.6 as an indicator of satisfactory reliability of the internal consistency (Cardoso-Júnior; Faria, 2021). Considering the above as well as the relevance of the IMMS-BRV for training evaluation, we decided to include all domains in the analysis. Table 9 shows the IMMS-BRV results and Table 10 classified the results by its dimensions (Interest, Confidence, Attention, and Expectation).

Table 9. IMMS-BRV scores in the post-intervention evaluation (n = 50). Data are presented as median (P_{25}–P_{75}) and mean (SD). São Carlos, 2023

	Likert Scale Percentage (%)					**Median (P_{25}–P_{75})**	**Mean ± SD**
Item	**1**	**2**	**3**	**4**	**5**		
1*	10	6	8	26	50	4,5 (4–5)	4.00 ± 1.325
2	2	0	6	26	66	5 (4–5)	4.54 ± 0.788
3	2	0	0	26	72	5 (4–5)	4.66 ± 0.688
4*	4	16	18	22	40	4 (3–5)	3.78 ± 1.250
5	0	0	0	12	88	5 (5–5)	4.88 ± 0.328
6	2	2	16	22	58	5 (4 –5)	4.32 ± 0.957
7	0	2	6	22	70	5 (4–5)	4.60 ± 0.700

8*	2	4	6	14	74	5 (4,25–5)	4.54 ± 0.93
9	2	0	0	26	72	5 (4–5)	4.66 ± 0.688
10	2	0	2	20	76	5 (5–5)	4.68 ± 0.713
11*	6	2	2	12	78	5 (5–5)	4.54 ± 1.073
12	2	0	12	30	56	5 (4–5)	4.38 ± 0.855
13	2	0	2	30	66	5 (4–5)	4.58 ± 0.731
14	2	0	0	24	74	5 (4,25–5)	4.68 ± 0.683
15*	6	8	10	20	56	5 (4 –5)	4.12 ± 1.239
16	2	0	6	30	62	5 (4–5)	4.50 ± 0.789
17	2	0	10	34	54	5 (4–5)	4.38 ± 0.830
18	2	0	6	36	56	5 (4–5)	4.44 ± 0.787
19	2	4	0	26	68	5 (4–5)	4.54 ± 0.862
20	2	2	8	36	52	5 (4–5)	4.34 ± 0.872
21*	2	0	10	16	72	5 (4–5)	4.56 ± 0.837
22*	4	4	8	16	68	5 (4–5)	4.40 ± 1.069
23*	8	4	2	10	76	5 (4–5)	4.42 ± 1.230
24	2	0	6	30	62	5 (4–5)	4.50 ± 0.789
25	2	0	6	24	68	5 (4–5)	4.56 ± 0.787

Note: * Items inverted for IMMS-BRV interpretation.

Font: research authorship, 2024.

Table 10. IMMS-BRV dimensions in post-intervention evaluation (n=50). São Carlos, 2023

	Minimum–maximum	**Median (P_{25}–P_{75})**	**Mean ± SD**	**Nurses over cut point (%)**
Overall	1.16–5	4.94 (4.14–5)	4.46 ± 0.872	94%
Interest	1.33–5	5 (4.25–5)	4.52 ± 0.783	96%
Confidence	1–5	5 (4.04–5)	4.58 ± 0.729	96%

	Minimum–maximum	Median (P_{25}–P_{75})	Mean ± SD	Nurses over cut point (%)
Overall	1.16–5	4.94 (4.14–5)	4.46 ± 0.872	94%
Attention	1–5	4.75 (3.75–5)	4.21 ± 1.087	78%
Expectation	1–5	4.83 (4.41–5)	4.32 ± 1.115	80%

Font: research authorship, 2024.

The average mean for all dimensions was above 3.7 and the overall score of motivation attributed by the participants was moderate to high (Cardoso-Júnior; Faria, 2022; Liaw et al., 2016), representing a moderate to high score. Considering the IMMS-BRV interpretation we found successful results on reaction level, showing the *Lidera-SMT* Program is powerful enough to be replicated in other offers in the future. We added an open-ended question at the end of the online IMMS-BRV survey to capture suggestions (Table 11), for improvements in future offers or new experiences based on the *Lidera-SMT*.

Table 11. Improvement suggestions interpreted from participants comments. São Carlos, 2023

Category	Participants' suggestion
Support participants regarding language barrier	*"Videos in English could be automatically subtitled, as the translation changes the meaning in some words".*
	"I had a lot of difficulty reading the articles in English, I have difficulties with the language. I tried to translate on Google and ended up not being able to, the articles in English ended up losing the information. If you could give translation tips, etc., that would be great".
	"Additional texts, especially the standard one, could be in Portuguese. It could have material like an e-book".
Improve pedagogical tools and materials.	*"More figures, perhaps. But it was great".*
	"I suggest bringing more examples of small everyday actions that can bring impacts, mainly intra-sectoral, that identify the organizational culture and are within the reach of the leader based on the standard".
Increase flexibility in the assignments' deadline	*"More extension and flexibility in quiz deliveries".*
	"I think I could have more time to do the assignments".
Include other modules	*"The topics could have been more in-depth, there were few classes, there could have been more".*
Reoffer the Program to other professionals	*"This program gave me great reflections. It would be important for other professionals who are supervisors or leaders of nursing professionals to also have access to the program".*
	"I hope that other professionals have the opportunity to also undertake the program so that we can practice nursing differently within what is possible for us".

	"I would be very happy if the Program was implemented in public services, especially teaching hospitals".
	"We could apply this Program to municipal spheres and private services".
Offer sequential courses/contents	*"More meetings/events promoted for hospital nurses, like this one"!*
	"Other activities on the subject. This content was very rich".
	"There should be more classes on this content, I found it very relevant to the current moment'.
	"I hope to have another one, specific to management and communication to help with the Mental Health of the Nursing team".
	"This program could be continued and the topic deepened in all areas".
	"For more courses and learning like this".

Font: research authorship, 2024.

We included scientific texts available only in English, as well the two masterclasses with Canadians speakers in the Program, in order to encompass the concepts and experiences of implementation of the Canadian National Standard of Psychological Workplace Health and Safety. Although we reaffirm the relevance of these materials, the participants' suggestions linked to language barriers needs attention. English has enabled exchanges between researchers using the same language and is recognized as a global language in science (Di Bitetti; Ferreras, 2017). However, only 5.1% of the Brazilian adult population point out having some knowledge of the English language (British Council, 2015). In this sense, we recognize the limits of the presented Program model and encourage the inclusion of new materials in the future, which discuss the standard's concepts and are published in Portuguese, such as the review by Santos *et al.* (2023).

In the *Lidera-SMT* we discussed leadership concepts, considering our goal in reflecting on strategies to promote mental health as a competency for leaders. Literature shows that nurses need more training on leadership skills (da Costa *et al.*, 2017), and our results can exemplify the perception of participants about content gaps, mostly through suggestions of expanding the content, offering new modules/courses and reoffering the *Lidera-SMT* for other professionals. Suggest improvements for satisfaction is related to the acceptance of the Program as relevant (Mlambo; Silén; Mcgrath, 2021), but it also exposes the lack of training programs in different fields, especially for leadership skills.

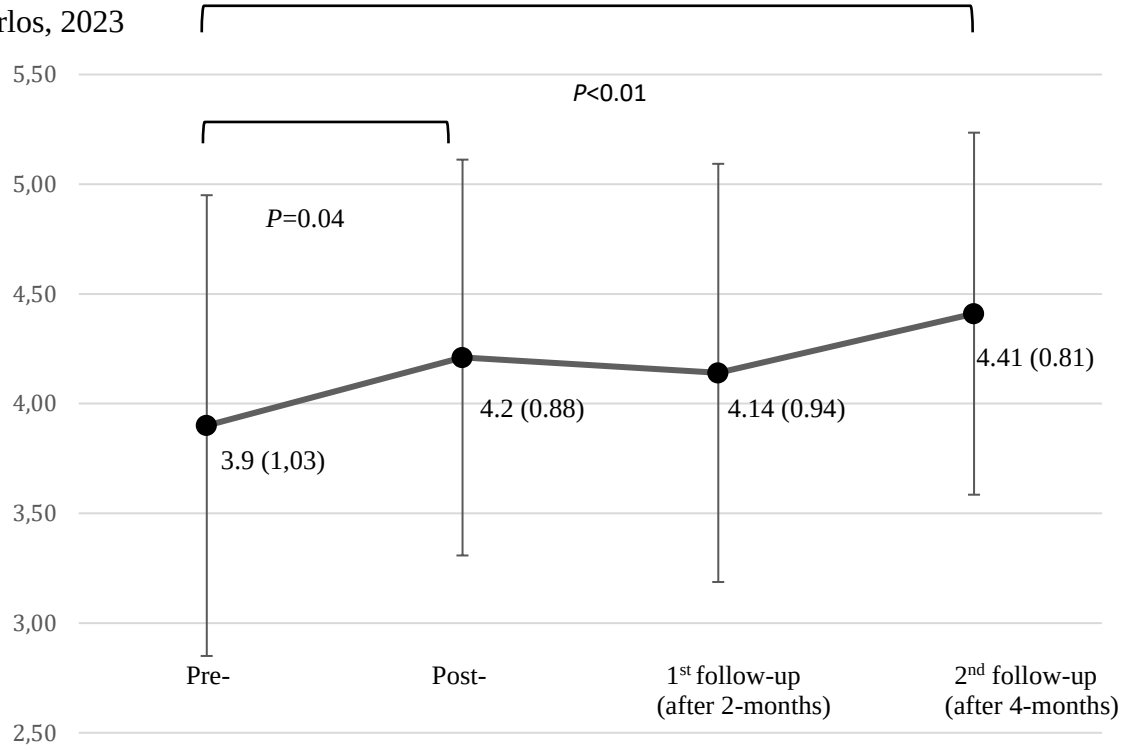
Lastly, they suggested to increase flexibility in the assignments' deadline. That, in addition to the lower participation in the live meetings, highlighted the lack of time for nurses to participate in all activities provided for the syllabus. It was not surprising evidence, considering the majority of nurses works a lot of weekly hours and took the *Lidera-SMT* from outside working hours. These results corroborate that factors such as lower workloads, adequate

study time and organizational support could improve nurses' continuing professional development adherence and outcomes (Mlambo; Silén; Mcgrath, 2021).

5.5.2 Hypothesis 2: The *Lidera-SMT* program will be associated with improvements in learning

Results had showed improvements in participants' learning, considering closed-ended questionnaire applied in four different moments (pre- and post-intervention, 2- and 4-months follow-up). Figure 14 shows score (presented by mean) over time.

Figure 14. Participants' learning score over time (n=29). Data is presented as mean (SD). São Carlos, 2023



Font: research authorship, 2024.

Medians for the learning score ranged from 4 (IQR – 2 pre; IQR – 1 post and 1st follow-up) to 5 (IQR – 1) on 2nd follow-up. Means score increased from 3.9 (pre) up to 4.41 (1st follow-up). The Friedman test indicated significant difference between the evaluation moments (P=0.03), and the multiple comparison test (Durbin-Conover) indicated a significant difference between pre and post (P=0.04) and between pre and the 2nd follow-up (P<0.01). There was no significant difference (P>0.05) for the other moments.

In addition to the flipped classroom structure (introduction syntheses, masterclasses, complementary readings, quizzes and live meetings), we also strive to encourage participation

in the Program. We include strategies like the possibility of having recorded videos to watch at any time, monitor support off-hours, and online spaces (mural, email, etc.) to encourage communication with participants. In this sense, the positive results in learning point out the effectiveness of the pedagogical design and activities proposed in the *Lidera-SMT*, converging with the literature about positive learning outcomes and potentiality of flipped classroom designs for self-regulated learning process (Chao *et al.*, 2022; Mcdonald; Smith, 2013; Mulhim, 2021).

As a complementary analysis with change the post hoc test (Durbin-Conover) and the pre and post difference disappeared (Bonferroni p = 0.575; Wilcoxon p = 0.06). Wilcoxon results comparing pre and post, for instance, which uses a signed-rank test to compare groups, counted 13 participants who increased the scores, 12 who maintained their same result in each measure and 4 who did decrease their score. Looking closer, 11 (91.66%) of those who maintained a score over the average presented a good score in all measures (score 3 (n=1), score 4 (n=4) and 5 (n=6)). That indicates that Friedman's test results need to be interpreted with caution, considering the power of the multiple comparation test in correcting the bias caused for the missing data on the follows-up (family-wise type).

The andragogy framework used in this research presupposes learning as a continuous process (Lewis; Bryan, 2021; Loeng, 2023) and nurses previous knowledge need to be considered and validated in the adult learning perspective (Decelle, 2016). Our efforts to build a robust Program with a solid theoretical framework, as well as the plurality of activities and strategies to engage participants were reflected in the learning process and consequently in the consolidation of content by participants. In this sense, the maintenance of the learning test results could be interpreted as a positive result in term of Kirkpatrick level II evaluation.

5.5.3 Hypothesis 3: Participants post-training learning retention will remain stable over time

This hypothesis was included to complement Kirkpatrick's level II evaluation, using the same closed-ended questionnaire and the same 4-data points.

A linear mixed model (LMM) analysis was performed with the sample (n=50); 167 observations were counted; observations per group identified a minimum of 2 repetitions, an average of 3.3 and a maximum of 4. Similar results to the Friedman's test were observed, however LMM consider the missing data and dealt with bias in both population level with fixed effects and individual level with random effects. Considering the missing data, significant differences were found ($\chi 2 < 0.01$) between pre and 2nd follow-up moments, but not in post-

intervention, therefore we cannot affirm that post-training learning retention remained stable over time. Table 12 presents the comparations between the pre-training measures and the other moments of evaluation.

Table 12. Linear mixed model: comparation between evaluation moments (n=50). São Carlos, 2023

	Coefficient	**SD**	**Z**	**P > |Z|**	**[95% conf. interval]**	
Pre – post	0.34	0.195	1.74	0.082	-0.042	0.722
Pre – 1st follow-up	0.37	0.211	1.75	0.080	-0.044	0.785
Pre – 2nd follow-up	0.81	0.812	3.52	0.000	0.359	1.266

Font: research authorship, 2024.

Learning retention over time is a frequent challenge on in-service nursing training. On the one hand, longer follow-ups were not described for evaluated level II in the sample of our literature review about Kirkpatrick Framework (Bijani et al., 2018; Castro Filho; Motta, 2018; Huang et al., 2021; Jobst et al., 2020; Knobel et al., 2020; Lahti; Kontio; Välimäki, 2016; Lamar, 2017; Liaw et al., 2016; Machado; Sampaio, 2021; Maloney et al., 2011; Parmar et al., 2022). On the other hand, there is evidence in training evaluation that learning retention tends to decrease in longer follows-ups, except for nurses who repeated the training or were exposed to more opportunities for training or practice (Lima et al., 2018; Roediger; Nestojko; Smith, 2019).

Literature suggests that slow learning can lead to better long-term retention results (Roediger; Nestojko; Smith, 2019). In this sense, the previous participants' knowledge may have confounded results in the intervention evaluation. However, it could be prolific to sustainable learning results in the longer run considering the self-regulation learning promoted by the pedagogical framework, structure and design of the *Lidera-SMT* program. That could partially explain why we found significant results comparing results between pre and 2nd follow-up, but not between pre and other timeframes. In another perspective, participants' return to their workplace may be gave meaning to content learned. Nurse-leaders may have sought more information about the theme over time, triggered by the *Lidera-SMT*.

5.5.4 Hypothesis 4: Participants post-training attitudes will improve over time

Attitudes evaluation was through the "Self-reported questionnaire on perceived training transfer at the workplace". The instrument was applied in 3-data points (post- and follows-up). Considering that there are no cut-points and consist in one construct, we analyzed each item

separately in the post-intervention and follow-up. Cronbach's alpha was 0.91 post-intervention; 0.95 in follow-up 1 and 0.85 in follow-up 2, showing good internal consistency. The results of the attitudes score can be seen in Table 13.

Table 13. Perceived attitudes towards training transfer among the nurses (n=29). Data are presented as median (IQR) and mean (SD). São Carlos, 2024

		Post		**1st Follow-up**		**2nd Follow-up**		***P****
		Median	Mean	Median	Mean	Median	Mean	
1.	I will make a plan to put into practice what I have learned after I get back to the workplace.	5.00 (1.00)	4.31 (0.93)	4.00 (1.00)	4.34 (0.90)	5.00 (1.00)	4.28 (0.80)	0.43
2.	I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers	5.00 (1.00)	4.59 (0.63)	5.00 (1.00)	4.38 (0.86)	5.00 (1.00)	4.48 (0.67)	0.31
3.	My work process became more organized after I put into practice what I learned in the *Lidera-SMT* Program.	4.00 (1.00)	3.83 (1.14)	4.00 (1.00)	3.93 (0.96)	4.00 (2.00)	4.24 (0.79)	0.10
4.	I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program.	2.00 (1.00)	2.45 (1.45)	2.00 (3.00)	2.41 (1.12)	2.00 (3.00)	2.45 (1.24)	0.94
5.	I am sure that what I have learned from the *Lidera-SMT* is put into practice for the workers' benefit.	5.00 (1.00)	4.66 (0.81)	5.00 (0.00)	4.55 (0.95)	5.00 (0.00)	4.76 (0.44)	0.64
6.	I feel motivated toward my role in promoting mental health at work after having attended the *Lidera-SMT* Program.	5.00 (1.00)	**4.52 (0.95)**	4.00 (1.00)	4.41 (0.83)	5.00 (1.00)	**4.31 (0.76)**	0.03
7.	I feel more engaged in promoting mental health at work after participating in the *Lidera-SMT* Program.	5.00 (1.00)	4.45 (0.99)	4.00 (1.00)	4.48 (0.83)	5.00 (1.00)	4.38 (0.62)	0.31
8.	Supervisors and/or colleagues have recognized my efforts to promote a safer and healthier environment.	4.00 (1.00)	3.66 (1.14)	4.00 (1.00)	3.41 (1.18)	4.00 (2.00)	3.62 (1.05)	0.35
9.	I feel safer when promoting SMT actions after participating in the *Lidera-SMT* Program.	4.00 (1.00)	4.34 (0.90)	4.00 (1.00)	4.28 (0.92)	5.00 (1.00)	4.38 (0.68)	0.80

10. I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program	5.00 (1.00)	4.55 (0.91)	5.00 (1.00)	4.41 (0.87)	5.00 (1.00)	4.52 (0.57)	0.27
11. I knew I would benefit from the *Lidera-SMT* Program.	5.00 (1.00)	4.52 (0.99)	5.00 (1.00)	4.59 (0.87)	5.00 (1.00)	4.45 (0.63)	0.15
12. My work performance improved after I participated in the *Lidera-SMT* Program.	4.00 (1.00)	3.86 (1.06)	4.00 (1.00)	4.17 (0.89)	4.00 (2.00)	4.24 (0.74)	0.41
13. Workers under my supervision will benefit if I put what I've learned into practice.	5.00 (1.00)	4.59 (0.87)	5.00 (1.00)	4.62 (0.82)	5.00 (1.00)	4.62 (0.49)	0.74
14. I am able to put into practice what I learned in the *Lidera-SMT* Program despite the demands at work.	4.00 (1.00)	4.24 (0.91)	4.00 (1.00)	4.21 (1.05)	4.00 (1.00)	4.31 (0.71)	0.94

Note: * Friedman test. **Bold** number indicates significant correlation.
Font: research authorship, 2024.

The program led to better mean scores on attitude in comparation to previous study (Liaw *et al.*, 2016), except for the post-measure of item 3 (means – *Lidera-SMT* 3.83; comparation study: 3.87), item 4 (means – *Lidera-SMT*: 2.45 post, 2.41 1º follow-up, 2.45 2º follow-up; comparation study: 3.72) and post-measure of item 12 (means – *Lidera-SMT* 3.86; comparation study: 3.88).

Also, attitudes presented high medians values, except for item 4 presenting 2 (IRQ post – 1; follows-up – 3). Although the median remained the same (between post- and 2nd follow-up), an increase in the IQR in follow-up measurements can be observed in item 4. Other items did not express the same change in dispersion. However, it could express a change of sense between the original English version “It will be disgraceful if I do not put into practice what I have learned from the training I attended” and the Portuguese version validated by the Delphi Panel after revision caused by a low index. Translating the new version back to English we found a sense closer to “I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program”, since a closer version to the original (similar to: “It would be a shame if I do not put into practice what I have learned from the *Lidera-SMT* that I attended”) did not achieved index for validation. This more subjective approach may have promoted greater reflection among participants after completing the course and returning to the workplace, which could justify the greater dispersion in follow-up measures.

Even though the all-items score points out to positive attitude in favor to transfer the *Lidera-SMT* content to the workplace, there was no significant difference between the

evaluation moments, except for item 6. There was a significant reduction between measures of post-intervention and 2nd follow-up (P<0.01), meaning participants felt less motivated toward their role in promoting mental health at work after return to their workplace reality.

In the *Lidera-SMT* we based on the premise of implementing strategies within the participants autonomy. High scores in attitudes indicate the perception of the *Lidera-SMT* as a mental health catalyst among participants. However, our results express a low level of autonomy of those professionals in transforming work (Centenaro *et al.*, 2023) - that is, although they created expectations, the confrontation with the real workplace undermines them, since there is no institutional support or sufficient structural empowerment for nurses in this matter. Autonomy results in motivation, since motivation is permeated by both work organization and subjective relationships established in the workplace (Campos; David; Souza, 2014; Machado; Camponogara; Moreira, 2021).

Further, this fact reinforces the relevance of organizational awareness and support as one of the key drivers of the Canadian National Standard of Psychological Workplace Health and Safety for sustainable strategies (Canadian Standards Association; Bureau de Normalisation du Québec, 2013). It also the exposes the lack of organizational commitment with the *Lidera-SMT*. In our pilot study, we did not select a workplace to implement the Program, instead our participants joined the *Lidera-SMT* voluntarily, meaning that we did not reach organizations. Therefore, we were unable to fully understand the work context and its characteristics nor guarantee organizational awareness and commitment to the premises of *Lidera-SMT*.

5.5.5 Hypothesis 5: Associations between perceived structural empowerment and attitudes will be found in pre- and post- training moments

This hypothesis was evaluated through two parts: first, we discussed the CET-II results in 4-data points (pre-, post- and follows-up). Second, we compared results of CET-II within the "Self-reported questionnaire on perceived training transfer at the workplace" on post-intervention moment. Thus, the results in this section will be presented in two stages, first we will (a) present an overview of the structural empowerment outcomes and then we will (b) present the correlation between structural empowerment and perceived attitudes.

a) Structural Empowerment (CET-II) – descriptive analysis

Results have shown that the *Lidera-SMT* influenced nurses' perception of structural empowerment. Overall, we measured low median values for structural empowerment in the

pre-intervention, except for moderate values in support and global empowerment and one domain of information ("the values of top management") and high values in two other domains of information ("the current state of the hospital" and "the goals of top management"). On the other hand, in the post-intervention and follow-up measures, we observed moderate to high values, except for the formal empowerment domain and "Time available to accomplish job requirements" in the post-intervention measure.

It is important to highlight that the *Lidera-SMT* program was design to reach nurse-leaders, so we expected a higher perception of structural empowerment linked to management positions and the role of participants in their workplaces. However, the increase reported after the Program showed that their insights are linked to changes caused by participation in the *Lidera-SMT*. We did not include a specific hypothesis about the structural empowerment scores, considering we are analyzing relations of structural empowerment with attitudes.

Literature reinforces that longitudinal designs may be better determinants of relationships between structural empowerment and other variables (Donahue *et al.*, 2008). In that sense, comparing our results with previous longitudinal studies could have been relevant to help us understand the general behavior of the data. However, we did not find studies that used this design. The main application of the CET-II focuses on measuring structural empowerment in one point in time (Machado; Camponogara; Moreira, 2021; Schorr, 2021).

So, to analyze the structural empowerment throughout the Program, we designed two scenarios: we first compared the sample in the pre- and post-intervention (n=50, Table 14) and we second compared the participants that completed the full 4-data points (n=29, Tables 15 and 16) over all four time points.

CET-II does not have a cutoff point (Bernardino *et al.*, 2013). Previous research has calculated a sum for CET-II. For comparison purposes, we used a score of 18 as in Moura *et al.* (2020), since this was the study that used more domains of the Brazilian version of CET-II (opportunity, information, support, formal and informal empowerment). None of the previous studies selected for comparation (Moura *et al.*, 2020; Schorr, 2021) used assessed the global empowerment domain. Excluding that domain, the *Lidera-SMT* program reached low values for pre-intervention and higher values for other measures. Means total score of 12.16 (pre-) and 20.4 (post-) for 2-point analysis (n=50). For 4-data point (n=29) similar results were calculated: 11.76 (pre-), 19.62 (post-), 19.58 (follows-up).

