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EFFECTIVENESS OF CONTINUOUS NURSING CARE ON QUALITY OF LIFE AND MANAGEMENT OF COMPLICATIONS IN PATIENTS WITH OSTOMY SURGERY: A SYSTEMATIC REVIEW

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ABSTRACT
Individuals undergoing ostomy surgery frequently encounter various physical, emotional, and social challenges that may adversely affect their quality of life. Continuous Nursing Care (CNC) has been recognized for its potential in strengthening self-care skills and decreasing the incidence of postoperative complications. This review seeks to evaluate the influence of CNC on enhancing life quality and addressing complications among individuals with an ostomy. Objective to determine the effectiveness of Continuous Nursing Care (CNC) in improving quality of life and managing complications among patients undergoing ostomy surgery. This systematic review was conducted in accordance with the PRISMA 2020 guidelines. A comprehensive literature search was performed for studies published between 2019 and 2023, utilizing Boolean operators and MeSH terms: ("nursing" OR "nurse" OR "care") AND ("ostomy" OR "stoma") AND ("continuous") AND ("management") AND ("quality of life") AND "complication", across five electronic databases: Scopus, PubMed, Web of Science, ScienceDirect, and ProQuest. The initial search yielded 968 articles. After removing 28 duplicates, 940 articles remained for title and abstract screening. A total of 151 full-text articles were assessed for eligibility, and 13 studies met the inclusion criteria for the final synthesis. The included studies comprised randomized controlled trials (RCTs) and quasi-experimental designs evaluating Continuous Nursing Care (CNC) interventions among ostomy patients, with outcome measures including quality of life, self-care ability, psychological well-being, and complication management. Methodological quality was appraised using the Joanna Briggs Institute (JBI) critical appraisal tools for both RCTs and quasi-experimental studies. Only studies scoring above 65% were included in the final analysis. Thirteen studies fulfilled the inclusion criteria. CNC interventions including structured education, telehealth services, home-based care, and psychosocial support were shown to enhance quality of life, improve self-care abilities, and reduce complications after surgery. Furthermore, CNC demonstrated effectiveness in decreasing peristomal infections, psychological distress (e.g., anxiety and depression), and in promoting self-efficacy and emotional adjustment in ostomy patients. Continuous Nursing Care (CNC) has been identified as a promising strategy to enhance quality of life, psychological health, and self-care capacity, while also reducing the risk of complications in individuals with an ostomy. Nonetheless, the variability in intervention models highlights the necessity for additional research utilizing theory-based frameworks, larger sample sizes, and meta-analytic methods to determine the most effective care approaches.

Keywords: complication management; continuous nursing care; ostomy; quality of life; self-care

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INTRODUCTION

This review systematically explores the impact of continuous nursing care on enhancing patients' quality of life and handling complications in those undergoing ostomy surgery. To achieve this goal, the methods used include a structured literature search, a critical assessment of the articles found, and a synthesis of relevant research results (Brink et al., 2006). The

review procedure adheres to the reporting standards set by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), ensuring methodological rigor and transparency at every stage of the process (Bolan et al., 2021).

A comprehensive literature search was conducted on five major databases Scopus, PubMed, Web of Science, ScienceDirect, and ProQuest. To obtain relevant articles, the search strategy used Boolean operators and keywords adjusted to Medical Subject Headings (MeSH): ("nursing" OR "nurse" OR "care" OR "healthcare") AND ("ostomy" OR "stoma" OR "colostomy" OR "ileostomy") AND ("continuous" OR "ongoing" OR "sustained" OR "persistent") AND ("management" OR "support" OR "education" OR "monitoring") AND ("quality of life") AND "complication". To fit within the scope of this study, only studies that met the following criteria were included in the review: (a) the population consisted of patients who had undergone colostomy, ileostomy, or enterostomy surgery, either temporary or permanent; (b) the intervention reviewed is ongoing nursing, including structured long-term follow-up by nurses, home visits, telehealth-based interventions, patient education, psychosocial support, and wound management and stoma care to prevent complications; (c) comparisons in the form of standard postoperative care, such as basic education when the patient discharges from the hospital without a structured follow-up by the nurse (d) outcomes measured include the patient's quality of life (WHOQOL-BREF, Stoma-QOL, SF-36), ostomy-related complications (peristomal skin irritation, leakage, infection, retraction, intestinal obstruction), psychological well-being (self-efficacy, anxiety, depression), patient adherence to ostomy care guidelines, rate of readmission due to complications, as well as patient satisfaction with nursing interventions; and (e) the accepted study designs are Randomized Controlled Trials (RCTs) and quasi-experimental studies published in English between 2019 and 2025. Studies that did not focus on the role of continuing nursing in ostomy management or did not report relevant outcomes were excluded from this review.

Study selection

Based on the results of literature searches on five databases and registers, a total of 968 articles were obtained, consisting of articles from Scopus (n = 48), PubMed (n = 34), Web of Science (n = 21), ScienceDirect (n = 105), and ProQuest (n = 760). After removing duplication (n = 28), a total of 940 articles were screened, with 789 articles removed for being outside the 2019–2025 time frame. Of the 151 reports identified for full text retrieval, 72 were successfully obtained and assessed for eligibility, while 79 articles were issued based on titles and abstracts. At the assessment stage, 22 reports were issued due to limited access, 7 reports were not available in English, 16 reports did not answer research questions, and 14 reports did not match the study design. Based on the inclusion and exclusion process, 13 studies met the criteria and were incorporated into this review. If there are discrepancies in the screening process, discussions are held until a consensus is reached (Figure 1).

