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16TH

Hong Kong International Nursing Forum

Digital Empathy, Innovating with Heart

November 23–25, 2026

Concurrent Oral Presentation





Hong Kong International Nursing Forum

Digital Empathy, Innovating with Heart

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Concurrent Oral Presentation Session

Session 1: Palliative and End-of-Life Care

CS1-1 What Matters Most for a Good Death in Advanced Cancer: Patient Priorities Shaping COMFORT-PEACE

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Background and Objectives

People with advanced cancer may define a good death beyond symptom control, including dignity, relationships, preparation and peace. We examined how patients with advanced cancer in Hong Kong understood a good death, factors associated with these perceptions, and how the findings could inform a culturally sensitive nurse-led comfort-planning intervention.

Methods

We used a concurrent mixed-methods design. Patients with stage III or IV cancer receiving palliative care were recruited from two specialist units in Hong Kong between May 2023 and February 2025. Survey participants completed the Chinese Good Death Inventory; data were analysed using descriptive statistics and generalised linear regression. In-depth semi-structured interviews explored patients' experiences and views of a good death and were analysed using inductive content analysis. Findings from both components were integrated through triangulation.

Results

Of 116 survey participants, the mean Good Death Inventory score was 275.3 (SD 40.05). Preparation for death, good relationships with medical staff, and good relationships with family were the highest-rated domains. Christian faith (B=22.97, p=0.005) and physical independence (B=22.79, p=0.031) were significant predictors. Interviews with 15 participants identified four themes: a peaceful, pain-free and natural death; barriers to end-of-life communication; the role of family, psychosocial and spiritual support; and preferences for place of care and death that balanced comfort with practical considerations.

Conclusions

Patients described a good death as more than symptom relief; it also involved preparation, autonomy, relationships, communication, dignity and peace. These findings informed COMFORT-PEACE, a nurse-led personalised comfort-planning intervention comprising Comfort Mapping, Symptom Comfort Coaching and a one-page patient-held My Comfort Plan. The intervention turns patient priorities into practical, visible care actions that can be communicated and acted on in routine care.

Concurrent Oral Presentation Session

Session 1: Palliative and End-of-Life Care

CS1-2 "Light Dust Finds Rest on Fragile Grass": Dilemmas of Community-Dwelling Older Adults Living Alone in Advance Care Planning Readiness: A Qualitative Study

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Background and Objectives

Global aging has brought the need for end-of-life medical decision-making among older adults into sharp focus, but older adults living alone in the community generally lack readiness for advance care planning (ACP). Objective: To investigate the dilemmas and challenges for the readiness of ACP among community-dwelling older adults living alone.

Methods

Based on the Cognition-Affect-Conation Perspective, this study employed descriptive qualitative research methods. Using purposive maximum-variation sampling, participants were selected from three communities. These included older adults living alone and their family members, community nurses, and community workers. Semi-structured interviews were conducted with these participants. Data analysis was performed using directed content analysis.

Results

Thirty-eight codes were developed and organized into three themes and 10 subthemes. The themes of this study are uncertainty about ACP and decision-making (lack of basic ACP concepts, misconceptions about ACP, limited cognitive abilities, and ambiguity in the perception of roles in medical decision-making), emotional and relational resistance to ACP (emotional distancing from mortality, relational concerns and family burden, and distrust and defensive communication), and the intention-action gap in ACP engagement (low self-efficacy, limited access to social and structural support, and challenges in initiating ACP-related communication).

Conclusions

ACP readiness among older adults living alone is shaped by interconnected cognitive, affective, and conative dilemmas. Community-based ACP interventions should move beyond knowledge provision to address emotional needs, strengthen self-efficacy, and facilitate the translation of willingness into action.

Concurrent Oral Presentation Session

Session 1: Palliative and End-of-Life Care

CS1-3 Indonesian Nurses' Experience in Caring for Patients at the End of Life in the Intensive Care Units: A Descriptive Phenomenology Study

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Background and Objectives

Intensive Care Units (ICUs) are specialized settings in which critically ill patients receive advanced life-sustaining treatment. Despite technological advances, ICU mortality remains high, with approximately 20–30% of patients dying in the ICU globally and 11.3–28.6% in Indonesia. As frontline providers of continuous bedside care, nurses play a pivotal role in end-of-life (EoL) care, although their degree of involvement varies across contexts. To date, Indonesian studies have not systematically examined how ICU nurses perceive, manage, and respond to EoL conditions, nor the knowledge, attitudes, practices, barriers, and facilitators they encounter. This study explored the lived experiences of nurses caring for EoL patients within the Indonesian ICU context.

Methods

A descriptive phenomenological design was employed to develop a comprehensive understanding of Indonesian ICU nurses' experiences in caring for patients at the EoL. Participants were recruited through purposive sampling with maximum variation, yielding 26 ICU nurses from four hospitals in Southeast Sulawesi Province. Data were collected via semi-structured, in-depth interviews and analyzed using Giorgi's five-step method.

Results

Twenty-eight clustered meaning units and 15 sub-constituents were identified, and four constituents emerged: developing professional knowing through experience; becoming a compassionate and reflective nurse; enacting holistic and contextual care; and negotiating conditions that shape practice. The phenomenological essence of providing end-of-life care in the ICU is lived as a continuous process of professional becoming in which nurses transform clinical experience into embodied professional knowing, compassionate presence, emotional maturity, and contextual responsiveness.

Conclusions

The findings indicate that inadequate facilities and the lack of recognition through professional rewards were the primary concerns of Indonesian ICU nurses, situated within the constituents of negotiating conditions that shape practice.

Concurrent Oral Presentation Session

Session 1: Palliative and End-of-Life Care

CS1-4 Experiences of Using a Digital Solution - IPOS App for People with Multiple Long-Term Conditions: A Qualitative Study

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Background and Objectives

Although symptom management is an essential aspect of palliative care, complex symptoms of patients with multiple long-term conditions may not be identified and addressed in primary care, causing significant distress to patients and their caregivers. A digital solution - IPOS app was designed to enhance the self-reporting of symptoms, needs, and concerns using a person-centred outcome measure - the Integrated Palliative care Outcome Scale (IPOS) linked with a clinician dashboard for timely response. This study aimed to explore the user experiences of the digital solution to facilitate person-centred care.

Methods

Semi-structured interviews were conducted. Participants were purposively sampled at two primary care settings in Birmingham, UK to achieve heterogeneity by age, gender, and ethnicity. The interviews were audio-recorded and transcribed verbatim and analysed using thematic analysis.

Results

Fifteen patients with multiple long-term conditions and three healthcare professionals (HCPs) participated. Three themes were generated: (1) Feasibility/acceptability. The digital solution proved to be a feasible and acceptable tool for its user-friendliness and intuitiveness. (2) Usefulness/limitations. Users reported a positive therapeutic and motivational impact, emphasising its utility in symptom reporting and self-management. Limitations included delays in feedback and limited interaction with HCPs. (3) Wider implementation. Patients viewed the app as a valuable data-gathering tool for quality improvement and advocated for its wider adoption. HCPs recognised the benefits of digital health solutions in identifying unmet needs and initiating treatment, but additional support (e.g., dedicated personnel) is required to effectively manage patient inquiries.

Conclusions

The digital solution enables continuous monitoring of symptoms, needs, and concerns, and empowers users with self-management guidance. Further evaluation is needed to optimise its implementation in primary care.

Concurrent Oral Presentation Session

Session 2: Chronic Disease Management

CS2-1 Cutaneous Microcirculatory Impairment and Its Association with Diabetes-Related Foot Ulcer in People with Diabetic Foot: A Cross-Sectional Study

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Background and Objectives

To characterise cutaneous microcirculatory alterations associated with prevalent diabetes-related foot ulcer (DFU) and assess their incremental discriminatory value beyond clinical factors.

Methods

This cross-sectional study included 203 participants with diabetic foot (40 with DFU; 163 without). Resting skin perfusion was assessed using laser Doppler flowmetry at the dorsum pedis (DP) and plantar first metatarsal head (MT1). Mean perfusion, nutritive blood flow (Mnutr), and blood flow oscillation measures were analysed using linear mixed models. Bootstrap LASSO selected stable candidates, Firth logistic regression estimated adjusted associations, and bootstrap resampling internally validated the models.

Results

Mean perfusion and Mnutr were lower with DFU at both sites (all $q < 0.001$); MT1 mean perfusion showed the largest difference (Cliff's $\delta = -0.740$) and highest univariable discrimination (AUC 0.870, 95% CI 0.812–0.928) , without a group-by-site interaction. After adjustment for age, sex, diabetes duration and HbA1c, each 1-SD increase in −ln-transformed mean perfusion at MT1 and DP was associated with aORs for DFU of 8.14 (95% CI 4.10–18.00) and 4.35 (95% CI 2.44–8.66), respectively. Selection frequencies were 94.8%~98.4%, with 100% directional consistency. Adding MT1 mean perfusion to the clinical model improved discrimination (ΔAUC = 0.201). The final microcirculatory model achieved an optimism-corrected AUC of 0.903 and a Brier score of 0.096. Blood flow oscillation and complexity measures showed less consistent associations.

Conclusions

Reduced cutaneous mean perfusion was strongly associated with DFU status and added discriminatory information beyond clinical factors. Laser Doppler flowmetry may support adjunctive identification of prevalent DFU.

Concurrent Oral Presentation Session

Session 2: Chronic Disease Management

CS2-2 Clinically Meaningful Individual Responses to Personalised Vivifrail-Based Exercise in Older Adults with Type 2 Diabetes: A Multicentre Randomised Controlled Trial

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Background and Objectives

Older adults with type 2 diabetes (T2D) are at increased risk of sarcopenia. Although exercise is recommended for diabetes management and sarcopenia prevention, evidence for Vivifrail-based multicomponent exercise in this population remains limited. We evaluated its effects on sarcopenia risk, physical activity and multidimensional health outcomes.

Methods

In this multicentre randomised controlled trial, 96 community-dwelling older adults with T2D were assigned to a 12-week personalised Vivifrail-based multicomponent exercise programme or usual diabetes care. Primary outcomes were sarcopenia risk and physical activity. Secondary outcomes included glycaemic control, muscle mass, muscle strength, physical performance, cognitive function, depressive symptoms, and health-related quality of life. Outcomes were assessed at baseline, post-intervention (T1), and 6-month follow-up from baseline (T2). Effects were evaluated at the group level via generalized estimating equation (GEE) and at the individual level using reliable and clinically significant change (RCSC).

Results

High sarcopenia risk in the intervention group declined from 52.1% at baseline to 39.0% post-intervention and 37.2% at 6 months. Compared with usual care, the intervention significantly improved physical activity (βT1=17.012, 95%CI: 4.194, 29.830; βT2=31.075, 95%CI: 20.268, 41.882), cognitive function (βT1=1.254, 95%CI: 0.095, 2.413; βT2=2.155, 95%CI: 1.101, 3.209), depressive symptoms (βT2 = -2.532, 95%CI: -3.517, -1.548), and health-related quality of life (βT2 = 0.052, 95%CI: 0.019, 0.085). RCSC analyses showed 6 participants (15.4%) at T1 and 8 participants (20.5%) at T2 reached clinically significant improvement, with statistically significant between-group differences at both time points (T1: $\chi 2 = 3.92$, $P = 0.048$; T2: $\chi 2 = 8.91$, $P = 0.003$).

Conclusions

Personalised Vivifrail-based exercise produced benefits for older adults with T2D. Future research should explore the mechanisms driving these sustained behavioural and neuropsychological benefits.

Concurrent Oral Presentation Session

Session 2: Chronic Disease Management

CS2-3 Cortical Activation in Tuberculosis Patients With and Without Depressive Symptoms: A Functional Near-Infrared Spectroscopy Study

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Background and Objectives

Depressive symptoms are common in patients with tuberculosis (TB) and may adversely affect treatment adherence and recovery. However, early recognition remains challenging because TB-related fatigue, appetite loss, weight loss, and sleep disturbance caused by symptoms such as night sweats and coughing may resemble manifestations of depression, while self-report screening is inherently subjective. Functional near-infrared spectroscopy (fNIRS) is a portable and non-invasive neuroimaging technique suitable for repeated clinical assessment. This study compared task-related cortical activation in TB patients with and without depressive symptoms and explored the potential of fNIRS as an objective adjunct to person-centred nursing assessment.

Methods

A total of 100 hospitalised TB patients were classified using the Patient Health Questionnaire-9 into a depressive-symptom group (TB-D, n=33) and a non-depressive-symptom group (TB-ND, n=67). A 48-channel fNIRS system measured changes in oxygenated haemoglobin (HbO_2) during a verbal fluency task, and between-group differences in cortical activation were analysed.

Results

During the verbal fluency task, the TB-D group showed significantly lower HbO_2 responses than the TB-ND group in channels 4, 5, 15, 31, 33, 37, 41, and 48 (all $p<0.05$). These channels involved the dorsolateral prefrontal cortex, Broca's area, temporal cortex, and premotor cortex. The findings indicated reduced recruitment of prefrontal-temporal and language-motor networks in TB patients with depressive symptoms.

Conclusions

fNIRS combined with a verbal fluency task can detect cortical activation differences associated with depressive symptoms in patients with TB and may complement questionnaire-based screening. Its portability, non-invasiveness, and repeatability may support technology-enabled nursing assessment and timely psychosocial care, allowing objective data to

complement rather than replace empathic, person-centred clinical judgement. Further longitudinal validation is needed before routine clinical implementation.

Concurrent Oral Presentation Session

Session 2: Chronic Disease Management

CS2-4 Barriers and Facilitators to Dietary Adherence Among Older Patients with Non-Dialysis-Dependent CKD Stages 3–5: A Descriptive Qualitative Study

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Background and Objectives

Dietary adherence is important for slowing disease progression in older patients with non-dialysis-dependent chronic kidney disease (CKD) stages 3–5. Successful dietary management requires considerable effort to overcome stage-specific challenges. Patients are key players in dietary management, and the factors that shape adherence must be understood to address these challenges effectively. This study aimed to identify barriers and facilitators across adherence stages and provide a foundation for tailored, stage-based dietary management strategies.

Methods

A descriptive qualitative study guided by the Health Action Process Approach (HAPA) was conducted. Semi-structured interviews (n = 34) were conducted with older patients with non-dialysis-dependent CKD stages 3–5 recruited from a tertiary hospital in Fujian Province, China, using purposive maximum-variation sampling. Participants were classified into pre-intention, intention, and action stages using the Dietary Management Behaviour Stage Assessment Questionnaire. Data were analysed using directed qualitative content analysis, and recruitment continued until data saturation was reached.

Results

Twenty-six stage-specific determinants of dietary adherence were identified, including 11 barriers and 15 facilitators. Key barriers were limited awareness of dietary management, underestimation of disease progression, insufficient age-appropriate dietary education, entrenched dietary habits, interference from traditional dietary practices, inadequate coping strategies, complacency-related lapses, and diminished self-control. Key facilitators were positive outcome expectancies, perceived risk of requiring dialysis, professional follow-up, family support and monitoring, detailed meal planning, active information and help-seeking, established dietary routines, and illness acceptance. These determinants showed stage-specific patterns, progressing from cognitive awareness to planning and behavioural maintenance.

Conclusions
Our study highlights distinct stage-specific barriers and facilitators to dietary adherence. These findings deepen understanding of stage-specific determinants and offer actionable insights to inform individualised, stage-based dietary management strategies.

Concurrent Oral Presentation Session

Session 3: Digital Health, AI, and Smart Care Delivery I

CS3-1 Explainable Artificial Intelligence–Based Prediction of Cardiac Tamponade During Atrial Fibrillation Ablation and Translation into Nursing Practice

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Background and Objectives

Acute cardiac tamponade during atrial fibrillation (AF) catheter ablation involves procedural, anticoagulation-related, and patient-related risks. Early prediction and coordinated nursing response remain challenging. This study aimed to develop and internally validate an explainable machine-learning model and translate its outputs and synthesized evidence into a nursing response pathway.