Table 14. Structural empowerment among the nurses in pre- and post-intervention measures (n=50). Data are presented as median (IQR) and mean (SD). São Carlos, 2023

Items/Domains	Pre		Post		*P**
	Mean (SD)	**Median (IQR)**	**Mean (SD)**	**Median (IQR)**	
- *How much of each kind of opportunity do you have in your present job?*					
Opportunity	1.00 (0.00)	1.00 (0.00)	4.20 (0.83)	4.00 (1.00)	<0.01
Challenging work	1.00 (0.00)	1.00 (0.00)	4.26 (0.92)	5.00 (1.25)	<0.01
The chance to gain new skills and knowledge on the job	1.00 (0.00)	1.00 (0.00)	3.90 (0.89)	4.00 (2.00)	<0.01
Tasks that use all of your own skills and knowledge	1.00 (0.00)	1.00 (0.00)	4.24 (1.06)	5.00 (1.00)	<0.01
- *How much access to information do you have in your present job?*					
Information	3.32 (1.25)	3.00 (2.00)	3.48 (1.30)	4.00 (1.75)	0.27
The current state of the hospital	3.46 (1.31)	4.00 (1.25)	3.54 (1.30)	4.00 (2.00)	0.56
The values of top management	3.28 (1.31)	3.00 (2.25)	3.50 (1.34)	4.00 (3.00)	0.14
The goals of top management	3.30 (1.40)	4.00 (2.25)	3.48 (1.28)	4.00 (2.25)	0.28
- *How much access to support do you have in your present job?*					
Support	2.86 (1.03)	3.00 (2.00)	2.98 (1.10)	3.00 (2.00)	0.30
Specific information about things you do well	2.90 (1.15)	3.00 (2.00)	3.04 (1.20)	3.00 (2.00)	0.32
Specific comments about things you could improve	2.96 (1.20)	3.00 (2.00)	2.96 (1.11)	3.00 (2.00)	1.00
Helpful hints or problem solving advice	2.82 (1.16)	3.00 (2.00)	3.04 (1.16)	3.00 (2.00)	0.11
- *How much access to resources do you have in your present job?*					
Resources	2.98 (0.89)	3.00 (2.00)	3.08 (0.94)	3.00 (2.00)	0.41
Time available to do necessary paperwork	3.10 (0.93)	3.00 (2.00)	3.26 (1.01)	3.00 (1.00)	0.18
Time available to accomplish job requirements	3.12 (0.87)	3.00 (1.00)	3.20 (0.90)	3.00 (1.00)	0.48
Acquiring temporary help when needed	2.66 (1.21)	3.00 (2.00)	2.66 (1.19)	2.50 (2.00)	0.98
- *In my work setting/job:*					

Formal empowerment	1.00 (0.00)	1.00 (0.00)	2.78 (1.15)	3.00 (1.75)	<0.01
The rewards for innovation on the job are	1.00 (0.00)	1.00 (0.00)	2.38 (1.24)	2.00 (2.00)	<0.01
The amount of flexibility in my job is	1.00 (0.00)	1.00 (0.00)	3.08 (1.19)	3.00 (2.00)	<0.01
The amount of visibility of my work-related activities within the institution is	1.00 (0.00)	1.00 (0.00)	2.90 (1.15)	3.00 (2.00)	<0.01
- How much opportunity do you have for these activities in your present job:					
Informal empowerment	1.00 (0.00)	1.00 (0.00)	3.88 (0.87)	4.00 (1.75)	<0.01
Collaborating on patient care with physicians	1.00 (0.00)	1.00 (0.00)	3.66 (1.21)	4.00 (2.00)	<0.01
Being sought out by peers for help with problems	1.00 (0.00)	1.00 (0.00)	4.24 (0.98)	5.00 (1.00)	<0.01
Being sought out by managers for help with problems	1.00 (0.00)	1.00 (0.00)	3.70 (1.25)	4.00 (2.00)	<0.01
Global empowerment					
Global empowerment	3.40 (1.05)	4.00 (1.00)	4.00 (0.00)	4.00 (0.00)	<0.01
Overall, my current work environment empowers me to accomplish my work in an effective manner	3.40 (1.03)	4.00 (1.00)	4.00 (0.00)	4.00 (0.00)	<0.01
Overall, I consider my workplace to be an empowering environment	3.12 (1.22)	3.00 (2.00)	4.00 (0.00)	4.00 (0.00)	<0.01
Overall	2.08 (0.60)	2.00 (0.00)	3.52 (0.76)	4.00 (1.00)	<0.01

Note: * Wilcoxon test

Font: research authorship, 2024.

Table 15. Structural empowerment among nurses (n=29). Data are presented as median (IQR) and mean (SD). São Carlos, 2023

Items/Domains	Pre		Post		1st Follow-up		2nd Follow-up		
	Median	Mean	Median	Mean	Median	Mean	Median	Mean	*P**
- *How much of each kind of opportunity do you have in your present job?*									
Opportunity	1.00 (0.00)	1.00 (0.00)	4.24 (0.69)	4.00 (1.00)	4.10 (0.82)	4.00 (1.00)	3.93 (1.00)	4.00 (2.00)	<0.01
Challenging work	1.00 (0.00)	1.00 (0.00)	5.00 (1.00)	4.38 (0.82)	4.00 (1.00)	4.21 (0.90)	4.00 (2.00)	4.00 (1.04)	<0.01
The chance to gain new skills and knowledge on the job	1.00 (0.00)	1.00 (0.00)	4.00 (1.00)	3.83 (0.85)	4.00 (2.00)	3.83 (0.97)	4.00 (2.00)	3.69 (1.17)	<0.01
Tasks that use all of your own skills and knowledge	1.00 (0.00)	1.00 (0.00)	5.00 (1.00)	4.31 (0.93)	5.00 (1.00)	4.28 (0.92)	4.00 (2.00)	4.03 (0.98)	<0.01
- *How much access to information do you have in your present job?*									
Information	3.14 (1.16)	3.00 (2.00)	3.24 (1.35)	3.00 (2.00)	3.21 (1.18)	3.00 (2.00)	3.21 (1.15)	3.00 (1.00)	0.91
The current state of the hospital	4.00 (2.00)	3.31 (1.34)	4.00 (2.00)	3.38 (1.32)	3.00 (2.00)	3.24 (1.24)	3.00 (2.00)	3.17 (1.07)	0.58
The values of top management	3.00 (2.00)	3.17 (1.26)	4.00 (2.00)	3.28 (1.41)	3.00 (2.00)	3.14 (1.19)	4.00 (2.00)	3.21 (1.32)	0.96
The goals of top management	4.00 (2.00)	3.21 (1.32)	3.00 (2.00)	3.21 (1.29)	3.00 (2.00)	3.21 (1.24)	3.00 (1.00)	3.28 (1.19)	0.98
- *How much access to support do you have in your present job?*									
Support	2.72 (1.00)	3.00 (1.00)	2.90 (1.08)	3.00 (2.00)	3.00 (1.16)	3.00 (2.00)	3.10 (1.08)	3.00 (2.00)	0.37
Specific information about things you do well	2.00 (0.00)	2.72 (1.13)	3.00 (2.00)	3.03 (1.21)	3.00 (2.00)	2.97 (1.21)	3.00 (2.00)	3.03 (1.21)	0.53
Specific comments about things you could improve	2.00 (0.00)	2.79 (1.08)	3.00 (2.00)	2.90 (1.11)	3.00 (2.00)	3.00 (1.16)	3.00 (1.00)	3.14 (1.03)	0.28
Helpful hints or problem solving advice	2.00 (0.00)	2.72 (1.07)	3.00 (2.00)	2.90 (1.14)	4.00 (2.00)	3.21 (1.18)	3.00 (2.00)	3.17 (1.10)	0.11
- *How much access to resources do you have in your present job?*									
Resources	2.90 (0.86)	3.00 (1.00)	2.93 (0.88)	3.00 (1.00)	3.17 (0.90)	3.00 (1.00)	3.07 (1.03)	3.00 (1.00)	0.44
Time available to do necessary paperwork	3.00 (0.00)	2.97 (0.82)	3.00 (1.00)	3.10 (0.98)	3.00 (1.00)	3.24 (0.99)	3.00 (1.00)	3.21 (1.08)	0.35
Time available to accomplish job requirements	3.00 (1.00)	3.07 (0.84)	3.00 (1.00)	3.10 (0.86)	3.00 (1.00)	3.28 (0.92)	3.00 (1.00)	3.24 (1.09)	0.30
Acquiring temporary help when needed	3.00 (1.00)	2.66 (1.08)	2.00 (1.00)	2.48 (1.12)	3.00 (2.00)	2.76 (1.09)	3.00 (2.00)	2.72 (1.13)	0.18
- *In my work setting/job:*									
Formal empowerment	1.00 (0.00)	1.00 (0.00)	2.52 (1.02)	3.00 (1.00)	2.62 (0.90)	3.00 (1.00)	2.72 (0.88)	3.00 (1.00)	<0.01
The rewards for innovation on the job are	1.00 (0.00)	1.00 (0.00)	2.00 (2.00)	2.21 (1.18)	2.00 (2.00)	2.17 (1.04)	2.00 (2.00)	2.28 (1.19)	<0.01
The amount of flexibility in my job is	1.00 (0.00)	1.00 (0.00)	3.00 (2.00)	2.90 (1.14)	3.00 (2.00)	2.90 (0.98)	3.00 (2.00)	2.90 (1.08)	<0.01
The amount of visibility of my work-related activities within the institution is	1.00 (0.00)	1.00 (0.00)	2.00 (1.00)	2.62 (0.94)	3.00 (1.00)	2.83 (0.93)	3.00 (0.00)	2.86 (0.96)	<0.01

- How much opportunity do you have for these activities in your present job:									
Informal empowerment	1.00 (0.00)	1.00 (0.00)	3.79 (0.82)	4.00 (1.00)	3.48 (0.74)	3.00 (1.00)	3.55 (0.95)	4.00 (1.00)	<0.01
Collaborating on patient care with physicians	1.00 (0.00)	1.00 (0.00)	4.00 (1.00)	3.55 (1.09)	3.00 (2.00)	3.24 (1.18)	3.00 (1.00)	3.17 (1.17)	<0.01
Being sought out by peers for help with problems	1.00 (0.00)	1.00 (0.00)	5.00 (1.00)	4.24 (0.99)	4.00 (2.00)	4.00 (0.85)	4.00 (2.00)	3.93 (0.92)	<0.01
Being sought out by managers for help with problems	1.00 (0.00)	1.00 (0.00)	4.00 (2.00)	3.66 (1.29)	3.00 (1.00)	3.38 (1.18)	3.00 (1.00)	3.48 (1.15)	<0.01
Global empowerment	3.24 (1.06)	3.00 (1.00)	4.00 (0.00)	4.00 (0.00)	3.48 (0.95)	4.00 (1.00)	3.45 (1.02)	4.00 (1.00)	<0.01
Overall, my current work environment empowers me to accomplish my work in an effective manner	3.00 (1.00)	3.28 (1.02)	4.00 (0.00)	4.00 (0.00)	4.00 (1.00)	3.48 (0.99)	4.00 (1.00)	3.41 (1.05)	0.01
Overall, I consider my workplace to be an empowering environment	3.00 (2.00)	2.93 (1.16)	4.00 (0.00)	4.00 (0.00)	3.00 (2.00)	3.14 (1.22)	4.00 (1.00)	3.31 (1.11)	<0.01
Overall	2.00 (0.60)	2.00 (0.00)	3.45 (0.69)	3.00 (1.00)	3.28 (0.70)	3.00 (1.00)	3.34 (0.90)	3.00 (1.00)	<0.01

Notes: * Friedman test; **Subitem "Seeking out ideas from professionals other than physicians, e.g., physiotherapists, occupational therapists, dieticians" was not applied, considering the version provided by the main author of the Brazilian version.
Font: research authorship, 2024.

Table 16. Pairwise comparisons (Durbin-Conover) (n=29). São Carlos, 2023

		Opportunity		**Formal Empowerment**		**Informal Empowerment**		**Global Empowerment**		**Overall score**	
		T	*p*	T	*P*	T	*p*	T	*p*	T	*p*
Pre -	Post	**13.491**	**< .001**	**8.60**	**< .001**	**14.307**	**< .001**	**3.303**	**0.001**	**10.152**	**< .001**
Pre -	1st follow-up	**12.216**	**< .001**	**9.73**	**< .001**	**11.959**	**< .001**	0.742	0.460	**8.520**	**< .001**
Pre -	2nd follow-up	**11.260**	**< .001**	**10.77**	**< .001**	**12.630**	**< .001**	0.539	0.591	**8.883**	**< .001**
Post -	1st follow-up	1.275	0.206	1.13	0.260	**2.347**	**0.021**	**2.562**	**0.012**	1.632	0.107
Post -	2nd follow-up	**2.231**	**0.028**	**2.17**	**0.033**	1.677	0.097	**2.764**	**0.007**	1.269	0.208
1st follow-up	2nd follow-up	0.956	0.342	1.04	0.302	0.671	0.504	0.202	0.840	0.363	0.718

Note*:* **Bold** number indicates significant difference.
Font: research authorship, 2024

At the baseline, the domains opportunity, formal and informal power were evaluated by all participants (n=50, Table 14; n = 29, Table 15) with a minimum score in the Likert Scale. That seems unusual considering that *Lidera-SMT's* participants were liked to different organizations. The main questions of these domains were about opportunity, flexibility, visibility and recognition. Our data did not allow us to go deeper in this discussion, but it could be a reflex of participants' perception of dissatisfaction with their workplace at the time of baseline, especially if we consider the bias generated by the voluntary adherence of the *Lidera-SMT*. On the other hand, after ending the Program, participants may feel more ready to engage in a critical evaluation of the perceived structural empowerment at those domains.

Analysis domain-by-domain showed that in pre-intervention: lower mean scores in the domain's opportunity and formal and informal empowerment, similar scores in support and resources, and higher scores in formation comparing with previous studies. In contrast, post-intervention measures found only similar results for domain resources and higher scores in others (Moura *et al.*, 2020; Schorr, 2021).

The Wilcoxon test resulted in significant differences in overall mean and four domains, which means the *Lidera-SMT* impacted participants perception of structural empowerment.

There was a significant increase in items related to the areas of opportunities, formal empowerment, informal empowerment and global empowerment. The multiple comparison test indicated that differences occurred between pre and post, pre and 1st follow-up (except global empowerment), pre and 2nd follow-up (except global empowerment) moments. For the items "The chance to gain new skills and knowledge on the job", "Collaborating on patient care with physicians" and "Being sought out by peers for help with problems" there was, additionally, a difference for the post-intervention and 2nd follow-up moments. For global empowerment there was an additional difference between the post and follow-ups 1 and 2. Cronbach's alpha was 0.89 in the pre-intervention period; 0.92 post-intervention; 0.91 in 1st follow-up and 0.94 in 2nd follow-up, showing good internal consistency (Bernardino *et al.*, 2013).

Analysis of 2-data points (n=50) and 4-data points (n=29) showed similar differences' outcomes. After *post hoc* for multiple data-points (Durbin-Conover test) we confirmed significant differences in overall score, opportunity, formal, informal and global empowerment in several moments.

The literature discusses that the perception of empowerment can be linked both to management positions and nurses' autonomy and professional satisfaction associated to the leadership role of nurses in their workplaces (Machado; Camponogara; Moreira, 2021). The

Lidera-SMT did not change the organizational structure or nurses' positions in their real workplace. In this sense, our results, measured by the CET-II, indicates that the relation between structural empowerment and attitudes is complex and need to be further explored. In a one-way view, we could just think that better perceptions of structural empowerment could lead to better results in attitudes. But our results, indicate that positive attitudes could also improve perception of structural empowerment.

b) Correlation between structural empowerment and perceived attitudes

Behavior change is measured by documentation of the actual transfer or willingness of learners to apply the new knowledge and skills at the workplace (Yardley; Dornan, 2012). For that, studies often measure only attitudes or performance regarding behaviors' level (Bijani *et al.*, 2018; Huang *et al.*, 2021; Knobel *et al.*, 2020; Liaw *et al.*, 2016; Maloney *et al.*, 2011). This approach may be enough considering that nurses have governability to apply what was learned in their practice, such as in nursing care skills training (Knobel *et al.*, 2020), prevention of occupational exposure to needlestick injury (Bijani *et al.*, 2018), patient deterioration (Liaw *et al.*, 2016), patient falls (Maloney *et al.*, 2011) or innovation (Huang *et al.*, 2021). In the *Lidera-SMT* Program, the intention of put into practice strategies to promote mental health at work did not necessarily happen. This may be due to aspects such as autonomy, organizational support, opportunities and governability. The inclusion of the CET-II accounted for those aspects, and to understand if there is relationship between its results and the attitude to training transfer at the workplace will contributes to a deeper understanding of behavior results.

Significant and fair correlations (sr range 0.25 to 0.50) (Portney; Watkins, 2009) were found between items of CET-II and "Self-reported questionnaire on perceived training transfer at the workplace". Both instruments presented similar patterns, especially relating to attitude items with opportunity and support domains of structural empowerment. Opportunity and support were the domains of CET-II that showed more correlations with the positive attitudes in order to put the *Lidera-SMT* content into practice. That converged with the relevance of organizational support to implement strategies based on the Standard (Canadian Standards Association; Bureau de Normalisation du Québec, 2013).

Our results on attitude improvements displayed lack of organizational support perceived by our participants (see 5.5.4 section). In this sense, those who felt organizationally supported also felt more ready to put the knowledge into practice, but participants need to feel supportive behavior from hospitals in order to achieve better results. Being supportive in the structural empowerment perspective includes mainly promoting feedback and helping with

problem solving and professional practice (Bernardino *et al.,* 2013; Moura *et al.,* 2020). Additionally, strategies such as promoting a supportive environment for workers participation in training programs (Mlambo; Silén; Mcgrath, 2021), sharing organizational information and offering and maintaining resources for initiatives could also help improve attitudes regarding *Lidera-SMT* context.

The information domain of the CET-II was the only one that did not show any significant relationship with some aspect of the attitude's questionnaire, what is different from what we need to promote a behavior change considering the Standard guidance. Access to organizational information was a key element for implementation of strategies based on the Standard (Canadian Standards Association, 2014; Canadian Standards Association; Bureau de Normalisation du Québec, 2013; Wilson; Bradley, 2017). In the Canadian experience, barriers were mostly composed by the amount, quality or reliability of the sources of information on psychological health, but not often related to access in the sense of organizational communication or permission to access information (Wilson; Bradley, 2017) .

A previous study discussed that low scores in information domain may reflect either a failure to pass on information or a lack of attention and importance to the information being passed on (Moura *et al.,* 2020). In this sense, efforts for better organizational communication and promotion of more horizontal work relations, in addition to strategies aiming to improve quantity and quality of organizational information, could improve attitudes in favor of workplace mental health promotion in Brazilian hospitals.

From a complementary view, the items "I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers" and "I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program" did not present a significant relationship with any aspect of the CET-II. Promoting mental health is a complex task, and nurses do not have the governance to intervene to the point of "solving the problem" - joint action with the organization is necessary to get results. At this point, it is important to reinforce the *Lidera-SMT* premise that as workers, nurses are not in charge of promoting mental health at work, but their awareness and reflection on psychosocial risks and workplace factors could strengthen the collective fight for healthy environments.

Results indicated an association between structural empowerment and perceived attitudes towards training transfer among the nurses aiming to evaluate the behavior level of the Kirkpatrick framework. Table 17 details all results of the correlation between perceived attitude and empowerment scales at post-intervention data point (n=50).

Table 17. Nonparametric correlation between attitudes and empowerment in the post-intervention (n=50). Data are presented as rs. São Carlos, 2023

		Attitudes													
Structural empowerment		I will make a plan to put into practice what I have learned after I get back to the workplace.	I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers	My work process became more organized after I put into practice what I learned in the *Lidera-SMT* Program.	I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program.	I am sure that what I have learned from the *Lidera-SMT* is put into practice for the workers' benefit.	I feel motivated toward my role in promoting mental health at work after having attended the *Lidera-SMT* Program.	I feel more engaged in promoting mental health at work after participating in the *Lidera-SMT* Program.	Supervisors and/or colleagues have recognized my efforts to promote a safer and healthier environment.	I feel safer when promoting SMT actions after participating in the *Lidera-SMT* Program.	I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program	I knew I would benefit from the *Lidera-SMT* Program.	My work performance improved after I participated in the *Lidera-SMT* Program.	Workers under my supervision will benefit if I put what I've learned into practice.	I am able to put into practice what I learned in the *Lidera-SMT* Program despite the demands at work.
Opportunity	Challenging work	0.04	0.16	0.27	-0.15	**0.45**	0.21	0.05	0.09	0.14	0.18	0.19	0.11	**0.30**	0.24
	The chance to gain new skills and knowledge on the job	-0.01	0.08	**0.35**	-0.15	**0.29**	0.25	**0.28**	0.16	**0.31**	0.26	**0.29**	**0.39**	0.28	0.19
	Tasks that use all of your own skills and knowledge	**0.29**	0.25	**0.40**	-0.02	**0.37**	**0.50**	**0.36**	0.28	**0.46**	0.19	**0.33**	**0.32**	**0.30**	**0.29**
Information	The current state of the hospital	0.15	0.07	0.02	-0.11	0.07	0.15	-0.10	0.03	0.14	-0.11	-0.08	0.08	-0.10	-0.01
	The values of top management	0.14	0.20	0.10	-0.19	0.09	0.21	-0.01	0.06	0.17	0.03	0.07	0.23	-0.03	0.07
	The goals of top management	0.22	0.18	0.09	-0.26	0.07	0.24	0.01	0.03	0.21	-0.02	0.03	0.15	-0.01	0.13
Support	Specific information about things you do well	0.17	0.20	0.26	-0.27	0.13	0.20	0.14	0.25	**0.32**	0.02	-0.01	0.22	0.08	0.22
	Specific comments	0.08	0.09	0.20	-0.01	0.19	0.13	0.16	0.15	0.28	0.15	**0.35**	**0.35**	0.10	0.11

	about things you could improve													
	Helpful hints or problem solving advice	0.09	0.16	0.21	-0.13	0.24	0.27	0.12	0.22	**0.30**	0.07	**0.32**	**0.36**	0.16	0.27
Resources	Time available to do necessary paperwork	0.03	0.05	0.23	-0.18	0.15	0.14	0.01	0.14	0.08	-0.04	0.10	0.24	0.04	0.20
	Time available to accomplish job requirements	-0.01	-0.04	0.27	-0.13	0.17	0.14	0.04	0.27	0.14	-0.02	0.13	**0.30**	0.12	0.19
	Acquiring temporary help when needed	-0.07	-0.01	0.22	-0.21	0.08	0.15	0.10	0.13	0.08	-0.06	0.05	0.26	0.04	0.14
Formal empowerment	The rewards for innovation on the job are	0.02	0.02	0.07	-0.13	0.10	0.05	0.11	0.16	0.15	0.07	0.06	0.20	-0.07	-0.01
	The amount of flexibility in my job is	-0.06	-0.02	0.04	-0.04	0.11	0.10	0.10	**0.33**	0.14	0.09	0.11	0.15	-0.01	0.02
	The amount of visibility of my work-related activities within the institution is	0.06	-0.01	0.12	-0.16	0.22	0.23	0.14	0.15	0.23	0.08	0.10	0.26	-0.01	0.13
Informal empowerment	Collaborating on patient care with physicians	-0.10	-0.08	0.19	-0.11	0.17	0.13	-0.05	0.02	-0.01	0.02	0.03	0.12	-0.06	-0.02
	Being sought out by peers for help with problems	-0.01	0.13	0.27	-0.22	**0.31**	**0.34**	0.17	0.24	**0.28**	0.27	0.19	0.16	0.26	0.19
	Being sought out by managers for help with problems	0.02	0.22	0.03	-0.10	0.14	0.12	0.00	0.06	0.15	-0.02	0.04	0.08	-0.02	-0.04

Note: **Bold** number indicates significant correlation.
Font: research authorship, 2024.

5.5.6 Hypothesis 6: No differences will be found between nurses without management positions and nurses in management positions in learning and attitudes levels.

Of our initial sample of nurse-leaders (n=50) was composed by 28 (56%) nurses without management position in the hospital and by 22 (54%) nurses in management positions. This preliminary descriptive analysis of the voluntary adherence to the Program goes in favor of the *Lidera-SMT* pilot in considering both groups of workers. However, we included a hypothesis for testing if we had a homogeneous group of participants, based on our methodological choice in including both nurses-leaders in a single group in this pilot study. For that, we used the pre- and post- level analysis, considering the higher number of participants (n=50). Both groups were tested for learning results and attitudes and no differences were found (Table 18).

