



Anxiety among colorectal cancer patient: A concept analysis

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ABSTRACT

Background: Despite the prevalence of anxiety among individuals with colorectal cancer, there is a lack of clarity regarding the definition of anxiety in this population. Moreover, research on the impact of care interventions on anxiety in colorectal cancer patients is limited. **Objective:** This concept analysis aimed to clarify the concept of anxiety among colorectal cancer patients. **Methods:** The concept analysis was conducted following the Walker and Avant methodology. The utilization of the concept was investigated across three databases (PubMed, Scopus, and Google Scholar), resulting in the identification of 12 relevant studies for in-depth analysis. **Results:** The identified attributes of anxiety in colorectal cancer include distress related to body image changes, uncertainty during social role reintegration, and fear of disease recurrence or mortality. Genetic factors, psychological elements, and stressful life events were recognized as antecedents of this anxiety. Additionally, the consequences of anxiety exhibited both positive and negative impacts on colorectal cancer patients. **Conclusion:** The findings of this concept analysis enhance the understanding of the concept of anxiety among colorectal cancer patients. This has the potential to improve the quality of care for colorectal cancer patients.

Keywords: Anxiety, colorectal cancer, concept analysis

INTRODUCTION

Colorectal cancer is a prevalent global cancer, accounting for around 10% of cancer cases worldwide¹ and ranking as the second leading cause of cancer-related deaths, with around 881,000 cases in 2018². In Vietnam, it stands as the fifth most common cancer, with a notable incidence of new cases³, and projections indicate a rise in cases over time⁴.

Anxiety is a common concern among colorectal cancer patients, with prevalence rates ranging from 25 to 54%⁵. Surgical

treatment for colorectal cancer often leads to anxiety, even months post-surgery⁶. Patients with colorectal cancer tend to experience higher levels of anxiety due to various factors such as fear of death, disease progression, and physical discomfort⁷. Stoma-forming surgery can exacerbate anxiety due to misconceptions and body image issues, impacting self-esteem and self-worth^{8,9}.

While anxiety is prevalent among colorectal cancer patients, there is a lack of clarity regarding the definition of anxiety in

this population. In addition, research on the impact of care interventions, particularly postoperative care, remains limited. Detecting mood disorders like anxiety in patients is challenging, highlighting the importance of ongoing care. Acknowledging the necessity for mental health support across disease stages, interventions to alleviate anxiety rates are crucial.

According to Walker and Avant ¹⁰, a structured approach to concept analysis that involves several steps: (1) Select the concept: Choose a concept of interest that requires clarification or further exploration, (2) Determine the aims of the analysis: Define the objectives and goals of the concept analysis to guide the process, (3) Identify all possible definitions of the concept: Gather various definitions and understandings of the concept from literature and other sources, (4) Identify the defining attributes: Determine the key characteristics or attributes that are essential to the concept, (5) Construct a model case: Develop a hypothetical scenario or case that exemplifies all the defining attributes of the concept. (6) Construct borderline, related, contrary, and invented cases: Create additional scenarios that help further clarify the boundaries and variations of the concept, (7) Identify antecedents and consequences: Explore factors that precede or result from the concept to understand its context and impact, (8) Define empirical referents: Identify measurable indicators or criteria that can be used to observe or measure the concept in practice, (9) Write the concept analysis: Synthesize all the information gathered through the steps above to provide a comprehensive understanding of the concept.

By following these steps in the Walker and Avant method, this study aims to define concept of anxiety among colorectal

cancer patients to provide a comprehensive understanding for clinical and research purposes. The study extracted defining attributes of anxiety from existing literature, presented a model case and additional cases, explored antecedents and consequences, and identified empirical referents.

CONCEPT ANALYSIS OF ANXIETY

A review of literature was conducted by searching three databases: PubMed, Scopus, and Google Scholar. The search strategy was tailored to identify recent publications within the past ten years that discussed anxiety in colorectal cancer patients. The search terms used were “anxiety”, “definition”, “colorectal cancer”, “colon cancer”, and “rectal cancer”. The selected articles had to meet specific inclusion and exclusion criteria. The inclusion criteria comprised articles written in English, mentioning “anxiety” in titles and abstracts, providing a definition of “anxiety”, and focusing on individuals with cancer. Exclusion criteria involved non-research articles, such as editorials and commentaries. In total, 12 articles were reviewed.