Methods

Retrospective data from 1,481 patients undergoing AF catheter ablation at a tertiary hospital in Nanjing, China, between October 2014 and December 2024 were analyzed. Predictors were selected using least absolute shrinkage and selection operator regression, and eight machine-learning algorithms were evaluated using cross-validation. Model performance was assessed using discrimination, calibration, and decision-curve analysis, and interpretability was evaluated using SHapley Additive exPlanations. Evidence was retrieved using the 5S evidence model and translated into a pathway linking risk stratification with nursing surveillance, escalation of care, and emergency preparedness. The pathway was evaluated using an uncontrolled before-and-after design comparing cardiac tamponade incidence, time to surgical-intervention decision, and transfer time.

Results

XGBoost showed the best overall performance, with areas under the curve of 0.972 in the training set and 0.908 in internal validation, good calibration, and the highest clinical net benefit. The leading predictors were operator experience, D-dimer level, total heparin dose, AF type, and left atrial diameter. Twenty studies generated 25 recommendations across five domains: risk assessment, preventive preparation, early recognition, emergency management, and training and simulation. Preliminary postimplementation data indicated reductions in cardiac tamponade incidence, time to surgical-intervention decision, and transfer time.

Conclusions

Integrating explainable artificial intelligence with an evidence-informed nursing response pathway was associated with improved procedural safety and emergency-response efficiency during AF ablation. Multicenter external validation and prospective evaluation are required.

Concurrent Oral Presentation Session

Session 3: Digital Health, AI, and Smart Care Delivery I

CS3-2 An Intelligent Exercise Prescription System for Respiratory Rehabilitation in Chronic Obstructive Pulmonary Disease Based on Knowledge Graphs

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Background and Objectives

To construct a knowledge graph for respiratory rehabilitation exercise prescriptions for chronic obstructive pulmonary disease (COPD) and to develop an intelligent decision-support system for exercise prescription interventions.

Methods

A top-down approach was adopted to construct the knowledge graph for COPD respiratory rehabilitation exercise prescriptions. First, a terminology glossary and relationship framework for the field of respiratory rehabilitation were manually defined. Subsequently, knowledge extraction was performed from existing data using computer technology. Second, the extracted results were fine-tuned to ensure the accuracy of the knowledge graph. Finally, a smart exercise prescription system for COPD respiratory rehabilitation was built by combining RAG technology with large language models.

Results

A knowledge graph for COPD respiratory rehabilitation exercise prescriptions, comprising 514 entities and 657 relationships, was constructed, and a smart exercise prescription generation system was developed. The results indicate that the prescriptions generated by the system demonstrate good overall performance, with scores for accuracy, completeness, conciseness, and clinical safety of 6.39 ± 0.46 out of 7, 4.55 ± 0.38 out of 5, 4.55 ± 0.38 out of 5, and 3.91 ± 0.14 out of 5, respectively. objectively confirming the safety and efficacy of the system's application and demonstrating its high clinical value for widespread adoption.

Conclusions

This study establishes a knowledge graph-enhanced large language model framework for the intelligent, interpretable generation of personalized COPD exercise prescriptions. Integrating structured clinical knowledge with retrieval augmentation and medical rule constraints, the framework ensures transparent, reliable AI-driven decision-making, thereby supporting the extension of respiratory rehabilitation to community and home care.

Concurrent Oral Presentation Session

Session 3: Digital Health, AI, and Smart Care Delivery I

CS3-3 Digital Innovation in Delirium Prevention: Development and Validation of a Virtual Reality Platform for Mechanically Ventilated ICU Patients

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Background and Objectives

ICU delirium affects 60%-80% of mechanically ventilated patients, raising mortality, prolonging hospitalization and causing long-term cognitive impairment. Current non-pharmacological prevention strategies are fragmented, poorly standardized and human-resource dependent. Virtual reality (VR) provides immersive non-invasive multisensory stimulation that addresses multiple modifiable delirium risk factors simultaneously. However, no systematic VR-based platform for delirium prevention in this population is available, leaving a critical gap in digital critical care nursing. To develop and validate a VR-based digital platform for delirium prevention in mechanically ventilated ICU patients.

Methods

A three-phase design was employed: (1) Evidence synthesis using the 6S pyramid model to identify best evidence for non-pharmacological delirium prevention and to inform the platform content framework; (2) Platform development using AI-generated immersive content, two rounds of Delphi expert consultation, and pilot testing; (3) A quasi-experimental study involving 122 mechanically ventilated ICU patients (62 controls receiving standard care; 60 intervention group receiving VR intervention in addition to standard care). Outcomes included delirium incidence, ventilation duration, anxiety, depression, pain, and sleep quality.

Results

Based on 18 studies yielding 26 best-evidence statements, a digital platform comprising 55 VR videos and 2 cognitive training games was developed, with 6 functional modules: VR positive emotion, VR breathing training, VR early mobilization, VR cognitive training, VR mindfulness meditation, and VR sleep optimization. The intervention group showed significantly lower delirium incidence (23.33% vs. 41.94%, $P < 0.05$), shorter ventilation duration (approximately 39 hours reduction, $P < 0.001$), reduced anxiety and depression scores, and improved sleep quality (all $P < 0.001$). No significant difference in pain scores was observed ($P > 0.05$).

Conclusions

This VR platform effectively reduces delirium incidence, shortens ventilation duration, and improves psychological and sleep outcomes, providing a scalable, evidence-based tool for smart ICU delirium prevention and contributing to digital transformation and humanized care in critical care nursing.

Concurrent Oral Presentation Session

Session 3: Digital Health, AI, and Smart Care Delivery I

CS3-4 Development and Usability Evaluation of a Knowledge Graph-Based Symptom Management System for Women Receiving Breast Cancer Chemotherapy

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Background and Objectives
Women receiving breast cancer chemotherapy frequently experience multiple co-occurring symptoms that require coordinated and individualized management. This study aimed to develop CoSMoS, a knowledge graph-based digital health system for personalized symptom self-management, and evaluate its preliminary usability among patients and oncology nurses.

Methods
CoSMoS was developed by integrating evidence on co-occurring symptom patterns with best available evidence for non-pharmacological symptom management. An evidence-based knowledge graph was constructed to link symptoms, assessments, influencing factors, and self-management interventions. A personalized recommendation mechanism incorporated patient-reported symptom severity and priorities, clinical characteristics, intervention suitability, and patient preferences to generate tailored recommendations. The system comprised a patient-facing mobile platform and a nurse management platform. Preliminary usability testing involved 20 women receiving breast cancer chemotherapy and 20 oncology nurses. Both groups completed the Post-Study System Usability Questionnaire (PSSUQ); nurses additionally completed five predefined tasks and evaluated nine generated recommendations for clinical appropriateness.

Results
The knowledge graph comprised 3,901 nodes and 5,193 relationships. Median overall PSSUQ scores were 1.16 (IQR 1.00–1.91) for patients and 1.63 (IQR 1.19–2.64) for nurses. Among patients with valid responses, 94.4% were satisfied with the system. All nurses completed the predefined tasks, with 65.0%–95.0% rating individual tasks as easy to complete. Across nine recommendations, favorable ratings averaged 0.94 for safety, 0.95 for evidence support, 0.88 for symptom relevance, and 0.82 for actionability.

Conclusions
CoSMoS demonstrated favorable preliminary usability among patients and oncology nurses, with generated recommendations showing good clinical appropriateness. Further evaluation is warranted to examine its use in supporting personalized symptom self-management during chemotherapy.

Concurrent Oral Presentation Session

Session 4: Mental Health and Psychosocial Care I

CS4-1 Developing a Framework of Digital Therapeutic Alliance: Findings from Implementing an ICBT Program in China

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Background and Objectives

Therapeutic alliance significantly influences mental health and health behavior outcomes in psychological interventions. Despite increasing evidence of the effectiveness of internet-based cognitive behavioral therapy (ICBT), the concept and dynamics of the digital therapeutic alliance (DTA) remain underdeveloped. This study aimed to develop a theoretical framework by exploring the roles of clients, counselors, and digital platforms and identifying the interactive process, characteristics, and influencing factors of DTA.

Methods

Data were collected within a broader intervention implementation study of a guided ICBT program for HIV prevention among young sexual minority men in China, which has been reported elsewhere. We conducted virtual individual semi-structured in-depth interviews among 20 recipients, and an exhaustive sample of all implementers (counselors and supervisors, n=6). Data was analyzed using qualitative template analysis.

Results

Our DTA framework defines the construct, including: the roles of the therapeutic triad (clients, counselor, and digital platform), triad interactions mechanism, characteristics and influencing factors of DTA. Clients act as initiators, counselors serve as guides, and digital platform functions as a "tree hole," "invisible friend," "warm harbor," or "repository of knowledge and tools". The connection to real-world affections (through welcome and check-in calls) and frequent triad interactions facilitate establishing the DTA, which having three key characteristics of “client-driven”, “equal relationship”, and “being difficult to establish but easy to terminate”. Influencing factors of DTA encompassed client-related aspects (motivation, personality, learning habits), counselor-related elements (professional skills, responsiveness, supervision), and platform-related considerations (authority, confidentiality, usability, functional appropriateness).

Conclusions

This study develops a concise DTA framework, elaborating the roles, interactions, characteristics and influencing factors. This framework could guide future digital therapies not only for HIV prevention, but also for a broader digital therapy programs, by emphasizing

tailored engagement strategies, counselor digital communication training, and enhanced platform usability and security.

Concurrent Oral Presentation Session

Session 4: Mental Health and Psychosocial Care I

CS4-2 Heterogeneity of Non-Suicidal Self-Injury in Adolescents with Depressive Disorders: A Latent Profile Analysis Integrating Functions and Addictive Features

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Background and Objectives

Non-suicidal self-injury (NSSI) is a prevalent and clinically significant behavior among adolescents with depressive disorders. However, substantial heterogeneity exists in the psychological functions and behavioral characteristics underlying NSSI, which may hinder individualized psychosocial care. This study aimed to identify latent profiles of NSSI based on behavioral functions and addictive features and to explore psychosocial factors associated with different profiles.

Methods

A total of 305 adolescent inpatients and outpatients aged 12–18 with depressive disorder and NSSI were consecutively recruited. Participants completed self-report measures assessing NSSI functions (social influence, external emotion regulation, internal emotion regulation) and addictive features, along with assessments of anxiety, depression, difficulty identifying feelings, emotion regulation strategies, peer pressure, academic pressure, emotional abuse (EA), and emotional neglect (EN). Latent profile analysis was performed to derive profiles, and multinomial logistic regression was used to identify independent correlates of profile membership.

Results

Three profiles emerged: “Low functional engagement with addictive features group” (Profile 1, 28.2%), “Moderate functional engagement with addictive features group” (Profile 3, 62.3%), and “Multifunctional engagement with addictive features group” (Profile 2, 9.5%). The profiles exhibited a clear gradient in all three NSSI function domains (Profile 2 > Profile 3 > Profile 1), whereas addictive features did not differ significantly across profiles. With the Profile 3 as reference, membership in the Profile 1 was independently predicted by lower anxiety (OR = 0.900, 95% CI: 0.826-0.981) and less EN (OR = 0.289, 95%CI: 0.209-0.401), whereas membership in the Profile 2 was independently predicted by higher EA (OR = 2.786, 95% CI: 1.678-4.625).

Conclusions

Adolescents with depressive disorders and NSSI exhibit distinct psychosocial profiles characterized by different functional patterns. Integrating assessment of NSSI functions, addictive features, and psychosocial factors may facilitate early risk identification and individualized mental health nursing interventions.

Concurrent Oral Presentation Session

Session 4: Mental Health and Psychosocial Care I

CS4-3 Development and Preliminary Application of a Psychological Distress Intervention Protocol for Patients with ICD Electrical Storm: A Post-Traumatic Growth Perspective

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Background and Objectives

To develop a FACE intervention protocol grounded in self-transcendence theory from the post-traumatic-growth perspective for psychologically distressed patients with implantable cardioverter-defibrillator (ICD) electrical storm, and validate its scientificity, feasibility and preliminary efficacy for targeted psychological intervention.

Methods

Relevant domestic and international literature was systematically searched. Guided by self-transcendence theory, a four-dimensional preliminary FACE framework was formulated, including: Focus on inner world and self-awareness (F); Associate with others and expand personal boundaries (A); Collect past experiences and envision the future (C); Elevate beyond self and achieve personal growth (E). Sixteen interdisciplinary experts completed two-round Delphi consultation to revise the protocol (Sep-Oct 2025). Thirty-two ICD electrical-storm patients from two Jiangsu tertiary-A hospitals received the preliminary 4-week intervention (Nov 2025-Feb 2026). Distress Thermometer, Self-Transcendence Scale, Multidimensional Scale of Perceived Social Support and Self-Management Behavior Scale were used for pre-post evaluation.

Results

High expert consensus was reached (Cr=0.881, second-round W=0.323, P<0.001, CV 0-0.179). The final protocol included 4 phases, 10 themes and 32 measures. Post-intervention psychological distress decreased significantly, while self-transcendence, perceived social support and self-management scores improved markedly (all P<0.001).

Conclusions

The FACE intervention is scientific and feasible. It mitigates psychological distress and improves patients' psychosocial status and self-management. This protocol can serve as a standardized psychological nursing tool for clinical management of ICD electrical storm patients, expand the application of self-transcendence theory in chronic disease psychological nursing from the post-traumatic growth perspective, and deserves further promotion and large-scale implementation.

Concurrent Oral Presentation Session

Session 4: Mental Health and Psychosocial Care I

CS4-4 Latent Profile Analysis of Compassion Fatigue Among Oncology Nurses and Its Association with Emotional Labor: A Multicenter Cross-Sectional Study

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Background and Objectives
Oncology nurses are repeatedly exposed to patient suffering and death, placing them at high risk of compassion fatigue. This condition undermines well-being, compromises care quality, increases turnover intention, and threatens workforce stability. Previous variable-centered research has overlooked individual heterogeneity. Latent profile analysis (LPA), a person-centered approach, can identify distinct subgroups. Emotional labor, whereby nurses regulate emotions to meet professional expectations, associates with compassion fatigue, but its profile-specific relationships remain unclear. This study used LPA to identify compassion fatigue profiles, examine associated factors, and explore their relationships with emotional labor, thereby informing targeted, individualized interventions.

Methods
A convenience sampling method was used to recruit 685 oncology nurses from four tertiary grade-A hospitals in four first-tier Chinese cities (Beijing, Shanghai, Guangzhou, and Shenzhen) between January and June 2026. Participants completed a general information questionnaire, the Professional Quality of Life Scale version 5 (ProQOL-5), and the Emotional Labor Scale. Latent profile analysis (LPA) was performed to identify profiles of compassion fatigue, and the robust three-step (R3STEP) approach was applied to construct a multinomial logistic regression model to examine associated factors.

Results
Three latent profiles of compassion fatigue were identified: low satisfaction–high burnout (n = 247, 36.1%), high satisfaction–low burnout (n = 394, 57.5%), and high satisfaction–high traumatic stress (n = 44, 6.4%). The total compassion fatigue score was weakly positively correlated with the total emotional labor score ($r = 0.304$, $P < 0.01$). With the high satisfaction–low burnout profile as the reference, multinomial logistic regression indicated that marital status, surface acting, deep acting, and emotional expression requirements were significantly associated with profile membership ($P < 0.05$).

Conclusions

Compassion fatigue among oncology nurses is heterogeneous. Nursing managers should prioritize nurses in the high satisfaction–high traumatic stress profile and deliver profile-specific interventions to improve occupational well-being and quality of care.

Concurrent Oral Presentation Session

Session 5: Nursing Leadership and Workforce

CS5-1 Bidirectional Empowerment of Organizational and Individual Health Literacy: A System Dynamics Analysis and Policy Insights for Hospital Health Literacy

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Background and Objectives

Hospital health literacy (HHL) improves patient outcomes and health equity and is central to China's health system strengthening. HHL emerges from the interaction between organizational health literacy and individual health literacy. This study builds a system dynamics (SD) model of HHL mechanisms to identify key drivers and inform policy.

Methods

Using mixed data from 12 hospitals in Zhejiang and Henan provinces—surveys (n=360), staff interviews (n=80), and site observations—we developed and validated an SD model with five subsystems: literacy-oriented management, staff-led promotion, physical environment, external collaboration, and patient engagement. The model simulated HHL trends from 2020 to 2030 and compared subsystem leverage across regional resource contexts.