Table 18. Comparison between groups divided according to organizational position considering post intervention data (n=50). Data are presented as median (IQR) and mean (SD). São Carlos, 2023

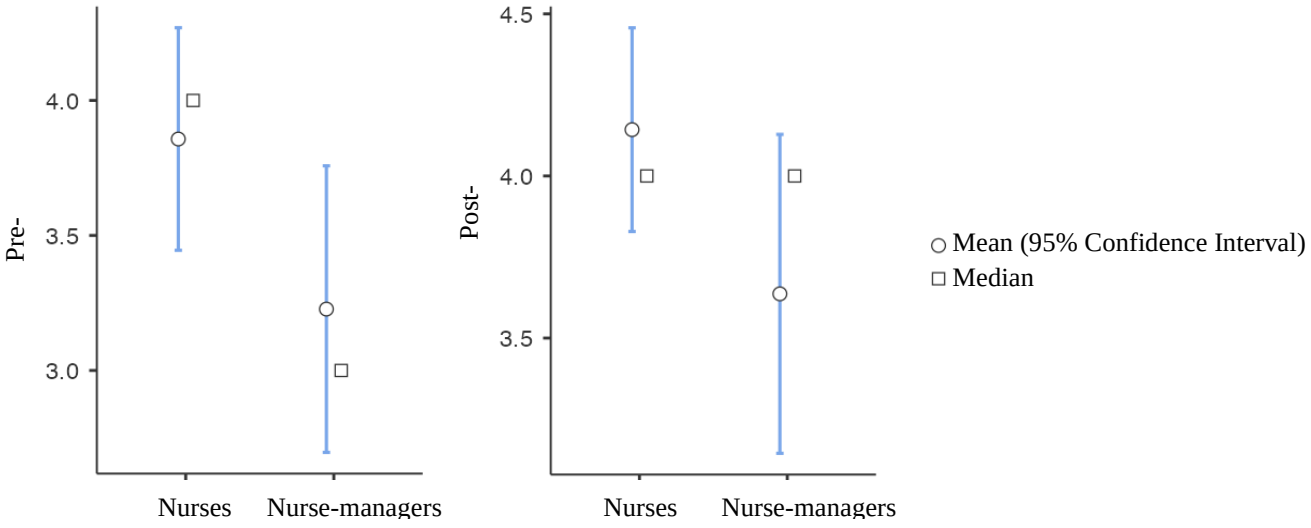
Scales	**Nurses (n=28)**		**Manager (n=22)**		
	Median	**Mean**	**Median**	**Mean**	***P***
Learning score	4.00 (1.00)	4.14 (0.848)	4.00 (1.75)	3.64 (1.18)	0.134
Attitudes					
I will make a plan to put into practice what I have learned after I get back to the workplace.	5.00 (1.00)	4.43 (0.836)	5.00 (1.00)	4.41 (0.796)	0.851
I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers	5.00 (1.00)	4.61 (0.629)	5.00 (0.00)	4.73 (0.550)	0.470
My work process became more organized after I put into practice what I learned in the *Lidera-SMT* Program.	4.00 (1.00)	3.93 (1.15)	4.00 (2.00)	3.91 (0.921)	0.665
I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program.	2.00 (3.00)	2.57 (1.40)	2.00 (1.75)	2.45 (1.30)	0.847
I am sure that what I have learned from the *Lidera-SMT* is put into practice for the workers' benefit.	5.00 (0.00)	4.71 (0.659)	5.00 (0.750)	4.59 (0.796)	0.600
I feel motivated toward my role in promoting mental health at work after having attended the *Lidera-SMT* Program.	5.00 (1.00)	4.43 (0.997)	5.00 (0.00)	4.77 (0.528)	0.168
I feel more engaged in promoting mental health at work after participating in the *Lidera-SMT* Program.	5.00 (1.00)	4.46 (0.999)	5.00 (1.00)	4.50 (0.673)	0.645
Supervisors and/or colleagues have recognized my efforts to promote a safer and healthier environment.	3.50 (1.25)	3.50 (1.23)	4.00 (1.75)	3.77 (0.973)	0.528

I feel safer when promoting SMT actions after participating in the *Lidera-SMT* Program.	4.00 (1.00)	4.29 (0.897)	5.00 (1.00)	4.55 (0.596)	0.324
I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program	5.00 (0.25)	4.61 (0.875)	5.00 (1.00)	4.41 (0.796)	0.221
I knew I would benefit from the *Lidera-SMT* Program.	5.00 (0.00)	5.57 (0.997)	5.00 (1.00)	4.55 (0.671)	0.352
My work performance improved after I participated in the *Lidera-SMT* Program.	4.00 (2.00)	4.04 (1.07)	4.00 (2.00)	3.91 (0.921)	0.534
Workers under my supervision will benefit if I put what I've learned into practice.	5.00 (1.00)	4.54 (0.881)	5.00 (0.750)	4.64 (0.658)	0.761
I am able to put into practice what I learned in the *Lidera-SMT* Program despite the demands at work.	4.00 (1.00)	4.25 (0.928)	4.50 (1.00)	4.41 (0.666)	0.691

Font: research authorship, 2024.

In addition, we need to consider that none of the participants failed the Program and that the facilitators of the Lidera-SMT program felt that the heterogenicity of the nurse-leaders group regarding organizational positions, leadership skills and workplace experiences enriched the discussions at the live meetings. Also, we need to highlight that besides no significant differences were found, the most diverse outcome was in learning. The group of nurses showed slightly higher and less spread learning scores (Figure 15). Therefore, some difference could appear in a bigger sample size, as will be discussed in the limitation section.

Figure 15. Pre- and post-learning score boxplot diagram, according to management position (n=50). São Carlos, 2023



We took leadership as a professional competency (Silva *et al.*, 2016) and the Lidera-SMT is aligned with a leaders who share decisions and responsibilities, clarifies roles, empowers, motivates, recognizes, and rewards teams (Canadian Standards Association; Bureau

De Normalisation Du Québec, 2013; Silva *et al,* 2022). In this sense, confirm there is no differences between groups runs in favor of our choice to include both types of participants. Our comparation outcomes allowed us to interpret our group of nurse-leaders as a single and homogeneous group in this pilot study, considering our premise that nurses with or without management positions have the same possibility of learning from the *Lidera-SMT* Program.

Literature also points out the lack of professional competences for occupational health in healthcare works. In this sense, some competences such as communication, teamwork, qualified listening, conflict management, leadership and health management need to be worked on from the initial training to improve their skills to understand the repercussions of work on health (Geraldi *et al,* 2022). Hence, all effort in training nurses has potential to contribute with their long-life professional development.

5.5.7 Hypothesis 7: No differences will be found between individuals who participated in the intervention with a minimum adherence of 75% and those who completed it with 100% participation

Although all the content of the *Lidera-SMT* program was relevant, some dropouts were expected. Since Brazilian legislation authorized a minimum participation of undergraduate and graduate students of 75% for certification purposes (Brazil, 2002), we aimed to assess whether there was a difference between participants with a minimum (75% attendance) and maximum (100% attendance) mandatory course workload. However, all graduates achieved 100% attendance in the mandatory modules (1 to 4) and this type of comparison was unable to be tested.

5.5.8 Hypothesis 8: No differences will be found between individuals who participated only in mandatory modules and those who participated in both mandatory and extra module

The extra module was valuable, considering its intention to create a safe space for those who have a manager position in the hospital to discuss their own work process, especially about supervising and championing behavior; however, we did not include its content in the *Lidera-SMT* evaluation, considering its optional character of participation. So, we also sought to understand whether there are significant differences between those who participated only in the mandatory modules (1 to 4, course load of 8 hours) and those who also participated in the extra module (1 a 5, course load of 10 hours). Both groups were tested for learning results and attitudes and no differences were found (Table 19).

Table 19. Comparison between groups divided according to training hours considering post intervention data (n=50). Data are presented as median (IQR) and mean (SD). São Carlos, 2023

Scales	**CH=8 (n=18)**		**CH=10 (n=32)**		
	Median	**Mean**	**Median**	**Mean**	***P***
Learning score	3.5 (2.00)	3.61 (1.20)	4.00 (1.00)	4.09 (0.89)	0.16
Attitudes					
I will make a plan to put into practice what I have learned after I get back to the workplace.	5.00 (1.00)	4.33 (1.03)	5.00 (1.00)	4.47 (0.67)	0.92
I will work as hard as possible to put into practice the plan made from the *Lidera-SMT* Program for the benefit of nursing workers	5.00 (1.00)	4.67 (0.59)	5.00 (1.00)	4.66 (0.60)	0.97
My work process became more organized after I put into practice what I learned in the *Lidera-SMT* Program.	4.00 (1.00)	4.06 (1.11)	4.00 (2.00)	3.84 (1.02)	0.35
I don't know if I'll be able to put into practice what I learned in the *Lidera-SMT* Program.	2.00 (3.00)	2.72 (1.64)	2.00 (3.00)	2.41 (1.16)	0.61
I am sure that what I have learned from the *Lidera-SMT* is put into practice for the workers' benefit.	5.00 (0.00)	4.78 (0.43)	5.00 (1.00)	4.59 (0.84)	0.70
I feel motivated toward my role in promoting mental health at work after having attended the *Lidera-SMT* Program.	5.00 (1.00)	4.61 (0.78)	5.00 (1.00)	4.56 (0.88)	0.93
I feel more engaged in promoting mental health at work after participating in the *Lidera-SMT* Program.	5.00 (1.00)	4.61 (0.78)	5.00 (1.00)	4.41 (0.91)	0.35
Supervisors and/or colleagues have recognized my efforts to promote a safer and healthier environment.	4.00 (1.00)	3.50 (1.25)	4.00 (2.00)	3.69 (1.06)	0.74
I feel safer when promoting SMT actions after participating in the *Lidera-SMT* Program.	4.50 (1.00)	4.44 (0.62)	5.00 (1.00)	4.38 (0.87)	0.96
I have changed my behavior to be more coherent with what I learned in the *Lidera-SMT* Program	5.00 (1.00)	4.61 (0.61)	5.00 (1.00)	4.47 (0.95)	0.91
I knew I would benefit from the *Lidera-SMT* Program.	5.00 (0.00)	4.78 (0.43)	5.00 (1.00)	4.44 (1.01)	0.36
My work performance improved after I participated in the *Lidera-SMT* Program.	4.00 (1.00)	4.22 (0.81)	4.00 (2.00)	3.84 (1.08)	0.25
Workers under my supervision will benefit if I put what I've learned into practice.	5.00 (1.00)	4.61 (0.61)	5.00 (1.00)	4.56 (0.88)	0.80
I am able to put into practice what I learned in the *Lidera-SMT* Program despite the demands at work.	4.00 (1.00)	4.28 (0.75)	4.50 (1.00)	4.34 (0.87)	0.60

Font: research authorship, 2024.

The decision in creating the supervising module was originated from our collaborative reflections with experts from EPID@Work Research Institute in order get the *Lidera-SMT* closer to the original Standard's targets, the organizations (Canadian Standards Association; Bureau De Normalisation Du Québec, 2013). In Brazil, nurses frequently assume manager positions in the healthcare system (Machado, 2017; Ouverney *et al.*, 2019). They continually qualify in the areas of their interest, looking at future opportunities. Within this context, training for manager positions is highlighted by the Federal Nursing Council's survey as one of the main area of interest for nurses (Machado, 2017). In this sense, although we created a specific module for nurse managers and advertised the Program in this format at the recruitment phase, we left it open to every nurse, considering the possibility of career advancement.

Consistent with the leadership concept adopted, the absence of differences between both groups regarding training hours also argues in favor of our pedagogical choice to include all nurses in our full intervention. The extra module reviewed the content already presented in the mandatory section and allowed participants to reflect on their supervising role and mental health at work. In this sense, if reoffered in the future we will stand by our previous decision to design this content as an extra module and extend the invitation for others to participate.

Moreover, confirming that there were no differences between both groups allowed us to interpret all training evaluation measurements (reaction, learning and behavior) as a single and homogeneous group, considering our premise that a single intervention was applied.

5.6 DISCUSSING THE EFFECTIVENESS OF THE *LIDERA-SMT* PROGRAM

Caring for mental health was recognized prior to the Covid-19 pandemic. The Plan of Action on Workers' Health 2015-2025 (Pan American Health Organization, 2017) included "Promote health, well-being, and healthy work in the workplace" as a strategic line. In the post pandemic world, mental health of the nurse team remained a sensitive point, especially for low- and middle-income countries (Cassiani; Dias; Johnson, 2023). During the Covid-19 pandemic, occupational health's issues of frontline and non-frontline workers were exacerbated (Ampos *et al.*, 2023). Strategics such as the *Lidera-SMT* Program, that aim to empower healthcare professionals to improve working conditions and to have leadership roles supported and recognized in a model of resilient health systems are highlighted (Ampos *et al.*, 2023; Cassiani; Dias; Johnson, 2023).

Strategies for promoting mental health focus on individual-aspects (Santos *et al.*,2023). If we look only into workplace mental health's training, we will see the same bias of a general analysis of interventions. Training among workers focuses mostly on individual components

such as resilience and coping (Sampson; Melnyk; Hoying, 2020), symptom management (Bolier *et al.*, 2014; Jacques *et al.*, 2018; Ketelaar *et al.*, 2014; Perry *et al.*, 2017; Sampson; Melnyk; Hoying, 2020), and mindfulness (Perry *et al.*, 2017; Sampson; Melnyk; Hoying, 2020). Training for leaders or managers also emphases individual aspects focusing on awareness and skills in early identification of mental health issues in support workers (Gayed; Milligan-Saville; *et al.*, 2018; Milligan-Saville *et al.*, 2017). Moreover, no training strategy included content based on collective aspects of the work process in the intervention description neither in a systematic review for managers interventions (Gayed; Milligan-Saville; *et al.*, 2018), nor in a integrative review for nurses (Santos *et al.*, 2023).

Lidera-SMT goes against the trend identified in the literature, moving forward by considering both the role of leaders as agents of change in organizations and the collective aspects of workplace mental health promotion to the discussion based on a solid theoretical framework like the Standard. This aligns with current debate about the best approach to improving workplace well-being as a collective one (Fleming, 2024).

Therefore, there is recognition among participants of the innovative character and relevance of a training program, as well as approving the Programs' design. Thus, us illustrated in the following quotes extracted from reaction evaluation (level I) of different nurses:

> "For more courses and learning like this", "I found it very relevant to the current moment", "I hope that other professionals have the opportunity to also take the program so that we can practice nursing differently within what is possible for us", "I really liked the material, well designed and instructive. I will apply what I learned in my work environment", "The program was great! I really enjoyed the classes and the materials shared", "Thank you very much for the knowledge gained!", "But the course was wonderful!!!"

The Standard and its measures were validated among Canadian nurses (Havaei; Park; Astivia, 2021) and literature considers that sociopolitical context is essential for a policy implementation such as the Canadian experience (Malachowski; Kirsh; Mceachen, 2017). Yet, even Canada still has room for improvement triggered by its voluntary character and the understanding that a Standard non-integrated with the politics and legislation could lead to partial implementation (Malachowski; Kirsh; Mceachen, 2017).

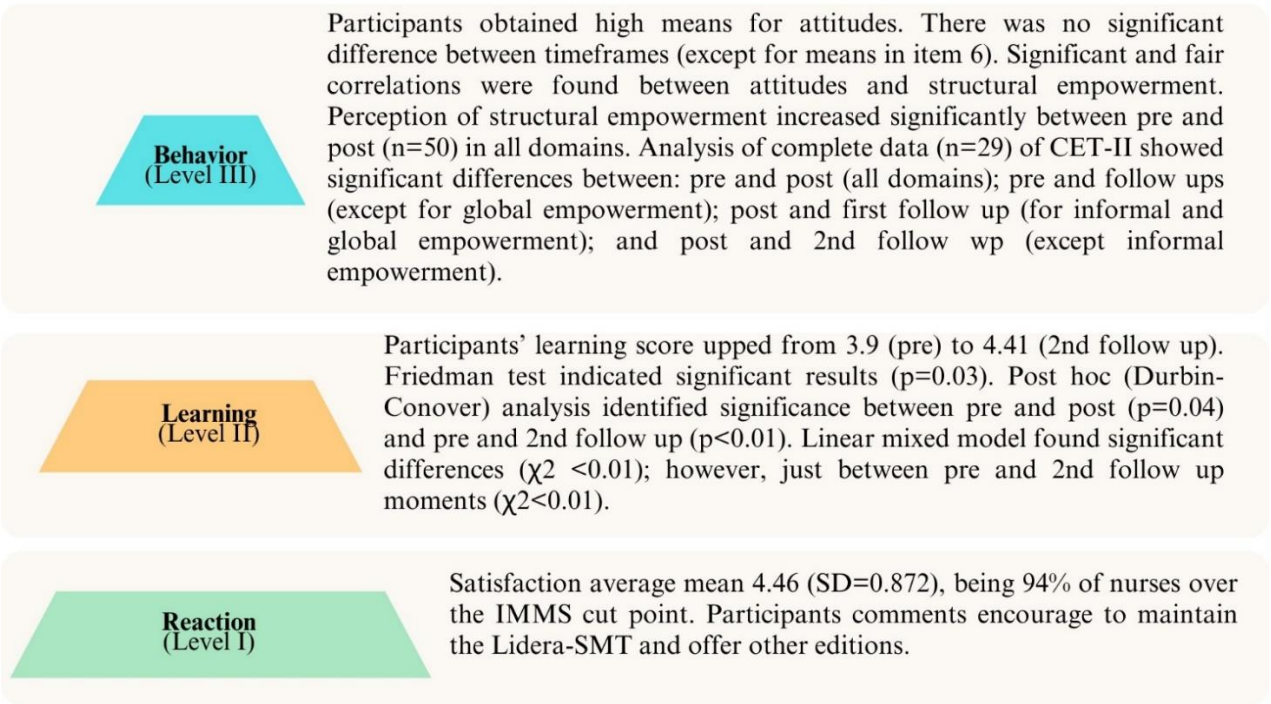
However, considering that there is still no structured policy or standard to address psychosocial factors at work in Brazil (Hurtado *et al.*, 2022), we believed that the *Lidera-SMT* Program helped nurses to think about a new way to promote mental health at work. The workplace factors identified by the Canadian standard and their influence on promoting mental health at work were a powerful tool to guide the reflection of the *Lidera-SMT* participants during the live meetings. Therefore, the Canadian standard could be influential to help in the

broader discussion and, perhaps, even in inducing a policy that considers the systemic effects of work on workers' health in the future.

Although the planning phase showed some challenges, it resulted in a well-structured, low cost and powerful based training. Statistical analysis pointed out that the *Lidera-SMT* program showed pilot positive reactions (level I from Kirkpatrick's model) from nurse-leaders in terms of interest, confidence, attention, and expectation (hypothesis 1). It was associated with improvements in learning (level II and hypothesis 2), even it is not possible to affirm that post-training learning retention remained stable (hypothesis 3). At behavior (level III), post-training attitudes on the part of nurse-leaders did not improve over time (hypothesis 4), although high scores were observed. There were associations between perceived structural empowerment and perceived attitudes (hypothesis 5) considering the significant and fair correlations found. We found no differences between nurses with or without management position (hypothesis 6) or individuals who participated only in mandatory modules and those who participated in both the mandatory and the extra module (hypothesis 8) regarding learning and attitude.

A synthesis of noteworthy results that shows *Lidera-SMT* Program effectiveness is summarized in Figure 16.

Figure 16. *Lidera-SMT* Program significant results of evaluation according Kirkpatrick level.



Font: research authorship, 2024.

Although the program presented results that attest to its effectiveness, some aspects, despite being observed, did not reach statistical significance. On the one hand, this may be due to the relatively small sample size of the pilot study, and a larger and complete trial could be

potential to investigate that. In another perspective, it demonstrated the potentiality of select a well based framework such as the Kirkpatrick framework (Kirkpatrick; Kirkpatrick, 2006) to conduct a well-founded evaluation achieving complementary levels results and seeing layers of outcomes for effectiveness.

Based on nurse participation in the Program as well as the main evaluation results, we can reflect on what elements were primordial for the pilot effectiveness outcomes. First, the flipped classroom was a viable choice for the training structure, considering its flexibility as discussed previously (Chao *et al.*, 2022; Låg; Sæle, 2019). Second, the Program's quality, diversity of activities and flexibility, since participants stayed engaged and reached positive outcomes, even considering challenges in reconciling intense work at their workplaces and regular study in *Lidera-SMT* over the five weeks of the Program. Third, it demonstrated the pertinence of choosing the Canadian National Standard of Psychological Workplace Health and Safety as a theoretical framework. Fourth, it also reinforced benefits of brief training in promoting mental health at work, especially through leaders' learning, confidence and behavior change (Gayed; Milligan-Saville; *et al.*, 2018; Milligan-Saville *et al.*, 2017).

Lastly, recent initiatives in favor of a national observatory about workplace mental health have been discussed in Brazil (Federal University of Paraná, 2023). One of the topics suggests fortifying and amplify access of training aimed to promote mental health at work. In this sense, the potential results of *Lidera-SMT* meet real and urgent needs in the Brazilian context, mainly considering the positive results that participants achieved after completing the *Lidera-SMT* Program regarding their rection (level I), learning (level II) and behavior (level III). The training structure and content are an innovative approach in the Brazilian context and we are reporting promising pilot results.

Beside *Lidera-SMT* results of effectiveness, some challenges were pointed out and they need to be summarized. From the perspective of the training structure, the language barrier was the more relevant one. Other aspects that reflected in the program's adherence and effectiveness results were organizational support, lack of training on leadership skills among nurses, and low level of autonomy of the participants in transforming their work. A study that used Kirkpatrick framework to evaluate a training intervention named this sort of aspects as exogen, refereeing to an aspect that are not inherent to the training structure and content, but it can affect positively or negatively training results (Castro Filho; Motta, 2018).

Organizational support was the most frequent exogen aspect and it permeated all levels of evaluation. Brazilian organizations still have important gaps to overcome in terms of organizational support for nursing training and development. Meanwhile organizational support

is present in studies of the implementation of training research, studies often do not have distinctness of what organizational support represents in that context, being reduced to the allocation of financial and material resources (Miranda; Alvares; Petroni, 2019). Forming champions was a good strategy to begin with, however ensuring organizations onboarding will be key to better chances to achieve collective aspects, as discussed by the Canadian experience (Canadian Standards Association; Bureau De Normalisation Du Québec, 2013; Sheikh; Smail-Crevier; Wang, 2018; Wilson; Bradley, 2017).

For the *Lidera-SMT*, organizational support represents, first to assume that Organizations have responsibilities on both lifelong education for their employes (Mlambo; Silén; Mcgrath, 2021) and workplace mental health (Canadian Standards Association; Bureau De Normalisation Du Québec, 2013). Second, to recognize how relevant is to train workforce for improving workplace mental health. Third, to recognize the participation in the Program as part of nurses' professional development, embracing strategies to strengthen it (Mlambo; Silén; Mcgrath, 2021). It could be illustrated by to encourage participation in working hours, and provide other resources for participation such as access to computer with quality internet, and others. Fourth, organizational awareness of collective aspects of work that can cause harm and consequently are key to the implement strategies addressing workplace mental health (Canadian Standards Association; Bureau De Normalisation Du Québec, 2013). Finally, identify participants as champions, being open to learn from their experience with the Program, and to recognize that champions will need support to transfer knowledge in their practice (Huang *et al.*, 2021; Parmar *et al.*, 2022). That means they will need to ensure access to organizational information, resort mechanisms to capture workplace mental health issues, promote autonomy, assertive communication, and others (Machado; Camponogara; Moreira, 2021; Wilson; Bradley, 2017).

Our discussion of the effectiveness of the *Lidera-SMT* Program at the first three levels of Kirkpatrick Framework evoked some reflection about what could be expected in a future level IV evaluation. On the one hand, we need to recognize that many confounders that need to be considered and controlled if this level be evaluated by workers' health outcomes such as stress, burnout and others. On the other hand, literature showed that training outcomes could be directly related to nursing social support, since training increase participants' confidence about providing support, giving information, and discussing emotional issues (Donovan, Greenwell, 2021). Which could be a positive primary outcome regarding results' level. Qualitative approaches (Koto-Shimada *et al.*, 2022; Maloney *et al.*, 2011) to participants describes what actions they implemented considering the planning stage at level III, could be helpful,

especially considering capturing other barriers make real change regarding workplace mental health depending on organizational support. Finally, the inclusion of instruments to capture changes at participants' perception of the thirteen workplace factors described by the Canadian standard could be a positive way to complement the evaluation of level IV (Canadian Standards Association; Bureau De Normalisation Du Québec, 2013).

Programs such as *Lidera-SMT* can be incorporated by Occupational Health and Safety (OHS) teams and employers, in order to encourage actions to promote workplace mental health (Santos *et al.*, 2023; Ketelaar *et al.*, 2014). Which is consonant with the responsibility of them to promote guidance, information and awareness activities for workers to prevent accidents and work-related illnesses established by the legislation (Brazil, 2022). Further, we recognize that those teams have a greater chance of being to identify and discuss the main workplace factors applicable to workers reality, as well as to be able to evaluate the results (level IV), since they have access both workers and the organizational information regarding workplace mental health issues.

5.7 LIMITATIONS

This study has some limitations. First, the Canadian Standard was designed to be applied by organizations, which have complete control of the thirteen workplace factors. We decided to structure the Program using the standard as conceptual framework but targeting individuals. We did that considering that nurses have some level of control over the workplace factors and believe that the *Lidera-SMT* program could be a good way to improve reactions, learning, and behavior (attitudes and empowerment) among hospital nurses in order to promote mental health, but the intervention could target employers as well.

As a second limitation, we did not validate the syllabus and content of the *Lidera-SMT* in the Delphi panels, which would require hours of dedication from experts and could make the study unfeasible. Additionally, cultural translation and adaptation of the instrument selected for the behaviors level first published in English were done only by the Delphi panel, which is not recommended in the literature. Although the panel was a proper design to offer a usable instrument, it is limited considering the language adaptation that could cause bias in translation (Nora; Zoboli; Vieira, 2018).

The presentation of the research objectives and steps for data collection for the participants in the *Lidera-SMT* welcoming presentation may have caused bias in the data collection. Our intention was to be transparent about the relationship between the Program and

the research, as well as to ensure recruitment to the data collection, considering the voluntary adherence of the pilot designed.

The application of the instruments selected to evaluated the *Lidera-SMT* brought other reflections that need to be shared. The results of the learning evaluation showed that a longer learning test, with a more diverse set of questions in terms of Bloom's taxonomy (Anderson *et al.*, 2001) could lead to clear results regarding this hypothesis 2 and 3. CET-II did not require a specific locus to be applied, however, if used among participants linked to a specific hospital (Bernardino *et al.*, 2013; Moura *et al.*, 2020; Schorr, 2021), it could generate opportunities for restructuring and working conditions for nurses (Bernardino *et al.*, 2013).