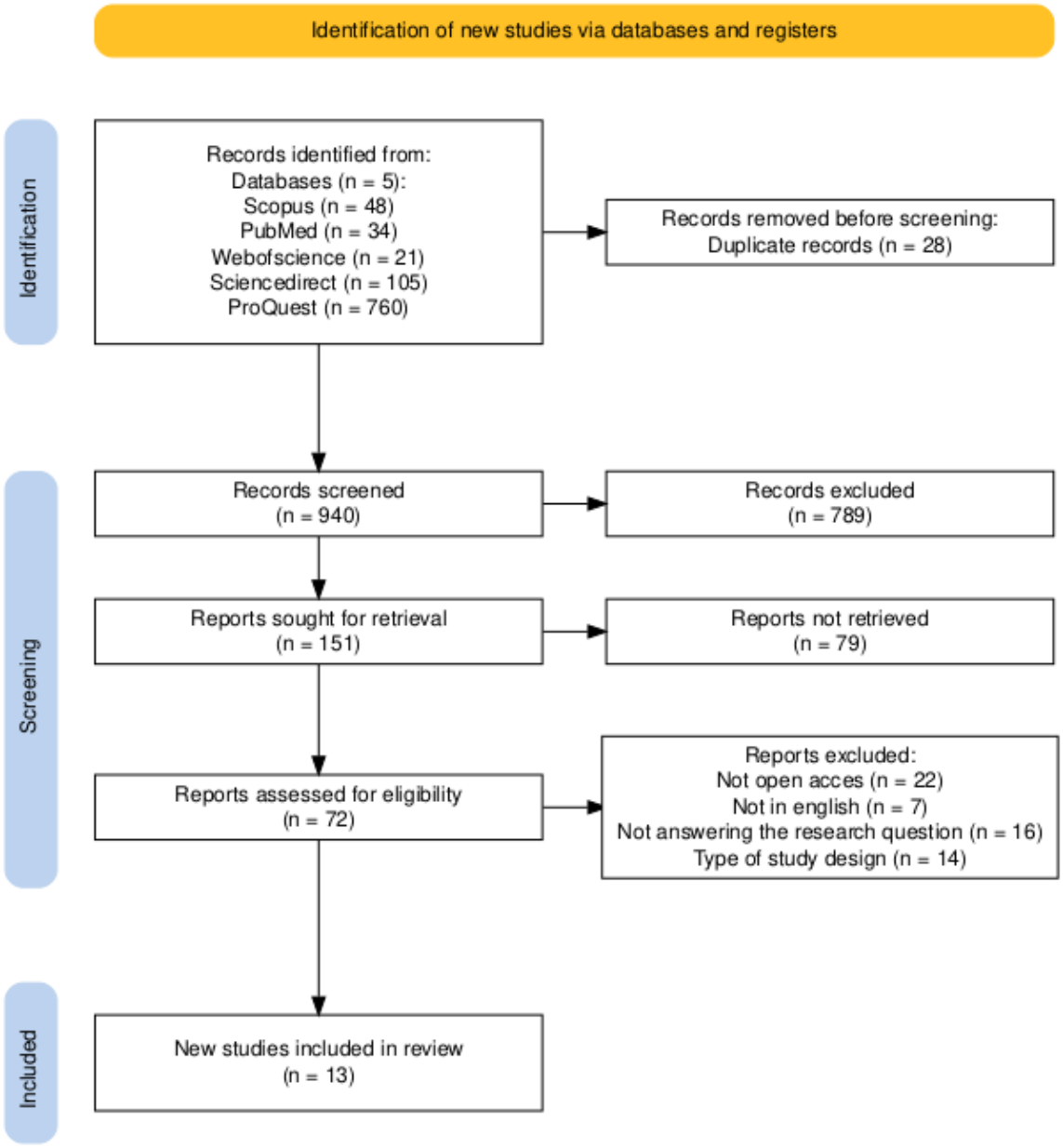

Figure 1. Diagram Flow PRISMA (Haddaway and al., 2022)

The quality and methodological soundness of the studies included in this analysis were systematically evaluated to detect possible sources of bias and to ensure the reliability of the results. This evaluation employed the appraisal instruments created by the Joanna Briggs Institute (JBI), which are designed for diverse research designs. Three independent reviewers appraised each eligible study based on established inclusion criteria to verify methodological soundness prior to its acceptance into the review. The types of studies analyzed in this systematic review comprised Randomized Controlled Trials (RCTs) and Quasi-Experimental Designs. JBI's approach in evaluating RCTs includes 13 key assessment criteria, covering essential components such as randomization procedures, concealed allocation, blinding of participants and assessors, thorough follow-up, and the accuracy of results along with statistical analyses applied. Of the 11 RCT studies reviewed, methodological scores varied between 77% to 92%, with the majority of studies obtaining a score of 77% (10 of 13 criteria met). The studies with the highest scores, namely Ko et al. (2023) and Xia (2020) with 92%, showed the application of a strict methodology, including a clear randomization system, an adequate bias control strategy, and a robust analytical approach.

In contrast, some RCT studies with a score of 77%, such as those conducted by Hu et al. (2020), Zhou et al. (2025), Wang et al. (2024), and Su et al. (2021), show some methodological weaknesses, especially in the aspects of blind allocation and follow-up strategies for participants who dropped out of the study. Studies with a score of 85%, such as Li et al. (2024), have a stronger methodology compared to those that obtained a score of 77%, but there are still some minor shortcomings in their implementation. Meanwhile, the Quasi-Experimental study was assessed using 9 JBI indicators, which assessed the control of confounding factors, the clarity of intervention measurements, the follow-up strategies applied, and the validity of the research results. Of the two studies in this category, Huang et al. (2021) and Abdelmohsen (2020) obtained a score of 89% (8 out of 9 criteria met). These results show that although the study has a fairly high methodological validity, there are some limitations, such as the absence of an optimal strategy in addressing data loss due to participants who do not complete the study. Each study was evaluated using a "yes", "no", "unclear", or "not applicable" rating scale, where the "yes" answer was given a score of one, while the other answers were given a score of zero. The results of the evaluation are calculated by summing the points of each indicator. Research that reaches a minimum of 50% of the total score is considered to have feasible methodological quality and meets critical assessment standards.