Results

Among the five subsystems, staff-led promotion was the strongest lever for HHL improvement. The physical environment—especially digital facilities (self-service kiosks, health-information screens, digital follow-up tools)—strongly supported HHL as a vehicle for organizations to empower individual health literacy. Literacy-oriented management showed the largest Zhejiang–Henan gap, reflecting how regional resources shape the organizational side. Scenario simulation showed that a combined-lever pathway (staff-led promotion + patient engagement + digital environment) improved the 2030 HHL composite index more than a single-lever pathway.

Conclusions

This study reveals the nonlinear dynamics of HHL and the bidirectional empowerment between organizational and individual health literacy. Humanistic, staff-led care and a digitally enabled environment together form the core engine of HHL improvement. Findings offer actionable policy insights for China and comparable health systems, advancing UN Sustainable Development Goal 3.

Concurrent Oral Presentation Session

Session 5: Nursing Leadership and Workforce

CS5-2 Exploring Renal Nurses' Cultural Education and Its Impact on Culturally Safe Care for First Nations People with Kidney Disease

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Background and Objectives
Cultural safety is crucial for equity and inclusion for First Nations People in kidney health settings. A lack of culturally safe and responsive care remains a significant barrier for many First Nations People, who prioritise cultural identity, family, and kinship. The predominantly non-First Nations nursing workforce, with limited understanding of the importance of family, community, and Country, inadvertently causes negative consequences for First Nations People. We explored renal nurses' cultural education in metropolitan and rural health services in South Australia, examining how this education translated into clinical and culturally safe practices when working with First Nations People experiencing kidney disease. Using qualitative Participatory Action Research, semi-structured interviews were conducted with renal nurses. Participants included both First Nations and non-First Nations nurses, sharing their cultural education journeys and how it translated into their practice.

Methods
This qualitative participatory action research was informed by Indigenous Institutional Theory providing a framework to understand systemic and institutional influences on cultural safety practices alongside decolonising methodologies; thereby assuring the research respects First Nations knowledge and perspectives. Semi-structured interviews were inductively and deductively analysed to identify themes. Findings were discussed with the Aboriginal Kidney Care Together - Improving Outcomes Now (Akction) First Nations kidney care consumer reference team confirmed accuracy and cultural relevance, and their feedback refined and validated the results

Results
All thirteen participants expressed frustration with limited access to cultural education and institutional barriers hindering culturally safe practices. Five themes emerged: “Entering practice unprepared; Building confidence for difficult conversations; Recognising culturally unsafe care; Sharing responsibility for culturally safe practice; and Confronting institutional white supremacy".

Conclusions
The study highlighted individual goodwill among nurses and support from change champions, as well as one effective co-designed cultural safety educational approach. However,

institutional inertia hindered prioritisation and implementation of appropriate cultural safety education and improvements in practice within the healthcare system.

Concurrent Oral Presentation Session

Session 5: Nursing Leadership and Workforce

CS5-3 Mapping Nursing Leadership Impact in the HKU JC Nursing Leadership Development Fellowship Programme

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Background and Objectives

The HKU JC Nursing Leadership Development Fellowship Programmes prepare nurse leaders through a tailored curriculum. Fellows complete practice change projects to improve workforce sustainability, service delivery, patient safety, digital transformation, and health outcomes. This study mapped the impact of 120 first-cohort projects (2024–2025).

Methods

A retrospective descriptive content analysis was conducted using the programme's project summary dataset. Each project was coded by global megatrend, Sustainable Development Goal, study methodology, outcome type, leadership theme, primary outcome, and reported impact. Outcome domains included organizational, service, patient, health, system, and policy outcomes.

Results

The 120 projects addressed five megatrends: Innovation in Nursing, 34 (28.3%); Nursing Workforce, 33 (27.5%); Primary Healthcare, 22 (18.3%); Healthcare Management and Policy, 17 (14.2%); and Digital Health, 14 (11.7%). All projects aligned with SDG 3; additional alignment included SDG 4 in 47 (39.2%), SDG 9 in 44 (36.7%), SDG 8 in 21 (17.5%), and SDG 10 in 14 (11.7%). The commonest methodology was quasi-experimental, pre–post, or pilot intervention design, used in 62 projects (51.7%). Outcome mapping showed 33 organizational outcomes (27.5%), 26 service (21.7%), 24 patient (20.0%), 22 health (18.3%), 13 system (10.8%), and 2 policy outcomes (1.7%). Impacts included improved mentoring competency by 43.69 points, reduced turnover intention by 5.18 points, reduced emergency department length of stay from 375 to 317 minutes, improved handover scores from 83.33 to 90.37, reduced pain scores from 4.54 to 2.53, pressure injury incidence from 28.3% to 6.9%, and documentation time from 189.2 to 35.9 seconds.

Conclusions

Mapping by megatrends, SDG alignment, and outcome domains showed preliminary positive nursing leadership impact across workforce development, service redesign, patient-centred

care, clinical health improvement, system innovation, and policy-informed healthcare development.

Concurrent Oral Presentation Session

Session 5: Nursing Leadership and Workforce

CS5-4 A Multicenter Study on the Ethical Leadership Ability of Clinical Nurses in China: Analysis of Potential Characteristics and Related Factors

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Background and Objectives

This study aims to assess the potential factors underlying the ethical leadership abilities of clinical nurses in China, as well as the differences in ethical leadership capabilities resulting from different potential factors.

Methods

This study was conducted from January 2026 to April 2026. Using convenience sampling, researchers conducted a multicenter cross-sectional survey among 409 nurses from 13 hospitals in Sichuan Province, China. Participants completed questionnaires on general demographics, ethical leadership, hospital ethical climate, and the Moral Resilience Scale. Through latent profile analysis, researchers identified potential characteristics of clinical nurses' ethical leadership. For ethical leadership under different potential characteristics, multiple logistic regression analysis was further employed to examine its influencing factors.

Results

The ethical leadership scores of 409 nurses were (146.14 ± 24.03), categorized into three levels: low(17.8%), moderate(36.7%), and high(45.5%). Multivariate logistic analysis revealed that marital status, participation in departmental management, hospital ethical climate, and moral resilience were significant predictors of ethical leadership competence across all classes ($P < 0.05$). Specifically, married nurses were more likely to demonstrate higher ethical leadership ability compared to their unmarried counterparts. Active involvement in departmental management was positively associated with ethical leadership. A supportive hospital ethical climate emerged as a strong environmental enabler. Furthermore, moral resilience significantly predicted high-level ethical leadership, underscoring its role as a critical personal resource.

Conclusions

There are differences in the ethical leadership abilities among different clinical nurses, and these differences are mainly related to marital and reproductive status, whether they participate in department management, the hospital's ethical atmosphere, and moral resilience. This finding suggests that enhancing the ethical leadership abilities of nurses requires strengthening hospital ethical culture construction, creating a supportive ethical

practice atmosphere, incorporating moral resilience training into the on-the-job education system for nurses, and providing them with opportunities to participate in department management.

Concurrent Oral Presentation Session

Session 6: Cancer Care

CS6-1 Development and Validation of the Multidimensional Frailty Scale for Cancer Survivors (MFS-CS) Using Classical Test Theory and Multidimensional Item Response Theory

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Background and Objectives

To develop and validate the Multidimensional Frailty Scale for Cancer Survivors (MFS-CS), providing a reliable instrument to assess multidimensional frailty in this population.

Methods

Guided by the "Integrated Conceptual Model of Frailty", an initial scale was generated through a literature review, qualitative interviews, text analysis, and Delphi expert consultations. A cross-sectional survey was conducted between May and June 2026 among cancer survivors with solid tumors across five tertiary hospitals in Jiangsu Province, China. Item selection and psychometric evaluations were conducted.

Results

A total of 684 valid questionnaires were collected. Following two Delphi rounds, a 37-item scale covering physical, psychological, and social dimensions was established. Item analysis eliminated 8 items. Exploratory factor analysis (n = 370) and confirmatory factor analysis (n = 314) supported and validated the three-factor structure. IRT analysis using Mokken and multidimensional two-parameter logistic models eliminated 4 items for insufficient discrimination, yielding a final 25-item scale. The total scale exhibited strong internal consistency (Cronbach's α = 0.831), split-half reliability (0.838), and test-retest reliability (0.818). Content validity was excellent (S-CVI/Ave = 0.962; I-CVI = 0.882-1.000). AVE and CR values exceeded thresholds, and discriminant validity was confirmed. Meanwhile, criterion-related validity with the TFI was well-supported. IRT parameters demonstrated ideal item discrimination (1.780-3.961) and difficulty (-0.445-0.312). Receiver operating characteristic analysis identified optimal cutoffs of 11, 6, 3, and 5 for the total scale and its physical, psychological, and social sub-scales, respectively, with areas under the curve of 0.913 (95% CI: 0.888-0.939), 0.858 (95% CI: 0.829-0.887), 0.899 (95% CI: 0.874-0.924), and 0.802 (95% CI: 0.770-0.835).

Conclusions

The MFS-CS demonstrates good reliability, validity, and item functionality. It serves as an effective instrument for assessing multidimensional frailty risk in cancer survivors, offering a quantitative foundation for tailored rehabilitation interventions.

Concurrent Oral Presentation Session

Session 6: Cancer Care

CS6-2 Global Research Landscape of Insomnia in Breast Cancer (2000–2025): A Bibliometric Analysis with Insights from Asia and Thailand

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Background and Objectives
Insomnia is common and clinically significant in women with breast cancer, affecting quality of life, well-being, and survivorship. Despite expanding research, the field's development, key contributors, collaborations, and evolving themes remain unmapped. This analysis identified publication trends, key contributors, collaboration patterns, and emerging themes, with insights from Asia and Thailand, to guide future research and practice.

Methods
We conducted a bibliometric analysis of 616 Scopus-indexed English-language articles and reviews on insomnia in breast cancer from 2000 to 2025. Searches combined insomnia-related terms (insomni, sleeplessness, "sleep initiation and maintenance disorder") with breast cancer terms. Performance analysis covered publication trends, country and journal productivity, international collaboration, and author keywords. Asian and Thai publications were examined by author affiliation.

Results
Annual publications rose from 5 in 2000 to 74 in 2025 (annual growth rate 11.4%). The United States (n = 187), China (n = 80), Canada (n = 60), and South Korea (n = 38) were the most productive countries, and Supportive Care in Cancer was the leading journal (n = 35). Taipei Medical University and Université Laval were the joint most productive institutions (n = 24 each). International co-authorship was 21.2%. Research themes shifted from menopausal symptoms and symptom management to cognitive behavioral therapy and, recently, to acupuncture, survivorship, sleep quality, and meta-analyses. Asian countries contributed 218 documents (35.4%), ASEAN countries 22 (3.6%), and Thailand 3 (0.5%), none focused primarily on insomnia among Thai patients; Thailand was peripheral in the collaboration network.

Conclusions
Research on insomnia in breast cancer has expanded substantially, increasingly addressing survivorship, sleep quality, and interventions. Output is concentrated in a few countries, with the United States central to collaboration, whereas Thailand remains peripheral. Context-specific research and regional collaboration are needed, particularly in Thailand.

CS6-3 Beyond Neurotoxicity: A Mixed-Methods Study of Illness Perceptions, Self-Regulation, and Unmet Support Needs in Chemotherapy-Induced Peripheral Neuropathy

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Background and Objectives
Chemotherapy-induced peripheral neuropathy (CIPN) can persist beyond treatment, disrupting physical function and emotional well-being and complicating self-management. This study examined associations of illness perceptions and self-regulatory strategies with CIPN-related symptom burden and psychological distress, and explored unmet support needs from patient and healthcare professional perspectives.

Methods
An explanatory sequential mixed-methods design was used. Quantitative data were collected from 472 adults with CIPN-related symptoms receiving platinum-based chemotherapy at two tertiary hospitals. Validated measures assessed symptom burden, psychological distress, illness perceptions, positive coping, mindfulness, and physical activity. Hierarchical regression analyses were followed by semi-structured interviews with 21 patients and 12 healthcare professionals. Qualitative data were analysed using directed content analysis and integrated with quantitative findings.

Results
More threatening illness perceptions were associated with greater symptom burden ($\beta=0.365$, $p<0.001$) and psychological distress ($\beta=0.465$, $p<0.001$). Lower positive coping, mindfulness, and physical activity were also associated with greater symptom burden and distress. The final models explained 52.1% of the variance in symptom burden and 56.6% in psychological distress. Qualitative findings revealed persistent functional limitations, uncertainty about recovery, self-management constrained by fatigue and treatment-related restrictions, and unmet needs for clear, specific, and ongoing professional guidance. Healthcare professionals identified workload, limited training, and fragmented follow-up as barriers. Integrated findings suggested that patients' CIPN experiences reflected the interplay of threatening illness perceptions, constrained self-regulation, and insufficient continuity of support.

Conclusions
CIPN should be addressed not only as a neurotoxic adverse effect, but also as a self-regulation and supportive-care challenge. Nursing care should assess illness perceptions, clarify realistic recovery expectations, and provide individualised, low-burden self-management guidance with sustained follow-up. These findings may inform patient-centred, empathy-informed CIPN care pathways.

Concurrent Oral Presentation Session

Session 6: Cancer Care

CS6-4 Network Analysis of Multi-Dimensional Symptoms and Influencing Factors in Lung Cancer Patients Undergoing Chemotherapy: A Mixed-Methods Study

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Background and Objectives

To investigate multidimensional symptoms, extract symptom clusters, construct symptom networks, identify bridge symptoms, and explore their influencing factors among lung cancer patients receiving chemotherapy, so as to provide evidence-based reference for symptom management.

Methods

An explanatory sequential mixed-methods design was adopted. A total of 281 chemotherapy-treated lung cancer patients from two tertiary-A hospitals in Liaoning Province between November 2025 and May 2026 were enrolled. Questionnaires including general information, MSAS, IPAQ-SF and Self-Efficacy for Managing Chronic Disease Scale were used. Exploratory factor analysis and R software were applied for symptom-cluster extraction and bridge-symptom identification. Binary Logistic regression was performed for influencing-factor analysis. Sixteen patients with prominent bridge symptoms underwent semi-structured interviews.

Results

Five symptom clusters were extracted with 61.981% cumulative explained variance. Top-three bridge symptoms were nervousness (RBS=2.9526), shortness of breath (RBS=2.2716) and insomnia (RBS=2.0091); fatigue (84.70%) was the most common symptom. Significant influencing factors ($P<0.05$): nervousness — primary caregiver type, prior chemotherapy cycles, number of comorbidities, overall activity level; shortness of breath — tumor stage, surgical history, chemotherapy regimen, self-management self-efficacy; insomnia — female sex, diagnosis duration, metastasis, surgical history. Three qualitative themes were identified: treatment-related toxicities, individual internal regulatory factors, external environmental support. Mixed-methods results confirmed that nervousness, shortness of breath and insomnia damage physical-mental status via dual physiological-psychological pathways. Chemotherapy-related adverse reactions interact with negative emotions to form a vicious cycle, and insufficient external care, medical and economic resources further aggravate multi-dimensional symptom burden.

Conclusions

Core bridge symptoms are jointly determined by physical, psychological and social factors. Clinical nursing should deliver bridge-symptom-centered multidimensional management, identify high-risk populations and implement stratified targeted interventions to improve patients' quality of life and survival.

Concurrent Oral Presentation Session

Session 6: Cancer Care

CS6-5 Developing a Cognitive Stepped Care Program for Brain Metastases: Co-Design and Preliminary Findings

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Background and Objectives

Cancer-related cognitive impairment (CRCI) is common among patients with brain metastases and can negatively affect symptom management and quality of life. Despite recommendations for cognitive symptom screening and management, models for integrating such practices into routine clinic follow-up are lacking. This project aims to develop and evaluate a Cognitive Stepped Care Program (CSCP) that provides systematic screening, assessment, and management of cognitive symptoms for patients with brain metastases.

Methods

In Phase 1, experience-based co-design methods were used to engage patients, caregivers, and clinicians to develop the CSCP, including clinical workflows and standard operating procedures. In Phase 2, we are currently evaluating the feasibility of the CSCP using the RE-AIM framework, with data collection involving intervention logs, surveys, and interviews with patients, caregivers, and clinic staff. An update on progress and preliminary findings will be presented.