Methodological limitations inherent to pilot studies included the limited generalization potential in comparison to experimental studies. There are selection biases due to the use of a convenience sample. This type of selection is generally not representative of random samples and may be biased regarding the topic of interest, which could exert negative impacts in terms of both internal validity and external validity (generalizability). Appropriate power and sample size are not calculated for pilot studies, as that is often their purpose to provide information to make these calculations. Thus, we recognize the fact that this design is not suitable for a complete test of hypotheses (In, 2017). The small sample size of the pilot also could be a bias to identify subtle differences between groups, so comparation outcomes need to be interpreted in context. Moreover, our proposed design has no control for confounding factors, as pilot studies often do not include a control group. In future research, we suggest investigating sex, age, training level, as confounding factors effect. Lastly, we did not were able to investigate the causes of drop off, what could improve the understanding of the participation in the Program.

Although expected from prospective designs (Fewtrell *et al.*, 2008; Kristman; Manno; Côté, 2004), missing data on follow-ups could generate bias in the quantitative analysis. The selection of mean and standard deviation for data interpretation is a limitation, considering the data did not have a normal distribution. However, this approach was chosen for comparison purposes with the application of the instrument in previous studies (Cardoso-Júnior; Faria, 2023; Liaw *et al.*, 2016; Moura *et al.*, 2020; Schorr, 2021). To minimize the bias, we presented both means (SD) and medians (IQR). Learning test structure with only 5-questions was also an observed limitation, considering that this structure may have impacted the results of the level II evaluation. The identification of a significant correlation between the variables must be interpreted with caution, since although they tend to vary together, the statistical analysis does not provide evidence of direct dependence or even causality between the variables (Liu *et al.*, 2016).

6 FINAL CONSIDERATIONS

We achieved all research objectives, as well as tested seven of eight hypotheses. One of them needed to be excluded. We developed the *Lidera-SMT* addressing mental health in the workplace to be applied online (objective 1). We selected thirteen (level I: attention; interest; confidence; expectation; level II: learning improvements and retention; level III: attitudes; opportunity, information, support, formal empowerment, informal empowerment and global empowerment) primary outcomes and four measurements instruments for evaluating the Program (objective 2), as well as a sociodemographic and occupational characterization questionnaire. We validated the three non-previously validated instruments with experts using the Delphi Technique (objective 3). We implemented the *Lidera-SMT* in a pilot group of 67 nurse-leaders and its evaluation included 50 nurses for pre and post analysis and 29 for 4-data points (objective 4).

Despite criticisms of the model, Kirkpatrick's framework is useful for evaluating the results of training activities in the field of nursing. All proposed levels or at least a combination of the first three levels (reaction, learning, and behavior) have been used for evaluating the training of the nursing team. Thus, for the *Lidera-SMT* Program, we used a combination of the three first levels, assemble IMMS-BRV (level I), learning test (level II), an attitude questionnaire (level III) and CET-II (level III). The Delphi panel was valuable to improve the accuracy of the selected measurement instruments and the final evaluation set could be useful for evaluating other nursing training in the future. Our pilot model evaluated the *Lidera-SMT* as effective in the perspective of the Kirkpatrick levels I, II and III (main goal).

Lidera-SMT was innovative in bringing a theoretical contribution to the assessment of psychosocial risks at work in its structure, focusing on their concepts and matrices of understanding workplace health and safety. Workplace factors from the theoretical framework evoked reflection on the autonomy of nurses in implementing workplace mental health strategies, especially involving factors with co-workers' control, such "civility and respect" and "engagement".

Using the practice experiences to make syntheses on topics that do not yet have clear definitions is an advance for Brazilian science. Brazil needs to move forward in proposing public policies aimed at workplace mental health, especially for hospitals and other healthcare organizations. The Canadian Standard can contribute in this sense, as it goes against practices that blame the worker and individualize the problem, proposing an approach based on organizational aspects and, therefore, a new way of thinking about mental health at workplace.

The *Lidera-SMT* Program showed positive results for participants and since it is an online training intervention requiring low-cost investments and can be done on demand, *Lidera-SMT* has potential for multiplication in other places of study and healthcare scenarios. We pilot measured effectiveness of the *Lidera-SMT* program regarding reaction, learning and behavior in favor of promoting workplace mental health, with important results at each level, including the training contextualization. We measured satisfactory interest, confidence, attention and expectation from the nurses, with improvements in their knowledge and attitudes favoring the promotion of mental health in the workplace. Additionally, we witnessed significant change in nurses' perception about the structural empowerment of their workplaces before and after the Program.

Other methodological advances were also accomplished. The 4-data point and 4-instruments set enabled an in-depth analysis of effectiveness, still inceptive in training evaluation. Associated attitudes and structural empowerment contributed to fortify the level III evaluation. Analyzing the *Lidera-SMT* data for structural empowerment across our 4-data points also added evidence to de corpus about the CET-II instrument and structural empowerment analysis.

We suggest as future research a longer follow-up with more participants, to follow learning and behavior outcomes, as well to include a level IV (results) evaluation. More research is needed to understand the relationship between structural empowerment and attitudes, as well as between attitudes with other possible variables according to the work organization. Considering the effectiveness of the *Lidera-SMT* among nurses in the pilot, future research can, in a broader implementation plan, be applied for other healthcare professionals (including nursing technicians and assistants) or embrace further content, organized in complementary layers of training. Finally, we strongly encourage further research with a pre determinate locus and consistent research design, as full trial.

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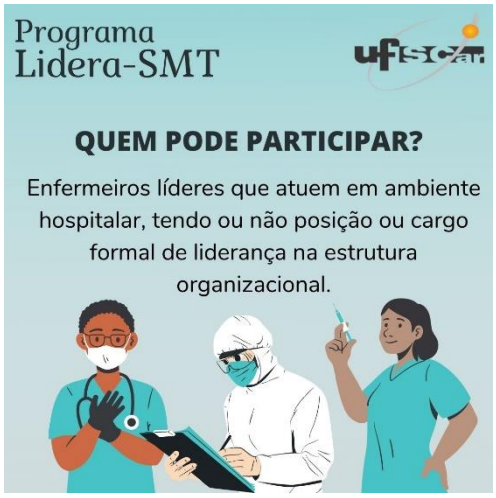
APPENDIX A: Characterization of strategies and their outcomes according to workplace factors.

Strategy	Outcome
Psychological and Social Support; psychological demands	
On-demand psychological telecare: the worker makes an appointment via the website and is assisted, via call or messaging application, by a team of nurses qualified in mental health care at available dates and times. Demand is defined by the worker. Risk assessment is based on the content of the conversation, vocal performance, profile image in the messaging application and clinical parameters (inconsolable crying, reports of suicidal ideation, self-mutilation, self-medication or substance abuse). However, the regularity and duration of consultations depend on the engagement and bond established (Amaral *el al,* 2022).	Support resulted in a reduction of negative feelings, increased perception to identify potential threats and contexts of "triggers", in the participants' personal appreciation, self-knowledge and self-care. The service was well evaluated by the participants, using the Net Promoter Score (NPS) tool, with a score of 79% (Amaral *el al*, 2022).
An online questionnaire to identify functioning at work, distress, work-related fatigue, alcohol use, depression, suicide risk, anxiety, panic disorder, and post-traumatic stress was sent to all participants. According to the results, participants were invited to take an online mental health intervention module (EMH): Psyfit (aimed at improving mental fitness, four-week module); Strong at work (aimed at learning skills to deal with stress at work, eight-week module); Color your life (aimed at combating depressive symptoms, eight-week module); Don't panic online (aimed at reducing panic symptoms for subclinical and mild cases, eight-week module); and Drinking less (aimed at reducing risk behavior, six-week module) (Bolier *et al,* 2014; Ketelaar *et al,* 2014).	EMH positively improved the mental health (0.37 Cohen's coefficient d between groups – moderate). The groups were evaluated at two post-intervention moments, using the mental health continuum - short form (MHC, median score in the population 2.98) and WHO-5 (maximum score 100) scales: - 3 months post-intervention: MHC-SF: EMH = 3.68; control group (CG)= 3.30; WHO-5: EMH = 70.1; CG= 67.3; -6 months post-intervention: MHC-SF: EMH = 3.65; CG= 3.33; WHO-5: EMH = 67.8; CG= 67.9 (Bolier *et al,* 2014).
An online questionnaire to identify functioning at work, distress, work-related fatigue, alcohol use, depression, suicide risk, anxiety, panic disorder, and post-traumatic stress was sent to all participants. Workers who presented impaired functioning at work and/or mental health complaints were invited to face-to-face preventive care with the occupational physician (OP) (Ketelaar *et al,* 2014).	EMH (BOLIER *et al,* 2014) with algorithm support and OP group obtained equal scores for the questionnaires: impaired functioning at work, symptoms in four dimensions, event impact scale (Dutch version) and work ability index. For the Dutch questionnaire on work experience and evaluation (maximum score 100, the higher the score the higher the level of work-related fatigue), the EMH and OP groups scored 34 and 33, respectively. There were no statistically significant differences. With regard to impaired work functioning, both groups, EMH and OP, improved after 3 months, with no statistically significant differences between them (30% of participants in the EMH group and 46% of the OP group had improvement) (Ketelaar *et al,* 2014).
Psychological and Social Support	
Evaluate the use of resilience as a mediator between perceived organizational support and fatigue (mental/physical/emotional) (Zhang *et al,* 2021).	Perceived organizational support reduced fatigue in nurses, through the mediating effect of resilience - a significant negative relationship with mental (-0.112), physical (-0.132) and emotional (-0.141) fatigue (Zhang *et al,* 2021).

Growth and Development	
Art therapy workshops: holding 10 art therapy workshops on site and during working hours, with the following topics: 1) Reading a manuscript for presentation (establishing a bond and providing autonomy); 2) Drawing and guided meditation (self-knowledge); 3) Tale of the seven balls and elaboration of manual work (self-knowledge and strengthening the bond with the team); 4) Mandala construction (empowerment); 5) Reading of the myth of the goddess Athena (empowerment); 6) Reading the myth of the goddess Artemis and producing a protective cover (communication and expression); 7) Reading the tale of the goddess Persephone and drawing (communication and expression); 8) Reading the Chinese parable of the cracked ceramic vase (self-esteem and resilience); 9) Reading the story of Aphrodite and making a mirror frame (self-esteem); 10) Closing and exhibition of the productions in a moment of fraternization (reflection) (Caldi *et al*, 2022).	The speeches indicated that teamwork, moments of listening, relaxation and exchange of experiences are positive for overcoming adversities in the work environment and promoting the mental health of workers (Caldi *et al*, 2022).
MINDBODYSTRONG (MBS) program: eight weekly sessions adapted from the Creating Opportunities for Personal Empowerment (COPE) intervention focusing on three areas: 1) Taking care of the mind: developing cognitive-behavioral skills to think, feel and behave, promoting self-esteem, gratitude, change management, goal setting, guided imagery, effective communication, problem solving, breathing exercises, and healthy emotion management; 2) Taking care of the body: developing cognitive-behavioral skills to promote physical health such as nutrition, physical activity, healthy eating, strength and flexibility training, self-determined goals of nutrition and physical activity; 3) Building skills: developing cognitive-behavioral skills to deal with stressful situations, stress, healthy coping, problem-solving strategies, sleep diary and long-term goal setting (Sampson; Melnyk; Hoying, 2020).	The comparative analysis between the MBS and the control group (CG) after six months indicated lower rates of depressive symptoms, anxiety and perceived stress and a greater presence of healthy behaviors and job satisfaction in the MBS: 1. depressive symptoms: MBS = 3.31 (normal) and GC=5.65 (moderate); 2. anxiety: MBS=4.49 (normal) and GC=5.59 (moderate); 3. perceived stress: MBS=13.18 and GC=13.44 4. job satisfaction: MBS=21.23 and GC=19.53; 5. healthy lifestyle: MBS=59.28 and GC=56.91. The last three tests do not indicate normal/moderate/excessive classification (Sampson; Melnyk; Hoying, 2020).
Balance	
"Well-being room" program: offer of the program for six months, at the workplace and during working hours, with the following activities: labor gymnastics (performed daily for 15 minutes); "beauty day" (performed monthly with aesthetic care, breakfast and movie session with snack); auricular acupuncture (held monthly); and lectures and workshops on managing and coping with stress (held monthly lasting two hours) (Jacques *et al*, 2018).	The intervention did not significantly reduce the levels of occupational stress, although the participants showed a decrease in the perception of psychological demand, increased control and social support received at work.
Organizational culture; Balance	
Focus groups for workers to share individual defensive strategies such as: separation between personal and professional life, distancing, rationalization and refuge during leisure time; and, collective defensive strategies such as moments of speaking and listening, aggregation of the collective, resignification of suffering and search for a new meaning for life (Vieiro *et al*, 2017).	Individual (conformity, distancing, rationalization and refuge in leisure time) and collective (speaking and listening, aggregation of the collective, re-signification of suffering and search for a new meaning for life) defensive strategies were used by the participants in the face of suffering at work, but there was no assessment of the impact on the health of these workers (Vieiro *et al*, 2017).

Psychological and Social Support; Leadership and Clear Expectations; Growth and Development; Management of workloads	
The Delphi panel (Perry *et al*, 2017) indicated 11 strategies, in four groups: 1) training: offer training for stress management and resilience development for workers at high risk; provide staff with mental health awareness training; provide training for managers and supervisors on ways to identify mental illness and support workers in recovery. 2) mental health programs: offer access to mental health programs for teams; offer mindfulness-based programs to reduce stress in the workplace; peer support programs with trained mentors for behavior change in the workplace; offer skill-building programs. 3) regular and free counseling at the workplace with a psychologist or counselor; regularly check in and support workers for mental health wellness; offer incentives for participation in group interventions in the workplace. 4) facilitate flexible work practices.	Leaders agreed that mental health promotion interventions (mental health training for managers and supervisors; providing stress management and resilience training for workers at high risk; flexible working practices; free workplace counseling and regular check-ups mental health wellness) should be prioritized, followed by healthy eating and physical activity and smoking cessation. To carry out this classification, they ranked the mental health strategies from an interval scale with 5 classifications, from very important/feasible to not at all important/feasible (Perry *et al*, 2017).
Growth and Development; workload management	
Implementation of a five-year workload management intervention, involving: 1) development of a tool to assess nursing workload; 2) creation of new jobs where a deficit of professionals and job demand requirements was identified; 3) long-term recruitment to increase the number of nurses employed; 4) offer of continuous professional development offer through the expansion of the graduate program and creation of short courses; 5) Recruitment campaign for recent graduates and permanent employees (Rickard *et al*, 2012).	The intervention led to an overall reduction in workplace stress, reduced turnover at one of the hospitals, there was a significant improvement in psychological health and job satisfaction, however levels of job stress in nurses and midwives remain high. The groups were evaluated in two post-intervention moments, using the General Health Questionnaire (GHQ-12) scales (maximum score 36), Maslach Burnout Inventory (MBI) (maximum score 90) and job satisfaction (scale of 7 points: 0 - extremely dissatisfied to 6 - extremely satisfied). Wave 1 (2008): GHQ-12: 14.52; MBI: 28.94; job satisfaction: 3.70. Wave 2 (2010): GHQ-12: 12.33; MBI: 20.77; job satisfaction: 4.06 (Rickard *et al*, 2012).

APPENDIX B: Recruitment communications for social media




Programa
Lidera-SMT
O Lidera-SMT está organizado em quatro módulos teóricos (3 horas/módulo), totalizando 12 horas de estudo online.


Programa
Lidera-SMT
O QUE ESTUDAREMOS?
PREVENÇÃO
Compreender o trabalho como determinante do processo saúde-doença, bem como identificar os riscos psicossociais e suas repercussões no contexto hospitalar.
FONTE: CANADIAN STANDARDS ASSOCIATION; BUREAU DE NORMALISATION DU QUÉBEC, 2013.


Programa
Lidera-SMT
O QUE ESTUDAREMOS?
PROMOÇÃO
Delinear ações e estratégias a serem desenvolvidas ou aprimoradas no contexto de trabalho para promoção ao trabalho psicologicamente saudável e seguro.
FONTE: CANADIAN STANDARDS ASSOCIATION; BUREAU DE NORMALISATION DU QUÉBEC, 2013.


Programa
Lidera-SMT
O QUE ESTUDAREMOS?
RESOLUÇÃO
Fortalecer a vigilância em saúde para o monitoramento de incidentes e preocupações relacionadas à saúde mental no trabalho.
FONTE: CANADIAN STANDARDS ASSOCIATION; BUREAU DE NORMALISATION DU QUÉBEC, 2013.


Programa
Lidera-SMT
DÚVIDAS:
lidera.smt@gmail.com

APPENDIX C: Informed Consent Form (Delphi Technique Judges)

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO - TCLE

(Resoluções nº 466/2012 e 510/2016 do Conselho Nacional de Saúde e Ofício Circular nº 2/2021/CONEP/SECNS/MS)

N° parecer de aprovação pelo CEP-UFSCar: 5.627.685 / CAAE: 57917922.9.0000.5504

Você está sendo convidado(a) a participar da pesquisa **"Promoção da saúde mental no trabalho: intervenção para enfermeiros líderes**", coordenada pela Me. Fernanda Maria de Miranda, aluna de doutorado do Programa de Pós-graduação em Enfermagem da Universidade Federal de São Carlos (PPGEnf/UFSCar), sob orientação da Profa. Dra. Vivian Aline Mininel, professora do Departamento de Enfermagem da Universidade Federal de São Carlos (UFSCar).

Esta pesquisa está registrada na Plataforma Brasil sob número de CAAE 105621.3.0000.5504 e foi aprovada pelo Comitê de Ética em Pesquisa da UFSCar sob o parecer número 4.692.098. Este projeto envolve pesquisadores do departamento de Enfermagem da UFSCar e da *EPID@Work Research Institute* da *Lakehead University* Thunder Bay, Ontário, Canadá).

1. Objetivo geral: avaliar a eficácia de uma intervenção formativa voltada à promoção da saúde mental no trabalho para enfermeiros líderes.

2. Procedimentos: você foi convidado à participar do Comitê de Especialistas para validação tanto do conteúdo da intervenção formativa *online*, denominada Programa *Lidera-SMT* quanto dos instrumentos de coleta de dados que serão utilizados para avaliar a intervenção por meio da Técnica Delphi. O material a ser analisado e formulários de avaliação serão enviados por e-mail. Estima-se que o tempo necessário para preenchimento e devolução das rodadas de avaliação seja de 30 minutos.

3. Potenciais riscos e benefícios: a participação nesta pesquisa trará como benefício aos participantes o aprofundamento e ampliação de conhecimentos para transformação do contexto de trabalho, na perspectiva da promoção da saúde mental no trabalho no ambiente hospitalar. Por outro lado, poderá expô-lo ao risco de cansaço durante ou após o preenchimento dos instrumentos de coleta de dados; e riscos de perda de dados ou informações. A fim de mitigar tais riscos, serão adotadas as seguintes estratégias: interrupção da coleta de dados e retomada em outro momento; armazenamento dos formulários de coleta de dados preenchidos e demais documentos em computador individual protegido por login e senha pessoais e intransferíveis. Somente os pesquisadores terão acesso a estes dados; utilização do *GoogleForms*, que é oferecido a docentes e estudantes da UFSCar e permite acesso restrito e controlado, para quando a coleta, ou parte dela, ocorra por plataforma virtual; não haverá armazenamento de dados em 'nuvem', mas em dispositivo eletrônico local (todos os registros em ambiente virtual compartilhado ou nuvem serão apagados); todos os dados coletados, sejam em documentos, anotações em diário de campo ou outros, serão anonimizados, a fim de impossibilitar a identificação de pessoas ou locais de trabalho.

4. Garantia de sigilo: suas respostas serão analisadas de forma anônima e confidencial, ou seja, em nenhum momento haverá divulgação do seu nome e de quaisquer informações que permitam a identificação de pessoas, profissionais ou vínculo profissional. Os dados serão armazenados sob responsabilidade da Coordenadora da pesquisa por, no mínimo, 5 (cinco) anos após a finalização do estudo. O relatório final desta pesquisa será publicado e compartilhado com o público em geral sem a identificação de nomes ou locais, mas contendo sínteses do processo de validação de conteúdo pela técnica Delphi que permitam a compreensão do objeto de estudo (intervenção formativa voltada à promoção da saúde mental no trabalho para enfermeiros líderes).

5. Liberdade de recusa: sua participação é de forma livre e voluntária. Você pode retirar o consentimento na participação a qualquer momento do estudo, sem necessidade de justificativa. A desistência não acarretará quaisquer prejuízos para você, sua família ou para instituição para qual trabalha. Após o consentimento, você terá o direito de acessar o teor do conteúdo dos instrumentos de coleta de dados (tópicos que serão abordados) previamente ao momento da coleta de dados, para uma tomada de decisão informada.

6. Custos, remunerações ou indenizações: a participação nesta pesquisa não trará custos adicionais para você. Também não haverá qualquer tipo de pagamento ou benefício por sua participação. Caso a pesquisa acarrete qualquer tipo de dano em sua vida, você terá direito a indenização. Fica garantida indenização em casos de danos,

comprovadamente decorrentes da participação na pesquisa, nos termos da Lei. O participante da pesquisa terá direito à indenização de qualquer dano decorrente da pesquisa, de acordo com a Resolução 466/2012 do Conselho Nacional de Saúde. Não está previsto pagamento ou gratificação decorrente da participação na pesquisa. A pesquisa não trará custos para o participante; sua participação é voluntária e o participante está livre para recusar, interromper sua participação e retirar seu consentimento a qualquer momento, inclusive após o período de coleta dos dados (nestes casos, os dados do participante serão excluídos do banco de dados). Por ser voluntário, o motivo de recusa em participar da mesma não irá acarretar qualquer penalidade. As informações do estudo serão divulgadas somente para fins científicos.

7. Esclarecimentos: sua participação é voluntária, isto é, a qualquer momento você irá (a) decidir se deseja participar e preencher o questionário, se deseja desistir da participação durante o preenchimento do questionário ou após o preenchimento, e poderá retirar seu consentimento sem nenhuma penalização ou prejuízo em sua relação com o pesquisador ou com a instituição Você ao clicar em "Aceito participar da pesquisa" irá: 1. Eletronicamente aceitar participar da pesquisa, o que corresponderá à assinatura deste termo (TCLE), o qual poderá ser impresso ou solicitado ao pesquisador via endereço de e-mail fornecido, se assim o desejar. 2. Responder ao questionário encaminhado por e-mail que terá tempo gasto para seu preenchimento em torno de 30 minutos. Caso não concorde, basta fechar a página do navegador. Caso desista de participar durante o preenchimento do questionário e antes de finalizá-lo, os seus dados não serão gravados, enviados e nem recebidos pelo pesquisador e serão apagados ao se fechar a página do navegador. Caso tenha finalizado o preenchimento e enviado suas respostas do questionário e após decida desistir da participação deverá informar o pesquisador desta decisão e este descartará os seus dados recebidos sem nenhuma penalização. Você poderá imprimir uma via deste termo, ou se desejar, o pesquisador poderá encaminhar uma via assinada por e-mail ou da maneira como preferir. É importante que você guarde uma cópia deste documento em seus arquivos físicos ou eletrônicos. Para esclarecimentos adicionais, dúvidas ou sugestões sobre o estudo, você pode entrar em contato com a Coordenadora da pesquisa ou com o próprio Comitê de Ética em Pesquisa, conforme dados abaixo.

CONSENTIMENTO

Você concorda em participar deste estudo?

( ) Sim ( ) Não

Nome completo: _____Data: __/__ / _____

Assinatura do(a) participante: _____

Me. Fernanda Maria de Miranda
Pesquisadora Responsável
Contato tel.: (16)997217292
E-mail: fermariademiranda@gmail.com ou lidera.smt@gmail.com
Endereço para contato: Rodovia Washington Luis, km 235, caixa postal 676, São Carlos-SP, Cep. 13565-905.

_____	_____
Me. Fernanda Maria de Miranda	**Profa. Dra. Vivian Aline Mininel**
Pesquisadora Responsável	Orientadora

Comitê de Ética em Pesquisa com Seres Humanos da UFSCar

É um comitê composto por diversos membros, que tem como finalidade defender os interesses dos participantes da pesquisa em relação a sua integridade e dignidade, para contribuir no desenvolvimento da pesquisa dentro de padrões éticos. Para informações complementares, acesse: http://www.propq.ufscar.br/etica

Horário de Atendimento ao Público - Balcão e Telefone:
Segunda à Sexta: 8:00 às 12:00 e das 14:00 às 16:30
Telefone: (16) 3351-8028
E-mail: cephumanos@ufscar.br
Endereço para contato: Rodovia Washington Luis, km 235, caixa postal 676, São Carlos-SP, Cep. 13565-905. O prédio localiza-se na Área Sul da UFSCar, no prédio da Reitoria.

APPENDIX D: Informed Consent Form (*Lidera-SMT* Program Participants)

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO - TCLE

(Resoluções nº 466/2012 e 510/2016 do Conselho Nacional de Saúde e Ofício Circular nº 2/2021/CONEP/SECNS/MS)

N° parecer de aprovação pelo CEP-UFSCar: 5.627.685 / CAAE: 57917922.9.0000.5504

Você está sendo convidado(a) a participar da pesquisa "Promoção da saúde mental no trabalho: intervenção para enfermeiros líderes", coordenada pela Me. Fernanda Maria de Miranda, aluna de doutorado do programa de pós-graduação em Enfermagem da Universidade Federal de São Carlos (PPGEnf/UFSCar), sob orientação da Profa. Dra. Vivian Aline Mininel, professora do Departamento de Enfermagem da Universidade Federal de São Carlos (UFSCar).

