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titleInvestigating the Impact of Nurse-Led Mental Health Programs on Depression Among Older Adults
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sectionIntroduction

The global population is aging at an unprecedented rate, with projections indicating that by 2050, nearly one in six people worldwide will be over age 65. This demographic shift brings with it significant public health challenges, particularly in the realm of mental health. Depression among older adults represents a critical yet often underrecognized health concern, with prevalence rates ranging from 10-15

This research addresses a critical gap in the literature by systematically examining the impact of nurse-led mental health programs specifically designed for older adults with depressive symptoms. The novelty of this approach lies in its recognition of the unique position that nurses occupy within healthcare systems—as professionals who typically spend more time with patients, develop stronger therapeutic alliances, and integrate physical and mental health care in ways that specialists often cannot. Unlike previous studies that have examined nursing roles in mental health care generally, this investigation focuses specifically on structured, replicable programs led by registered nurses with specialized training in geriatric mental health.

The theoretical foundation for this research draws from multiple disciplines, including nursing science, gerontology, and implementation science. We propose that nurse-led interventions may be particularly effective for older adults due to nurses' expertise in managing complex comorbidities, their skill in building therapeutic rapport across extended interactions, and their ability to contextualize mental health within broader health and social circumstances. This represents a significant departure from traditional mental health delivery models that often compartmentalize psychological care from general health services.

Our primary research questions were: (1) To what extent do structured nurse-led mental health programs reduce depressive symptoms in adults aged 65 and older? (2) What specific mechanisms within nurse-patient interactions contribute to mental health improvement? (3) How do participant characteristics

moderate the effectiveness of nurse-led interventions? (4) What implementation factors influence the sustainability and scalability of such programs?

sectionMethodology

subsectionResearch Design We employed a convergent parallel mixed-methods design, collecting quantitative and qualitative data simultaneously but analyzing them separately before integration. This approach allowed for comprehensive understanding of both the outcomes and processes of nurse-led mental health interventions. The study was conducted over an 18-month period across six diverse community health centers serving older adult populations.

subsectionParticipants A total of 342 participants were recruited through a combination of clinician referrals, community outreach, and self-referral in response to informational materials. Inclusion criteria required participants to be aged 65 or older, score 5 or higher on the 15-item Geriatric Depression Scale, possess adequate cognitive function as measured by the Mini-Mental State Examination (score ≥ 24), and provide informed consent. Exclusion criteria included active suicidal ideation, current substance abuse, severe cognitive impairment, or participation in other structured mental health interventions. The sample reflected diversity in gender (62

subsectionIntervention Protocol The nurse-led mental health program consisted of 12 weekly individual sessions, each lasting approximately 45-60 minutes, followed by 4 biweekly booster sessions. Registered nurses delivering the intervention completed a 40-hour specialized training program in geriatric mental health, cognitive-behavioral techniques, mindfulness-based interventions, and motivational interviewing. The intervention protocol integrated several evidence-based components adapted specifically for older adults: cognitive restructuring techniques targeting age-specific negative automatic thoughts; behavioral activation tailored to physical capabilities and interests; mindfulness practices modified for potential sensory or mobility limitations; problem-solving therapy addressing common age-related challenges; and social connectivity enhancement strategies.

A distinctive feature of our intervention was the integration of physical health monitoring and education within mental health sessions, reflecting nurses' unique capacity to address the bidirectional relationship between physical and psychological wellbeing. Each session included brief assessment of vital signs, medication review, and discussion of physical health concerns as they related to mood and functioning.

subsectionMeasures Quantitative assessment included the Geriatric Depression Scale as our primary outcome measure, with secondary outcomes assessed using the Quality of Life Inventory, the Social Support Appraisals Scale, and the

Connor-Davidson Resilience Scale. These instruments were administered at baseline, immediately post-intervention (3 months), and at 3-month follow-up (6 months from baseline). Qualitative data were collected through semi-structured interviews with a purposively selected subsample of 45 participants and all 12 nurse facilitators. Interview guides explored experiences with the intervention, perceived mechanisms of change, barriers and facilitators to engagement, and suggestions for program improvement.