Results

In Phase 1, strong engagement from patients, caregivers, and clinicians supported the co-design of the CSCP tailored to the local setting. The resulting pathway includes routine cognitive symptom screening and stepped interventions leveraging digital tools and matched to symptom severity, ranging from patient education to neuropsychological consultation. In Phase 2, feasibility of the CSCP was tested among 40 patients with brain metastases, 35 of whom reported mild to severe cognitive concerns and were allocated to receive intervention based on symptom severity. Early findings suggest that the initial components of the CSCP (e.g., cognitive symptom screening, patient education) are feasible to implement and acceptable to patients. However, refinements to the delivery of more intensive interventions (e.g., computerized cognitive assessment, group-based training) may be needed to enhance accessibility.

Conclusions

Early findings support that cognitive symptoms among people with brain metastases are common and while a stepped care model may improve implementation of supportive care, ongoing adaptation to optimize implementation and patient benefit may be warranted.

Concurrent Oral Presentation Session

Session 7: Gerontology and Long-term Care

CS7-1 Exploring Time Bank for Community Dwelling Older People Among Malaysian Urban Population: A Mixed Methods Study

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Background and Objectives

Malaysia is experiencing a rapid demographic transition towards an ageing society, underscoring the urgent need for innovative, community-based support systems that can complement conventional care structures. Time banking, a reciprocal service exchange model, has been shown internationally to promote active ageing, enhance social inclusion, and facilitate more equitable resource sharing. Despite its potential relevance to the Malaysian context, empirical evidence on the feasibility, cultural acceptance, and willingness to engage in time banking within urban populations remains scarce.

Methods

This mixed-methods study examined perceptions, motivators, barriers, and willingness to participate in time banking among community-dwelling older adults in urban Malaysia from November 2023 to July 2025. Quantitative data from 432 respondents were analyzed using SPSS version 26, while 12 in-depth interviews were thematically analyzed using ATLAS.ti.

Results

Quantitative findings showed high perceived drivers ($M = 36.90$, $SD = 5.25$), moderate perceived barriers ($M = 30.65$, $SD = 6.21$), and relatively high willingness to participate ($M = 7.69$, $SD = 1.99$). Hierarchical linear regression indicated that perceived drivers positively predicted willingness ($\beta = 0.446$, $p < .001$), while perceived barriers negatively predicted it ($\beta = -0.287$, $p < .001$). Age, marital status, income, occupation, and health status were also significantly associated with willingness. Thematic analysis identified five themes: conceptualization of time banking, motivators, barriers, willingness, and engagement strategies, highlighting limited awareness, mutual support, trust and privacy concerns, digital literacy, and the need for awareness campaigns and user-friendly tools.

Conclusions

Findings converged to show that while drivers encourage and barriers hinder willingness, cultural, social, and digital factors explain these dynamics. Malaysian urban populations are receptive to time banking, but implementation must address trust, inclusivity, and digital

access. Future initiatives should pilot culturally adapted models and evaluate their impact on community health and healthy ageing.

Concurrent Oral Presentation Session

Session 7: Gerontology and Long-term Care

CS7-2 Construction and Application of a Clinical Decision Support System for Specialized Nursing in Elderly Patients with Sarcopenia

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Background and Objectives

With accelerating population aging, sarcopenia in older adults is prevalent, raising risks of falls and disability. Sarcopenia nursing decisions are largely experience-driven, lacking standardized evidence-based digital tools. This study developed a specialized sarcopenia-nursing CDSS and validated its clinical effects to support standardized geriatric sarcopenia care.

Methods

On the basis of the nursing-process framework, a specialized nursing knowledge base was constructed through systematic literature screening and Delphi expert consultation. A closed-loop CDSS covering nursing assessment, diagnosis, planning, implementation and outcome evaluation was developed under B/S architecture. An explanatory sequential mixed-methods design was adopted for prospective clinical validation. A quasi-experimental trial was conducted among 49 nurses and 100 older patients with sarcopenia, followed by semi-structured interviews with participating nurses. Quantitative-qualitative triangulation was performed to comprehensively assess system usability, implementation effects and end-user experiences.

Results

A knowledge base consisting of 5 first-level, 25 second-level and 94 third-level items was constructed, and the corresponding CDSS was developed and implemented in clinical settings. Nurses rated the system high in terms of usability and effectiveness. Post-intervention data revealed that patients receiving CDSS-assisted nursing obtained significantly higher scores on sarcopenia prevention-related knowledge-attitude-practice than those in the control group. Qualitative findings further verified that this digital system supports evidence-based decision-making and empowers front-line nursing practice.

Conclusions

This specialized-nursing CDSS for older adults with sarcopenia shows sound clinical usability and acceptability. Embedding evidence-based knowledge into workflows, it bridges gaps between best-practice evidence and front-line nursing, facilitates standardized decision-making and improves patients' sarcopenia-related knowledge-attitude-practice. It offers a solution for homogenized high-quality geriatric nursing. Further multi-center studies should update its knowledge base, refine functions and validate generalizability for wider real-world adoption.

Concurrent Oral Presentation Session

Session 7: Gerontology and Long-term Care

CS7-3 Profiling Multi-System Symptom Clusters in Knee Osteoarthritis Patients and Associated Influencing Factors

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Background and Objectives

This study is designed to establish a symptom profile system for knee osteoarthritis (KOA) patients, investigate the underlying stratification of symptom clusters, and accurately distinguish diverse symptom cluster patterns and clinical phenotypes. Additionally, we aim to dissect the heterogeneity and independent determinants of different symptom profile subtypes, so as to elucidate inter-individual variations in symptom presentation and offer theoretical support for personalized symptom management and precision care.

Methods

Using convenience sampling, 424 KOA patients from Shenzhen tertiary grade-A hospitals (Jan–Jul 2026) completed a general questionnaire, the Memorial Symptom Assessment Scale, the Brief Resilience Scale, and the Social Support Rating Scale. Exploratory factor analysis extracted symptom clusters, latent profile analysis identified latent classes, and multinomial logistic regression (with univariate analysis) explored influencing factors.

Results

Exploratory factor analysis extracted six symptom clusters (joint dysfunction, negative emotion, systemic secondary, joint mechanical injury, muscle weakness, autonomic nervous) with 53.38% cumulative variance. Latent profile analysis revealed significant phenotypic heterogeneity, identifying three classes: local joint (59.1%), somatic stress (28.0%), and psychosomatic imbalance (12.9%). Multinomial logistic regression showed that vs. local joint, age and income were independent predictors of somatic stress compensatory, while age, BMI, resilience, and K-L grade predicted psychosomatic imbalance.

Conclusions

KOA patients exhibit significant individual differences in symptom cluster distribution and symptom burden levels, from which distinct symptom phenotype classes can be identified. Older age, higher BMI, more severe radiographic grading, and lower resilience levels may increase the risk of patients presenting with high symptom burden phenotypes. Clinical healthcare providers should pay attention to the characteristics of patients with different symptom phenotypes and develop targeted comprehensive symptom management strategies.

Concurrent Oral Presentation Session

Session 7: Gerontology and Long-term Care

CS7-4 Determinants of Digital Exclusion Among Older Adults in India: Evidence from the Longitudinal Aging Study in India

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Background and Objectives

To investigate the prevalence and determinants of digital exclusion among older adults in India.

Methods

A cross-sectional analysis was performed on 29,821 individuals aged ≥60 years using data from the Longitudinal Aging Study in India (Wave 1). Independent correlates were examined through multivariable logistic regression, with results expressed as odds ratios and 95% confidence intervals. To assess variable importance, an XGBoost machine learning model with SHAP values was employed.

Results

Digital exclusion was observed in 97.5% of participants, with higher prevalence among rural residents, women, those with lower education, and the oldest age groups. Higher education demonstrated a strong protective effect. Pronounced regional disparities were evident, with greater exclusion in the Northeast and East. Compared with the poorest quintile, participants in the richest households exhibited substantially lower odds of exclusion. Female gender and unmarried status were associated with elevated risk, whereas higher subjective social position conferred protection. The XGBoost model corroborated these findings, ranking education, geographic region, household economic status, residence type, and gender as the most influential predictors.

Conclusions

Both regression and XGBoost analyses highlight education, socioeconomic status, and regional inequalities as critical determinants. Addressing these structural barriers is essential to promote digital equity in aging populations.

Concurrent Oral Presentation Session

Session 8: Innovations in Healthcare Education and Pedagogy

CS8-1 Bridging Theory and Practice: Construction and Effect Evaluation of a "Three-Stage Progressive" Teaching Model for Comprehensive Midwifery Experimental Courses

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Background and Objectives

Midwives are the pivotal workforce ensuring high-quality maternal and newborn health care. The rising proportion of advanced maternal age has increased the complexity of clinical midwifery services and imposed higher demands on the core competencies of midwifery talents. Traditional experimental teaching in midwifery focuses on isolated skill training, leading to a disconnect between classroom learning and clinical practice and insufficient situational adaptability among students. This study constructed a "three-stage progressive" comprehensive experimental midwifery teaching model covering virtual, simulated and community scenarios supported by a nine-link teaching chain, with integrated ideological and political education, and explored its effects on students' core competencies, professional identity, autonomous learning ability and learning experience.

Methods

A historical non-simultaneous controlled study was conducted. Grade 2022 midwifery undergraduates served as the control group receiving traditional experimental teaching, and Grade 2023 as the intervention group implementing the three-stage progressive model. Outcomes were evaluated across four dimensions.

Results

The core competency score of the intervention group increased from 108.0±8.41 to 119.0±13.88, significantly higher than that of the control group (from 110.0±7.15 to 115.0±10.18, $P<0.05$). Post-test scores of professional identity and autonomous learning ability in the intervention group were both at a relatively high level. Over 94% of students highly recognized the teaching design and ideological integration, with favorable overall learning experience.

Conclusions

The three-stage progressive experimental teaching model can effectively bridge the gap between classroom and clinical practice, and simultaneously improve students' professional competence and autonomous development capacity, providing a practical paradigm for midwifery practical teaching reform.

Concurrent Oral Presentation Session

Session 8: Innovations in Healthcare Education and Pedagogy

CS8-2 Scaling and Streamlining Educational Escape Room Simulation for A–E Assessment in Nursing Students

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Background and Objectives

Educational escape rooms integrate simulation, gamification, teamwork and problem-solving to create active learning experiences. However, implementation can be resource-intensive, creating challenges for large nursing cohorts. Facilitator preparation is also an underexplored component of educational escape-room simulation. This study aimed to co-design, streamline and evaluate a scalable educational escape room focused on systematic A–E assessment and recognition of patient deterioration.

Methods

An educational escape room was co-designed by nursing academics and simulation educators and implemented with 795 second-year nursing students. Students worked collaboratively through a simulated deteriorating-patient scenario, applying the A–E framework to clinical cues and completing sequential challenges. The design was streamlined to support consistent delivery at scale, alongside structured facilitator preparation. Evaluation incorporated pre- and post-intervention questionnaires assessing A–E knowledge and certainty in responses, together with post-intervention qualitative questions exploring students' learning experiences. There were 126 pre-intervention and 109 post-intervention questionnaire responses.

Results

Students demonstrated high levels of A–E knowledge following the activity, with post-intervention responses indicating increased certainty across multiple knowledge domains. Qualitative findings demonstrated strong perceived educational value. Students described the escape room as engaging, interactive and less stressful than traditional simulation and reported that it reinforced systematic A–E assessment, recognition of deterioration, prioritisation and clinical reasoning. Students also identified benefits for teamwork, communication, decision-making under pressure and confidence for clinical placement. Implementation identified the importance of clear instructions, appropriate timing and facilitator preparation when delivering educational escape rooms at scale.

Conclusions

A co-designed and streamlined educational escape room provides a feasible approach to delivering engaging simulation-based learning to large nursing cohorts. Combining standardised design with facilitator preparation may enable scalable gamified simulation

while supporting clinical knowledge, confidence and application of systematic patient assessment.

Concurrent Oral Presentation Session

Session 8: Innovations in Healthcare Education and Pedagogy

CS8-3 Reimagining Post-Baccalaureate Residency Training (PBRT): A Five-Year Evaluation of Thailand's Pathway Beyond Transition to Specialty Nursing Competency

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Background and Objectives

Nurse residency programs commonly support newly graduated nurses during transition to professional practice. Thailand's Post-Baccalaureate Residency Training (PBRT) extends beyond transition through a workplace-based, competency-based pathway that progressively develops nurses toward specialty nursing competency over three years. For experienced nurses, prior clinical experience and demonstrated competencies can be recognized, enabling individualized progression and potentially shortening the training period. PBRT allows nurses to learn while continuing clinical practice, offering an alternative to conventional specialty training requiring approximately four months of full-time educational leave.

Methods

A retrospective and cross-sectional study evaluated five years of PBRT implementation (2018–2023) at King Chulalongkorn Memorial Hospital, Thailand, using Stufflebeam's Context, Input, Process, and Product (CIPP) Model integrated with Kirkpatrick's evaluation framework. Retrospective data were obtained from 422 program completers, and cross-sectional questionnaire data from 291 nursing administrators, unit-based clinical nurse educators, and nurse preceptors. Data were analyzed using descriptive statistics, ANOVA, and paired t-tests.

Results

Context, input, and process components were rated highly to exceptionally appropriate. Trainee satisfaction ranged from moderate to very high. All participants achieved the required specialty competency standards (100%). Specialty nursing competencies improved significantly after training and were sustained at six-month follow-up ($p<.05$). Confidence increased significantly, while work-related stress decreased significantly ($p<.05$).

Conclusions

PBRT demonstrates the feasibility of extending nurse residency beyond transition to practice into a progressive pathway toward specialty nursing competency. Its integration of workplace-based learning, competency-based progression, and academic–practice collaboration provides an innovative approach to specialty nurse development while enabling nurses to remain in clinical practice.

Concurrent Oral Presentation Session

Session 8: Innovations in Healthcare Education and Pedagogy

CS8-4 Learning Microbiology Through PhotoVoice: A Mixed-Methods Study of Undergraduate Nursing Students' Learning Outcomes and Experiences

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Background and Objectives
Microbiology is a core subject in nursing training, yet it is frequently perceived as difficult and disconnected from real-world clinical applications. Connecting microbiology concepts with everyday environments may make learning more meaningful for nursing students. This study focuses on undergraduate nursing students' participation in a PhotoVoice activity and aims to examine changes in engagement, learning empowerment, and satisfaction, and collect accounts of their learning experiences.

Methods
A mixed-methods study was conducted within an undergraduate nursing programme at a government-funded university in Hong Kong. Students investigated campus surface cleanliness using adenosine triphosphate (ATP) testing, photographed their findings, and participated in guided reflection. A single-group pretest–posttest evaluation included 188 students who completed paired questionnaires. Focus groups involved 109 students, guided by an interview guide. Quantitative outcomes were analysed using paired t-tests, with effect sizes expressed as Cohen's d. Qualitative data were analysed by inductive content analysis.

Results
Among the students, overall engagement increased following the activity (Cohen's $d = 0.94$, $p < 0.001$). Learning empowerment also increased ($d = 1.08$, $p < 0.001$), as did overall satisfaction ($d = 0.75$, $p < 0.001$). Five categories were identified from the focus group data, namely enhanced student engagement, active and experiential learning, intellectual stimulation, authentic learning contexts, and an innovative pedagogical approach.

Conclusions
Participation in the PhotoVoice activity was likely to be associated with enhanced learning outcomes and experiences. These findings support further evaluation of this teaching approach.

Concurrent Oral Presentation Session

Session 9: Mental Health and Psychosocial Care II

CS9-1 Level of Stress and Well-Being Among Nursing Students in Selected Higher Education Institutions: Basis for Holistic Stress Management

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Background and Objectives

Nursing students experience Academic, Clinical, interpersonal, Environmental, and Health-related stressors that may affect their well-being. This study assessed stress and well-being among nursing students in selected higher education institutions and examined relationships between specific stress and well-being domains. Findings provide a basis for holistic stress management and proposed areas where students may benefit from accessible, digitally enabled support.

Methods

A quantitative, descriptive-correlational design was used among 366 Bachelor of Science in Nursing students from three higher education institutions in Metro Manila during Academic Year 2025–2026. Stress was assessed across five domains: academic, clinical, interpersonal, environmental, and health-related. Well-being was assessed across five dimensions: physical, social, emotional, psychological, and spiritual. Descriptive statistics, Spearman rank-order correlation, MANOVA, and two-way ANOVA were used.