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1. Objetivo geral: avaliar a eficácia de uma intervenção formativa voltada à promoção da saúde mental no trabalho para enfermeiros líderes.

2. Procedimentos: você foi convidado à participar por ser enfermeiro líder no ambiente hospitalar e ter manifestado interesse em participar da intervenção formativa *online* denominada Programa *Lidera-SMT*, que terá duração de um mês e consistirá em quatro módulos semanais teóricos (3 horas/encontro), totalizando 12 horas. A sua participação consiste no preenchimento de um questionário com informações sociodemográficas, laborais e de avaliação de reação, aprendizagem e comportamento que será aplicado antes do início do primeiro módulo, logo após o final do quarto módulo, dois meses depois da intervenção e seis meses depois da intervenção. Serão utilizados pelos pesquisadores apenas os dados dos participantes que atingirem 75% de presença no *Lidera-SMT*. O tempo de preenchimento estimado para o preenchimento das informações será de aproximadamente 30 minutos.

3. Potenciais riscos e benefícios: a participação nesta pesquisa trará como benefício aos participantes o aprofundamento e ampliação de conhecimentos para transformação do contexto de trabalho, na perspectiva da promoção da saúde mental no trabalho no ambiente hospitalar. Por outro lado, poderá expô-lo ao risco psicológico, decorrente de perguntas relacionadas a participação no Programa e experiências prévias, que podem remeter à algum desconforto, evocar sentimentos desagradáveis de avaliação ou julgamento a discussões ou conflitos durante os momentos síncronos do Programa; ao cansaço durante ou após o preenchimento dos instrumentos de coleta de dados ou durante as atividades previstas no Programa; e riscos de perda de dados ou informações. A fim de mitigar tais riscos, serão adotadas as seguintes estratégias: interrupção da coleta de dados e retomada em outro momento; intervenção imediata dos mediadores, que possuem experiência com esta modalidade de intervenção formativa, a fim de direcionar os participantes aos objetivos da atividade e mitigar divergências de opinião mais acaloradas; apoio para encaminhamento aos serviços da Rede de Atenção à Saúde do Sistema Único de Saúde (SUS) para acolhimento e, posteriormente, referenciamento a setores de apoio psicológico do SUS, se necessário; garantia de assistência integral e gratuita por danos imediatos ou tardios, diretos ou indiretos relacionados à participação nessa pesquisa. Essa assistência poderá ocorrer em qualquer momento, não só durante ou após o término do estudo, mas também tardiamente, desde que seja detectado o problema e a relação com a participação na pesquisa; armazenamento das eventuais gravações do *Lidera-SMT* pactuadas entre os participantes, dos formulários de coleta de dados preenchidos e demais documentos em computador individual protegido por login e senha pessoais e intransferíveis. Somente os pesquisadores terão acesso a estes dados; utilização do *GoogleForms*, que é oferecido a docentes e estudantes da UFSCar e permite acesso restrito e controlado, para quando a coleta, ou parte dela, ocorra por plataforma virtual; não haverá armazenamento de dados em 'nuvem', mas em dispositivo eletrônico local (todos os registros em ambiente virtual compartilhado ou nuvem serão apagados); todos os dados coletados, sejam em documentos, anotações em diário de campo ou outros, serão anonimizados, a fim de impossibilitar a identificação de pessoas ou locais de trabalho.

4. Garantia de sigilo: suas respostas serão analisadas de forma anônima e confidencial, ou seja, em nenhum momento haverá divulgação do seu nome e de quaisquer informações que permitam a identificação de pessoas, profissionais ou serviços de saúde. Os dados serão armazenados sob responsabilidade da Coordenadora da

pesquisa por, no mínimo, 5 (cinco) anos após a finalização do estudo. O relatório final desta pesquisa será publicado e compartilhado com o público em geral sem a identificação de nomes ou locais, mas contendo análises estatísticas que permitam a compreensão do objeto de estudo (intervenção formativa voltada à promoção da saúde mental no trabalho para enfermeiros líderes).

5. Liberdade de recusa: sua participação é de forma livre e voluntária. Você pode retirar o consentimento na participação a qualquer momento do estudo, sem necessidade de justificativa. A desistência não acarretará em quaisquer prejuízos para você, sua família ou para o serviço de saúde. Após o consentimento, você terá o direito de acessar o teor do conteúdo dos instrumentos de coleta de dados (tópicos que serão abordados) previamente ao momento da coleta de dados, para uma tomada de decisão informada.

6. Custos, remunerações ou indenizações: a participação nesta pesquisa não trará custos adicionais para você. Também não haverá qualquer tipo de pagamento ou benefício por sua participação e sua participação não incidirá em abono de falta, banco de horas ou horas extras em seu local de trabalho. Caso a pesquisa acarrete em qualquer tipo de dano em sua vida, você terá direito a indenização. Fica garantida indenização em casos de danos, comprovadamente decorrentes da participação na pesquisa, nos termos da Lei. O participante da pesquisa terá direito à indenização de qualquer dano decorrente da pesquisa, de acordo com a Resolução 466/2012 do Conselho Nacional de Saúde. Não está previsto pagamento ou gratificação decorrente da participação na pesquisa. A pesquisa não trará custos para o participante; sua participação é voluntária e o participante está livre para recusar, interromper sua participação e retirar seu consentimento a qualquer momento, inclusive após o período de coleta dos dados (nestes casos, os dados do participante serão excluídos do banco de dados). Por ser voluntário, o motivo de recusa em participar da mesma não irá acarretar qualquer penalidade. As informações do estudo serão divulgadas somente para fins científicos.

7. Esclarecimentos: sua participação é voluntária, isto é, a qualquer momento você irá (a) decidir se deseja participar e preencher o questionário, se deseja desistir da participação durante o preenchimento do questionário ou após o preenchimento, e poderá retirar seu consentimento sem nenhuma penalização ou prejuízo em sua relação com o pesquisador ou com a instituição Você ao clicar em "Aceito participar da pesquisa" irá: 1. Eletronicamente aceitar participar da pesquisa, o que corresponderá à assinatura deste termo (TCLE), o qual poderá ser impresso ou solicitado ao pesquisador via endereço de e-mail fornecido, se assim o desejar. 2. Responder ao questionário on-line que terá tempo gasto para seu preenchimento em torno de 30 minutos. Caso não concorde, basta fechar a página do navegador. Caso desista de participar durante o preenchimento do questionário e antes de finalizá-lo, os seus dados não serão gravados, enviados e nem recebidos pelo pesquisador e serão apagados ao se fechar a página do navegador. Caso tenha finalizado o preenchimento e enviado suas respostas do questionário e após decida desistir da participação deverá informar o pesquisador desta decisão e este descartará os seus dados recebidos sem nenhuma penalização. Você poderá imprimir uma via deste termo, ou se desejar, o pesquisador poderá encaminhar uma via assinada por e-mail ou da maneira como preferir. É importante que você guarde uma cópia deste documento em seus arquivos físicos ou eletrônicos. Para esclarecimentos adicionais, dúvidas ou sugestões sobre o estudo, você pode entrar em contato com a Coordenadora da pesquisa ou com o próprio Comitê de Ética em Pesquisa, conforme dados abaixo.

CONSENTIMENTO

Você concorda em participar deste estudo?

( ) Sim ( ) Não

Nome completo: _____Data: __/__ / _____

Assinatura do(a) participante: _____

Me. Fernanda Maria de Miranda
Pesquisadora Responsável
Contato tel.: (16)997217292
E-mail: fermariademiranda@gmail.com ou lidera.smt@gmail.com
Endereço para contato: Rodovia Washington Luis, km 235, caixa postal 676, São Carlos-SP, Cep. 13565-905

_____ _____

Me. Fernanda Maria de Miranda
Pesquisadora Responsável

Profa. Dra. Vivian Aline Mininel
Orientadora

Comitê de Ética em Pesquisa com Seres Humanos da UFSCar

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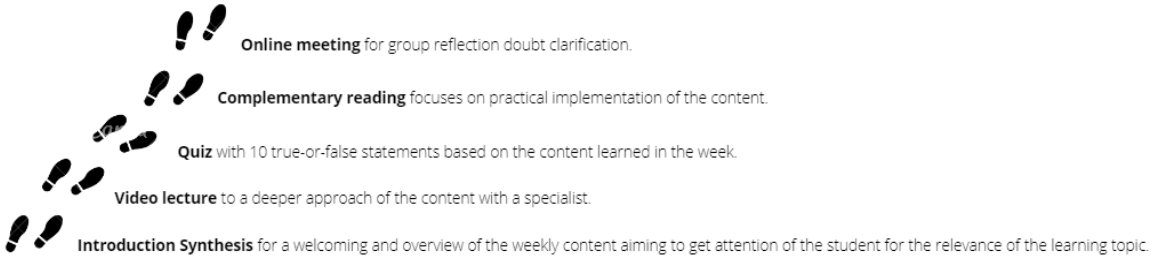
O prédio localiza-se na Área Sul da UFSCar, no prédio da Reitoria.

APPENDIX E: *Lidera-SMT* Syllabus

Coordinators: Dr. Vivian Aline Mininel, Dr. Vicki Kristman
Monitor: PhD Student Fernanda Maria de Miranda
Total credit hours: 8 hours (synchronous and asynchronous activities) + 2-hours extra module.
Goal: to discuss how to promote mental health at work among hospital nursing teams based on The National Standard of Canada for Psychological Health and Safety in the Workplace.
Information: Management of the program will be with Google Classroom and synchronous activities through Google Meet (invite will be available at Google Classroom)

Learning path: all modules will follow the same learning path.



Schedule:

Module	**CH**	**Objective**	**Invited Lecture**	**Asynchronous activities**	**Synchronous activities**
Module 1. Learning from Canadian experience	02	To present the *Lidera-SMT Program*, introduce mental health promotion at work as a necessity for nurses' leaders and present an overview of the standard.	Margaret Cernigoj (EPID@Work, Lakehead University, Canadá)	**Where?** Google Classroom **When?** Deadline for finish quiz activity on July 6th 2023	**Where?** Google Meet. **When?** July 7th 2023 from 11am to 12am (BRT).
Module 2. Prevention	02	To understand work as a determinant of the health-disease process, as well as identify psychosocial risks and their repercussions in the hospital context.	Dr. Vivian Aline Mininel (UFSCar, Brazil)	**Where?** Google Classroom **When?** Deadline for finish quiz activity on July 13th 2023	**Where?** Google Meet. **When?** July 14th 2023 from 11am to 12am (BRT).
Module 3. Promotion	02	To outline actions and strategies to be developed or improved in the work context to promote psychologically healthy and safe work.	Dr. Patrícia Pavan (USP, Brazil)	**Where?** Google Classroom **When?** Deadline for finish quiz activity on July 20th 2023	**Where?** Google Meet. **When?** July 21th 2023 from 11am to 12am (BRT).
Module 4. Resolution	02	To discuss the strength of health surveillance to monitor incidents and concerns related to mental health at work.	Dr. Fernanda Moura D Almeida Miranda (UFPR, Brazil)	**Where?** Google Classroom **When?** Deadline for finish quiz activity on July 27th 2023	**Where?** Google Meet. **When?** July 28th 2023 from 11am to 12am (BRT).

Extra Module. Supervising	02	To reflect about the role of leadership engagement for promoting mental health at work.	Dr. Vicki Kristman (EPID@Work, Lakehead University, Canada)	**Where?** Google Classroom **When?** Deadline for finish quiz activity on August 3rd 2023	**Where?** Google Meet. **When?** August 4th 2023 from 11am to 12am (BRT).

Assessment method:
Final grade = (Quiz 1 + Quiz 2 + Quiz 3 + Quiz 4)/4
The extra module will not be part of the final grade, since it is not mandatory.
For certification purposes, will pass the student who gets more than 5.0 on final grade.
75% of participation (4-modules)

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APPENDIX F: Sociodemographic and Occupational Questionnaire

Sexo	□ Feminino □ Masculino □ Outro: -
Data de Nascimento	__/__/____
Estado Civil	□ casado(a) □ união estável □ solteiro(a) □ separado(a)/divorciado(a) □ viúvo(a) □ Outro: -
Você é responsável por crianças pequenas ou outras pessoas que necessitem de cuidados?	□ não □ sim, um dependente □ sim, dois dependentes □ sim, três ou mais dependentes
Maior titulação	□ graduação □ especialização/MBA □ mestrado □ doutorado
Há quanto tempo você é formado como enfermeiro?	□ menos de um ano □ Entre 1 e 5 anos □ Entre 6 e 10 anos □ Entre 11 e 15 anos □ mais de 16 anos
Há quanto tempo você trabalha no seu vínculo principal?	□ menos de um ano □ Entre 1 e 5 anos □ Entre 6 e 10 anos □ Mais de 10 anos
Cargo	□ Enfermeiro □ Enfermeiro do Trabalho □ Supervisor/Coordenador/Gerente de Enfermagem □ Outro: -
Possui vínculo de trabalho com outra(s) instituição(ões)?	□ não □ sim, eu tenho um outro vínculo □ sim, eu tenho mais de dois outros vínculos
Faixa Salarial	□ Menos de dois salários mínimos □ Entre dois e quatro salários mínimos □ Acima de quatro salários mínimos
Setor de trabalho:	□ Central de Material e Esterilização □ Centro Cirúrgico □ Internações Clínicas ou Cirúrgicas □ Maternidade □ UTI adulto □ UTI neonatal/pediátrica □ Pronto Atendimento □ Outro: -

Quantas horas você trabalha em uma semana?	□ menos de 30 horas □ aprox. 30 horas □ aprox. 40 horas □ aprox. 60 horas □ mais de 60 horas
De onde você está acessando o Programa *Lidera-SMT*?	□ de casa □ do trabalho □ outros: -
Por onde você ficou sabendo do Programa *Lidera-SMT*?	□ Pelas redes sociais (Facebook, Instagram, outros) □ Pelo local de trabalho □ Pela Universidade □ Por amigos □ Outros: -

APPENDIX G: Learning test (Level II)

Id.	Questão	Resposta Comentada
1	1. A experiência canadense com o standard tem mostrado a importância em se considerar os fatores organizacionais ao formular estratégias de promoção, prevenção e resolução em saúde psicológica e segurança no trabalho. Por outro lado, a implantação do standard, em sua totalidade, foi vista como complexa pelas organizações. Os hospitais foram vistos como ambientes propícios para se fomentar ações relacionadas ao standard. Mesmo com este ambiente prolífero, foram identificadas barreiras para sua implementação em algumas organizações da área da saúde. Assinale a alternativa que apresenta algumas destes barreiras: a. Uma minoria dos fatores organizacionais descritos pelo standard se aplicam para o trabalho em saúde, considerando sua especificidade. b. A inclusão dos fatores "suporte para o autocuidado psicológico" e "proteção contra o sofrimento moral" desviaram o foco do standard. c. A falta de acesso a dados sobre os riscos psicossociais dificultou a seleção de intervenções ou levou a intervenções sem impacto significativo. d. Todas as acima.	Alternativa C. Os fatores organizacionais descritos pelo *standard* se aplicam para o trabalho em saúde. A inclusão de fatores organizacionais extras como o "suporte para o autocuidado psicológico" e "proteção contra o sofrimento moral" são previstos pelo *standard* e garantem sua adaptação para a realidade de trabalho em análise. Foram identificadas como barreiras a falta de acesso a dados sobre os riscos psicossociais, o que dificultou a seleção de intervenções ou levou a intervenções sem impacto significativo. Mudanças organizacionais significativas, como fusões, também dificultavam a implantação do *standard*, pois mudam-se a cultura organizacional, as prioridades, a alocação de recursos e, por vezes, os trabalhadores. Por fim, a falta de engajamento da liderança também foi uma barreira identificada. Foi observado que no início os líderes se engajaram, entretanto, com o tempo, os líderes se distraíram ou se ausentaram.
2	2. Utilizando o standard como orientador para a proposição de estratégias de saúde mental no trabalho o enfermeiro deve considerar que: a. Estratégias que promovam seu autocuidado alcançaram apenas resultados individuais e, logo, não contribuem para um ambiente psicologicamente mais saudável e seguro. b. Quanto menor a autonomia dada aos trabalhadores de enfermagem, menor será seu poder decisório, logo, mais psicologicamente saudável e seguro será seu trabalho. c. Mesmo que o trabalho abarque demandas psicológicas, como a proximidade com a dor ou sofrimento dos pacientes, é possível minimizar algumas demandas psicológicas por meio da educação permanente em saúde e dos espaços de diálogo. d. Todas as acima.	Alternativa C. O *standard* como orientador para a proposição de estratégias de saúde mental no trabalho convida o enfermeiro a considerar os fatores organizacionais que influenciam na saúde psicológica do trabalhador. A alternativa A está incorreta, pois as estratégias individuais que promovem seu autocuidado podem ser um ótimo ponto de partida para um ambiente psicologicamente mais saudável e seguro. A literatura tem encontrado bons resultados baseadas em *mindfulness*, por exemplo. A alternativa B está incorreta, pois boas práticas de gestão que aumentem a autonomia dos profissionais, dentro de seu nível de formação e função, podem promover ambientes de trabalho mais psicologicamente saudável e seguro. A alternativa C está correta. Mesmo que o trabalho abarque demandas psicológicas, como a proximidade com a dor ou sofrimento dos pacientes, é possível minimizar algumas demandas psicológicas por meio da educação permanente em saúde e dos espaços de diálogo.
3	3. Considere as afirmações abaixo sobre a prevenção de agravos sob a ótica do standard: I - A prevenção de agravos é considerada ponto de partida para a promoção da saúde mental no trabalho. II - Mitigar os riscos ocupacionais ambientais (físicos, químicos, biológicos, ergonômicos) trará resultados dissociados dos de prevenção de agravos mentais. III - Só será possível um enfermeiro propor ações de proteção psicológica no microcontexto da equipe de	Alternativa A. A afirmação I está correta: a prevenção de agravos é considerada ponto de partida para a promoção da saúde mental no trabalho. A afirmação II está errada, pois mitigar os riscos ocupacionais ambientais (físicos, químicos, biológicos, ergonômicos) trará resultados de prevenção de agravos mentais.

	enfermagem, se trabalhar em uma organização que considere plenamente a saúde do trabalhador um elemento da cultura organizacional. Avalie as proposições acima e escolha a alternativa correta: a. Apenas I. b. Apenas I e II. c. Apenas II e III. d. I, II e III.	A afirmação III está errada, pois um enfermeiro poderá propor ações de proteção psicológica no microcontexto da equipe de enfermagem, adotando uma postura de "campeão" proposto pelo *standard*, e estas podem ser um ponto de partida para a mudança da cultura organizacional.
4	4. Ações para resolução de eventos críticos em saúde mental no trabalho devem considerar a governabilidade dos diversos atores sociais envolvidos. O standard canadense nos convida a olhar para a resolução de forma sistemática e endereçada aos fatores organizacionais. I - O enfermeiro tem autonomia para fortalecer boas práticas de gestão e comunicação dentro da equipe de enfermagem. II - Ações simples como o incentivo a cordialidade, comportamentos não agressivos, qualificação profissional e comunicação assertiva pode alcançar resultados positivos especialmente para os fatores "civilidade e respeito", "liderança e expectativas claras", "reconhecimento e recompensa" e "engajamento". III - A autonomia do enfermeiro para propor ações de intervenção isenta a organização de sua responsabilidade na resolução de incidentes críticos. Avalie as proposições acima e escolha a alternativa correta: a. Apenas I. b. Apenas I e II. c. Apenas II e III. d. I, II e III.	Alternativa B. O enfermeiro tem autonomia para fortalecer boas práticas de gestão e comunicação dentro da equipe de enfermagem, considerando a Lei do Exercício profissional e sua posição dentro da equipe de enfermagem. Ações simples como o incentivo a cordialidade, comportamentos não agressivos, qualificação profissional e comunicação assertiva pode alcançar resultados positivos especialmente para os fatores "civilidade e respeito", "liderança e expectativas claras", "reconhecimento e recompensa" e "engajamento". Entretanto, a autonomia do enfermeiro para propor ações de intervenção não isenta a organização de sua responsabilidade na resolução de incidentes críticos. Como trabalhadores, os enfermeiros não são encarregados de promover a saúde mental no trabalho, mas sua consciência sobre os riscos psicossociais e os fatores do local de trabalho que afetam esses riscos, bem como sua posição na organização como enfermeiros-líderes, podem fortalecer a luta coletiva por ambientes saudáveis
5	5. Considere o caso a seguir: João, técnico de enfermagem da UTI estava desatento e pouco produtivo no trabalho. O enfermeiro do setor, buscando exercitar boas práticas de liderança, lembrou-se dos aspectos trabalhados no Programa *Lidera-SMT*, acolheu e ouviu qualificadamente o membro de sua equipe. João relatou que está passando por um momento familiar delicado na última semana. Entendendo que não se tratava de sofrimento causado pelo trabalho, nenhuma estratégia pode ser utilizada no micro espaço de trabalho deste enfermeiro para se promover a saúde mental de João Considerando a situação anterior o enfermeiro: a. Tomou uma boa decisão, pois o momento familiar delicado causador do problema não se relacionava ao trabalho de João. b. Tomou uma boa decisão, pois apenas estratégias no macro contexto de trabalho seriam eficazes. c. Não tomou uma boa decisão, pois é possível resolver o problema ocasionado pelo momento familiar delicado. d. Não tomou uma boa decisão, pois outras boas práticas como reorganizar o micro espaço de trabalho poderiam apoiá-lo.	Alternativa D. O enfermeiro tomou uma boa decisão em acolher e ouvir o trabalhador. Entretanto, sua análise de que nada poderia ser feito no sentido de promover saúde mental não foi uma boa decisão, pois a causa do sofrimento não é o trabalho está incorreta. O trabalho nem sempre é causador do sofrimento, mas certamente pode ser parte da solução. A própria escuta qualificada pode ser uma promotora de saúde mental no trabalho, neste caso. O enfermeiro poderia também articular internamente entre a equipe de enfermagem no redimensionamento das tarefas diárias do plantão de João, se fosse possível. Assim como as estratégias no macrocontexto das organizações, estratégias simples, no microcontexto de trabalho das equipes podem promover saúde mental no trabalho.

Nota: durante as coletas de dados de follow-up a ordem das alternativas foi trocada.

APPENDIX H: Perceived attitudes towards training transfer among nurses (Level III) (Portuguese version).

Item	Concordo Totalmente	Concordo Parcialmente	Nem concordo nem discordo	Discordo parcialmente	Discordo totalmente
Farei um plano para colocar em prática o que aprendi no Programa *Lidera-SMT* depois que voltar ao local de trabalho.					
Vou trabalhar o máximo possível para colocar em prática o plano feito a partir do Programa *Lidera-SMT* em benefício dos trabalhadores de enfermagem					
Meu processo de trabalho ficou mais organizado depois que coloquei em prática o que aprendi no Programa *Lidera-SMT*.					
Não sei se vou conseguir colocar em prática o que aprendi no Programa *Lidera-SMT*					
Acredito que o que aprendi com o Programa *Lidera-SMT* é feito em benefício dos trabalhadores.					
Sinto-me motivado para o meu papel na promoção da saúde mental no trabalho depois de ter frequentado o Programa *Lidera-SMT*.					
Sinto-me mais engajada(o) na promoção da saúde mental no trabalho após participar do Programa *Lidera-SMT*.					
Supervisores e/ou colegas têm reconhecido meus esforços para promover um ambiente mais seguro e saudável.					
Sinto-me mais seguro(a) ao promover ações de SMT após participar do Programa *Lidera-SMT*.					
Tenho mudado meu comportamento para ser mais coerente com o que aprendi no Programa *Lidera-SMT*					
Eu sabia que me beneficiaria com o Programa *Lidera-SMT*.					

Meu desempenho no trabalho melhorou depois que participei do Programa *Lidera-SMT*.					
Os trabalhadores sob minha supervisão serão beneficiados se eu colocar em prática o que aprendi.					
Sou capaz de colocar em prática o que aprendi no Programa *Lidera-SMT* apesar das demandas no trabalho.					