Table 1
Quality Assessment with JBI

No.	Author , Years	Study Design	1	2	3	4	5	6	7	8	9	10	11	12	13	Result
1.	(Hu et al., 2020)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	X	√	√	√	√	√	√	10/13= 77 %
2.	(Hu et al., 2020)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	X	√	√	√	√	√	√	10/13= 77 %
3.	(Zhou et al., 2025)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	X	√	√	√	√	√	√	10/13= 77%
4.	(Taylan & Aksoy, 2021)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	X	√	√	√	√	√	√	10/13= 77%
5	(Ko et al., 2023)	Randomized Controlled Trial (RCT)	√	√	√	√	√	√	X	√	√	√	√	√	√	12/13= 92%
6	(S. Q. Li et al., 2024)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	√	√	√	√	√	√	√	11/13= 85%
7	(Wang et al., 2024)	Randomized Controlled Trial (RCT)	√	X	√	X	X	√	√	√	√	√	√	√	√	10/13= 77%
8	(Xia, 2020)	Randomized Controlled Trial (RCT)	√	√	√	√	√	√	X	√	√	√	√	√	√	12/13= 92%
9	(Su et al., 2021)	Randomized Controlled Trial (RCT)	√	√	√	X	X	√	X	√	√	√	√	√	√	10/13= 77 %
10	(Taylan & Akıl, 2019)	Randomized Controlled Trial (RCT)	√	X	√	X	X	√	X	√	√	√	√	√	√	9/13= 69 %
11	(Hao et al., 2023)	Randomized Controlled Trial (RCT)	√	X	√	X	X	√	√	√	√	√	√	√	√	10/13 = 77
12	(Huang et al., 2021)	Quasi-Experimental	√	√	√	√	√	√	√	X	√					8/9 = 89%
13	(Abdelmohsen, 2020)	Quasi-Experimental	√	X	√	√	√	√	√	√	√					8/9 = 89%

The results of this assessment indicate that most of the studies reviewed have a fairly good methodology, with a large proportion obtaining scores above 75%. The highest-scoring studies tended to have a more rigorous design, better use of bias control methods, and clearer follow-up strategies, making the results more reliable. In contrast, studies with lower scores showed some weaknesses in the implementation of the methodology, which required caution in the interpretation of the results. With this evaluation, studies that have a lower risk of bias and a robust methodological design can be more trusted to be used as a basis for making conclusions and recommendations in this systematic review.

RESULT

Characteristics of the Selected Studied

Studies examined throughout this review displayed heterogeneity in terms of research design, number of participants, types of stoma, length of intervention, and the assessment methods employed. From the analysis of Table 1 and Table 2, the majority of studies used a Randomized Controlled Trials (RCT) design with methodological assessment standards based on the Joanna Briggs Institute (JBI). In addition, there are two studies with Quasi-Experimental designs that also meet good methodological standards. Based on the results of the JBI assessment, eleven RCT studies showed methodological scores that varied between 77% to 92%, with two studies obtaining a score of 92%, three studies obtaining 85%, and the remaining obtaining 77%. The highest-scoring studies in these RCT studies had high methodological validity with a stricter intervention approach in the study design (Ko et al., 2023; Xia, 2020). Meanwhile, two Quasi-Experimental studies obtained a score of 89%, indicating a fairly good methodological quality with few limitations in the follow-up aspect (Abdelmohsen, 2020; Huang et al., 2021).

Geographically, these studies were conducted in different countries, with the majority of studies coming from China (8 studies), followed by Turkey (2 studies), Taiwan (1 study), Saudi Arabia and Egypt (1 study). The research was conducted in the range of 2019 to 2025, with the majority of articles published in English. In terms of sample size, the number of participants in each study ranged from 60 to 155 patients, with variations in the types of stoma studied, including colostomy, ileostomy, enterostomy, and sigmoidostomy. The duration of interventions in these studies varied, with a time range of 2 weeks to 6 months, depending on the intervention approach used. Some studies used telemedicine-based interventions, such as telephone counseling and digital platform-based continuing nursing services, while others applied multimedia education models, structured education, as well as nursing theory-based approaches such as the Orem Self-Care Model.

The instruments used in this study also vary, with measuring tools including WHO-QOL BREF, Ostomy Self-Care Ability Scale, State-Trait Anxiety Inventory (STAI), and Self-Rating Anxiety Scale (SAS) to assess quality of life, anxiety, self-care ability, and postoperative complications. Key findings from these studies suggest that continuous nursing interventions significantly improve quality of life, lower complications, as well as improve patients' adaptation to their conditions. Overall, the results of the analysis of the 13 studies included in this systematic review showed that all studies had a score of >50% and met good methodological criteria, so they can be used to support the analysis of the data in this study.

Improving Patients' Quality of Life with Ostomy

Various studies show that Continuous Nursing Care (CNC) significantly improves the quality of life of patients with ostomy, which is measured through SF-36, Stoma-QOL, and WHOQOL-BREF. Virtual platforms and multimedia education have been shown to significantly improve patients' self-efficacy and quality of life ($p < 0.001$) (Hao et al., 2023;

Ko et al., 2023). The Orem self-care model also contributes to improving the patient's self-care ability and readiness to live postoperative life ($p < 0.001$(S. Q. Li et al., 2024).