Results

Academic stress had the highest mean (M = 3.212), followed by health-related stress (M = 3.168), and interpersonal stress had the lowest (M = 2.346). Students showed generally positive well-being, with spiritual well-being having the highest mean (M = 6.768) and physical well-being the lowest (M = 6.107). Significant but weak relationships were found between selected stress and well-being domains, particularly academic stress and emotional and psychological well-being. Health-related and interpersonal stress were also significantly associated with selected well-being domains. Differences across institutions were observed in selected stress and well-being domains.

Conclusions

The findings support a holistic, student-centered stress-management approach addressing academic, physical, emotional, psychological, social, and spiritual needs. A digitally enabled holistic stress-management program is proposed, integrating Cognitive Behavioral Therapy (CBT)-based strategies, mindfulness, emotional regulation, physical wellness, spiritual

reflection, and online peer support through an accessible digital platform. This approach may provide flexible access to stress-management resources while maintaining human connection, empathy, and individualized support.

Concurrent Oral Presentation Session

Session 9: Mental Health and Psychosocial Care II

CS9-2 Self-Stigma, Self-Esteem, Social Inclusion, and Family Empowerment in Parents of Children with Autism Spectrum Disorder: Latent Profile and Chain Mediation Analysis

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Background and Objectives

Self-stigma is common among parents of children with autism spectrum disorder (ASD) and may undermine family empowerment, thereby affecting children's rehabilitation and developmental outcomes. However, little is known about the heterogeneity of self-stigma in this population or the mechanisms through which self-stigma influences family empowerment. This study aimed to identify latent profiles of self-stigma among parents of children with ASD, examine differences in family empowerment across profiles, and investigate the mediating roles of self-esteem and social inclusion.

Methods

A cross-sectional survey was conducted among 505 parents of children with ASD in Fujian Province, China (2025–2026). Participants completed measures of affiliate stigma, family empowerment, self-esteem, and social inclusion. Latent profile analysis identified self-stigma profiles, and serial mediation analysis examined the mechanisms linking profile membership to family empowerment.

Results

Two profiles emerged: a Low Self-Stigma profile (72.3%) and a Negative Emotional Cognition–Social Anxiety profile (27.7%). Parents in the latter profile reported significantly lower family empowerment ($p < 0.001$). The association between self-stigma profile membership and family empowerment was fully mediated by self-esteem and social inclusion (total indirect effect = −0.219, 95% CI [−0.309, −0.142]). Self-esteem contributed the largest indirect effect (55.7%), followed by the serial pathway through self-esteem and social inclusion (24.7%) and the independent effect of social inclusion (19.6%).

Conclusions

Self-stigma among parents of children with ASD is heterogeneous, with a subgroup characterized by negative emotional cognition and social anxiety exhibiting substantially lower family empowerment. Self-esteem and social inclusion fully explain this association,

highlighting the importance of identifying high-risk parents and implementing interventions that enhance psychological resources and social integration to promote family empowerment.

Concurrent Oral Presentation Session

Session 9: Mental Health and Psychosocial Care II

CS9-3 Latent Profiles of Caregiver Burnout and Associated Factors Among Family Caregivers of Patients with Heart Failure: A Cross-Sectional Study

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Background and Objectives

Family caregivers of patients with heart failure often experience sustained caregiving demands that may lead to caregiver burnout. However, caregiver burnout may be heterogeneous, and its distinct patterns remain insufficiently understood. Guided by the Job Demands–Resources model, this study aimed to identify the latent profiles of caregiver burnout among family caregivers of patients with heart failure and examine the associations of patient- and caregiver-related characteristics, emotional labor, and resourcefulness with profile membership.

Methods

We recruited 307 dyads of patients with heart failure and their family caregivers from a tertiary hospital in Nanjing, China, between July and December 2025 using convenience sampling. Latent profile analysis (LPA) was used to identify distinct profiles of caregiver burnout. Univariate analysis and multinomial logistic regression were subsequently conducted to examine associations between patient- and caregiver-related characteristics, emotional labor, resourcefulness, and profile membership.

Results

LPA identified three distinct profiles of caregiver burnout: low-burnout/physiological-burnout predominant, moderate-burnout/role-burnout predominant, and high-burnout/role-psychological burnout co-elevated. Significant differences were observed across these profiles in terms of patient age, number of comorbidities, NYHA functional class, caregiver age, sex, education level, employment status, per capita monthly household income, perceived caregiving difficulty, emotional labor, and resourcefulness using univariate analysis. Multinomial logistic regression analysis revealed that patient age, caregiver age, employment status, perceived caregiving difficulty, emotional labor, and resourcefulness were significant factors associated with profile membership.

Conclusions

Caregiver burnout among family caregivers of patients with heart failure can be characterized by three distinct profiles, with age-related factors, caregiver employment status, perceived

caregiving difficulty, emotional labor, and resourcefulness identified as key factors associated with profile membership.

Concurrent Oral Presentation Session

Session 9: Mental Health and Psychosocial Care II

CS9-4 A Longitudinal Trajectory Analysis of Disease Communication in Couples, Posttraumatic Growth, and Anticipatory Grief in Breast Cancer Patients Based on the Generalized Estimating Equation

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Background and Objectives
Breast cancer patients experience high levels of anticipatory grief. This study focuses on the dynamic trends and correlations at various time points regarding disease communication in couples, post-traumatic growth, and anticipatory grief among breast cancer patients at different stages of treatment; and explores the predictive roles of disease communication in couples and post-traumatic growth in anticipatory grief.

Methods
This study recruited 103 breast cancer patients and administered questionnaires. Data were collected at three time points: the third day after surgery (T1), the day of admission for the first chemotherapy session (T2), and the completion of the fourth chemotherapy session (T3). Analytical methods include normal test, descriptive statistical analysis, generalized estimating equation, pearson correlation analysis, spearman correlation analysis, and multiple stepwise linear regression.

Results
The dynamic changes in the total score of disease communication in couples and its four scale dimensions had statistical significance. The dynamic changes in the total score of total post-traumatic growth and its five scale dimensions had statistical significance. The dynamic changes in the total score of total anticipatory grief and its five scale dimensions had statistical significance. T1 and T3: Anticipatory grief is positively correlated with disease communication in couples and negatively correlated with post-traumatic growth. T2: Anticipatory grief showed a positive correlation with disease communication in couples. Self-protection, specific treatment concerns, and emotional support exert a positive prediction on anticipatory grief; life insights and new possibilities exert a negative prediction on anticipatory grief.

Conclusions
Disease communication in couples, post-traumatic growth, and anticipatory grief in breast cancer patients exhibit dynamic changes. Disease communication in couples and anticipatory grief show significant positive correlations. T1 and T3 reveal significant negative correlations between post-traumatic growth and anticipatory grief. Breast cancer patients' self-protection,

specific treatment concerns, and emotional support positively predict anticipatory grief, while life insights and new possibilities negatively predict it.

Concurrent Oral Presentation Session

Session 10: Women's Health

CS10-1 Effects of Health Promotion on the Awareness of Human Papillomavirus (HPV) Vaccine Among Female Elementary Students

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Background and Objectives

Human papillomavirus (HPV) is a preventable cause of cervical cancer, yet awareness of HPV and its vaccine remain limited among school-aged children. Nurses play a vital role in health promotion through early education and disease prevention. This study aimed to determine the effectiveness of a structured health promotion intervention in improving awareness of HPV and HPV vaccination among female elementary students aged 9–12 years.

Methods

A quasi-experimental pretest-posttest design was conducted among 60 female students in Grades 4–6 from a public elementary school in Manila. Participants were selected through stratified random sampling and assigned to either an experimental group (structured health promotion using a comic-based PowerPoint presentation, interactive discussion, engagement activities, and infographics) or a control group (infographics only). Ethical approval, parental informed consent, and participant assent were obtained prior to data collection. Awareness was measured using a validated 20-item questionnaire administered before and immediately after the intervention. Data were analyzed using descriptive statistics, Wilcoxon Signed-Rank Test, paired-samples t-test, and independent-samples t-test.

Results

Both groups demonstrated significant improvements in HPV and HPV vaccine awareness following the intervention. The experimental group achieved a significantly higher posttest awareness score than the control group (89.5% vs. 73.5%; $t = -3.74$, $p < .001$), with a greater mean gain in awareness (27.5 vs. 18.9). Participants also rated the structured health promotion intervention highly in terms of content, delivery, usefulness, and overall satisfaction, indicating excellent acceptability and perceived effectiveness.

Conclusions

Structured, interactive, and age-appropriate health promotion was more effective than infographic-based education alone in improving HPV vaccine awareness. The findings support integrating nurse-led, school-based HPV education using engaging learning strategies into health promotion programs. Schools and healthcare providers should strengthen

collaborative health education initiatives and involve parents to improve HPV vaccination awareness and support informed vaccination decisions.

Concurrent Oral Presentation Session

Session 10: Women's Health

CS10-2 Navigating Work and Lactation: A Scoping Review of Women's Experiences

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Background and Objectives

Rising women's employment presents new breastfeeding challenges that differ from those of previous decades, requiring updated support strategies. Global breastfeeding rates after women return to work remain low and highly heterogeneity. This paper aims to explore what is currently known about women's breastfeeding experiences after returning to work.

Methods

A scoping review was conducted from 23 September 2025 to 3 June 2026. The methodology was guided by the Joanna Briggs Institute (JBI) framework and university librarians. Eight databases were searched: PubMed, Web of Science, Scopus, CINAHL Plus, EBSCOhost Global Health, PsycINFO, British Nursing Index, and Embase. Studies published after 2015 were included. Inclusion criteria were based on the participant, concept and context framework.

Results

Of the 4137 studies identified, 148 reports were included. Data were summarised and presented in tabular form under three categories: metadata, lactation experiences in the workplace and workplace context. Four overarching themes emerged from women's diverse experiences: (1) Returning to work as a pivotal moment to continue or wean; (2) Workplace policies vary; (3) Workplace support is offered by supervisors and co-workers; (4) Breastfeeding practice is situated between infant care and work.

Conclusions

Women encountered various barriers to breastfeeding after returning to work. Their experiences were often subject to discretionary negotiation. To ensure policies are consistently translated into practice, robust enforcement mechanisms and the involvement of lactating women in policy design are needed.

Concurrent Oral Presentation Session

Session 10: Women's Health

CS10-3 Association Between Sleep Quality and Duration and Blood Pressure Variability in Pregnancy-Induced Hypertension

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Background and Objectives
Insufficient or excessive sleep duration and poor sleep quality elevate risk of cardiovascular disease and mortality in patients with preeclampsia. This cross-sectional study recruited pregnant women with gestational hypertension and used cardiopulmonary coupling sleep analysis to investigate associations between sleep quality and duration and blood pressure and blood pressure variability, to inform clinical sleep interventions and hypertension management.

Methods
A total of 165 women with gestational hypertension at ≥20 weeks' gestation were enrolled between June 2023 and December 2024, and 139 completed the study. Subjective sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI), while objective sleep metrics were collected using smart wristbands. SPSS 29.0 was used to analyze the subjective and objective sleep measurements.

Results
The mean PSQI score was 8.67 ± 4.41; 31.7% of participants had poor sleep quality (PSQI≥11). Sleep duration distribution: 27.4% <7 h, 53.3% 7.0–8.9 h, and 19.4% ≥9 h. PSQI score was a significant predictor of diastolic blood pressure. Sleep latency correlated with variability in systolic and diastolic blood pressure. Hypnotic use was positively correlated with both systolic and diastolic blood pressure. Nighttime sleep duration was positively associated with diastolic blood pressure, whereas daytime sleep duration was negatively associated with systolic blood pressure and diastolic variability. Sleep efficiency was positively correlated with diastolic variability, whereas sleep disturbance was inversely correlated. Subjective and objective estimates of nocturnal awakenings (NWAK) and Total sleep time (TST) showed poor consistency, while no significant difference was detected for Wake after sleep onset (WASO).

Conclusions
Sleep quality and duration are closely linked to blood pressure and its variability in hypertensive pregnant women. Discrepancies exist between subjective and objective assessments of selected sleep parameters. Combined sleep assessment, prioritized non-pharmacological sleep interventions, and prudent hypnotic prescribing are recommended to optimize blood pressure control.

Concurrent Oral Presentation Session

Session 10: Women's Health

CS10-4 Effectiveness of an Integrated Two-Stage Hybrid Simulation on Undergraduate Nursing Students' Breastfeeding Clinical Self-Efficacy and Knowledge Confidence: A Convergent Mixed-Methods Randomized Controlled Trial

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Background and Objectives

Pre-licensure nursing students often report marked unreadiness in maternal-newborn care, particularly newborn assessment and lactation coaching. Evidence supporting single, scaffolded hybrid simulation within compressed curricula remains limited. To evaluate whether a single, two-stage hybrid high-fidelity simulation (HFS) workshop—integrating a standardized patient (SP) and infant manikin—improves breastfeeding self-efficacy, neonatal knowledge, and knowledge confidence versus standard instruction.

Methods

In this mixed-methods randomized controlled trial, 155 second-year nursing students were randomized 1:1 to a 2-hour hybrid simulation (labor ward stabilization; postnatal lactation coaching with SP) or control (lecture/static lab). Primary outcome was breastfeeding self-efficacy (modified BSES-SF). Secondary outcomes included knowledge, confidence, and simulation evaluations (SDS, EPQ). Quantitative analysis used Linear Mixed Models (intention-to-treat); qualitative focus groups (n=38) underwent reflexive thematic analysis.

Results

Intervention participants showed significantly greater improvement in breastfeeding self-efficacy (adjusted β=15.21, 95% CI: 9.79–20.63, p<0.001) and knowledge confidence (β=3.42, 95% CI: 0.92–5.92, p=0.008)
versus controls. Knowledge scores improved post-intervention (p=0.030) but the Group × Time interaction was non-significant (p=0.261). Intervention participants rated simulation design (SDS d=0.88, p<0.001) and educational practices (EPQ d=0.91, p<0.001) significantly higher. Themes from 13 focus groups revealed tactile execution, milestone-driven pacing, and embedded facilitator scaffolding transformed passive recall into active clinical agency, internalizing the relational "With Woman" philosophy and advancing learners from procedural survival to higher-order judgment.

Conclusions

A single, scaffolded hybrid HFS workshop robustly enhances breastfeeding self-efficacy and knowledge confidence among nursing students within a compressed curriculum. Hybrid simulation with SPs and structured debriefing is an effective, scalable pedagogy for maternal-newborn education, equipping generalist nurses with essential competencies for diverse clinical and community settings.

Concurrent Oral Presentation Session

Session 11: Surgical and Cancer Care

CS11-1 Simple Bed Exercises for Reducing Postoperative Ileus in Colorectal Surgical Patients: A Randomized Controlled Trial

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Background and Objectives

Patients with colorectal cancer undergoing surgery often experience postoperative ileus, which negatively impacts patient satisfaction, prolongs hospital stays and increases healthcare costs. Early off-bed mobilization helps reduce the risk of postoperative ileus. However, patients often have low adherence to early off-bed mobilization due to various barriers. Simple bed exercises may serve as a feasible solution to enhance mobilization in these patients. This study aimed to examine the effectiveness of simple bed exercises for reducing postoperative ileus in patients undergoing colorectal surgery.

Methods

Elective colorectal surgery patients were recruited and randomized into an intervention group (simple in-bed exercises) and a control group. Patients in the intervention group were educated about simple in-bed exercises, with the assistance of instructional videos, on the day prior to surgery. The intervention group was advised to perform these exercises starting on postoperative day 1 for 15 minutes at breakfast, lunch, and dinner—until their first postoperative defecation. The control group received usual care. Primary outcome was time to first defecation. The secondary outcomes included time to first flatus and tolerance of oral intake. Logbooks were given to patients of both groups to record the outcomes. The analysis was based on the intention-to-treat principle.