Font: adaptation from Liaw et al (2016)

APPENDIX I: *Lidera-SMT* final content in Portuguese

Boas Vindas

Como navegar?
Mensagem de boas vindas e orientações iniciais sobre o Programa *Lidera-SMT*. Qualquer dúvida, entre em contato pelos espaços de interação do Google Classroom ou pelo e-mail: lidera.smt@gmail.com. Vídeo: https://www.youtube.com/watch?v=nTL1PZkUP5s

Obtendo algumas informações sobre você!
Olá pessoal. Como expliquei no vídeo de boas-vindas, o programa *Lidera-SMT* está vinculado ao projeto de doutorado em enfermagem "Training Brazilian nurses to promote mental health at work", financiado pelo Programa de Doutorado Sanduíche no Exterior (PDSE) da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Antes de iniciarmos gostaríamos de conhecer você, seu trabalho e seus conhecimentos e comportamentos sobre a saúde mental no trabalho. Pedimos gentilmente que preencha o questionário abaixo, caso concorde que seus dados sejam utilizados na pesquisa em questão.
Antes de acessar o questionário, você será direcionado ao Termo de Consentimento Livre e Esclarecido, que explica os benefícios e riscos dessa pesquisa. Todos os dados coletados serão analisados anonimamente e sua participação é importante para avaliarmos se o Programa *Lidera-SMT* que estamos propondo é viável ou não. Mas, mesmo que você não queira participar do estudo, você ainda sim poderá ter acesso ao conteúdo do programa, ok? Sejam todos bem-vindos ao *Lidera-SMT*! Formulário: https://docs.google.com/forms/d/e/1FAIpQLSfGB-u-EPN5lJ0KwCgW4sRUvHOYH1WcXnulc53iM1iM1GR_Sw/closedform

Conteúdo Programático
Ao longo de quatro semanas refletiremos sobre como promover a saúde mental no trabalho de enfermagem hospitalar. Escolhemos trabalhar com a formação de enfermeiros líderes tendo em vista seu papel chave nas equipes de enfermagem para uma mudança mais efetiva no ambiente de trabalho. Discutiremos os conceitos chave do referencial teórico canadense National Standard of Psychological Workplace Health and Safety, em especial os 13 fatores organizacionais que impactam a saúde mental dos trabalhadores sob a ótica dos pilares estratégicos: prevenção, promoção e resolução. Arquivo: https://drive.google.com/file/d/1GEWwgTjCdhFgGtLSuNh2hjCnJWybmZN4/view https://drive.google.com/file/d/1Ky0_jQAKLoNbSod-4GFDOhaKMpH6cf3j/view

Módulo 1: aprendendo com o Canadá

Atividades (prazo inicial: 06/07/2023, prazo final (recuperação): 04/08/2023)
Olá enfermeiro, seja bem vindo ao Programa *Lidera-SMT*. O primeiro módulo objetiva apresentar o Programa *Lidera-SMT*, apresentar a promoção da saúde mental no trabalho como uma necessidade para os líderes de enfermagem e apresentar uma visão geral da norma canadense. Para conhecer o Programa *Lidera-SMT*, convidamos você a voltar para a sessão de "Boas-Vindas" acima e verificar o material que preparamos por lá. Depois disso você estará pronto para continuar a leitura da Síntese de Introdução de hoje (texto abaixo). Lembre-se que todos os módulos seguirão o mesmo caminho: Leia a síntese de introdução. Faça o quiz. Leia o material complementar. Venha, sempre que possível, participar de nosso encontro síncrono semanal para discutir as leituras, refletir em conjunto e sanar as dúvidas. Se você terminou a sessão de boas-vindas, vamos começar?
Síntese de Introdução:

O programa *Lidera-SMT* tem como objetivo discutir a promoção da saúde mental no trabalho de enfermagem hospitalar a partir da experiência canadense com o referencial nacional denominado "Psychological Health and Safety in the Workplace", conhecido como "Standard".

Essa estrutura foi desenvolvida com base em três pilares estratégicos (prevenção de danos, promoção da saúde e resolução de eventos críticos) e é reconhecida desde 2013 como uma política nacional para promover ambientes de trabalho psicologicamente mais saudáveis (Canadian Standards Association; Bureau De Normalization Du Québec, 2013).

O standard identifica treze fatores do local de trabalho relacionados à saúde mental do trabalhador (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013):

- Cultura organizacional: "normas, valores, crenças, significados e expectativas que os membros do grupo têm em comum e que usam como pistas comportamentais e de resolução de problemas (…)". (pág. 19)
- Apoio psicológico e social: "Todas as interações sociais de apoio disponíveis no trabalho, seja com colegas de trabalho ou supervisores (…) o ser está comprometido". (p. 20)
- Psychological and social support: "All supportive social interactions available at work, either with co-workers or supervisors (…) eles [os trabalhadores] acreditam que sua organização valoriza suas contribuições, está comprometida em garantir seu bem-estar psicológico e fornece suporte significativo se esse bem-estar for comprometido". (p. 20)
- Liderança e expectativas claras: "A liderança é eficaz e fornece apoio suficiente que ajuda os trabalhadores a saber o que precisam fazer, explica como seu trabalho contribui para a organização e discute a natureza e os resultados esperados das mudanças iminentes". (p. 20)
- Civilidade e respeito: "um ambiente de trabalho onde os trabalhadores são respeitosos e atenciosos em suas interações uns com os outros" (p. 20)
- Demandas psicológicas "documentadas e avaliadas em conjunto com as demandas físicas do trabalho. As demandas psicológicas do trabalho permitirão que as organizações determinem se uma determinada atividade do trabalho pode ser um risco para a saúde e o bem-estar do trabalhador". (p. 20)
- Crescimento e desenvolvimento: "os trabalhadores recebem encorajamento e apoio no desenvolvimento de suas habilidades interpessoais, emocionais e de trabalho". (p. 21)
- Reconhecimento e recompensa: "reconhecimento e valorização adequados dos esforços dos trabalhadores de maneira justa e oportuna". (p. 21)
- Envolvimento e influência: "os trabalhadores são incluídos nas discussões sobre como seu trabalho é feito e como decisões importantes são tomadas". (p. 21)
- Gerenciamento de carga de trabalho: "tarefas e responsabilidades atribuídas podem ser realizadas com sucesso dentro do tempo disponível". (p. 22)
- Engajamento: "os trabalhadores gostam e se sentem conectados ao seu trabalho e onde se sentem motivados a fazer bem o seu trabalho. O envolvimento do trabalhador pode ser físico, emocional e/ou cognitivo". (p. 22)
- Equilíbrio: "há aceitação da necessidade de um senso de harmonia entre as demandas da vida pessoal, familiar e profissional". (p. 22)
- Proteção psicológica: "em um ambiente de trabalho onde a segurança psicológica dos trabalhadores é garantida (…)". (pág. 22)
- Proteção da segurança física: "Quando a segurança psicológica e física de um trabalhador é protegida contra perigos e riscos relacionados ao ambiente físico". (p. 23)

O standard também destaca a importância de todas as mudanças para promover a saúde mental no local de trabalho serem integradas, compondo um sistema completo de melhoria contínua e mudança organizacional. Nesse sentido, o objetivo geral dessa iniciativa canadense como "ajudar as organizações a se moverem em direção a uma posição mais elevada de cuidado e, finalmente, atingir a meta de cuidado e diligência na proteção da saúde e segurança psicológica do trabalhador" (Canadian Standards Association, 2014, p. . 18).

Neste primeiro módulo buscaremos entender o que os canadenses vivenciaram desde a publicação deste standard, refletindo sobre as possibilidades e desafios para eles. Isso é importante para compreendermos a estrutura e os elementos do standard e como ele tem impactado a discussão sobre a saúde mental nas organizações Canadense. Este módulo é também um disparador para refletirmos se algum elemento da experiência internacional pode ser aprendido e aplicado em nossa realidade. Será que os desafios do Canadá e do Brasil são muito distintos? Para isso, apresentamos Margaret Cernigoj, Líder Operacional de Mobilização

e Implementação de Conhecimento da Enhancing the Prevention of Injury & Disability at Work (EPID@Work) da Lakehead University, Thunder Bay, Ontário, Canadá, como nossa primeira convidada para a vídeo aula.

Por favor, após a aula, vá para a atividade de quiz para verificação de aprendizagem. Também, para um estudo mais aprofundado, incluímos como leitura complementar o texto "The National Standard of Psychological Health and Safety in the Workplace: A Psychometric and Descriptive Study of the Nursing Workforce in British Columbia Hospitals", publicado em 2021 que traz uma análise dos fatores organizacionais do standard canadense sob a perspectiva do trabalho das enfermeiras hospitalares de um hospital de British Columbia, no Canadá.

Video aula: https://www.youtube.com/watch?v=e7e7B8hCasc

Leitura complementar:
https://drive.google.com/file/d/1HGZVTt__Fg3Bvc8ZMv9v5LIsC0AVXLa5/view

Quiz:
1. O desenvolvimento de um standard nacional no Canadá foi motivado pela: a) relevância do trabalho na vida cotidiana; b) influência do local de trabalho na saúde do trabalhador; c) nos custos com saúde do trabalhador no Canadá.
( ) Verdadeiro ( ) Falso

2. O desenvolvimento do standard ocorreu de forma vertical por meio do governo federal canadense, sendo uma atividade exclusiva da Comissão de Saúde Mental do Canadá. Ele se baseia, além da legislação nacional e internacional sobre a Saúde do Trabalhador, nas ações de melhoria contínua do Sistemas de Gestão de Saúde e Segurança, ou seja, planejar, fazer, checar e agir.
( ) Verdadeiro ( ) Falso

3. O standard possui três focos estratégicos: 1. responsabilidade compartilhada; 2. Documentação sistemática; e 3. Engajamento da gestão.
( ) Verdadeiro ( ) Falso

4. Um local de trabalho onde supervisores e colegas de trabalho apoiam as preocupações psicológicas e de saúde mental dos trabalhadores e respondem apropriadamente, se necessário, é uma organização que tem trabalhado satisfatoriamente o fator organizacional engajamento.
( ) Verdadeiro ( ) Falso

5. Embora os desenvolvedores do standard tenham sugerido outros dois fatores organizacionais (1. Suporte para o autocuidado psicológico; e 2. Proteção da saúde contra o sofrimento moral) para os serviços de saúde, a implantação do standard foi mais difícil nesta área do que em outros setores, pois a motivação era menor na área da saúde.
( ) Verdadeiro ( ) Falso

Encontro Online (data: 07/07/2023)
Temos um encontro online no dia 7 de julho de 2023, das 11h às 12h (BRT). É importante ter atividades de interação para refletir com nossos pares e esclarecer todas as dúvidas. Esta atividade síncrona é incentivada, mas não obrigatória. Nosso link é sempre o mesmo: https://meet.google.com/gca-dmxm-gfq Gravação do encontro: https://www.youtube.com/watch?v=-09FCusaq8U

Módulo 2: promoção

Atividades (prazo inicial: 13/07/2023; prazo de recuperação: 04/08/2023)
Olá enfermeiro, seja bem vindo ao Programa *Lidera-SMT*. O objetivo do Módulo 2 é discutir ações e estratégias a serem desenvolvidas ou melhoradas no contexto laboral para a promoção do trabalho psicologicamente saudável e seguro.

Síntese de Introdução:

O segundo pilar estratégico do standard é a promoção da saúde. Ele considera que garantir a segurança, elemento basal sob o pilar da prevenção, é o ponto de partida para a promoção da saúde. Promover saúde, a partir da prevenção, significa primeiro olhar para os riscos psicossociais que adoecem o trabalhador e a partir daí expandir a ação para outros fatores que fortalecem a percepção de bem-estar. Nesse sentido, o standard sugere compreender os treze fatores organizacionais (cultura organizacional; apoio psicológico e social; liderança e expectativas claras; civilidade e respeito; demandas psicológicas; crescimento e desenvolvimento; reconhecimento e recompensa; envolvimento e influência; gerenciamento de carga de trabalho; engajamento; equilíbrio; proteção psicológica; e proteção da segurança física) para saber priorizá-los no desenvolvimento de estratégias sustentáveis em um ciclo de melhoria contínua (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013).

A literatura tem revelado resultados positivos de estratégias de promoção da saúde mental no trabalho no contexto da enfermagem hospitalar. Nessa abordagem sistemática, as estratégias de promoção são poderosas tanto para melhorar os sintomas de depressão, ansiedade, estresse, burnout (Sampson; Melnyk; Hoying, 2020; Rickard et al., 2012), quanto para aumentar a satisfação no trabalho (Sampson; Melnyk; Hoying, 2020; Rickard et al., 2012), estilo de vida saudável (Sampson; Melnyk; Hoying, 2020), bem-estar (Ketelaar et al., 2014), funcionamento no trabalho (Ketelaar et al., 2014) e saúde geral (Rickard et al., 2012).

A maioria das estratégias entre a equipe de enfermagem descreve foco individual, centrado no trabalhador, e refletem ações de desenvolvimento de habilidades (Sampson; Melnyk; Hoying, 2020; Perry et al., 2017), atendimento psicológico individual (Amaral et al., 2022; Ketelaar et al., 2014; Bolier et al., 2014) e programas de construção de resiliência (Caldi et al., 2022; Zhang et al., 2021; Sampson; Melnyk; Hoying, 2020). O programa *Lidera-SMT*, por exemplo, é um bom exemplo de estratégia de desenvolvimento individual. Com os exemplos acima, é possível discutir que enquanto alguns fatores organizacionais como "crescimento e desenvolvimento" e "apoio psicológico e social" têm sido refletidos em diversas ações, outros fatores ainda têm suas discussões incipientes. É imprescindível que líderes tenham em mente quais fatores são mais relevantes para sua realidade de trabalho e equipe para, assim, priorizar estratégias que estejam dentro de sua governabilidade e sejam significativas e sustentáveis.

A responsabilidade de promover saúde mental e da organização, porém, a luta por ambientes de trabalho psicologicamente saudáveis e seguros é coletiva. Convidamos você a refletir, com ajuda dos elementos do standard canadense, sobre como os enfermeiros podem fortalecer essa luta.

Para isso, neste módulo vamos conhecer algumas ações e estratégias positivas a serem desenvolvidas ou melhoradas no contexto hospitalar. Também, o módulo refletirá sobre as responsabilidades de cada ator social (organização, gestores, enfermeiros, equipes de enfermagem, etc.) e a autonomia do enfermeiro-líder. Para isso, apresentamos a Dra. Vivian Aline Mininel da Universidade Federal de São Carlos como convidada da nossa video aula semanal.

Por favor, após a vídeo aula, vá para a atividade de quiz para a verificação de aprendizagem. Para aprofundamento do estudo, incluímos como leitura complementar o artigo "Building expert agreement on the importance and feasibility of workplace health promotion interventions for nurses andmidwives: A modified Delphi consultation", publicado em 2017.

Video aula: https://www.youtube.com/watch?v=gowjBnKtUF0

Leitura complementar:
https://drive.google.com/file/d/1qDyRzCxDRqHANBneVcuNE2jBFL3VV1xQ/view

Quiz:

1. A responsabilidade de se promover saúde mental no trabalho da equipe de enfermagem hospitalar é exclusiva do enfermeiro.
( ) verdadeiro ( ) falso

2. Como a saúde mental é uma manifestação individual, as estratégias de promoção à saúde mental devem apenas ter foco no autocuidado.
( ) verdadeiro ( ) falso

3. O trabalho é sempre causador dos problemas de saúde mental, então deve ser sempre parte da solução.
( ) verdadeiro ( ) falso

4. Conferir autonomia, deixar claras as expectativas, objetivos e critérios de avaliação dos trabalhadores e compartilhar informações com foco nos objetivos do trabalho podem ser entendidas como estratégias de promoção da saúde mental no trabalho.
( ) verdadeiro ( ) falso

5. Fortalecer as competências de mediação de conflitos e de comunicação assertiva são exemplos de estratégias de promoção da saúde mental no trabalho sob o olhar da civilidade e respeito.
( ) verdadeiro ( ) falso

Encontro Online (data: 14/07/2023)
Temos um encontro online no dia 14 de julho de 2023, das 11h às 12h (BRT). É importante ter atividades de interação para refletir com nossos pares e esclarecer todas as dúvidas. Esta atividade síncrona é incentivada, mas não obrigatória. Nosso link é sempre o mesmo: https://meet.google.com/gca-dmxm-gfq Gravação do encontro: https://www.youtube.com/watch?v=MtWbZwho-mw

Módulo 3: prevenção

Atividades (prazo inicial: 21/07/2023; prazo de recuperação: 04/08/2023)

Olá enfermeiro, seja bem vindo ao Programa *Lidera-SMT*. Nosso terceiro módulo do *Lidera-SMT* objetiva compreender o trabalho como determinante do processo saúde-doença, bem como identificar os riscos psicossociais e suas repercussões no contexto hospitalar.

Síntese de Introdução:

O primeiro pilar estratégico do standard canadense é prevenir danos. Ele considera que a prevenção construirá uma base para a promoção da saúde mental no trabalho, garantindo um local de trabalho psicologicamente saudável e seguro como aquele "que promove o bem-estar psicológico dos trabalhadores e trabalha ativamente para prevenir danos à saúde psicológica do trabalhador, inclusive em casos negligentes, imprudentes , ou formas intencionais" (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013, p. 4).

Nesse contexto, precisamos entender como danosas as consequências de uma situação que pode causar "uma lesão ou agravo à saúde" (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013, p. 3). Essas situações que podem prejudicar um trabalhador são resultado da exposição do trabalhador aos riscos psicossociais. Podemos incluir como situações que podem conduzir aos riscos psicossociais: assédio, bullying, discriminação, violência, estigma, etc. (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013).

Todos os riscos psicossociais relacionados a um trabalho precisam ser relatados e mitigados. Embora no contexto hospitalar, a equipe de enfermagem está mais exposta a riscos biológicos, ergonômicos, físicos e psicológicos (Beleza et al, 2013), os riscos psicológicos geralmente não são incluídos nos mapas de riscos organizacionais (Monteiro, Silva, 2015). O primeiro passo para promover um ambiente de trabalho psicológico saudável e seguro é conhecer os perigos físicos e psicológicos que influenciam os riscos psicossociais, para então, trabalhar para mitigá-los, reduzi-los ou extingui-los.

O Canadá desenvolveu uma ferramenta baseada no standard para avaliar os fatores organizacionais mais influentes em um processo de trabalho, chamado de Guarding Minds @ Work (Smith; Oudyk, 2021). Essa ferramenta ainda não possui versão brasileira, mas foi traduzida para o português por Magalhães e Paulo (2018). Na enfermagem, algumas pesquisas preliminares mostram que as enfermeiras do Canadá identificam nove fatores do local de trabalho como uma preocupação séria ou significativa em seu local de trabalho: Proteção Psicológica; Gerenciamento de carga de trabalho; Equilíbrio; Reconhecimento e Recompensa; Cultura organizacional; Apoio Psicológico; Liderança e Expectativas; Civilidade e Respeito; e Crescimento e Desenvolvimento (Havaei; Park; Astivia, 2021).

Além disso, o standard sugere às organizações como ferramenta para a implementação de estratégias o método PDCA (plan, do, check, act) e a compilação das estratégias criadas em um sistema, denominado Sistema de Gestão de Segurança e Saúde Psicológica (PHSMS) (Canadian Standards Association, 2014).

Neste segundo módulo vamos conhecer o trabalho como determinante do processo saúde-doença, bem como identificar os riscos psicossociais e suas repercussões no contexto hospitalar. A Dra.Vivian Aline Mininel, da Universidade Federal de São Carlos volta a falar conosco nessa vídeo aula semanal. Por favor, após a aula, vá para a atividade do quiz para verificação de aprendizagem.

Para aprofundamento, incluímos como leitura complementar o "Trabalho como determinante do processo saúde-doença" de Cardoso (2015) e o texto colombiano "Relationship of the PDCA cycle in occupational health and safety management" (2021).

Video aula: https://www.youtube.com/watch?v=Ln6TryiGBX8

Leitura complementar:

https://drive.google.com/file/d/1WRco7sqiy4QjJWKTIgQgfncXY2KGQNO1/view
https://drive.google.com/file/d/1GxgjaJtj3trOOqh7CKwXNqiB5VFw137D/view

Leitura incluída a pedido dos alunos:

https://drive.google.com/file/d/1oIQvVbT_pLQIP23PqIs1Osv5XzSn6dWv/view
https://drive.google.com/file/d/1qI2ba80X79LDWWVvpHrz2IwfIeRfnUqv/view

Quiz:

1. As interações entre o trabalhador e as características de seu trabalho (ex.: contexto, conteúdo, organização) podem resultar em perigos, riscos e danos à sua saúde.
( ) verdadeiro ( ) falso

2. Um ambiente psicologicamente seguro e saudável é aquele em que a probabilidade de ocorrência de danos foi diminuída.
( ) verdadeiro ( ) falso

3. Um aspecto ou fator no contexto de trabalho pode deve ser classificado como neutro, protetivo ou danoso à saúde do trabalhador, e essa classificação é imutável.
( ) verdadeiro ( ) falso

4. A proteção da segurança física é dissociada dos riscos psicossociais.
( ) verdadeiro ( ) falso

5. Os sistemas de gestão organizacional são imprescindíveis para identificar e manejar os riscos psicossociais.
( ) verdadeiro ( ) falso

Encontro Online (data: 21/07/2023)
Temos um encontro online no dia 21 de julho de 2023, das 11h às 12h (BRT). É importante ter atividades de interação para refletir com nossos pares e esclarecer todas as dúvidas. Esta atividade síncrona é incentivada, mas não obrigatória. Nosso link é sempre o mesmo: https://meet.google.com/gca-dmxm-gfq Gravação do encontro: https://www.youtube.com/watch?v=IbFYOKPCMBo

Módulo 4: resolução

Atividades (prazo inicial: 27/07/2023; prazo de recuperação: 04/08/2023)
Olá enfermeiro, seja bem vindo ao Programa *Lidera-SMT*. O objetivo do Módulo 4 é discutir a força da vigilância em saúde para monitorar eventos críticos e agravos relacionados à saúde mental no trabalho.

Síntese de Introdução:

No módulo 2 começamos a trabalhar com o conceito de dano e perigo. Estudamos os riscos psicológicos relativos à equipe de enfermagem hospitalar e porque esse risco precisa ser incluído aos olhos da organização. Além disso, no módulo 3, foram estudadas as estratégias de promoção. Neste momento, vamos falar sobre mitigação de eventos reais.

Perseguindo a noção de melhoria contínua é relevante compreender qual é o valor da vigilância para encontrar incidentes ou preocupações e poder trabalhar de forma resolutiva. Nesse sentido, apresentamos o último pilar estratégico do standard canadense, a resolução de eventos críticos (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013).

Se um trabalhador adoeceu ou se lesionou devido a um risco psicológico, faz parte de um ambiente positivo apoiar este indivíduo e analisar os treze fatores laborais de forma a melhorar as estratégias de prevenção e promoção já implementadas pelo Sistema de Gestão de Segurança e Saúde Psicológica (PHSMS) (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013).

Para o standard, é importante a noção de criar um programa de gerenciamento que seja contínuo e convergente com os objetivos estratégicos da organização, ao invés de uma iniciativa pontual ou de curto prazo (Canadian Standards Association, 2014). O Brasil tem um sistema de vigilância que pode orientar o pilar da resolução.

A criação da Rede Nacional de Atenção Integral à Saúde do Trabalhador (RENAST) em 2002 e a implantação dos Centros de Referência em Saúde do Trabalhador (CEREST) refletem ganhos que se refletem na construção de uma poderosa rede de vigilância à saúde do trabalhador trabalhador, incluindo aspectos relacionados à saúde mental. Embora ainda incipiente, a literatura brasileira reconhece como essencial o debate sobre a relação entre organização do trabalho e saúde mental dos trabalhadores (Araújo; Palma; Araújo, 2017).

No contexto real de trabalho da enfermagem hospitalar, além de reconhecer os riscos psicossociais levando em consideração o ambiente e as condições de trabalho é preciso identificar as causas de adoecimento decorrentes do trabalho, avaliar e acompanhar os casos de adoecimento, assim como monitorar os casos de violência, para a proposição de intervenções que visem a resolução dos eventos críticos.

Neste módulo vamos discutir conceitos sobre o adoecimento e a vigilância em saúde para monitorar eventos críticos relacionados à saúde mental no trabalho, perpassando pelos diversos atores sociais envolvidos. Para isso, apresentamos a Dra. Fernanda Moura D'Almeida Miranda, da Universidade Federal do Paraná (UFPR), professora convidada para nossa videoaula semanal. Durante a aula, convidamos você a refletir sobre como os fatores organizacionais do standard canadense contribuem na compreensão das ações de boas práticas propostas.

Por favor, após a vídeoaula, vá para a atividade de quizz para um ponto de verificação de aprendizado.

Para aprofundamento do estudo, incluímos como leitura complementar os quatro artigos sugeridos pela professora convidada, com o objetivo de refletir acerca da Reforma Trabalhista Brasileira e seus impactos na saúde dos trabalhadores de saúde (Santana; Sarquis; Miranda, 2020) e das condições de trabalho dos profissionais de enfermagem no enfrentamento ao novo coronavírus e apontar o impacto na vida desses profissionais em meio à pandemia. (Miranda et al., 2020). Assim como exemplificar o perfil de adoecimento dos trabalhadores de saúde e seu absenteísmo, em um hospital público na região sul do Brasil (Santana et al, 2016; Brey et al, 2017).