In addition, the Continuing Care Bundle based on scientific evidence showed an improvement in the quality of life of patients with temporary stoma, particularly in physical and psychosocial aspects ($p < 0.001$) (Su et al., 2021). Visual education led by enterostomal therapists and hospital-family integration model also helped patients adapt to life after ostomy and reduce peristomal complications ($p < 0.05$) (Wang et al., 2024; Xia, 2020). Furthermore, psychological interventions combined with nutrition education improved WHOQOL-BREF scores and significantly reduced postoperative patients' anxiety and depression ($p < 0.0001$) (Zhou et al., 2025). CNC-based online training and continuous nursing services have also been shown to improve self-efficacy, quality of life, and lower the risk of complications after 6 months postoperative ($p < 0.05$) (Geng et al., 2019; Huang et al., 2021). In addition to the educational approach, CNC-based postoperative counseling helps patients develop better adaptation strategies, improve mental health, and increase satisfaction with nursing services ($p < 0.05$) (Hu et al., 2020). Overall, education-based CNC, digital technology, and psychological support have proven to be effective in improving the quality of life of ostomy patients, both from physical, emotional, social, and psychosocial adaptation aspects.

Improvement of Self-Care Ability in Ostomy Surgery Patients

Several studies have shown that continuous nursing interventions significantly improve the self-care ability of patients with ostomy. The instruments used in this study include the Stoma Care Self-Efficacy Scale, the Exercise of Self-Care Agency (ESCA) Scale, and the Ostomy Self-Care Ability Scale. The virtual care model was shown to significantly improve self-care ability compared to conventional care ($p < 0.001$) (Hao et al., 2023). Multimedia education was also effective in increasing the Ostomy Self-Care Ability Scale score, especially in the aspect of stoma management ($p < 0.001$(Ko et al., 2023). In addition, the Orem self-care model contributes to improving self-care knowledge and skills and accelerates patients' readiness to go home ($p < 0.001$) (S. Q. Li et al., 2024). Further, visual education by enterostomal therapists combined with peer education improved self-nursing ability, including patient self-care skills and responsibilities ($p < 0.001$) (Wang et al., 2024). Structured education was also shown to increase knowledge and practice of colostomy care from 41.9% to 83.0% ($p < 0.001$) (Abdelmohsen, 2020).

Reduction of Postoperative Complications

Several studies have shown that Continuous Nursing Care (CNC) significantly reduces postoperative complications in patients with ostomy. Instruments used to assess the impact of these interventions include the Colostomy Complication Assessment Table and the Incidence of Stoma-Related Complications Checklist. CNC-based online training has been shown to reduce peristomal infections and stoma stenosis ($p < 0.05$) (Huang et al., 2021). The Continuing Care Bundle was also effective in reducing peristomal dermatitis and stoma prolapse within 12 weeks postoperatively ($p < 0.05$) (Su et al., 2021). In addition, the hospital-family integration model is able to suppress stenosis and peristomal infections, as well as accelerate the patient's adaptation to their ostomy conditions ($p < 0.001$) (Xia, 2020). Psychological interventions integrated with nutritional education have demonstrated beneficial effects in minimizing peristomal infections, prolapse, and stoma stenosis when compared with control treatments ($p < 0.05$) (Zhou et al., 2025). Furthermore, telemedicine-based CNC has also been shown to reduce skin irritation, peristomal edema, and stoma bleeding, with a lower complication rate compared to standard treatments ($p < 0.05$) (Geng et al., 2019).

Reduces Anxiety and Depression

Multiple studies indicate that Continuous Nursing Care (CNC) is effective in reducing anxiety and depressive symptoms among ostomy patients, thereby positively influencing their overall well-being. Tools commonly utilized to evaluate these psychological outcomes include the Self-Rating Anxiety Scale (SAS) and the Self-Rating Depression Scale (SDS). At six months post-surgery, patients who received CNC demonstrated a marked reduction in SAS and SDS scores, with statistically significant differences compared to those in the control group ($p < 0.05$) (Geng et al., 2019). These findings are reinforced by reports that CNC-based online training helps patients better manage anxiety and depression ($p < 0.05$) (Huang et al., 2021). Additionally, postoperative telephone counseling has been shown to help patients adapt to lifestyle changes and reduce stress more effectively compared to standard care (Taylan & Akil, 2019). Technology-based hospital-family integration also plays a role in increasing self-efficacy, which has a direct impact on significantly reducing anxiety and depression ($p < 0.001$) (Xia, 2020). Furthermore, the combination of psychological interventions and nutrition education has been shown to significantly lower SAS and SDS scores, while improving patients' emotional well-being ($p < 0.0001$) (Zhou et al., 2025).