Results

Seventy-six patients were randomized (38 intervention group and 38 control group). There were no dropouts. The exercise compliance rate in the intervention group was satisfactory (79%). Compared to the control group, the intervention group reported significantly shorter time to first defecation (mean difference=21.0 hours; p=0.008), first flatus (mean difference=12.3 hours; p=0.017), and time to tolerate of oral diet (mean difference=32.2 hours; p=0.046). No adverse event because of the intervention was reported.

Conclusions

The findings support the effectiveness of simple bed exercises for reducing postoperative ileus in colorectal surgical patients.

Concurrent Oral Presentation Session

Session 11: Surgical and Cancer Care

CS11-2 Preoperative and Postoperative Correlates of Fatigue in Gynecological Cancer Surgery: A Theory-Guided Study for Cancer Symptom Management

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Background and Objectives

Cancer-related fatigue (CRF) is highly prevalent and debilitating in women undergoing gynecological cancer surgery, yet its perioperative determinants are not fully understood within a comprehensive framework. Guided by the Theory of Unpleasant Symptoms (TOUS), this study aimed to prospectively examine preoperative determinants and postoperative predictors of fatigue in this population, with the goal of informing targeted symptom management strategies in cancer nursing.

Methods

This prospective study enrolled 215 gynecological cancer patients scheduled for surgery. Data were collected at admission and discharge, including patient-reported outcomes (fatigue, pain, sleep, quality of life, psychosocial factors) and objective biomarkers (albumin, ALT, neutrophil-to-lymphocyte ratio [NLR]). Multivariate regression analyses identified independent correlates of fatigue.

Results

Total fatigue scores did not change significantly from admission to discharge; however, physical fatigue increased while cognitive fatigue decreased postoperatively. Preoperative fatigue was independently associated with hypoalbuminemia, elevated ALT, sleep disorders, and lower SF-36 pain, general health, and vitality scores (explaining 64.2% of variance). Postoperative fatigue was predicted by NLR, preoperative fatigue, and SF-36 pain and vitality (explaining 27.5% of variance). Psychological factors (anxiety, depression, coping) lost significance after adjusting for physiological variables.

Conclusions

This first TOUS-guided analysis demonstrates that perioperative fatigue in gynecological cancer patients is predominantly driven by modifiable physiological parameters (nutritional status, liver function, systemic inflammation, pain, and sleep) rather than by psychological distress. These findings provide a theoretical and empirical basis for developing multimodal symptom management interventions targeting modifiable physiological parameters in perioperative cancer care. Future research should explore integrating these biomarkers into

routine nursing assessment to enhance personalized palliative and supportive care for surgical cancer patients.

Concurrent Oral Presentation Session

Session 11: Surgical and Cancer Care

CS11-3 Decision Conflict in Liver Cancer Surgery Patients: A Mixed Methods Study Based on the Ottawa Decision Support Framework

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Background and Objectives

Based on the Ottawa Decision Support Framework, this explanatory sequential mixed methods study investigated the current status and influencing factors of decision conflict in liver cancer surgery patients, and explored their authentic experiences and support needs during decision-making, to inform the development of patient-centered decision aids and targeted interventions.

Methods

In the quantitative phase, 211 liver cancer surgery patients were recruited via convenience sampling. Data were collected using Decisional Conflict Scale (DCS), Hospital Anxiety and Depression Scale (HADS), Perceived Social Support Scale (PSSS), Patient Participation in Medical Decision-Making Expectation Scale, and Decision Preparation Scale. Logistic regression identified independent influencing factors. In the qualitative phase, 14 patients were purposively sampled and interviewed using semi-structured in-depth interviews, with data analyzed by conventional content analysis. The two phases were integrated using the joint display method.

Results

The mean DCS score was 32.29 ± 7.48, with an incidence rate of 78.67%. Logistic regression showed that depression, anxiety, educational level, expectation of participation in medical decision-making, and decision preparation were independent influencing factors (all $P < 0.05$). Thematic analysis identified five themes: emotional experiences and evolution, perception and identification of surgical risks, information needs and communication, decision-making patterns and preferences, and support and pressure. The integrated results revealed that "low decision preparation" qualitatively manifested as "information access barriers" and "postoperative risk concerns", while the high incidence of "depression and anxiety" corresponded to qualitative descriptions of "negative emotional experiences" and "dynamic emotional transitions", with the two sets of findings mutually corroborating each other.

Conclusions

Decision conflict in liver cancer surgery patients is shaped by psychological status, educational level, decision-making expectations, and preparation. Core gaps include information

communication barriers, risk perception biases, and emotional regulation needs. Future decision aids should be grounded in the Ottawa Decision Support Framework to address these gaps and reduce decision conflict.

Concurrent Oral Presentation Session

Session 11: Surgical and Cancer Care

CS11-4 Application of a Gastrostomy Decision Aid for Cancer Patients with Dysphagia: A Randomized Controlled Trial

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Background and Objectives
Patients with head and neck cancer and esophageal cancer often experience dysphagia, and gastrostomy is a critical means of nutritional support; however, these patients are prone to decision-making conflicts, which can affect the course of treatment and their overall experience. There is a lack of localized decision-making support tools for gastrostomy tailored to this population in China. This study aims to evaluate the clinical efficacy of the independently developed CD-G-PDA.

Methods
In a randomized controlled trial, 160 patients who met the criteria for gastrostomy but had not yet made a decision regarding tube placement were randomly assigned to an intervention group and a control group, with 80 patients in each group. The intervention group received CD-G-PDA, while the control group received standard nutritional health education and medical counseling. The primary outcome was decision conflict; secondary outcomes included decision-making self-efficacy, decision readiness, satisfaction with the treatment decision, and decision regret.

Results
Baseline characteristics were comparable between groups. After the intervention, the intervention group had significantly lower decisional conflict than the control group (19.00 vs 34.00, $P<0.001$) and significantly higher decision self-efficacy (80.00 vs 55.00, $P<0.001$), preparation for decision making (50.00 vs 34.00, $P<0.001$), and satisfaction with treatment decisions (65.00 vs 55.00, $P<0.001$). At one month, decision regret was significantly lower in the intervention group (56.25 vs 62.50, $P<0.001$).

Conclusions
CD-G-PDA can reduce decision conflict and decision regret in cancer patients with dysphagia, enhance their decision-making self-efficacy and decision readiness, and provide support for shared decision-making regarding gastrostomy.

Concurrent Oral Presentation Session

Session 11: Surgical and Cancer Care

CS11-5 Latent Symptom Profiles and Associated Factors in Patients After Endoscopic Transnasal Pituitary Surgery

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Background and Objectives
Patients undergoing endoscopic transnasal surgery for pituitary tumors may experience heterogeneous postoperative symptom patterns. Identifying distinct symptom profiles and their associated factors may facilitate individualized symptom assessment and nursing management. This study aimed to identify latent postoperative symptom profiles and explore factors associated with profile membership.

Methods
A total of 187 patients were included. Fifteen postoperative symptoms were assessed and entered into latent profile analysis (LPA). Model selection was based on information criteria, entropy, bootstrap likelihood ratio test, class size, and clinical interpretability. Demographic, clinical, surgical, and psychological variables were compared across profiles, followed by multinomial logistic regression using the low-symptom profile as the reference group.

Results
A four-profile solution provided the optimal fit (BIC=6997.03, entropy=0.975, BLRT P=0.0099). The profiles were characterized as high multisymptom burden (11.2%), sexual dysfunction-dominant (15.0%), appearance-change-dominant (17.1%), and low symptom burden (56.7%). Compared with the low symptom burden profile, membership in the high multisymptom burden profile was associated with younger age (OR=0.911, 95% CI 0.862–0.964), higher depressive symptom scores (OR=1.220, 95% CI 1.042–1.427), and postoperative electrolyte disturbances (OR=13.446, 95% CI 3.494–51.753). Membership in the sexual dysfunction-dominant profile was associated with sex (OR=0.185, 95% CI 0.041–0.842) and alcohol use history (OR=14.473, 95% CI 3.571–58.655). The appearance-change-dominant profile was associated with younger age, sex, tumor lineage, and postoperative electrolyte disturbances.

Conclusions
Postoperative symptoms in patients with pituitary tumors showed substantial heterogeneity. Four clinically distinct symptom profiles were identified, with different demographic, psychological, tumor-related, and postoperative correlates. Profile-based assessment may support more targeted postoperative symptom management.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-1 Translating Nutritional Modulation of Neuroinflammation into Nursing Strategies for Healthy Aging and Long-Term Care in Alzheimer's Disease and Depression

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Background and Objectives

Alzheimer's disease (AD) contributes to cognitive decline, functional dependency, and long-term care needs, while coexisting depression further impairs cognitive function, psychological well-being, and quality of life. AD and depression involve interconnected mechanisms of neuroinflammation, serotonergic dysregulation, and mitochondrial dysfunction. Docosahexaenoic acid (DHA) has anti-inflammatory and neuroprotective properties, while sunlight exposure promotes vitamin D_3 synthesis and subsequent activation to $1,25(OH)_2D_3$ (calcitriol), which contributes to serotonin regulation and mitochondrial function. This research translates completed cellular findings into two distinct clinical approaches: DHA and calcitriol treatment, and nurse-led dietary education combined with morning outdoor exercise to support healthy aging.

Methods

The completed in vitro study used SH-SY5Y cells to evaluate DHA and $1,25(OH)_2D_3$ effects on neuroinflammation, serotonin regulation, mitochondrial function, and cell viability using MTT assays, Western blotting, and ELISA. Two distinct clinical trials are ongoing, each planning to enroll 80 participants with early-stage AD. The first evaluates DHA supplementation combined with calcitriol treatment on inflammatory biomarkers, depressive symptoms, and cognition. The second is a 12-week nurse-led randomized controlled trial combining dietary education emphasizing omega-3-rich foods and tryptophan-containing proteins with morning outdoor exercise. Outcomes include depressive symptoms, sleep quality, physical and daily functioning, and exploratory cognition.

Results

DHA reduced IL-6 and TNF-α levels. Individual DHA or $1,25(OH)_2D_3$ treatment increased serotonin levels, TPH2 expression, and mitochondrial function to approximately 1.5-fold of control values, while combined treatment increased these outcomes to approximately 2-fold and improved cell viability. Both clinical trials are ongoing, with no clinical outcome data available.

Conclusions

The cellular findings provide a biological rationale for further clinical investigation. Together with existing lifestyle evidence, they support evaluating nurse-led dietary education and morning outdoor exercise as a potential nonpharmacological approach. Integrating nutritional assessment, health education, and symptom monitoring may support healthy aging, functional independence, and personalized geriatric care.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-2 Association of the Cumulative Life's Essential 8 Score with Cognitive Change: Results from Two Longitudinal Cohorts

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Background and Objectives
Cardiovascular risk factors are known to be related to cognitive function. This study aims to investigate whether the cumulative Life's Essential 8 (LE8) score was associated with late-life cognitive change. We hypothesize that a higher cumulative LE8 score is associated with a slower rate of cognitive decline.

Methods
We included 1345 participants from the Health and Retirement Study (HRS) and 2865 participants from the English Longitudinal Study of Ageing (ELSA). The cumulative LE8 score was calculated using 8 years of LE8 assessments. The association between cumulative LE8 score and cognitive change was examined using a linear mixed model.

Results
Results from the HRS and the ELSA demonstrated general consistency. Pooled analysis showed that a per SD increase in cumulative LE8 score was associated with a slower rate of decline in global cognition (pooled Beta=0.089 SD/year, 95% CI: 0.059 to 0.120, I2=0%), executive function (pooled Beta=0.093 SD/year, 95% CI: 0.063 to 0.122, I2=0%), memory (pooled Beta=0.050 SD/year, 95% CI: 0.022 to 0.078, I2=0%), and orientation (pooled Beta=0.040 SD/year, 95% CI: 0.007 to 0.073, I2=10%). The association of the cumulative LE8 score with cognitive decline was independent of the single-time LE8 score at the start point.

Conclusions
A higher cumulative LE8 score was associated with better late-life cognition, highlighting the importance of maintaining long-term optimal cardiovascular health, regardless of the starting point, for preventing cognitive decline.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-3 Digital Health Literacy and Cognitive Frailty Among Older Adults in Rural Xinjiang: A Latent Profile Analysis and Moderated Mediation Analysis

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Background and Objectives
Against the backdrop of a global ageing population, cognitive frailty has become a key health challenge for older adults in rural areas. Existing research suggests that digital health literacy plays a role in preventing this issue; however, such studies often overlook population heterogeneity, and the underlying mechanisms remain unclear. The aim is to identify potential categories of digital health literacy among older adults in rural areas and to explore the mediating role of technology anxiety and the moderating role of psychological resilience.

Methods
Between October 2025 and July 2026, a multi-stage stratified sampling method was employed in rural Xinjiang to recruit 523 older adults aged 60 years and over for questionnaire surveys. The following scales were used: the Digital Health Literacy Assessment Scale, the Fried Frailty Phenotype, the Montreal Cognitive Assessment, the Clinical Dementia Rating Scale, the Technology Anxiety Scale and the Brief Psychological Resilience Scale.

Results
Digital health literacy was positively correlated with psychological resilience and negatively correlated with technology anxiety and cognitive frailty (all $P < 0.01$). Digital health literacy was categorised into three groups: low literacy–passive (52.6 per cent), moderate literacy–limited (27.3 per cent) and high literacy–active (20.1 per cent). Digital health literacy directly predicted cognitive frailty, with technology anxiety partially mediating this relationship ($B = -0.041$, $P < 0.001$); psychological resilience moderated the 'digital health literacy → technology anxiety' pathway ($B = -0.176$, 95% CI: −0.268, −0.084) and the 'technology anxiety → cognitive frailty' pathway ($B = -0.940$, $OR = 0.391$, 95% CI: 0.261, 0.584).

Conclusions
Intervention strategies should involve stratified and categorised training tailored to different subgroups of rural older adults in Xinjiang based on their digital health literacy, with the aim of reducing technology anxiety and enhancing psychological resilience to slow the progression of cognitive frailty.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-4 Sleepless After Stroke: How Insomnia and Hypnotic Use Shape Cognitive Decline and Mortality in 1.8 Million Survivors

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Background and Objectives

Post-stroke insomnia (PSI) is common, yet the distinct impacts of insomnia with and without hypnotic therapy on long-term cognitive outcomes remain unclear. This study aimed to compare the effects of PSI and hypnotic use on the risk of post-stroke cognitive impairment (PSCI), dementia, Alzheimer's disease, and mortality.

Methods

We conducted a retrospective cohort study using the TriNetX Global Collaborative Network, comprising 182 healthcare organizations. Adults diagnosed with stroke between 2004 and 2017 were classified into four cohorts: stroke only (n=849,815), stroke with hypnotics but no insomnia (n=395,024), PSI with hypnotics (n=35,742), and PSI without hypnotics (n=7,460). Propensity score matching was used to balance baseline characteristics. Cox proportional hazards models calculated hazard ratios (HRs) with 95% confidence intervals (CIs).

Results

After matching, the combination of insomnia and hypnotics had the most detrimental effect on long-term PSCI (HR=1.48, 95% CI: 1.43–1.55 at 10 years). Insomnia alone was the strongest predictor of dementia risk (HR=1.42, 95% CI: 1.23–1.63 at 10 years), closely followed by insomnia with hypnotics (HR=1.40, 95% CI: 1.32–1.48). Exclusive hypnotic use was the most significant predictor of short-term mortality (HR=2.00, 95% CI: 1.96–2.04 at 1 year), while insomnia alone showed no correlation with long-term mortality. No consistent associations were found for Alzheimer's disease.

Conclusions

PSI and hypnotic use have distinct effects on cognitive and mortality outcomes. Insomnia treated with hypnotics poses the highest risk for cognitive decline, while hypnotics alone significantly increase mortality risk. These findings underscore the importance of prioritizing non-pharmacological therapies for insomnia in post-stroke care and advise against the routine prescription of hypnotics.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-5 Development and Evaluation of Cognidiet: A Chinese Dietary Pattern for Cognitive Health Maintenance

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Background and Objectives

Accelerated aging is increasing the burden of cognitive disorders. Diet is a key modifiable factor, yet existing dietary indices are predominantly Western-derived and may not be culturally appropriate for Chinese populations. We developed and preliminarily validated Cognidiet, a culturally adapted dietary index for cognitive health in Chinese adults.

