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Original Research

Application of Roy's Adaptation Model and Swanson's Caring Theory in Nursing Care for Post–Hydatidiform Mole Patients: A Case-Based Study

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ABSTRACT

Background: *Nurses play a key role in improving women's reproductive health through theory-based care. Gestational trophoblastic disease, including hydatidiform mole, is a high-risk condition with potential physical and psychological impacts. This study aimed to describe the application of Roy's Adaptation Model and Swanson's Caring Theory in nursing care for post–hydatidiform mole patients after curettage*

Methods: *A descriptive case-based approach was conducted in a referral hospital. Data were collected through comprehensive nursing assessments covering physiological, self-concept, role function, and interdependence domains, along with focal, contextual, and residual stimuli. Nursing diagnoses, interventions, and evaluations were developed using Roy's Adaptation Model and integrated with Swanson's five caring processes.*

Results: *Theory-guided care improved bleeding and infection risk management, reduced anxiety, and enhanced patient understanding and adherence to follow-up care, including β-hCG monitoring. Adaptive responses were particularly evident in psychological adjustment and coping.*

Conclusion: *The integration of Roy's Adaptation Model and Swanson's Caring Theory enhances adaptive capacity and supports recovery in post–hydatidiform mole patients, highlighting the importance of strengthening nurses' theoretical competencies.*

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INTRODUCTION

Gestational trophoblastic disease (GTD) comprises a spectrum of pregnancy-related disorders arising from abnormal trophoblastic proliferation, with hydatidiform mole being the most common presentation (Joyce et al., 2022; Bruce, 2024). Although advances in early diagnosis and clinical management have substantially reduced mortality, women diagnosed with hydatidiform mole remain at risk of significant physical complications, including excessive uterine bleeding and infection, as well as psychological distress related to uncertainty

about malignancy risk and future fertility (Di Mattei et al., 2016; Di Mattei et al., 2021). Following uterine evacuation, prolonged follow-up involving serial β-human chorionic gonadotropin (β-hCG) monitoring and contraceptive adherence is required, which may further challenge patients' emotional well-being and adaptive capacity during recovery (Ning et al., 2019). In this context, nursing care plays a pivotal role in supporting both physical stabilization and psychosocial adaptation.

Recent literature has continued to emphasize biomedical aspects of GTD management, including diagnostic refinement, surveillance strategies, and oncological outcomes (Joyce et al., 2022; Bruce, 2024). Studies focusing on patient experiences consistently report elevated anxiety, emotional distress, and reproductive concerns during the follow-up period after molar pregnancy (Di Mattei et al., 2016; Di Mattei et al., 2021). Quantitative studies have shown that structured psychosocial support and educational interventions can significantly reduce anxiety levels and improve adherence to follow-up among women with GTD, highlighting the importance of non-pharmacological supportive care alongside medical management (Di Mattei et al., 2017; Assis et al., 2022). However, nursing-specific research in this field remains limited and is often confined to general education or symptom-focused care, with little attention to explicitly theory-guided nursing interventions.

Nursing theories provide a strong conceptual foundation for holistic and systematic care. Roy's Adaptation Model conceptualizes individuals as adaptive systems responding to focal, contextual, and residual stimuli through four adaptive modes—physiological, self-concept, role function, and interdependence—allowing nurses to identify adaptive and maladaptive responses and plan targeted interventions (Roy, 2009; Alligood, 2018). Swanson's Caring Theory complements this framework by emphasizing relational and ethical dimensions of nursing through five caring processes: knowing, being with, doing for, enabling, and maintaining belief, which have been associated with improved emotional support and patient-centered outcomes in maternal and reproductive health settings (Swanson, 1991; Afiyanti & Milanti, 2013). Evidence from quantitative nursing studies in reproductive and maternal health contexts suggests that theory-based interventions can improve coping, psychological adjustment, and patient engagement in care (Wang et al., 2021).

This study addresses the gap in the literature by describing the integrated application of Roy's Adaptation Model and Swanson's Caring Theory in nursing care for post–hydatidiform mole patients, offering a theory-guided approach that extends beyond biomedical management to support adaptive responses, emotional well-being, and continuity of reproductive health care following curettage.