Table 2.
Result of Literature Reseach

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
1	The Impact of Psychological Intervention on Postoperative Nutrition and Psychological State in Patients Undergoing Surgery for Low Rectal Cancer with Stoma Formation (Zhou et al., 2025), China	Randomized Controlled Trial (RCT)	88	Transverse Colostomy (2.27%), Descending Colostomy (22.73%), Single-Cavity Sigmoidostomy (31.82%), Proximal Sigmoidostomy (6.82%), Sigmoidostomy (36.36%)	2 weeks (Intensive psychological counseling and health education)	Health management team (Psychologists, nurses, surgeons)	WHO-QOL BREF, SAS, SDS, Nutritional Indicators (ALB, PA, TRF), Immune Markers (IgA, IgM, IgG)	Quality of Life, Anxiety, Depression, Nutritional Status (ALB, PA, TRF), Immune Function (IgA, IgM, IgG), Postoperative Complications (Edema, Stenosis, Hernia, Prolapse)	Significant improvements in quality of life (WHO-QOL BREF) were reported, along with reductions in anxiety (SAS) and depression (SDS) scores, as well as a lower incidence of postoperative complications among participants who received the intervention when compared to those in the control group. Positive changes were also observed in nutritional indicators (ALB, PA, TRF) and immune system markers (IgA, IgM, IgG) among individuals in the intervention group. Additionally, complications such as edema, stenosis, hernias, and prolapse were less frequent than in the control group, emphasizing the clear benefits of incorporating psychological and nutritional support in the postoperative recovery process.
2	The Effect of Phone Counselling Service on Adaptation to Stoma and Quality of Life Among Patients with Intestinal Stoma (Taylan & Aksoy, 2021), Turkey	Randomized Controlled Trial (RCT)	60	Colostomy: 43.3%, Ileostomy: 56.7%, Enterostomy: 0%	10 weeks (Phone counseling intervention)	Stoma therapy nurses	Ostomy Adjustment Inventory (OAI), Adaptation of Quality Life Scale (AQLS)	Quality of Life, Social Adaptation, Self-care Responsibility, Stoma-related Problems	Telephone counseling produced notable improvements in stoma adjustment and overall well-being over a period of 10 weeks. Individuals receiving the intervention demonstrated better outcomes in terms of social adaptation, acceptance, and responsibility for self-care. Although psychological distress such as anger and anxious preoccupation may be initially heightened, it tends to diminish with time. By the tenth week, the intervention group experienced a marked decline in stomal complications, including reduced

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
									occurrences of skin irritation, issues with pouches, and leakage, when contrasted with those receiving standard care.
3	A Randomized Control Study: The Effectiveness of Multimedia Education on Self-Care and Quality of Life in Patients with Enterostomy (Ko et al., 2023) ,Taiwan	Randomized Controlled Trial (RCT)	108	Colostomy: 51.9%, Ileostomy: 48.1%, Enterostomy: 0%	3 months (Multimedia Education Program)	Stoma therapy nurses, colorectal surgeons	Ostomy Self-Care Ability Scale, Stoma Quality of Life Scale (Stoma-QOL)	Self-Care Ability, Quality of Life (Sleep, Activity, Social, Psychological, Physiological Domains)	Participants in the intervention group who engaged in the multimedia education program demonstrated better self-care and a higher quality of life relative to the conventional education group. Post-intervention, the intervention group scored higher on self-care ability ($p < 0.001$) and overall Stoma-QOL ($p < 0.001$), especially in sleep, activity, and social adaptation. ROC analysis identified an optimal self-care capability threshold of 20 points with a sensitivity of 77.8% and a specificity of 75.5%. These findings highlight the effectiveness of multimedia-based education in improving patient self-care and adaptation.
4	Effect of Orem's Self-Care Model on Discharge Readiness of Patients Undergoing Enterostomy. (S. Q. Li et al., 2024), China	Randomized Controlled Trial (RCT)	92	Enterostomy: 100%	3 months (Orem's Self-Care Model Intervention)	Nurses, healthcare professionals	Readiness for Hospital Discharge Scale, Ostomy Self-Care Ability Scale, Stoma Quality of Life-Chinese Questionnaire	Discharge Readiness, Self-Care Ability, Quality of Life	Patients in the intervention group had significantly higher readiness ($p < 0.001$), improved self-care ability ($p < 0.001$), and better overall quality of life (QoL) at discharge from the hospital, 30 days, and 90 days after discharge ($p < 0.001$). Notably, the intervention group had higher scores in knowledge ($p < 0.001$), coping ability ($p = 0.006$), and personal status ($p = 0.001$). The study confirms that the Orem self-care model is effective in improving patient discharge readiness, reducing postoperative complications, and improving adaptation to enterostomy care.
5	Effect of Enterostomal Therapist-Led Visual Health Education Combined with Peer Education on Self-Nursing Ability, Quality of Life, and Peristomial Complications in Patients with a Permanent Colostomy (Wang et al., 2024), China	Randomized Controlled Trial (RCT)	120	Colostomy 100 %	3 months (Visual Health Education & Peer Education)	Enterostomal Therapists, Trained Peer Educators	Stoma Quality of Life Scale, Exercise of Self-Care Agency (ESCA) Scale, Ostomy Adjustment Scale	Quality of Life, Self-Nursing Ability, Psychological Adaptation, Complication Rates, Nursing Satisfaction	Patients in the intervention group showed significantly higher self-nursing abilities ($p < 0.001$), quality of life ($p < 0.001$), and psychological adaptation ($p < 0.001$) compared to the control group. The incidence of complications such as stoma bleeding, mucosal separation, and dermatitis was significantly lower in the intervention group ($p < 0.05$). Patients also reported significantly higher satisfaction with nursing care (93.3% vs. 61.7%, $p = 0.003$). The study highlights the effectiveness of enterostomal therapist-led visual education combined with peer education in improving patient adaptation, reducing