Methods

(1) A scoping review qualitatively mapped dietary patterns in cognitive research to identify core food groups, recommended roles, and index-construction approaches. (2) A dose-response meta-analysis of prospective cohorts examined associations between food groups and cognitive decline and identified intake thresholds using random-effects models and restricted cubic splines. (3) Cognidiet was constructed by integrating these findings, with dose-response-derived thresholds calibrated against the Chinese Dietary Guidelines (2022). (4) The index was cross-sectionally validated in 1158 adults aged ≥50 years from Beijing and Chengdu using multivariable logistic regression.

Results

The scoping review identified 77 dietary patterns with substantial overlap in core food groups and methodological practices, including equal-weighted continuous scoring. The meta-analysis showed that higher intakes of tea, fish, dairy, nuts, fruits, and vegetables (including total, cruciferous, and green vegetables) were associated with a lower risk of cognitive decline, whereas processed red meat was associated with a higher risk, and identified intake thresholds. Based on these findings and food group properties, Cognidiet covered 12 food groups in three categories: adequacy (fish, nuts, tea, fruits, whole grains, legumes, and multi-indicator vegetables), optimum (eggs, coffee, dairy), and limitation (processed red meat, alcohol). Compared with the lowest tertile, the highest tertile had a lower risk of MCI (OR=0.54, 95% CI: 0.33–0.86); each 1-SD increase in Cognidiet score was associated with a 26% lower risk (OR=0.74, 95% CI: 0.61–0.91).

Conclusions

Cognidiet is a culturally adapted, cognition-specific dietary index associated with lower MCI risk among Chinese adults.

Concurrent Oral Presentation Session

Session 12: Cognitive Health and Neurodegenerative Care

CS12-6 Frailty Transitions, Depressive Symptoms, and Incident Dementia: Findings from Four Longitudinal Studies

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Background and Objectives
Frailty is a potentially reversible risk factor for dementia. Whether frailty reversal actively reduces dementia risk across diverse populations, and the extent to which depressive symptoms mediate this pathway, remains unclear.

Methods
We included 59,331 adults aged ≥50 from the Health and Retirement Study (HRS), the China Health and Retirement Longitudinal Study (CHARLS), the Survey of Health, Ageing and Retirement in Europe (SHARE), and the English Longitudinal Study of Ageing (ELSA). A harmonized 25-item FI defined frailty (FI ≥0.25). Primary exposures were baseline frailty status and frailty transitions between the first two waves, evaluated within baseline strata as worsening versus stable non-frail status and improvement versus stable frail status. Mean FI and FI change were also examined.

Results
Over 7.51±2.09 years, 5,629 participants (9.49%) developed dementia. Baseline frailty was associated with higher risk (HRs, 1.35–2.23), as was frailty worsening (HRs, 1.43–2.53). Frailty reversal was associated with lower risk in SHARE (HR, 0.55) and CHARLS (HR, 0.70); associations in ELSA and HRS were not statistically significant. Estimated mediation proportions for depressive symptoms ranged from 29.29% to 44.78%. CLPN analyses showed cross-lagged associations in three cohorts for walking limitations, difficulty managing finances, and psychiatric problems.

Conclusions
Frailty worsening was associated with higher dementia risk, whereas frailty improvement was associated with lower risk in some cohorts. Depressive symptoms showed indirect associations with incident dementia for both baseline frailty and frailty worsening. However, whether interventions targeting frailty and depressive symptoms can reduce dementia incidence remains to be determined in future interventional studies.

Concurrent Oral Presentation Session

Session 13: Digital Health, AI, and Smart Care Delivery II

CS13-1 Nurse-Led Digital Structured Education Enhanced by Behavioral Nudge Tools for Adults with Type 2 Diabetes: A Multicenter Randomized Controlled Trial

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Background and Objectives

Digital health interventions provide scalable approaches for diabetes self-management support; however, maintaining behavioral engagement and achieving sustained clinical benefits remain challenging. Integrating behavioral science principles into digital education may enhance patients' ability to initiate and sustain healthy self-management behaviors. This study aimed to evaluate the effectiveness of a nurse-led digital structured education program enhanced by behavioral nudge tools in improving metabolic, behavioral, and psychological outcomes among adults with type 2 diabetes.

Methods

A multicenter randomized controlled trial was conducted in four hospitals in China. Adults with type 2 diabetes were randomly assigned to receive either nurse-led digital structured education enhanced by behavioral nudge tools (intervention group, n=146) or standard digital diabetes education (control group, n=147). Participants were assessed at baseline and after 12 weeks. The primary outcome was HbA1c, while secondary outcomes included other metabolic indicators, diabetes self-management behaviors, self-efficacy, and habit strength.

Results

Among 293 participants, 287 (97.9%) completed the 12-week follow-up. Compared with standard digital diabetes education, the intervention group showed greater improvements in HbA1c (between-group difference −0.38%, 95% CI −0.68 to −0.09, P=.011), fasting blood glucose, body mass index, blood pressure, and total cholesterol. Significant improvements were also observed in diabetes self-management behaviors, self-efficacy, and habit strength (all P<.05).

Conclusions

A nurse-led digital structured education program enhanced by behavioral nudge tools improved metabolic outcomes and strengthened behavioral and psychological determinants of diabetes self-management. This integrated digital nursing intervention provides a promising approach for delivering scalable, patient-centered diabetes management support. Further research is needed to evaluate its long-term sustainability and implementation in diverse healthcare settings.

Concurrent Oral Presentation Session

Session 13: Digital Health, AI, and Smart Care Delivery II

CS13-2 Effects of a WeChat-Based Multimodal Psychoeducational Intervention on Family Caregivers of Adults with Acute Leukaemia: A Randomised Controlled Trial

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Background and Objectives

Background: Family caregivers of adults with acute leukaemia experience substantial psychological distress and impaired quality of life, yet scalable caregiver-focused support remains limited. Aim: To evaluate the effects of ICARE, a WeChat-based multimodal psychoeducational intervention, on caregiver burden, psychological outcomes, and quality of life.

Methods

Methods: Seventy-two patient-caregiver dyads were allocated to usual care or usual care plus the 12-week ICARE programme. ICARE integrated WeChat groups, an official account, and a micro-website with resource-sharing, education, mutual-support consultation, and personal diary modules. Caregivers completed the Zarit Caregiver Burden Scale, Distress Thermometer, Hospital Anxiety and Depression Scale, and SF-36 at baseline, post-intervention, and 4-week follow-up. Linear mixed models examined group, time, and group-by-time effects. Ethics approval (2017/00049), trial registration (ChiCTR-IOR-1900022828), and informed consent were obtained.

Results

Results: At the 4-week follow-up, 53 dyads remained (attrition 26.4%). Significant group-by-time effects were observed for psychological distress ($F = 6.76$, $p = .001$), the SF-36 physical functioning domain ($F = 8.26$, $p < .001$), mental component summary ($F = 5.88$, $p = .003$), and mental health domain ($F = 7.61$, $p = .001$). Distress decreased more immediately after ICARE than after usual care (mean 5.42 to 3.31 vs 4.81 to 4.58), although group means converged at follow-up. No significant group-by-time effects were found for caregiver burden, anxiety, depression, physical component summary, or the remaining SF-36 domains (all $p > .05$).

Conclusions

Conclusion: ICARE produced selective, time-dependent effects on caregiver distress and quality-of-life domains rather than broad improvements across all outcomes. The intervention may support short-term distress management and physical functioning in family caregivers; booster components may be needed to sustain benefits.

Concurrent Oral Presentation Session

Session 13: Digital Health, AI, and Smart Care Delivery II

CS13-3 A Study on AI-Based Home Rehabilitation Management Program for Patients After Lung Cancer Surgery

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Background and Objectives
This study evaluates effectiveness of AI-driven home rehab for post-surgical lung cancer patients to inform family-based symptom management and rehabilitation.

Methods
The artificial intelligence application developed in this study is composed of three modules: a symptom reporting system with alert prompts, a module for respiratory and physical exercise training, and a module that pushes disease-related educational materials. Four core symptoms were screened out on the basis of questionnaires completed by 80 patients and three rounds of Delphi voting among 15 experts. A total of 110 patients were enrolled via convenience sampling and randomly assigned to the intervention group and the control group. The primary outcome was the recovery of pulmonary function 30 days after surgery. Secondary outcomes covered symptom burden and interference with daily life (measured by the Lung Cancer Symptom Scale score), aerobic exercise intensity, the number of emergency visits, application-related safety and user satisfaction.

Results
Patients in the intervention group achieved significantly better pulmonary function recovery one month postoperatively compared with the control group ($P<0.05$). The intervention group exhibited markedly reduced symptom burden and interference with daily activities, along with greater aerobic exercise intensity relative to the control group ($P<0.05$). In the intervention group, 47.3% of participants (26 out of 55) triggered at least one symptom alert. Among the total 32 alerts activated, the most frequent symptom notifications were pain (46.9%) and dyspnea (38.5%). Participants who triggered alerts demonstrated the optimal recovery of pulmonary function and the highest aerobic exercise intensity. Moreover, these patients accessed educational materials more frequently, and spent significantly longer time on physical training with higher exercise intensity ($P<0.05$).

Conclusions
AI-based home rehabilitation optimizes postoperative recovery in lung cancer patients by enhancing rehabilitation mastery, promoting pulmonary function, and improving daily living ability and quality of life.

Concurrent Oral Presentation Session

Session 13: Digital Health, AI, and Smart Care Delivery II

CS13-4 Multi-Sensory Sham Feeding Alleviates Oxidative Stress and Preserves Intestinal Mucosa After Gastrointestinal Surgery: Clinical and Experimental Evidence

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Background and Objectives

Enteral nutrition (EN) is standard care after gastrointestinal (GI) surgery but poorly elicits the cephalic-phase responses. Existing interventions such as chewing gum have shown limited benefits, and multi-sensory sham feeding integrating visual, auditory, and olfactory stimuli remains unstudied. Our clinical study using an innovative multi-sensory VR sham-feeding device advanced first bowel sounds, flatus, defecation by 9, 13, and 9 h, respectively. We examined whether sham feeding alleviates oxidative stress and intestinal injury in patients and rats.

Methods

In a prospective controlled study, 42 patients were allocated to EN or EN plus VR sham feeding. Serum metabolomics and oxidative stress markers were measured. Gastric fistula-operated rats were randomized to control, trauma, EN, or sham feeding plus EN, measuring body weight change, villus/crypt ratio, serum and tissue oxidative stress markers, and 4-HNE immunofluorescence.

Results

Metabolomics identified changes in fatty-acid and purine metabolism metabolites (palmitic acid, hypoxanthine), suggesting redox-related metabolic regulation. Clinically, sham feeding increased serum T-AOC (0.85 vs 0.72 mM), SOD (0.91 vs 0.62 units), and GSH (18.02 vs 14.98 μmol/L), and decreased MDA (5.06 vs 10.18 μM) and NO (46.80 vs 66.12 μM), with the most pronounced effects at postoperative day 4. In rats, sham feeding reduced body weight loss (3.45% vs 4.28%), increased jejunal (3.29:1 vs 1.62:1) and ileal (2.66:1 vs 1.84:1) villus/crypt ratios, improved oxidative stress markers in serum and all tissues, and reduced tissue 4-HNE by 65.35%–77.85% ($P < 0.05$).

Conclusions

Multi-sensory sham feeding combined with EN alleviates oxidative stress and preserves intestinal mucosa in patients and rats after GI surgery, suggesting that it may promote early recovery by relieving intestinal oxidative stress. This low-cost, empathy-centered digital nursing intervention warrants multicenter validation.

Concurrent Oral Presentation Session

Session 13: Digital Health, AI, and Smart Care Delivery II

CS13-5 The Role of Technology-Based Music Intervention for Enhancing Wellness: A Scoping Review

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Background and Objectives

Adult wellness is an increasing public health priority, as adults across the adult lifespan face stress, emotional dysregulation, chronic illness, and reduced quality of life. Music interventions may support psychological, emotional, physiological, and social dimensions of wellness. Digital health technologies are also reshaping how people access, personalize, and engage with music in everyday and clinical contexts. However, evidence on technology-based music interventions remains fragmented across populations, technologies, intervention designs, and outcomes. This scoping review aimed to map current evidence on technology-based music interventions for adult wellness.

Methods

We searched CINAHL (EBSCO), MEDLINE (Ovid), Embase (Ovid), Scopus (Elsevier), PsycINFO (Ovid), PsycArticles (Ovid), Web of Science (Clarivate Analytics), Cochrane Library (Wiley), ERIC (Ovid), and IEEE Xplore (IEEE) from database inception to September 2, 2025. Peer-reviewed English-language studies were eligible if they reported a music-based activity delivered, enabled, adapted, augmented, monitored, or meaningfully supported by technology, with health-, wellness-, or process-related outcomes in adults. Two reviewers independently screened records and selected studies. Data extraction is ongoing using a protocol-informed extraction form.

Results

Searches identified 12,303 records. After removal of 148 duplicates, 12,155 titles and abstracts were screened, and 229 full texts were assessed. A total of 134 articles were included. Preliminary extraction indicates that technologies included telehealth or online platforms, mobile applications, adaptive or algorithmic systems, digital instruments or software, virtual reality, sensors, brain-computer interfaces, and robotics. Outcomes most often concerned implementation processes, psychological well-being, cognitive or neurological health, rehabilitation or function, and pain or procedural care.

Conclusions

Technology-based music interventions represent a diverse and expanding field for adult wellness. This ongoing scoping review highlights promising digitally enabled approaches while identifying methodological heterogeneity, limited rigorous evaluation, and implementation gaps requiring interdisciplinary research.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-1 Paediatric Family-Based Dignity Therapy for Children with Advanced Cancer and Their Family Caregivers: A Randomised Clinical Trial

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Background and Objectives

Children with advanced cancer and family caregivers experience multidimensional distress. Paediatric Family-based Dignity Therapy (P-FBDT) is a brief psychotherapy for such distress. This study evaluated the effects of P-FBDT on psychosocial outcomes and dignity-related experiences in this population.

Methods

This was a two-arm randomised trial with an embedded qualitative study at three paediatric oncology/palliative care sites in China. Child-caregiver dyads were randomly assigned (1:1) to receive P-FBDT or attention-matched supportive interviews. Primary outcomes were child cancer-specific quality of life and caregiver anxiety and depressive symptoms; secondary outcomes were anticipatory grief and caregiving burden. Outcomes were assessed at baseline (T0), post-intervention (T1), and 2 weeks (T2) and analysed using generalised estimating equations under an intention-to-treat approach. Interviews with P-FBDT participants were analysed using content analysis and integrated with quantitative findings using joint displays.

Results

Between July 2023 and December 2025, 83 of 207 families approached provided consent. P-FBDT did not improve children's quality of life at T1 (adjusted mean difference [aMD] 1.01, 95% CI –3.83 to 5.85; P = .68) or T2 (aMD –0.26, 95% CI –5.70 to 5.18; P = .93). P-FBDT reduced caregiver anxiety and depressive symptoms at T1 (aMD –2.01, 95% CI –3.58 to –0.43; P = .01) and T2 (aMD –3.04, 95% CI –4.68 to –1.40; P < .001). Caregiving burden was lower in the P-FBDT group at T2, whereas anticipatory grief did not differ significantly. Integrated quantitative and qualitative findings suggested benefits for children's emotional expression, legacy-making, family communication, and meaning-making.

Conclusions

While P-FBDT did not improve child quality of life, it showed potential to enhance psychosocial outcomes and dignity-related experiences in children with advanced cancer and their caregivers, and may be a useful intervention within paediatric palliative care.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-2 Dyadic Communication and Coping Experiences of Lung Cancer Patients and Their Family Caregivers During Disease Adaptation: A Descriptive Phenomenological Study

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Background and Objectives

Background: Lung cancer causes severe physical and psychological distress for both patients and family caregivers. Dyadic communication and coping are recognised as crucial components of the cancer adaptation process within family care systems, yet evidence from Chinese cultural contexts remains limited, with insufficient understanding of diverse interaction patterns and lived experiences. Aim: To explore the dyadic interactive experiences, communication patterns, coping strategies, gains, and challenges of lung cancer patients and their family caregivers during the cancer adaptation process.