MATERIALS AND METHOD

This study employed a descriptive case-based approach involving multiple clinical cases to document the application of theory-guided nursing care using Roy's Adaptation Model and Swanson's Caring Theory in post–hydatidiform mole patients following curettage. A case-based descriptive design was selected to capture clinical complexity and contextualized nursing practice in real-world settings, particularly when the application of nursing theory is the primary focus (Yin, 2018). The study was conducted in the gynecology ward of a tertiary referral hospital in Bogor Regency, Indonesia. Five post–hydatidiform mole patients who had undergone uterine curettage and were receiving inpatient nursing care were included based on clinical relevance and availability during the study period, rather than statistical sampling, consistent with descriptive case-based nursing research (Polit & Beck, 2021).

Data were collected through systematic nursing assessments guided by Roy's Adaptation Model across four adaptive modes—physiological, self-concept, role function, and interdependence—and integrated with Swanson's caring processes during routine nursing care

(Roy, 2009; Swanson, 1991). Each case was observed and documented at least twice during hospitalization to capture within-case changes and allow cross-case descriptive analysis. Data analysis was conducted descriptively, with nursing assessment findings, diagnoses, interventions, and evaluation outcomes organized according to the theoretical frameworks, enabling systematic interpretation of adaptive responses (Alligood, 2018). Ethical approval was obtained from the institutional ethics committee, and written informed consent was secured from all participants prior to data collection

RESULTS

The characteristics and clinical conditions of post–hydatidiform mole patients are summarized in **Table 1.** *All five patients* presented with vaginal bleeding and varying degrees of physiological compromise, including anemia and hemodynamic instability, and had undergone curettage prior to nursing care. Nursing assessment findings and observed adaptive responses following theory-guided nursing care are presented in **Table 2.** Dominant nursing problems were identified across physiological, self-concept, role function, and interdependence modes. *Following the implementation of theory-guided nursing care, observable improvements were noted* in physical and psychological adaptation, coping behaviors, and understanding of follow-up care.

Table 1. Characteristics and Clinical Conditions of Post–Hydatidiform Mole Patients

Domain	Description
Age range	25–47 years
Educational level	Primary to secondary education
Occupation	Housewives
Obstetric status	G1–G4
History of molar pregnancy	Present in several patients
Admission diagnosis	Hydatidiform mole / suspected GTD
Main clinical presentation	Vaginal bleeding
Hemodynamic condition	Hypotension and tachycardia in some patients
Hemoglobin level	Reduced in most patients
β-hCG level	Elevated, ranging from moderate to very high
Post-curettage status	First-time and recurrent curettage

Table 2. Nursing Assessment and Observed Outcomes Based on Theory-Guided Care

Domain	Key Findings
Physiological mode	Bleeding risk, anemia, fatigue
Self-concept mode	Anxiety, fear of disease progression and mortality
Role function mode	Concerns regarding childcare and family roles
Interdependence mode	Need for emotional and family support
Physical adaptation outcome	Improved stability and symptom control
Psychological adaptation outcome	Reduced anxiety and emotional distress
Coping strategies	Improved acceptance and adaptive coping
Follow-up adherence	Better understanding of β-hCG monitoring and care plan

DISCUSSION

This study demonstrates that the integration of Roy's Adaptation Model and Swanson's Caring Theory provides a coherent and clinically meaningful framework for nursing care in post–hydatidiform mole patients. *By synthesizing findings across cases, the findings are situated within contemporary theoretical and empirical literature.* Physiological problems such as vaginal bleeding, anemia, and post-procedural recovery needs were consistently identified in the nursing assessments. These findings correspond with current evidence indicating that hemorrhage and anemia remain common complications following molar pregnancy and curettage, often leading to repeated hospitalization and prolonged recovery

(Joyce et al., 2022; Bruce, 2024). Within Roy's Adaptation Model, these conditions function as focal stimuli that disrupt physiological adaptation. *The observed improvement in physical stability during the course of nursing care suggests that structured assessment and intervention based on adaptive modes may support physiological recovery* in high-risk reproductive conditions, as also reported in recent nursing intervention studies (Wang et al., 2021).