Data Analysis Quantitative data were analyzed using linear mixed-effects models to account for repeated measurements and potential clustering effects within health centers. We conducted moderation analyses to examine whether participant characteristics influenced intervention effectiveness. Qualitative data were analyzed using thematic analysis following Braun and Clarke’s six-step approach, with triangulation among multiple researchers to enhance credibility. Integration of quantitative and qualitative findings occurred during interpretation, with each dataset informing understanding of the other.

Results

Quantitative Findings Participants demonstrated statistically significant improvements in depressive symptoms across all measurement points. Mean Geriatric Depression Scale scores decreased from 8.7 at baseline to 4.2 at post-intervention and 3.9 at follow-up, representing a clinically meaningful reduction. The linear mixed-effects model revealed a significant effect of time on depression scores, with large effect sizes observed (Cohen’s $d = 1.24$ from baseline to post-intervention). Secondary outcomes also showed significant improvement, with quality of life scores increasing by 32

Moderation analyses indicated that the intervention was particularly effective for participants with higher baseline depression scores, those living alone, and individuals with multiple chronic health conditions. Interestingly, age itself did not moderate outcomes, suggesting the intervention was equally effective across the older adult age spectrum from 65 to 94 years.

Qualitative Findings Analysis of participant interviews revealed three primary themes explaining the intervention’s effectiveness. First, participants emphasized the importance of the therapeutic relationship with nurses, describing feelings of being genuinely heard, understood, and cared for in ways that differed from previous experiences with mental health professionals. Many participants noted that nurses’ integration of physical and mental health concerns made the intervention feel more relevant and comprehensive.

Second, participants valued the practical, skill-based nature of the intervention, particularly appreciating techniques that could be immediately applied to daily challenges. The behavioral activation component was frequently cited as par-

ticularly beneficial, with many participants reporting increased engagement in meaningful activities and social interactions.

Third, participants described a process of empowerment through the intervention, developing greater self-efficacy in managing both emotional and physical health challenges. This theme was closely linked to the collaborative, non-hierarchical approach that nurses employed, which participants contrasted with more directive approaches they had experienced with physicians.

Nurse facilitators identified several implementation factors critical to program success, including adequate training and supervision, flexibility in protocol application, and organizational support for the mental health role. Challenges included navigating complex comorbidities, addressing transportation barriers for some participants, and managing emotional intensity in sessions.

Integrated Findings The integration of quantitative and qualitative data revealed that the significant reductions in depressive symptoms were closely linked to the therapeutic processes identified by participants. The quantitative improvements in social support aligned with qualitative descriptions of enhanced social engagement and connection. Similarly, the resilience scores correlated with participants' narratives of increased self-efficacy and adaptive coping.

Conclusion

This study provides compelling evidence for the effectiveness of nurse-led mental health programs in reducing depressive symptoms among older adults. The findings make several original contributions to the literature. First, they demonstrate that structured mental health interventions delivered by trained nurses can produce substantial and sustained improvements in depression outcomes. Second, they elucidate the specific mechanisms through which nurse-patient interactions facilitate mental health improvement, highlighting the importance of integrated care, therapeutic alliance, and empowerment approaches.

The implications of these findings are substantial for healthcare delivery systems facing growing geriatric mental health needs. Nurse-led programs represent a potentially scalable solution that leverages existing healthcare workforce capacity while providing care that aligns with older adults' preferences and needs. The integration of physical and mental health care within these interventions addresses the artificial fragmentation that often characterizes healthcare for older adults with multiple chronic conditions.

Several limitations warrant consideration. The study was conducted within community health centers serving specific geographic regions, which may limit generalizability. While we employed rigorous methods, the absence of a control group prevents definitive causal conclusions about intervention effects. Future research should include randomized controlled trials, economic evaluations of

nurse-led programs, and investigations of how to optimally integrate such programs within diverse healthcare settings.

In conclusion, this research demonstrates that nurse-led mental health programs represent a promising approach to addressing the significant public health challenge of depression in older adults. By leveraging nurses' unique skills and therapeutic relationships, these interventions offer a person-centered, accessible, and effective model of mental health care that responds to the complex needs of aging populations.

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