Methods

This study was conducted in two tertiary hospitals in Hunan Province. Twenty participants (11 patients, 9 caregivers) from 13 family dyads were purposively sampled until data saturation. Individual and dyadic semi-structured interviews were performed, and data were analyzed using Colaizzi's seven-step phenomenological method with Nvivo 12.0 software.

Results

The study identified six communication patterns: open and collaborative communication, restrained and burden-bearing communication, tacit and resonant communication, conflict and confrontational communication, stubborn and dominant communication, and cautiously avoidant communication. Correspondingly, three dyadic coping strategies emerged: active engagement, delegation coping, and passive disengagement. Furthermore, interactional gains comprised strengthened bonding and reconstructed life meaning. Conversely, main challenges included economic toxicity, limited health literacy, conflicting disease communication, overwhelming caregiving burden, and moral dilemmas.

Conclusions

Lung cancer patient-caregiver dyads present diverse and complex communication and coping experiences. Culturally tailored interventions are needed to reduce shared challenges, improve positive interaction, psychological adaptation and quality of life for the dyads.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-3 Actor-Partner Interdependence Model of Illness Perception and Fear of Disease Progression in Probands and Affected Relatives with Hypertrophic Cardiomyopathy

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Background and Objectives
To investigate the actor and partner effects of illness perception on fear of disease progression in probands and affected family members with hypertrophic cardiomyopathy (HCM), and to provide evidence for psychological assessment and precision intervention in families with inherited cardiomyopathies.

Methods
From October 2025 to May 2026, 172 dyads of HCM probands and affected relatives were recruited by convenience sampling from the cardiomyopathy ward of a specialized hospital in Beijing. Data were collected using a general information questionnaire, Brief Illness Perception Questionnaire, Fear of Progression Questionnaire–Short Form, and Simplified Coping Style Questionnaire. Directed acyclic graphs (DAGs) were used to identify the minimal sufficient adjustment set. Actor-partner interdependence models (APIMs) were constructed to examine the actor and partner effects of illness perception on fear of disease progression between probands and relatives. Multi-group APIM analyses were further performed to compare model differences between parent–child and sibling dyads.

Results
Probands reported significantly higher illness perception scores than affected relatives (51.90 ± 9.539 vs. 48.42 ± 11.920, $P = 0.001$), but significantly lower fear of disease progression scores (22.51 ± 6.591 vs. 43.12 ± 6.378, $P < 0.001$). The APIM revealed significant actor effects for both probands and relatives ($\beta_1 = 0.295$, $\beta_2 = 0.449$, both $P < 0.001$), whereas partner effects were not significant (both $P > 0.05$). Illness perception between dyad members showed a positive correlation ($r = 0.256$, $P = 0.001$), while the residual correlation was not statistically significant. Multi-group analyses indicated no significant differences between parent–child and sibling dyads.

Conclusions
Within HCM families, the pathway from illness perception to fear of disease progression operates primarily at individual level. Probands and affected relatives exhibit a contrasting pattern more negative illness perceptions but lower fear of progression suggesting that family-

based management should integrate global cognitive education with individualized emotional interventions.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-4 Latent Profiles of Unmet Supportive Care Needs Among Patients with Advanced Lung Cancer and Their Associations with Family Caregiver Outcomes: Implications for Oncology Nursing Practice

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Background and Objectives

Patients with advanced lung cancer often experience substantial unmet supportive care needs, which may affect not only their own well-being but also the outcomes of their family caregivers. However, limited research has examined the heterogeneity of their unmet needs or explored the dyadic associations between patient need profiles and caregiver outcomes. This study aimed to identify distinct latent profiles of unmet supportive care needs among patients with advanced lung cancer and examine their associations with family caregiver preparedness and caregiving difficulty.

Methods

A cross-sectional paired study was conducted with 289 patient-caregiver dyads. Patients responded to the Short-Form Survivor Unmet Needs Survey (SUNS-SF), while family caregivers completed the Caregiver Preparedness Scale (CPS) and the Family Caregiver Task Inventory (FCTI). Latent profile analysis (LPA) identified distinct patient subgroups based on unmet need patterns. Associations between patient profiles and caregiver outcomes were examined using analysis of covariance (ANCOVA), adjusting for patient and caregiver sociodemographic and clinical characteristics.

Results

LPA identified three distinct patient profiles: low overall unmet needs (n=219, 75.8%), moderate information/financial unmet needs (n=51, 17.6%), and high pervasive unmet needs (n=19, 6.6%). After adjusting for covariates, significant differences in caregiver preparedness ($P<0.001$, $\eta p^2 = 0.610$) and caregiving difficulty ($P<0.001$, $\eta p^2 = 0.359$) were observed across profiles. Caregivers of patients in the low overall unmet needs profile reported significantly higher preparedness and lower caregiving difficulty compared to the other two profiles (both adjusted $P < 0.001$).

Conclusions

Unmet supportive care needs among patients with advanced lung cancer are heterogeneous, and the configuration of these needs carries meaningful associations with caregiver preparedness and task difficulty. Routine dyadic screening may help oncology nurses identify

vulnerable patient-caregiver pairs warranting prioritized intervention. Given the association between caregiver education and outcomes, health literacy-tailored support merits consideration in clinical practice.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-5 Mapping Supportive Care Needs Across the Cancer Patient Journey: A Qualitative Meta-Synthesis

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Background and Objectives
Cancer patients experience changing supportive care needs throughout the disease journey. However, existing Patient Journey Map (PJM) mainly focus on stage-specific experiences, with limited attention to supportive care needs across the cancer trajectory. This qualitative meta-synthesis aimed to synthesize evidence on supportive care needs across the cancer journey from a cross-cancer perspective and develop an integrated PJM framework to capture unmet needs and experiences and identify opportunities for supportive care.

Methods
A systematic search was conducted across eight electronic databases from database inception to March 2026. Qualitative studies using a PJM approach to explore the supportive care needs and experiences of cancer patients were included. Methodological quality was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Qualitative Research, and confidence in the synthesized findings was evaluated using the ConQual approach. Findings were synthesized using the JBI meta-aggregation methodology.

Results
Thirteen studies involving diverse cancer populations were included. Three synthesized findings were identified: (1) cognitive and psychosocial challenges during diagnosis; (2) physical and psychological distress and unmet supportive needs under treatment burdens; and (3) rehabilitation needs and ongoing challenges during follow-up. Three cross-cutting trajectories—information needs and financial burden, identity reconstruction, and fear of recurrence—were also identified as evolving needs spanning the cancer journey. Based on these findings, an integrated cancer PJM framework was developed to characterize changes in supportive care needs, identify stage-specific intervention opportunities, and support person-centered care.

Conclusions
This review provides a comprehensive understanding of stage-specific changes in supportive care needs across the cancer patient journey and extends existing PJM research by proposing an integrated cross-cancer PJM framework with potential transferability. The findings offer a theoretical foundation for designing stage-specific, patient-centered supportive care interventions, improving care coordination across the cancer journey, and informing future research on the development and implementation of an integrated cancer PJM framework.

Concurrent Oral Presentation Session

Session 14: Family Caregiving and Supportive Care

CS14-6 Designing Human-Centred Telehealth for Family Caregivers of Older Adults with Disabilities: A Qualitative Study

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Background and Objectives

Family caregivers of older adults with disabilities often lack timely professional support. Telehealth can improve access, yet services that overlook caregivers' digital capabilities, daily routines, and need for trustworthy human interaction may remain inaccessible. This study explored barriers and facilitators shaping caregivers' preferences for telehealth and considered their implications for human-centred, empathetic home-care delivery.

Methods

An interpretive qualitative study was conducted in a community in Dongguan, China. Twenty primary family caregivers of adults aged 60 years or older with disabilities were purposively recruited. Four Mandarin-language focus groups were held in July and August 2024, audio-recorded, transcribed verbatim, and analysed inductively using Braun and Clarke's six-step thematic approach. Member checking and collaborative coding supported credibility.

Results

Participants had a mean age of 50 years, and 65% were spouses. Two overarching themes were identified: barriers to and facilitators of telehealth use. Barriers spanned limited digital learning capacity and difficult operating procedures; uncertainty about provider identity, privacy, service quality, and telehealth's clinical limitations; misalignment with established care-seeking habits, work demands, and self-management practices; and concerns about cost, availability, and awareness. Convenience encouraged use, particularly when telehealth reduced travel and mobility constraints. Trust in the professionalism and authority of healthcare professionals was another key facilitator, underscoring caregivers' preference for technology-mediated care that preserved reliable human guidance.

Conclusions

Telehealth for families caring for older adults with disabilities should be designed around more than technical efficiency. Nurse-led orientation, simplified interfaces, transparent provider credentials and costs, privacy reassurance, and hybrid pathways that retain interpersonal

support may reduce exclusion and strengthen trust. Embedding these relational and accessibility needs can help translate digital empathy into practical, equitable home-care support.

Concurrent Oral Presentation Session

Session 15: Health Care Systems Policy and Management

CS15-1 Exploring Nurses' Role Transformation, Safety Challenges, and Organizational Adaptation During Digital Transformation in Oral Healthcare

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Background and Objectives
Oral nursing is a function-oriented specialty where nurses support not only disease management but also communication, swallowing, nutrition, and social participation. It relies on contextual interpretation of oral conditions, functional changes, symptom experiences, and patient needs. With increasing adoption of digital technologies, oral nursing practice is being transformed; however, how digitalization affects nurses' integration of objective data with experiential knowledge and patient-centered care remains unclear. This study explored how oral nurses adapt to digital transformation regarding clinical judgment, professional roles, and human-centered care.

Methods
A qualitative interpretive descriptive study was conducted in a tertiary oral specialty hospital. Fifteen oral nurses were recruited through purposive sampling and participated in semi-structured interviews. Interviews explored nurses' experiences of digital technology use in oral nursing practice, including changes in assessment approaches, functional care delivery, clinical decision-making, nurse–patient communication, and perceived challenges in technology-enabled care. Data were analyzed using reflexive thematic analysis.

Results
Three themes were generated. First, digitalization was perceived as changing the nature of oral assessment, shifting nursing practice from direct sensory and experiential observation toward integration of digital information with clinical interpretation. Second, nurses described a tension between standardized digital data and the individualized understanding required for functional care, highlighting the continuing importance of professional judgment in interpreting patients' unique conditions. Third, nurses emphasized that maintaining therapeutic communication was essential in oral healthcare, where impairments in speech, swallowing, and appearance may influence patients' emotional and social experiences. Digital tools were considered valuable when they enhanced nurses' ability to recognize patient needs rather than replaced interpersonal care.

Conclusions
Digital transformation in oral nursing represents a transition in how nurses perceive, interpret, and respond to patients' functional and lived experiences. Future digital healthcare design

should incorporate the experiential knowledge of nurses and preserve the relational foundations of oral nursing while leveraging technological innovation.

Concurrent Oral Presentation Session

Session 15: Health Care Systems Policy and Management

CS15-2 Developing a Theoretical Framework for Non-Cost Factors in Palliative Care Pricing: A Value-Based Healthcare Perspective

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Background and Objectives
Existing healthcare pricing predominantly emphasizes cost compensation, which may not fully capture the multidimensional value of palliative care, including symptom control, psychosocial support, and dignity preservation. This study aimed to identify non-cost factors influencing palliative care pricing and develop a theoretical framework for their role in price formation from a value-based healthcare perspective.

Methods
A systematic literature search was conducted in China National Knowledge Infrastructure, Wanfang Data, Web of Science, and related databases from inception to March 2026. Literature analysis was combined with preliminary field investigation to identify non-cost factors relevant to palliative care and healthcare service pricing. The identified factors were classified by their sources using the STEEPLED framework and then functionally reorganized according to three elements of price formation: value, supply and demand, and policy. Based on these relationships, a theoretical framework was developed to explain how non-cost factors enter the pricing process.

Results
Fifty-five studies were included. Multidimensional non-cost factors were identified, including social awareness and acceptance, service quality, level of economic development, health insurance payment policies, population aging, and ethical and equity considerations. These factors were reorganized into a three-layer regulatory framework: the Institutional Constraint Layer, which defines the legitimate boundaries of price formation; the Value Adjustment Layer, which translates the humanistic and professional value of palliative care into price signals; and the Demand Adjustment Layer, which reflects affordability and the conditions for policy implementation. The framework clarifies the pathways and mechanisms through which non-cost factors influence price formation.

Conclusions
The proposed three-layer framework extends pricing analysis beyond cost compensation by incorporating the multidimensional value of palliative care. It provides a theoretical paradigm for developing pricing mechanisms that balance cost-based foundations with service value and may inform the refinement of palliative care pricing policies.

Concurrent Oral Presentation Session

Session 15: Health Care Systems Policy and Management

CS15-3 Long-Term Cost-Effectiveness of a Nurse-Led Intervention to Improve Adherence to the ABC Pathway in Rural Patients with Atrial Fibrillation

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Background and Objectives

Nurse-led interventions may improve adherence to the ABC pathway and clinical outcomes in rural patients with atrial fibrillation (AF). This study aimed to evaluate the cost-effectiveness of a nurse-led intervention to improve ABC pathway adherence from a healthcare system perspective.

Methods

A Markov cohort model was developed from the healthcare system perspective to compare a nurse-led ABC pathway adherence intervention with usual care among rural patients with atrial fibrillation. The model used a 1-month cycle length and a lifetime horizon. Outcomes included direct medical costs, quality-adjusted life-years (QALYs), and cost-effectiveness. One-way, threshold, scenario, and probabilistic sensitivity analyses were conducted to assess model uncertainty.

Results

Compared with usual care, the nurse-led intervention was projected to reduce ischaemic stroke events by 18.10 and intracranial haemorrhage events by 0.70 in the model cohort over the lifetime horizon. The intervention gained 0.57 quality-adjusted life-years and saved RMB 579.99 in direct medical costs per patient, making it a dominant strategy. Base-case findings were generally robust in one-way sensitivity, threshold, and scenario analyses. In the probabilistic sensitivity analysis, the intervention was cost-effective in 95.7% of 10,000 Monte Carlo simulations at a willingness-to-pay threshold of RMB 275,238 per quality-adjusted life-year.

Conclusions

The nurse-led intervention to improve ABC pathway adherence among rural patients with atrial fibrillation was projected to reduce healthcare costs and provide favourable long-term cost-effectiveness compared with usual care. These findings support the potential economic value of implementing nurse-led atrial fibrillation management in rural healthcare systems.

Concurrent Oral Presentation Session

Session 15: Health Care Systems Policy and Management

CS15-4 Nurses' Trust Calibration, Reliance, and Override of Algorithmic Clinical Decision Support: A Scoping Review

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Background and Objectives

Nurses use algorithmic clinical decision support to assess risk, guide treatment, and plan care, yet trust or adoption alone cannot show whether their responses to recommendations are clinically appropriate. This scoping review mapped how trust and reliance were assessed, how nurses responded to recommendations, and which clinical and organizational conditions shaped those responses.

Methods

Following JBI guidance and PRISMA-ScR, MEDLINE via PubMed, CINAHL, Embase, Scopus, Web of Science Core Collection, and APA PsycINFO were searched from inception through August 5, 2026, supplemented by Google Scholar and reference checking. Empirical studies involving practicing nurses or mixed teams with an explicit nursing role and patient-specific algorithmic decision support were eligible. Reviewers screened and charted reports, critically appraised the original search set, and mapped attitudes, behaviors, task performance, contextual factors, and clinical consequences.

Results

The synthesis of 43 included reports linked nurses' trust to perceived accuracy, understandable advice, and agreement with bedside assessment. Nurses verified predictions, selectively used recommendations, and overrode scores that conflicted with clinical judgment. Participants also requested contextual information and ways to document disagreement with predictions. Evaluations captured trust perceptions, recommendation uptake, guideline adherence, and task performance. Alert burden, workflow fit, and access to clinical support shaped reliance across surveillance, treatment safety, risk assessment, and care planning.

Conclusions

Algorithmic clinical decision support should permit nurses to accept suitable recommendations, verify uncertain advice, and challenge output that conflicts with the patient's condition. Trust and acceptance scores alone do not demonstrate appropriate reliance. Evaluation should connect recommendation quality, the information available to the nurse, the observed response, and its clinical consequence. This evidence is needed before

verification rules, training approaches, or override procedures can be judged to improve safety.