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
									complications, and improving overall well-being.
6	The Effects of Continuous Care Model of Information-Based Hospital-Family Integration on Colostomy Patients: A Randomized Controlled Trial (Xia, 2020), China	Randomized Controlled Trial (RCT)	155	Colostomy 100 %	3 months (Information-Based Continuous Care Model)	Nurses, Healthcare Team via WeChat, Blog, QQ, and Telephone	State-Trait Anxiety Inventory (STAI), Stoma Care Self-Efficacy Scale, Colostomy Complication Assessment Table, Stoma Quality of Life Scale, Degree of Satisfaction Table	Anxiety Levels, Self-Efficacy, Colostomy Complications, Quality of Life, Patient Satisfaction	The continuous treatment model significantly reduced anxiety levels ($p < 0.0001$) and improved self-efficacy scores in the intervention group compared to the control group. Patients in the intervention group had significantly fewer colostomy-related complications, including stoma prolapse and retraction ($p < 0.0001$). Quality of life scores in the intervention group were significantly higher across multiple dimensions, including physical and emotional functioning, as well as social and economic well-being ($p < 0.0001$). Patient satisfaction with treatment was significantly greater in the intervention group ($p = 0.0015$). This study highlights the benefits of an information-based hospital-family integration model in reducing complications, improving adaptation, and improving overall well-being.
7	Effects of Evidence-Based Continuing Care Bundle on Health Outcomes in Rectal Cancer Patients With Temporary Stomas: A Multicenter Randomized Controlled Trial (Su et al., 2021)), China	Randomized Controlled Trial (RCT)	124	Temporary Stoma: 100%	12 weeks (Evidence-Based Continuing Care Bundle)	Nurses, Healthcare Team	Stoma Self-Efficacy Scale, Stoma Quality of Life Scale, Stoma Complication Assessment, Patient Satisfaction Questionnaire	Self-Efficacy, Quality of Life, Stoma-Related Complications, Satisfaction, Stoma Reversal Outcomes	The intervention group showed significant improvements in self-efficacy ($F = 11.88$, $p = 0.001$) and quality of life ($F = 17.99$, $p < 0.001$) compared to the control group. The incidence of stoma-related complications was significantly lower in the intervention group ($p < 0.05$). The stoma reversal time was shorter in the intervention group (208.96 ± 21.65 days) compared to the control group (281.32 ± 22.02 days, $\chi2 = 5.93$, $p = 0.015$). Patient satisfaction with treatment was significantly higher in the intervention group ($t = 4.08$, $p < 0.001$). The study highlights the effectiveness of evidence-based continuous care bundles in improving health outcomes and supporting stoma reversals in cancer patients.
8	The Effect of Postoperative Telephone Counseling on the Sexual Life of Patients With a Bowel Stoma: A Randomized Controlled Trial (Taylan & Akil, 2019), Turkey	Randomized Controlled Trial (RCT)	70	Colostomy: 48.6%, Ileostomy: 51.4%	12 weeks (Telephone Counseling)	Stoma Therapy Nurses	Golombok-Rust Inventory of Sexual Satisfaction (GRISS), Questionnaire for Individuals with Intestinal Stoma	Sexual Function, Sexual Satisfaction, Anxiety about Stoma, Stoma Self-Care	The intervention group showed significant improvements in total and subscale GRISS scores ($p < 0.01$) after 12 weeks. Patients who received telephone counseling reported higher sexual frequency, satisfaction, sensuality, and lower anorgasmia and vaginismus ($p < 0.01$). Concerns related to stoma during sexual activity such as fear of leakage, falling, and

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
									dissatisfaction with physical appearance were significantly reduced among individuals who received the intervention ($p < 0.05$). A larger percentage of those who underwent the intervention reported returning to bed-sharing with their partners (82.9%) compared to participants in the standard care group (51.4%). These outcomes highlight the essential contribution of telephone counseling in supporting sexual health and facilitating adjustment to life with a stoma.
9	The Value of Applying a Continuous Nursing Model Based on Virtual Platforms for Patients with Colostomy or Ileostomy (Hao et al., 2023), China	Randomized Controlled Trial (RCT)	100	Colostomy: 50%, Ileostomy: 50%	3 months (Continuous Nursing via Virtual Platforms)	Nurses, Healthcare Team via WeChat, QQ, Tencent Conference	Stoma Care Self-Efficacy Scale, Exercise of Self-Care Agency Scale (ESCA), State-Trait Anxiety Inventory (STAI), Short Form-36 Health Survey Questionnaire (SF-36), Postoperative Complications Assessment	Self-Efficacy, Self-Care Ability, Anxiety, Quality of Life, Postoperative Complications	Participants who engaged in continuous nursing care through a virtual platform demonstrated notably greater self-efficacy scores at both 1 week ($P = 0.0129$) and 3 months following discharge ($P < 0.0001$), when contrasted with those receiving standard care. Self-care competencies—such as responsibility, understanding, and practical skills showed significant enhancement in the intervention group ($P < 0.0001$). Anxiety symptoms were substantially alleviated ($P < 0.0001$), accompanied by lower anxiety trait scores among those in the intervention arm. Quality of life indicators improved across multiple domains, including physical functioning, psychological well-being, vitality, and social engagement ($P < 0.0001$). Postoperative complication rates were also meaningfully reduced among individuals in the intervention group ($P < 0.0001$), underscoring the positive impact of virtual nursing interventions on patient recovery.
10	Continuous Nursing Reduces Postoperative Complications and Improves Quality of Life of Patients After (Geng et al., 2019), China	Randomized Controlled Trial (RCT)	120	Colostomy: 50%, Ileostomy: 50%	6 months (Continuous Nursing via Telephone, WeChat, Follow-up Visits)	Nurses, Doctors via Telephone, WeChat, In-Person Visits	Self-Rating Anxiety Scale (SAS), Self-Rating Depression Scale (SDS), Quality of Life (QOL) Scale, Nursing Satisfaction Survey	Postoperative Complications, Anxiety and Depression, Quality of Life, Nursing Satisfaction	The incidence of complications was markedly lower among patients receiving continuous nursing care relative to participants under standard treatment ($P < 0.05$). Additionally, levels of anxiety (SAS) and depression (SDS) were markedly lower in the intervention group ($P < 0.05$). Quality of life (QOL) scores were also higher among those receiving the intervention than in the control group ($P < 0.05$). Moreover, family members of patients in the intervention group demonstrated greater awareness regarding stoma-related care. Nursing