Video aula: https://www.youtube.com/watch?v=35m4XZInWi4

Leitura complementar:

https://drive.google.com/file/d/1VT1RA-Da2EBz3leTd5tl9w6z1pg-uuaF/view
https://drive.google.com/file/d/1SJa4eibHis45Rr5d-KNtzrnRAdtMHbqw/view
https://drive.google.com/file/d/1aFpdVVYjOAMxhuhaixlxrOoGlly0Ot6z/view
https://drive.google.com/file/d/1Ko4ym0n4I_px4Up88GNobn-J3YIyWeSt/view

Quiz:

1. É importante considerar as diversidades contratuais e regionais ao se avaliar os riscos do trabalho de enfermagem, pois essa avaliação pode desnudar riscos psicossociais específicos e direcionados, como por exemplo jornadas extensas em regiões remotas.
( ) verdadeiro ( ) falso

2. A avaliação do ambiente de trabalho e seu desdobramento em ações, como o dimensionamento adequado de pessoal, além de contribuir para a diminuição do estresse, insegurança e bem-estar do trabalhador, gera resultados benéficos para a organização, como o aumento da produtividade.
( ) verdadeiro ( ) falso

3. As ações relacionadas a resolução de eventos críticos em saúde mental no trabalho são de responsabilidade exclusiva dos Serviços Especializados em Engenharia de Segurança e em Medicina do Trabalho (SESMT).
( ) verdadeiro ( ) falso

4. Ações de avaliação e acompanhamento que identifiquem o setor de trabalho que mais adoece são contra-indicadas, pois deterioram o clima de trabalho e aumentam o adoecimento.
( ) verdadeiro ( ) falso

5. Boas práticas de gestão da equipe de enfermagem como o incentivo a cordialidade, comportamentos não agressivos, qualificação profissional e comunicação assertiva, assim como a ajuste de folgas na escala de trabalho, quando possível, são ações simples e de autonomia do enfermeiro que contribuem para a ambientes de trabalho mais psicologicamente saudáveis e seguros.
( ) verdadeiro ( ) falso

Encontro Online (data: 28/07/2023)
Temos um encontro online no dia 28 de julho de 2023, das 11h às 12h (BRT). É importante ter atividades de interação para refletir com nossos pares e esclarecer todas as dúvidas. Esta atividade síncrona é incentivada, mas não obrigatória. Nosso link é sempre o mesmo: https://meet.google.com/gca-dmxm-gfq Gravação do encontro: https://www.youtube.com/watch?v=HvOyxIcJB1o

Módulo (Extra) para Gestores

Orientações
Caso você tenha cargo de gestão no hospital em que trabalha, participe do módulo extra a seguir. Caso contrário, você pode pular este conteúdo e ir direto para o módulo de encerramento chamado "Até Breve", logo abaixo. Gostaria de mais informações? Veja o vídeo de orientação a seguir: https://www.youtube.com/watch?v=4QXEhT4oVsY

Atividades (prazo inicial: 03/08/2023; prazo de recuperação: 04/08/2023)
Olá gestor, seja bem vindo ao módulo adicional do Programa *Lidera-SMT*. Este módulo objetiva refletir sobre o papel do engajamento da liderança na promoção da saúde mental no trabalho.

Síntese de Introdução:

O Canadá tem tido resultados promissores com o standard nacional que utilizamos como

base teórica para o *Lidera-SMT*. Quando analisados os fatores que atuam como facilitadores ou barreiras para sua implementação, foram identificadas três grandes categorias (Wilson; Bradley, 2017): a) Estrutura, recursos e acesso à informação b) Conscientização e c) Apoio e envolvimento institucional.

No que tange o acesso à estrutura, recursos e acesso à informação, foi verificado que nos locais de trabalho onde já existiam processos, políticas e programas para promoção da saúde mental foram mais propícios a implantar o standard. Assim como, ter mais recursos, infraestrutura e sistematização da informação também levaram a melhores resultados de implantação. Para a implantação do standard a autonomia, competência de negociação e conscientização dos envolvidos nos processos de mudança foram imprescindíveis (Wilson; Bradley, 2017).

Conforme refletimos ao longo do *Lidera-SMT*, não é surpresa a percepção de que é necessário o pleno engajamento organizacional para a implementação do standard canadense. O próprio standard reconheceu que nos cenários em que a alta gestão da organização não estivesse "a bordo" poderia ser impraticável implementar integralmente suas orientações. Para organizações cuja a alta gestão ainda não se comprometeu com a luta por ambientes de trabalho mais psicologicamente saudáveis e seguros, é possível que os gerentes e líderes da linha de frente implementem alguns programas ou iniciativas para demonstrar o valor para a organização. Essa abordagem dependerá do envolvimento e do esforço de trabalhadores da linha de frente para seu sucesso (Canadian Standards Association; Bureau De Normalization Du Quebec, 2013).

Durante o *Lidera-SMT* buscamos despertar nos enfermeiros o interesse em participar da luta coletiva para a proposição de ambientes mais psicologicamente saudáveis e seguros. Embora a luta seja coletiva, e todo enfermeiro tenha autonomia para desenvolver estratégias de gestão na promoção da saúde mental, é necessário reconhecer que diferentes funções em uma organização podem levar a mais ou menos acesso aos fatores listados anteriormente.

A legislação para o exercício profissional da enfermagem brasileira prevê a responsabilidade dos enfermeiros perante a equipe de enfermagem (Brasil, 1986). São pontuados como desafios entre os enfermeiros gestores o desenvolvimento de competências de liderança, comportamentos estratégicos, negociação, gestão de conflitos de enfermagem e gestão hospitalar (Scofano; Valente; Lanzillotti, 2019). Neste sentido, o *Lidera-SMT* acredita que alguns dos elementos do standard podem ser úteis para que os enfermeiros brasileiros, que ocupam cargo de gestão da equipe de enfermagem, sendo pontes entre o trabalhador da equipe de enfermagem e a organização, comecem a refletir sobre o promoção da saúde mental, tendo como ponto de partida sua posição na estrutura organizacional, ganhando - por meio na negociação com a alta gestão - mais autonomia e governabilidade para fazer mudanças complexas no local de trabalho.

Para isso, apresentamos nossa convidada desta semana, a Dra. Vicki Kristman, professora da Lakehead University e Diretora do EPID@Work Research Institute no Canadá, para nossa vídeo aula semanal.

Por favor, após a aula, vá para a atividade do quiz para verificação de aprendizagem.

Para aprofundamento do estudo, incluímos como leitura complementar o artigo "Influence of toxic and transformational leadership practices on nurses' job satisfaction, job stress, absenteeism and turnover intention: A cross-sectional study" que examinou a influência

das práticas de liderança tóxica e transformacional na satisfação profissional dos enfermeiros, sofrimento psicológico, absenteísmo e intenção de deixar a organização ou a profissão de enfermagem e o artigo "Leaders supporting leaders: Leaders' role in building resilience and psychologically healthy workplaces during the pandemic and beyond" que reflete a partir da pandemia de Covid-19 sobre a construção de resiliência e locais de trabalho psicologicamente saudáveis na perspectiva da liderança.

Vídeo aula: https://www.youtube.com/watch?v=_OuP34rPiJA

Leitura complementar:
https://drive.google.com/file/d/1eHY32BW7aCfnWMxjb0NwT2G4H9ZvgqAe/view
https://drive.google.com/file/d/1_UxkOaQExBeGDw_RKlHua9HyKKzQ0z-J/view

Quiz:
1. No início de uma reunião de equipe, o gestor que a conduz pergunta como os funcionários estão se sentindo naquela tarde de sexta-feira. Um dos participantes responde "tudo está péssimo, estou sobrecarregado, mas preciso participar desta reunião sem sentido". O gestor imediatamente responde que também está sobrecarregado, mas não está reclamando. Neste cenário, pode-se afirmar que houve uma ação para a promoção da saúde mental no trabalho, pois o gestor esforçou-se em perguntar sobre o bem-estar dos funcionários.
( ) verdadeiro ( ) falso

2. Considerando que a responsabilidade na promoção da saúde mental é compartilhada, todos os envolvidos têm o mesmo poder de gerar mudanças em uma organização.
( ) verdadeiro ( ) falso

3. Explicar ao funcionário quais são os aspectos e competências avaliados pela organização e quais os requisitos para ele avançar no seu plano de carreira é uma forma de promover a saúde mental no trabalho.
( ) verdadeiro ( ) falso

4. Uma ação de promoção da saúde mental no trabalho que necessite de esforço intersetorial é aquela que pode ser implementada dentro de uma equipe com maior governabilidade, exigindo menor nível de negociação.
( ) verdadeiro ( ) falso

5. Um bom líder, reconhecido pelo standard como um campeão deve ser proativo, acessível, bom comunicador e flexível.
( ) verdadeiro ( ) falso

Encontro Online (data: 04/08/2023)
Temos um encontro online no dia 04 de agosto de 2023, das 11h às 12h (BRT). É importante ter atividades de interação para refletir com nossos pares e esclarecer todas as dúvidas. Esta atividade síncrona é incentivada, mas não obrigatória. Nosso link é sempre o mesmo:

https://meet.google.com/gca-dmxm-gfq Gravação do encontro: https://www.youtube.com/watch?v=IvkT2dwbxrY

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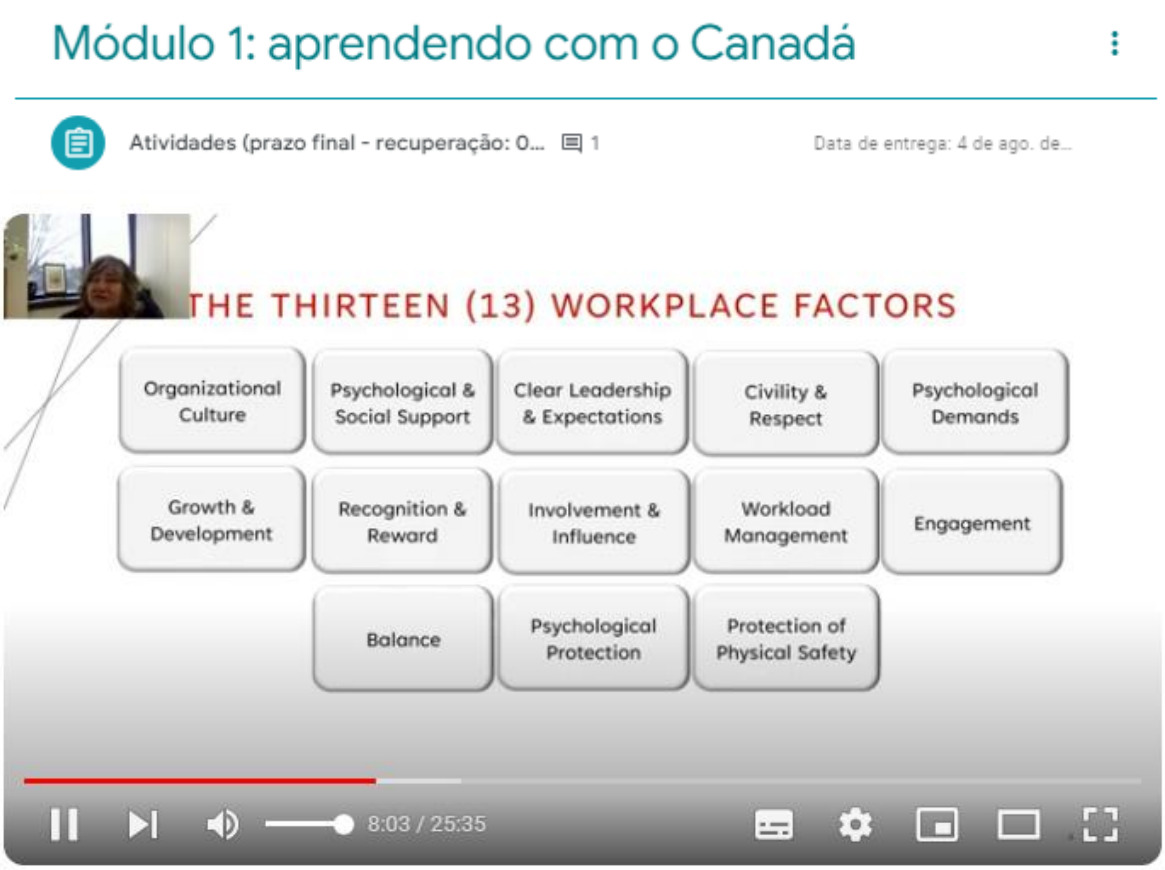
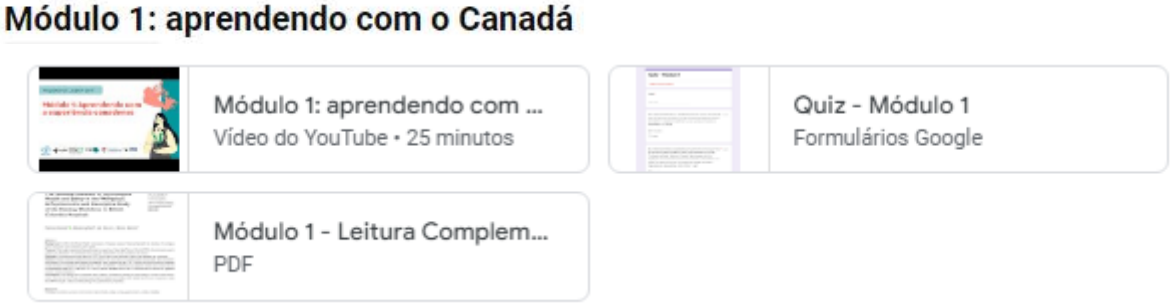
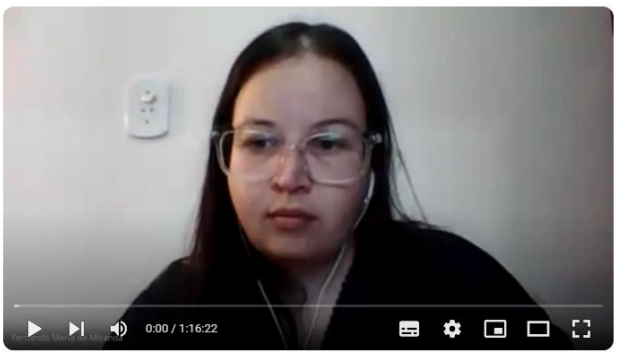
APPENDIX J: illustrations of the Lidera-SMT implementation per module







Gravação do encontro ao vivo (07/07/2023)

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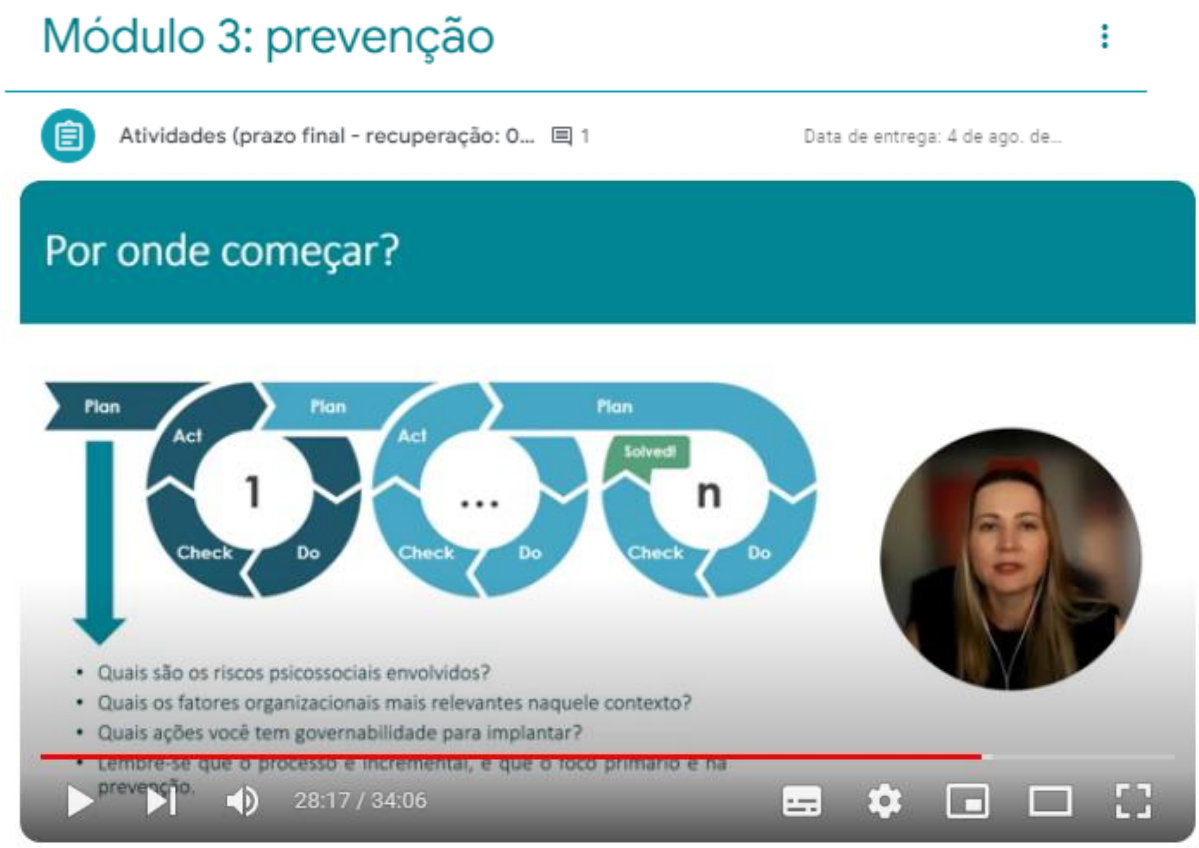

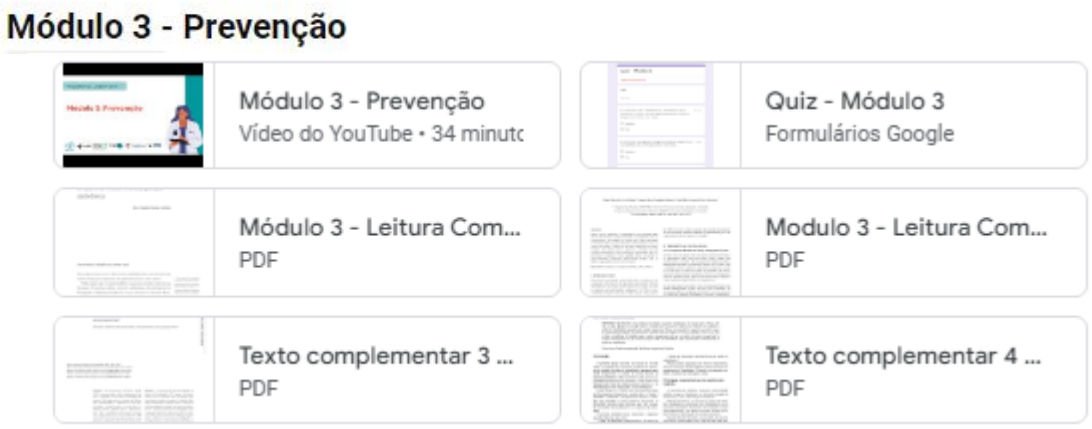

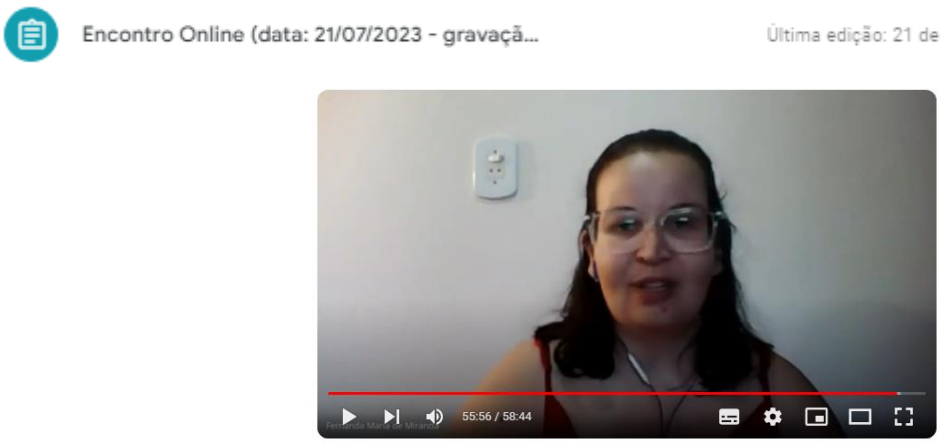

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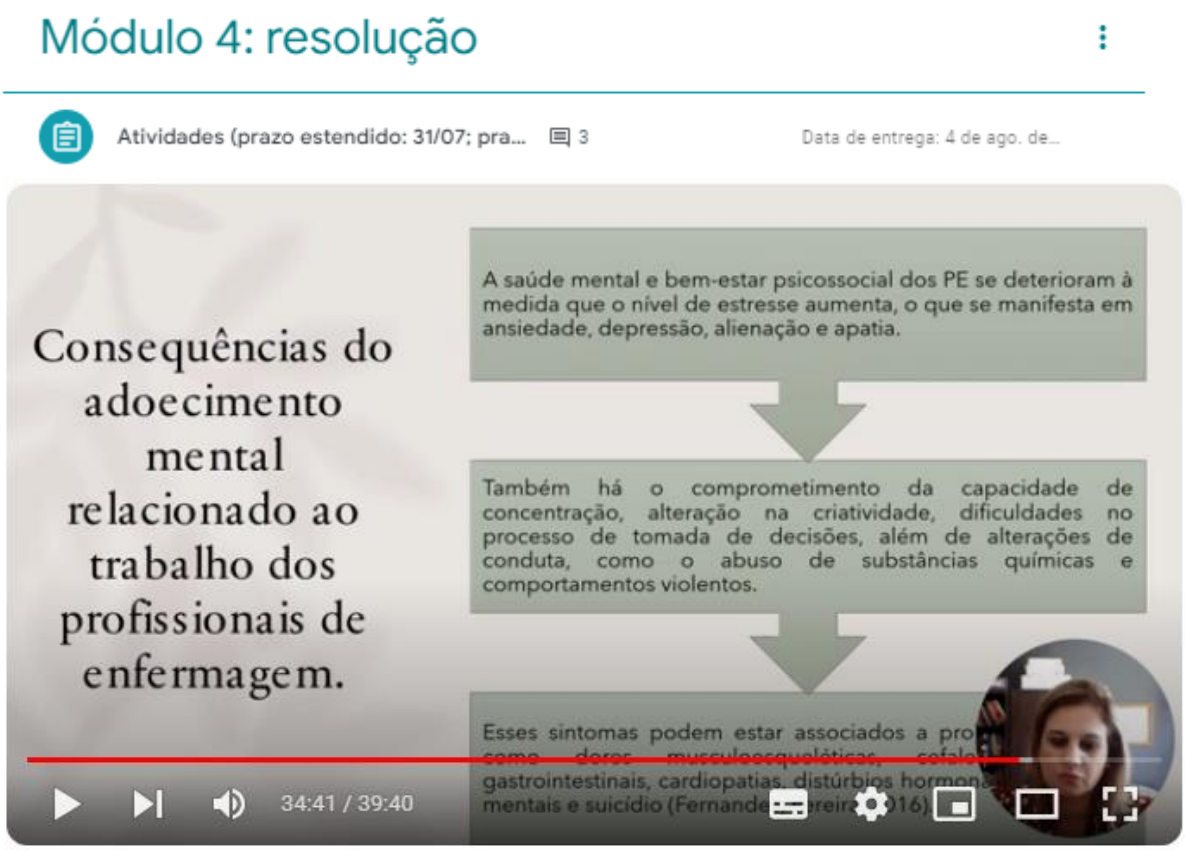

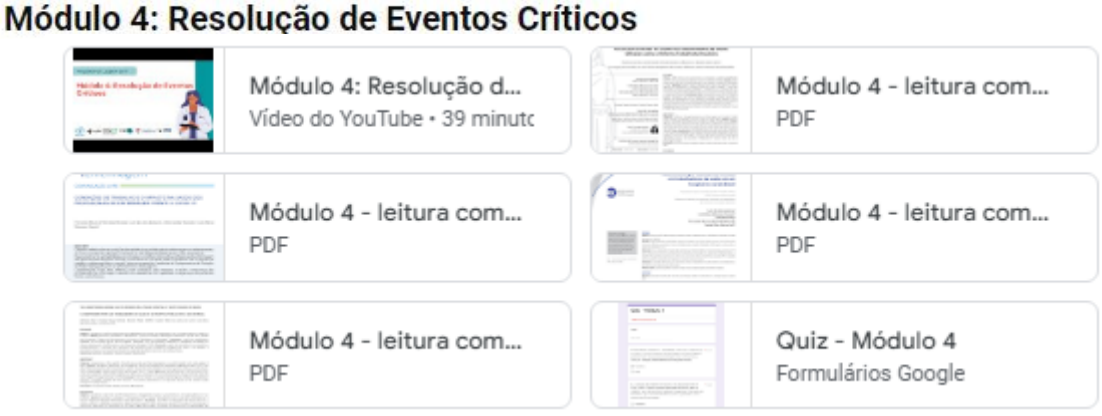

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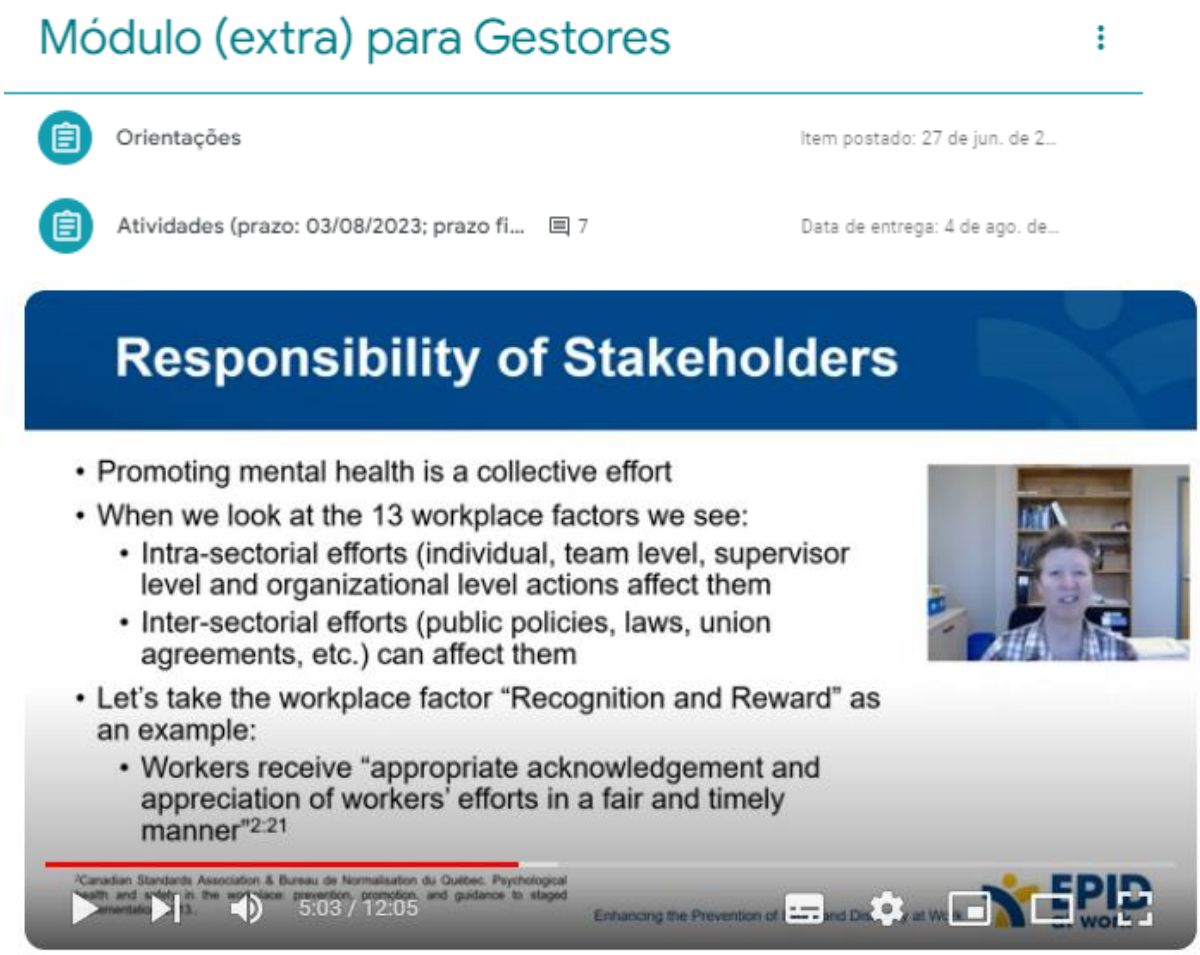

Gravação do encontro ao vivo (04/08/2023)

ANNEX 1: approval of the Ethics Committee

UFSCAR - UNIVERSIDADE FEDERAL DE SÃO CARLOS

PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: Promoção da saúde mental no trabalho: intervenção para enfermeiros líderes.
Pesquisador: Fernanda Maria de Miranda
Área Temática:
Versão: 2
CAAE: 57917922.9.0000.5504
Instituição Proponente: Centro de Ciências Biológicas e da Saúde
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 5.627.685

Apresentação do Projeto:
As informações elencadas nos campos "Apresentação do Projeto", "Objetivo da Pesquisa" e Avaliação dos Riscos e Benefícios" foram extraídas do arquivo Informações Básicas da Pesquisa (PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1925131 (2).pdf, de 08/07/2022).