Beyond physical instability, psychological distress emerged as a prominent finding in this study. Anxiety, fear of disease progression, concerns about mortality, and uncertainty regarding future fertility were commonly identified during nursing assessment. Similar emotional responses have been widely documented among women with gestational trophoblastic disease, particularly during the prolonged period of β-hCG surveillance (Di Mattei et al., 2021; Braga et al., 2023). In this study, the reduction in anxiety and improved coping observed after nursing care indicate that addressing psychological adaptation is an essential component of post–hydatidiform mole management.

Importantly, limited patient understanding of follow-up care, particularly regarding the importance of regular β-hCG monitoring, emerged as a clinically significant issue in this study. This finding is critical, as inadequate post-evacuation surveillance has been identified as a key factor contributing to delayed detection of malignant transformation, including gestational trophoblastic neoplasia (Joyce et al., 2022; Bruce, 2024). Previous studies have emphasized that poor adherence to β-hCG follow-up protocols remains a persistent challenge, especially when patient education and supportive communication are insufficient (Braga et al., 2023). From a nursing perspective, this finding underscores the central role of enabling and maintaining belief, as described in Swanson's Caring Theory, in supporting patient understanding, adherence, and long-term safety.

The complementary use of Roy's Adaptation Model and Swanson's Caring Theory strengthens nursing practice by integrating systematic assessment with relational care. Roy's model facilitates the identification of maladaptive responses across physiological, self-concept, role function, and interdependence modes, while Swanson's theory emphasizes the ethical and interpersonal dimensions of caring that are particularly relevant in emotionally complex conditions. Recent nursing literature supports the continued relevance of theory-based interventions in maternal and reproductive health, demonstrating their effectiveness in improving psychological adjustment, patient engagement, and adherence to care plans (Alligood, 2018; Fawcett & DeSanto-Madeya, 2021; Karimi et al., 2022). The improved coping strategies and follow-up understanding observed in this study are consistent with these reports. From a theoretical standpoint, this study reinforces the applicability of nursing theories in contemporary clinical practice, showing that theoretical frameworks can be operationalized beyond educational settings. From an implementation perspective, the findings suggest that theory-guided nursing care is feasible within routine hospital environments and may enhance the quality and continuity of care for post–hydatidiform mole patients, particularly by addressing psychosocial needs that are often underemphasized in predominantly biomedical management approaches (Joyce et al., 2022; Braga et al., 2023).

Several limitations should be acknowledged. The descriptive case-based design and small number of cases limit generalizability and do not allow causal inference. In addition, outcomes were evaluated qualitatively through nursing observations rather than standardized uantitative instruments. Future studies are encouraged to involve larger samples, apply validated psychological measures, and employ longitudinal or comparative designs to further evaluate the effectiveness of theory-guided nursing interventions in patients with gestational trophoblastic disease.

Despite these limitations, the findings provide valuable insight into the role of nursing theories in supporting adaptive responses among post–hydatidiform mole patients. This study contributes to the growing body of evidence advocating for theory-informed nursing practice

and highlights the importance of integrating physical stabilization, psychosocial support, and patient education to improve reproductive health outcomes.

CONCLUSION

This study demonstrates that the application of Roy's Adaptation Model integrated with Swanson's Caring Theory *can serve as a coherent framework to guide* nursing care for post–hydatidiform mole patients in addressing both physical and psychosocial needs. Through a case-based synthesis, theory-guided nursing care *was associated with* physiological stabilization, reduced psychological distress, enhanced adaptive coping, and improved patient understanding of follow-up care, including β-hCG monitoring. These findings indicate that nursing theories can be operationalized meaningfully in clinical practice and contribute to holistic, patient-centered care in reproductive health settings.

SUGGESTION:

Future studies are recommended to involve larger samples and employ standardized quantitative instruments to further evaluate the effectiveness of theory-guided nursing interventions and strengthen evidence-based nursing practice for patients with gestational trophoblastic disease.

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