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
									satisfaction scores were significantly elevated in the intervention group (P < 0.05), supporting the effectiveness of continued nursing care in enhancing outcomes after hospital discharge.
11	The Effect of Continuing Nursing Services on Colostomy Patients (Hu et al., 2020), China	Randomized Controlled Trial (RCT)	108	Colostomy: 100%	3 months (Continuing Nursing Services)	Nurses, Healthcare Professionals	Self-Care Ability Scale (ESCA), Self-Rating Anxiety Scale (SAS), Self-Rating Depression Scale (SDS), SF-36 Quality of Life Scale, Nursing Satisfaction Survey	Self-Care Ability, Disease Knowledge, Psychological State (Anxiety & Depression), Quality of Life, Postoperative Complications, Nursing Satisfaction	Comparing the intervention group to the control group, the former showed clearly better disease-related knowledge (P < 0.05) and self-care capacity. At the 3-month follow-up (P < 0.05), levels of anxiety (SAS) and depression (SDS) in the intervention group were much lowered. Particularly in areas of physical and mental health, quality of life scores (SF-36) were also considerably higher among individuals getting the intervention (P The intervention group had much reduced complication rates (3.70% vs. 14.81%, P < 0.05), therefore verifying the part continuous nursing care plays in reducing health problems. Emphasizing the need of ongoing nursing assistance post discharge, participants in the intervention group also expressed better satisfaction with nursing services (96.30% vs. 79.63%, P < 0.05).
12	The Effect of Online Training-Based Continuous Nursing Care for Rectal Cancer Patients Undergoing Permanent (Huang et al., 2021), China	Quasi-Experimental (Pre-Post Test)	119	Permanent Colostomy 100 %	6 months (Online Training-Based Continuous Nursing Care)	Nurses, Healthcare Team via Online Platforms (WeChat, QQ)	General Self-Efficacy Scale (GSES), Self-Care Ability Scale (ESCA), MOS 36-Item Short Form Health Survey (SF-36), Self-Rating Anxiety Scale (SAS), Self-Rating Depression Scale (SDS)	Self-Efficacy, Self-Care Ability, Quality of Life, Psychological Well-Being (Anxiety & Depression), Postoperative Complications	Participants in the intervention group demonstrated significantly higher self-efficacy and self-care ability scores (P < 0.05) than those in the control group after a 6-month period. Improvements in quality of life were evident across several domains physical function, role-physical, bodily pain, social participation, mental health, vitality, and overall health perception—with higher scores reported in the intervention group (P < 0.05). Additionally, levels of anxiety (SAS) and depression (SDS) were significantly reduced among those receiving the intervention (P < 0.05), reflecting enhanced psychological well-being. Within six months post-discharge, the complication rate was markedly lower among participants who received the intervention when compared to the control group (P < 0.05). These findings support the effectiveness of online training based continuous nursing care in promoting

No	Tittle/ Author/Year/ Country	Study design	Sample size (n)	Stoma type	Duration of Intervention	Interventic provider	Instrument	Outcome measure	Findings
									self-efficacy, self-care capability, quality of life, and psychological resilience, while simultaneously decreasing post-discharge complication risks.
13	Effectiveness of Structured Education on Patient's Knowledge and Practice Regarding Colostomy Care (Abdelmohsen, 2020), Saudi Arabia & Egypt	Quasi-Experimental (Pre-Post Test)	60	Colostomy : 100 %	3 months (Structured Education Program)	Nurses, Healthcare Educators	Structured Interview Questionnaire, Colostomy Care Observation Checklist	Patient Knowledge, Self-Care Practice, Stoma & Peristomal Skin Care Proficiency	Demonstrated a notable enhancement in overall knowledge levels supported by statistical significance score post-intervention (Pre: 42.1 ± 14.3 vs. Post: 75.7 ± 18.6, P = 0.001). Self-care practice scores improved significantly post-intervention in several key areas: preparation of new bags (Pre: 39.1 ± 11.5, Post: 86.0 ± 28.3, P = 0.001), removal of old bags (Pre: 26.5 ± 10.7, Post: 68.1 ± 30.8, P = 0.001), emptying of bags (Pre: 60.8 ± 17.5, Post: 84.3 ± 25.3, P = 0.002), and stoma irrigation (Pre: 32.2 ± 20.2, Post: 88.0 ± 30.1, P = 0.001). The research concluded that structured educational programs play a vital role in enhancing patients' knowledge and self-care abilities, thereby supporting improved outcomes in stoma and peristomal skin management

DISCUSSION

This review underscores the role of Continuous Nursing Care (CNC) as an effective strategy for enhancing quality of life, promoting self-care, reducing postoperative complications, and alleviating anxiety and depression among individuals with ostomies. CNC has been shown to support postoperative adjustment through both technology-facilitated education and social or familial support systems. However, its overall impact may vary depending on factors such as patient age, health literacy, and levels of social support (Liu et al., 2021). Therefore, an individualized approach to care is necessary to ensure optimal effectiveness for different groups of patients. Improvements in the well-being of patients living with an ostomy have been documented in multiple studies utilizing instruments such as the SF-36, Stoma-QOL, and WHOQOL-BREF. Research further indicates that individuals with stronger self-care abilities tend to report a better quality of life, highlighting the significance of sustained educational interventions(Hao et al., 2023; Ko et al., 2023). However, the intervention methods used are still diverse. Technology-based education, such as online training and remote monitoring, has been shown to be effective in increasing patient independence (M. Li et al., 2024). In contrast, family and community support is more effective in improving social aspects and psychological well-being, especially in patients with temporary ostomy (Su et al., 2021). This suggests that patients with lower levels of self-care may benefit more from direct social support, while more self-reliant patients may benefit more from technology-based interventions.