Objetivo da Pesquisa:
Objetivo Primário:
Avaliar a eficácia de uma intervenção formativa voltada à promoção da saúde mental no trabalho para enfermeiros líderes.
Objetivo Secundário:
Desenvolver uma intervenção formativa sobre promoção da saúde mental no trabalho de enfermagem hospitalar.Validar a intervenção formativa sobre promoção da saúde mental no trabalho de enfermagem hospitalar. Implementar entre enfermeiros líderes a intervenção formativa sobre a promoção da saúde mental no trabalho em enfermagem.

Avaliação dos Riscos e Benefícios:
Poderá expor os participantes ao risco psicológico, decorrente de perguntas relacionadas a participação no programa e experiências prévias, que podem remeter à algum desconforto, evocar sentimentos desagradáveis de avaliação ou julgamento a discussões ou conflitos durante os momentos síncronos do Programa; ao cansaço durante ou após o preenchimento dos instrumentos de coleta de dados ou durante as atividades previstas no Programa; e riscos de perda de dados ou

informações.

A fim de mitigar tais riscos, serão adotadas as seguintes estratégias: interrupção da coleta de dados e retomada em outro momento; intervenção imediata dos mediadores, que possuem experiência com esta modalidade de intervenção formativa, a fim de direcionar os participantes aos objetivos da atividade e mitigar divergências de opinião mais acaloradas; apoio para encaminhamento aos serviços da Rede de Atenção à Saúde do Sistema Único de Saúde (SUS) para acolhimento e, posteriormente, referenciamento a setores de apoio psicológico do SUS, se necessário; garantia de assistência integral e gratuita por danos imediatos ou tardios, diretos ou indiretos relacionados a participação nessa pesquisa. Essa assistência poderá ocorrer em qualquer momento, não só durante ou após o término do estudo, mas também tardiamente, desde que seja detectado o problema e a relação com a participação na pesquisa; armazenamento das eventuais gravações do Lidera-SMT pactuadas entre os participantes, dos formulários de coleta de dados preenchidos e demais documentos em computador individual protegido por login e senha pessoais e intransferíveis. Somente os pesquisadores terão acesso a estes dados; utilização do GoogleForms, que é oferecido a docentes e estudantes da UFSCar e permite acesso restrito e controlado, para quando a coleta, ou parte dela, ocorra por plataforma virtual; não haverá armazenamento de dados em 'nuvem', mas em dispositivo eletrônico local (todos os registros em ambiente virtual compartilhado ou nuvem serão apagados); todos os dados coletados, sejam em documentos, anotações em diário de campo ou outros, serão anonimizados, a fim de impossibilitar a identificação de pessoas ou locais de trabalho.

Os benefícios e riscos elencados, além das ações propostas para diminuição dos riscos estão detalhadas no TCLE para apresentação aos participantes.

Comentários e Considerações sobre a Pesquisa:

Trata-se de um estudo quase-experimental com medidas pré e pós-teste em um único grupo e follow-up de dois e seis meses após a intervenção formativa, buscando observar seu efeito sobre o desfecho conhecimento dos enfermeiros líderes. A pesquisa será realizada no contexto de uma universidade pública brasileira. A escolha do método se deu por sua aplicabilidade ao cenário real da pesquisa e sua potencialidade em gerar evidência de alto nível sobre os resultados da intervenção proposta. As principais limitações metodológicas inerentes dos estudos quase- experimentais estão relacionadas ao seu limitado potencial de generalização em relação aos estudos experimentais.

Considerações sobre os Termos de apresentação obrigatória:

Apresentados TCLE para enfermeiros e para juízes. Todos foram readequados.

Recomendações:

Vide campo Conclusões ou pendências

Conclusões ou Pendências e Lista de Inadequações:

No que tange à apreciação ética do projeto, a autora apresentou documentos com adequações das pendências, conforme descrito a seguir:

READEQUADO - Incluir riscos e benefícios no formulário PB Informações básicas do projeto;
READEQUADO / ESCLARECIDO - Descrever explicitamente no projeto se haverá ou não participação de uma ou mais instituições hospitalares;
READEQUADO - Detalhar melhor a forma de recrutamento/seleção dos participantes enfermeiros líderes;
READEQUADO - Apresentar texto da divulgação da pesquisa nas mídias para seleção dos participantes e do tipo "carta- convite" aos enfermeiros que entrarem em contato com interesse em participar do estudo;
READEQUADO - Explicar se haverá articulação do projeto com o HU-UFSCar, uma vez que consta no TCLE:
"Caso você deseje, poderá ser encaminhado(a) aos serviços de apoio psicológico do próprio HU-UFSCar ou da Rede de Atenção à Saúde do Sistema Único de Saúde para acolhimento e, posteriormente, referenciamento a setores de apoio psicológico do SUS".
Neste caso, caso exista, a participação do HU deverá ser explicitada no projeto e as pesquisadoras deverão apresentar aceite do HU-UFSCar em participar da pesquisa;
READEQUADO - Havendo ou não participação do HU-UFSCar na mitigação dos riscos inerentes à pesquisa, ações mais específicas voltadas a essa mitigação deverão ser detalhadas pelas pesquisadoras no projeto e nos TCLE; - Explicitar a forma como os participantes irão assinar e devolver o TCLE assinado.
Caso o TCLE seja online, reforçamos que são itens importantes a contarem no TCLE:
"Sua participação é voluntária, isto é, a qualquer momento o (a) senhor irá (a) decidir se deseja participar e preencher o questionário, se deseja desistir da participação durante o preenchimento do questionário ou após o preenchimento, e poderá retirar seu consentimento sem nenhuma penalização ou prejuízo em sua relação com o pesquisador ou com a instituição
O(a) senhor(a) ao clicar em "Aceito participar da pesquisa" irá: 1. Eletronicamente aceitar participar

da pesquisa, o que corresponderá à assinatura deste termo (TCLE), o qual poderá ser impresso ou solicitado ao pesquisador via endereço de email fornecido, se assim o desejar. 2. Responder ao questionário on-line que terá tempo gasto para seu preenchimento em torno de XXXX minutos. Caso não concorde, basta fechar a página do navegador.

Caso desista de participar durante o preenchimento do questionário e antes de finalizá-lo, os seus dados não serão gravados, enviados e nem recebidos pelo pesquisador e serão apagados ao se fechar a página do navegador. Caso tenha finalizado o preenchimento e enviado suas respostas do questionário e após decida desistir da participação deverá informar o pesquisador desta decisão e este descartará os seus dados recebidos sem nenhuma penalização.

Considerações Finais a critério do CEP:

Diante do exposto, o Comitê de ética em pesquisa - CEP, de acordo com as atribuições definidas na Resolução CNS nº 466 de 2012 e 510 de 2016, manifesta-se por considerar "Aprovado" o projeto. A responsabilidade do pesquisador é indelegável e indeclinável e compreende os aspectos éticos e legais, cabendo-lhe, após aprovação deste Comitê de Ética em Pesquisa: II - conduzir o processo de Consentimento e de Assentimento Livre e Esclarecido; III - apresentar dados solicitados pelo CEP ou pela CONEP a qualquer momento; IV - manter os dados da pesquisa em arquivo, físico ou digital, sob sua guarda e responsabilidade, por um período mínimo de 5 (cinco) anos após o término da pesquisa; V - apresentar no relatório final que o projeto foi desenvolvido conforme delineado, justificando, quando ocorridas, a sua mudança ou interrupção. Este relatório final deverá ser protocolado via notificação na Plataforma Brasil. OBSERVAÇÃO: Nos documentos encaminhados por Notificação NÃO DEVE constar alteração no conteúdo do projeto. Caso o projeto tenha sofrido alterações, o pesquisador deverá submeter uma "EMENDA".

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1925131.pdf	08/07/2022 13:13:35		Aceito
Outros	Carta_Resposta_versao_1.pdf	07/07/2022 22:22:06	Fernanda Maria de Miranda	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLE_Juizes.pdf	07/07/2022 22:21:57	Fernanda Maria de Miranda	Aceito
TCLE / Termos de Assentimento /	TCLE_Enfermeiros.pdf	07/07/2022 22:21:51	Fernanda Maria de Miranda	Aceito

UFSCAR - UNIVERSIDADE FEDERAL DE SÃO CARLOS

Continuação do Parecer: 5.627.685

Justificativa de Ausência	TCLE_Enfermeiros.pdf	07/07/2022 22:21:51	Fernanda Maria de Miranda	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_Doutorado_CEP.pdf	07/07/2022 22:21:42	Fernanda Maria de Miranda	Aceito
Declaração de concordância	Concordancia_Instituicao_Coleta.pdf	14/04/2022 11:26:49	Fernanda Maria de Miranda	Aceito
Orçamento	Orcamento.pdf	14/04/2022 11:25:36	Fernanda Maria de Miranda	Aceito
Cronograma	Cronograma.pdf	14/04/2022 11:25:05	Fernanda Maria de Miranda	Aceito
Folha de Rosto	Folha_Rosto_FMM.pdf	07/04/2022 08:25:48	Fernanda Maria de Miranda	Aceito

Situação do Parecer:
Aprovado

Necessita Apreciação da CONEP:
Não

SAO CARLOS, 06 de Setembro de 2022

Assinado por:
Adriana Sanches Garcia de Araújo
(Coordenador(a))

Endereço: WASHINGTON LUIZ KM 235
Bairro: JARDIM GUANABARA **CEP:** 13.565-905
UF: SP **Município:** SAO CARLOS
Telefone: (16)3351-9685 **E-mail:** cephumanos@ufscar.br

ANNEX 2: approval of the Canadian Ethics Committee

Lakehead UNIVERSITY

Research Ethics Board
t: (807) 343-8283
research@lakeheadu.ca

July 26, 2023

Principal Investigator: Dr. Vicki Kristman
Co-Investigator: Fernanda Miranda
Health and Behavioural Sciences\Health Sciences
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1

Dear Dr. Vicki Kristman and Fernanda:

Re: Romeo File No: 1469900
Granting Agency: n/a
Agency Reference #: n/a

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Training Brazilian nurses to promote mental health at work.".

Ethics approval is valid until July 26, 2024. Please submit a Request for Renewal to the Office of Research Services via the Romeo Research Portal by June 26, 2024, if your research involving human participants will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Access the Romeo Research Portal by logging into mylnfo at:

https://erpwp.lakeheadu.ca/

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Best wishes for a successful research project.

Sincerely,

Dr. Claudio Pousa
Chair, Research Ethics Board

/sa

ANNEX 3: IMMS-BRV (Level I)

Versão brasileira validada do IMMS (IMMS-BRV)	Discordo totalmente	Discordo parcialmente	Não concordo, nem discordo	Concordo parcialmente	Concordo totalmente
1. Há 25 afirmações neste questionário. Por favor, pense sobre cada sentença em relação a cada material didático que você acabou de estudar e indique o quão verdadeira é a sentença. Dê a resposta que verdadeiramente se aplica a você, e não aquela que você gostaria que fosse verdadeira, ou aquilo que você pensa que outros querem ouvir. 2. Pense em cada afirmação isoladamente e indique quão verdadeira ela é. Não se deixe influenciar por suas respostas a outras afirmações. 3. Registre suas respostas na folha fornecida e siga as instruções adicionais que podem ser fornecidas em relação à folha de resposta que está sendo usada nesta pesquisa. Obrigado.					
1. Este material foi mais difícil de entender do que eu gostaria.	①	②	③	④	⑤
2. Depois de ler as informações iniciais, eu me senti confiante de que sabia o que se esperava que deveria ser aprendido com essa atividade.	①	②	③	④	⑤
3. Completar os exercícios dessa atividade me deu um sentimento satisfatório de realização.	①	②	③	④	⑤
4. Muitas das páginas tinham tanta informação que foi difícil escolher e lembrar os pontos importantes.	①	②	③	④	⑤
5. Esses materiais são interessantes.	①	②	③	④	⑤
6. Havia histórias, figuras ou exemplos que me mostraram como esse material poderia ser importante para algumas pessoas.	①	②	③	④	⑤
7. A qualidade da escrita ajudou a manter minha atenção.	①	②	③	④	⑤
8. Essa atividade é tão abstrata que foi difícil manter minha atenção nela.	①	②	③	④	⑤
9. Enquanto eu trabalhava nessa atividade, estava confiante de que poderia aprender o conteúdo.	①	②	③	④	⑤
10. Gostei tanto dessa atividade que gostaria de saber mais sobre este assunto.	①	②	③	④	⑤
11. As páginas desse material parecem pouco interessantes.	①	②	③	④	⑤
12. A forma como a informação está organizada nas páginas ajudou a manter minha atenção.	①	②	③	④	⑤
13. Esta atividade tem elementos que estimularam minha curiosidade.	①	②	③	④	⑤
14. Gostei muito de estudar essa atividade.	①	②	③	④	⑤
15. A quantidade de repetição nesta atividade me fez ficar, eventualmente, entediado.	①	②	③	④	⑤
16. O conteúdo e o estilo de escrita neste material dão a impressão de que vale a pena conhecê-lo.	①	②	③	④	⑤
17. Aprendi algumas coisas que foram surpreendentes ou inesperadas.	①	②	③	④	⑤
18. Depois de trabalhar nessa atividade por algum tempo, eu estava confiante de que seria capaz de passar em um teste sobre ela.	①	②	③	④	⑤
19. A maneira como foi dado o feedback após os exercícios, ou outros comentários na atividade, ajudou-me a sentir recompensado pelo meu esforço.	①	②	③	④	⑤
20. A variedade de trechos de leitura, exercícios, ilustrações etc., ajudou a manter minha atenção na atividade.	①	②	③	④	⑤
21. O estilo de escrever é entediante.	①	②	③	④	⑤
22. Há tantas palavras em cada página que é irritante.	①	②	③	④	⑤
23. Eu realmente não consegui entender muito o material desta atividade.	①	②	③	④	⑤
24. A boa organização do conteúdo me ajudou a ter certeza de que eu aprenderia este material.	①	②	③	④	⑤
25. Foi um prazer trabalhar em uma atividade tão bem planejada.	①	②	③	④	⑤

Itens distribuídos por dimensão

Dimensão	Itens												
Interesse	5	6	7	10	11*	12	13	16	17		19	20	25
Confiança	2	3	9	14	18	24							
Atenção	4*	15*	21*	22*									
Expectativa	1*	8*	23*										

* Itens invertidos: a nota dos itens deverá ser invertida.

ANNEX 4: author' permission of use of the IMMS-BRV.

Autorização uso IMMS versão em Português do Brasil Inbox ×

Fernanda Maria de Miranda [redacted]
to [redacted] Mon, Jan 9, 11:30 AM

Prezado Dr. Aloísio Cardoso-Júnior,

Meu nome é Fernanda Maria de Miranda, sou estudante de doutorado do Programa de Pós-Graduação em Enfermagem da Universidade Federal de São Carlos (PPGEnf/UFSCar), sob orientação da Profa. Dra. Vivian Aline Mininel.

Escrevo para verificar se a versão brasileira da escala IMMS, publicada na Revista Brasileira de Educação Médica (Cardoso-Júnior, Aloísio et al. Tradução e Adaptação Transcultural do Instructional Materials Motivation Survey (IMMS) para o Português do Brasil. Revista Brasileira de Educação Médica [online]. 2020, v. 44, n. 04 [Acessado 5 Janeiro 2023], e179. Disponível em: https://doi.org/10.1590/1981-5271v44.4-20200142) está disponível para utilização por outros pesquisadores.

Meu interesse é utilizá-la como instrumento de avaliação de reação (primeiro nível de avaliação proposto por Donald Kirkpatrick) para a intervenção formativa vinculada ao meu projeto de doutorado.

Atenciosamente,

aloisiocardosojunior [redacted] Jan 10, 2023, 9:38 AM

Portuguese › English Translate message Turn off for: Portuguese ×

Prezada Fernanda,
Recebo com satisfação sua mensagem e desejo-lhe sucesso em sua pesquisa.
O Instrumento pode ser usado em seu projeto.
Aproveito para enviar-lhe a versão brasileira, denominada IMMS-BRV, obtida após validação psicométrica do IMMS traduzido. Avalie se não será mais adequada ao seu trabalho.
Neste sentido, encaminho, também, artigo recém publicado que já utilizou tal versão.
Qualquer dúvida estou à disposição para contribuir com vocês.
Cordialmente,

Aloísio Cardoso Jr.

ANNEX 5: Perceived attitudes towards training transfer among nurses (Level III) – Original

	Completely Agree	Partially Agree	Neither agree nor disagree	Partially Disagree	Completely Disagree
I will make a plan to put into practice what I have learned after I get back to the workplace.					
I will work as hard as possible to put into practice what I have learned for the patients' benefit.					
My work is more organized after I have put into practice what I have learned from the training.					
It will be disgraceful if I do not put into practice what I have learned from the training I attended.					
I am sure that what I have learned from the training is put into practice for the patients' benefit.					
I feel motivated toward my role in patient deterioration after having attended the training programs.					
My commitment towards my role in patient deterioration has increased as a result of attending the training programs.					
Supervisors or peers have told me that my performance has improved following the training programs.					
I work with more confidence after putting into practice what I have learned from the training.					
I have changed my behavior in order to be consistent with the material taught in the training programs.					
I knew that I would benefit from the training.					
My work performance improved after I attended the training.					
My work will be rewarded if I put into practice what I have learned.					
I am capable of putting into practice what I have learned from the training even though I am busy.					

Font: Liaw et al (2016)

ANNEX 6: CET-II (Level III)

1. QUANTO DE OPORTUNIDADE VOCÊ TEM EM SEU TRABALHO?

Questões	Nenhuma 1	2	Alguma 3	4	Muita 5
1.1 Trabalho desafiador					
1.2 Oportunidade de obter novas habilidades e conhecimentos					
1.3 Tarefas que requerem todas as minhas habilidades e conhecimentos					

2.QUANTO DE ACESSO À INFORMAÇÃO VOCÊ TEM EM SEU TRABALHO?

Questões	Nenhum 1	2	Algum 3	4	Muito 5
2.1 Sobre a condição atual do hospital					
2.2 Sobre os valores da administração do hospital					
2.3 Os objetivos da administração do hospital					

3.QUANTO DE SUPORTE VOCÊ TEM EM SEU TRABALHO?

Questões	Nenhum 1	2	Algum 3	4	Muito 5
3.1. Comentários específicos sobre o que você faz bem					
3.2 Comentários específicos sobre o que você poderia melhorar					
3.3 Dicas úteis ou conselhos para resolução de problemas					

4.QUANTO DE ACESSO A RECURSOS VOCÊ TEM EM SEU TRABALHO?

Questões	Nenhum 1	2	Algum 3	4	Muito 5
4.1 Tempo disponível para realizar o trabalho burocrático necessário					
4.2 Tempo disponível para cumprir as exigências do trabalho					
4.3 Obtenção de ajuda temporária quando necessário					

5. EM MEU TRABALHO

Questões	Nenhuma 1	2	Alguma 3	4	Muita 5
5.1 As recompensas por inovação no trabalho são					
5.2 A flexibilidade em meu trabalho é					
5.3 A visibilidade das minhas atividades no trabalho dentro da instituição é					

6. HÁ OPORTUNIDADES PARA VOCÊ REALIZAR ESTAS ATIVIDADES EM SEU TRABALHO?

Questões	Nenhuma 1	2	Alguma 3	4	Muita 5
6.1. Participar com médicos no cuidado ao paciente					
6.2 Ser procurado por seus pares para auxiliar a resolver problemas					
6.3 Ser procurado por administradores para auxiliar nos problemas					

7. EMPODERAMENTO GLOBAL

Questões	Discordo Totalmente 1	2	Concordo 3	4	Concordo Totalmente 5
1. Em geral, o ambiente de trabalho me empodera para realizar meu trabalho de forma eficaz					
2. Em geral, considero meu local de trabalho um ambiente de empoderamento					

ANNEX 7: author' permission of use of the CET-II.

Autorização uso CET-II versão em Português do Brasil

Fernanda Maria de Miranda [redacted]
to [redacted]

Thu, Apr 20, 9:09 PM

Prezada Dra. Elizabeth Bernardino,

Meu nome é Fernanda Maria de Miranda, sou estudante de doutorado do Programa de Pós-Graduação em Enfermagem da Universidade Federal de São Carlos (PPGEnf/UFSCar), sob co-orientação da Dra. Vivian Aline Mininel (UFSCar) e Dra. Vicki Kristman (Lakehead University, Canadá).

Escrevo para verificar se a versão brasileira da escala CET-II, publicada na RLAE (Bernardino E, Dyniewicz AM, Carvalho KLB, Kalinowski LC, Bonat WH. Transcultural adaptation and validation of the Conditions of Work Effectiveness - Questionnaire-II instrument. Rev Latino-Am Enfermagem. 2013 Sep; 21(5):1112–8. Available from: https://doi.org/10.1590/S0104-11692013000500014) está disponível para utilização por outros pesquisadores.

Meu interesse é conhecê-la para potencialmente utilizá-la em conjunto com outro instrumento na avaliação de comportamento (terceiro nível de avaliação de intervenções formativas proposto por Donald Kirkpatrick) após intervenção formativa. A intervenção em questão é voltada para enfermeiros na promoção de saúde mental no trabalho e para avaliarmos o comportamento dos participantes gostaríamos de incluir: a) um instrumento para avaliar atitudes e percepção de transferência dos conhecimentos para a prática e b) um instrumento para avaliar o empoderamento estrutural do enfermeiro para proposição de mudanças.

Atenciosamente,

Elizabeth Bernardino
to me

Apr 22, 2023, 7:27 AM (2 days ago)

Olá Fernanda

Quando realizamos a pesquisa obtivemos a autorização. Já faz bastante tempo. Se precisar posso tentar encontrar, mas não há problema algum. Naquela época fizemos um compromisso de tudo o que fosse publicado reportaríamos a Fundação Lashinger. Fizemos isso mas não obtivemos resposta. Depois me desinteressei deste tema mas o instrumento é muito útil. Muitas pessoas me escrevem sobre ele e consigo ajudar pouco pois o que tenho é o que está publicado. No entanto, foi um trabalho estatístico bem confiável e voce pode usá-lo sem problema. Qq coisa que possa ajudar estou as ordens.

Abraço e boa sorte

Elizabeth