In addition to improving quality of life, CNC also facilitates increased self-care, which plays a role in lowering postoperative complications. Studies using the Stoma Self-Care Ability Scale and the Exercise of Self-Care Agency (ESCA) Scale showed that CNC-based interventions

significantly improved patients' self-care skills (Ko et al., 2023). However, the effectiveness of educational methods depends on the characteristics of the patient. Visual-based education is more effective for patients with low literacy, while digital approaches are more optimal for those who have access to technology and adequate social support (Wang et al., 2024). This indicates that the educational methods in CNC need to be adjusted to the level of literacy and patient access to technology so that the results are maximized.

Continuous Nursing Care (CNC) has demonstrated a considerable effect in decreasing the rate of postoperative complications among individuals with an ostomy. Studies using the Colostomy Complication Assessment Table and the Incidence of Stoma-Related Complications Checklist showed that CNC can reduce peristomal infections, stoma stenosis, and bleeding compared to conventional treatments (Huang et al., 2021). However, the effectiveness of CNC in preventing long-term complications still needs to be further studied, especially regarding the type of ostomy (temporary vs permanent), patient adherence to treatment, and access to healthcare services Xia, 2020). Beyond its physical benefits, CNC also contributes positively to emotional health by alleviating anxiety and depression—both of which are key components in maintaining psychological well-being. Evidence indicates that patients who underwent CNC interventions experienced notably greater reductions in anxiety and depressive symptoms than those receiving standard care (Geng et al., 2019). However, the effectiveness of psychosocial support methods still varies. Online education and virtual counseling have been proven to help patients manage stress and improve emotional balance (Huang et al., 2021), while family support is more effective in helping patients cope with ostomy-related anxiety (Xia, 2020). This suggests that a combination of technology-based approaches and social support may be more optimal in helping patients adjust to the psychological changes resulting from ostomy.

Strenght and Limitation

This study shows that Continuous Nursing Care (CNC) has significant benefits in improving quality of life, self-care capabilities, as well as reducing complications, anxiety, and depression in ostomy patients. Various intervention approaches such as multimedia education, telephone counseling, the Orem model, and hospital-family integration have been used involving valid instruments. Some studies also had a fairly long duration of interventions (≥3 to 6 months), providing an idea of the medium-term effectiveness of CNC. The study also has some limitations. The majority of studies originated in China, with relatively small sample sizes and follow-ups that were generally short-term. Variations in intervention methods without direct comparison make it difficult to identify the most effective approach. Therefore, further research is suggested to increase the statistical power and generalization of findings by involving a larger sample count and wider area coverage. This systematic review can also be developed into a meta-analysis to obtain more robust and standardized results. Grouping interventions based on theory, implementation media, or core components is also needed to assess effectiveness more specifically. The lack of theoretical use in the reviewed studies is an opportunity to develop interventions based on nursing theory, such as Orem's Self-Care Model, Health Belief Model, or Social Cognitive Theory, to be more systematic, directed, and applicable in clinical practice.

Relevance For Clinical Practice

The findings of this systematic review provide compelling evidence for the integration of Continuous Nursing Care (CNC) as a validated, evidence-based approach within nursing practice for patients with ostomies. CNC strategies including structured educational programs (Abdelmohsen, 2020; Ko et al., 2023), psychosocial interventions (Taylan & Aksoy, 2021; Zhou et al., 2025), telehealth-based follow-up (Geng et al., 2019; Hao et al., 2023), home

visitations (Wang et al., 2024; Xia, 2020), and the application of theoretical models such as Orem's Self-Care Model (S. Q. Li et al., 2024), have been shown to significantly enhance quality of life, promote self-care capacity, and reduce postoperative complications and psychological distress. These findings underscore the importance of adopting CNC into standardized nursing care as an evidence-based practice. In clinical settings, CNC can be operationalized through community-based discharge planning and structured follow-up care, offering an improvement over conventional approaches that rely solely on one-time discharge education without continuity. CNC interventions embedded in structured discharge planning have demonstrated positive impacts on discharge readiness and long-term adaptation (S. Q. Li et al., 2024), while evidence-based continuing care bundles have enhanced post-discharge outcomes and supported effective transitional care (Su et al., 2021).

CNC has also proven adaptable across diverse platforms, including digital and in-person modalities, making it a viable option in primary, community, and hospital-based nursing services. Accordingly, nurses must be equipped with competencies in delivering CNC interventions, including proficiency in educational tools, telehealth technologies, and strategies for family empowerment as collaborative partners in care. In sum, CNC not only improves clinical outcomes for ostomy patients but also reinforces the role of nurses in delivering sustainable, holistic, and evidence-based care.services.

CONCLUSION

This study shows that Continuous Nursing Care (CNC) is effective in improving quality of life, self-care, and reducing complications and psychological impacts on ostomy patients. Various intervention methods, such as multimedia education, telephone counseling, and Orem's self-care approach, have been shown to improve patient independence, care adherence, and emotional well-being. Nonetheless, the effectiveness of CNC varies depending on the patient's characteristics and access to services. CNC also lowers postoperative complications, but more long-term research is needed to thoroughly evaluate its impact. Key challenges in CNC implementation include lack of training for medical personnel, limited resources, and limited access to digital services. Further research is needed with a larger sample and wider geographic coverage to ensure more generalizable results. To improve the effectiveness of CNC, the role of nurses, family support, and the utilization of technology need to be strengthened in clinical practice. A more structured implementation of CNC can improve patient adherence, accelerate postoperative adaptation, and reduce long-term complications.

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