Anxiety in the literature: The concept of anxiety in colorectal cancer patient is not typically found in dictionaries but has been defined in various ways in scholarly literature. Lazarus ¹¹ characterizes anxiety as a perceived threat or danger, often related to potential loss or uncertainty, leading to feelings of powerlessness. Cambridge English Dictionary defines anxiety as an uncomfortable feeling of nervousness or worry about present or future events ¹². Bouras and Holt ¹³ suggest that anxiety arises when individuals anticipate potential dangers, causing discomfort and worry. It is marked by inner turmoil and nervous behaviors like pacing, complaining, and ruminating on fears or anticipated events

¹⁴. Anxiety involves consciously perceived feelings of fear and tension, along with autonomic nervous system activation. Notably, anxiety is a common issue among surgical patients ¹⁵.

The American Psychological Association defines anxiety as an emotion marked by tension, worried thoughts, and physical changes ¹⁶. Yuan ¹⁷ describes anxiety as an uneasy feeling that triggers maladaptive physical and mental responses when individuals have intrusive thoughts about an uncertain future.

Defining attributes: Analyzing the concept of anxiety among colorectal cancer (CRC) patients involves identifying critical attributes that define this phenomenon. Attributes are features consistently associated with the central concept, providing a comprehensive understanding from various perspectives ¹⁰.

The attributes of anxiety in CRC patients include an uneasy personal feeling, intrusive thoughts about an uncertain future, and non-adaptive physical and mental reactions ¹⁷. Horikawa and Yagi ¹⁸ distinguish between state anxiety, a temporary emotional state characterized by tension, apprehension, and heightened autonomic activity, and trait anxiety, a stable tendency to respond anxiously to perceived threats.

Generalized anxiety disorder symptoms, as outlined by the National Institute of Mental Health ¹⁹, encompass restlessness, fatigue, difficulty concentrating, irritability, muscle tension, sleep disturbances, and uncontrollable worry. Post stoma-forming surgery, patients experience anxiety due to body image alterations, leading to concerns about social reintegration and fear of recurrence or death ^{20, 21, 22, 23}.

A study was conducted to explore the experiences of colorectal cancer in post-

operative. After surgery, some individuals expressed concerns about the biopsy results and fears of losing their normal bodily functions. The presence of a stoma often led to feelings of insecurity and shyness. Patients with an artificial anus commonly faced challenges such as uncontrollable defecation, particularly feeling embarrassed when sharing a bedroom with the partner ²⁴. Similarly, Ayaz-Alkaya showed that colorectal cancer patients believed that their attractiveness had decreased since surgery and expressed anxiety when recalling personal feelings around their altered body appearance. They expressed fear that their spouses would be disturbed by the physical changes in their body ²¹. In a descriptive phenomenology study, Fahrizal et al. investigated how anxiety among colorectal cancer patients stemmed from negative feelings about ways of living their lives, including financial difficulties and adjusting to new ways of living ²⁵.

Synthesizing information from relevant literature, the defining attributes of anxiety in colorectal cancer patients include distress related to body image changes, uncertainty during social role reintegration, and fear of disease recurrence or mortality.

Operational definition: The operational definition of Anxiety in colorectal cancer patients is defined as the emotional distress of colorectal cancer resulting from changes in body image, social role concerns, and fear of disease recurrence or mortality.

Model case: “A model case exemplifies the application of the concept by illustrating all its defining attributes” ¹⁰. Mr.P, a 50-year-old successful businessman in his own company, lives with his beautiful young wife and two lovely children. He occasionally plays sports and maintains good communication with friends and colleagues, who admire and like him.

However, during a physical examination this year, he received a diagnosis of colorectal cancer and underwent stoma-forming surgery. Following the successful surgery, he acquired a new stoma formation.

Subsequently, he began experiencing emotional distress due to discomfort with his change. This emotional distress included:

Feeling uncomfortable with his stoma, leading to a lack of confidence in his interactions with others, particularly related to concerns about odor. He felt upset about his body image and avoided meeting people due to these feelings. Mr. P, suffered from headaches, loss of appetite, and insomnia. He often found himself unreasonably irritable towards his family. He felt sadness, nervousness, and a deep fear of death and cancer recurrence.

Engaging in activities such as dressing, sports, daily routines, and even his sexual life became challenging due to his insecurities about reintegrating into his previous social roles and functions. Mr. P found himself in a state of psychological avoidance, unable to live a normal life as before.”

Using this model case, Mr. P exhibited anxiety, experiencing emotional distress characterized by fear of recurrence or death, upset about changes in body image and insecurities about reintegrating into his previous social roles and functions. This case illustrates all attributes of anxiety.

Additional cases

Borderline case: “A borderline case is an example that exhibits some, but not all, of the defining attributes of a concept”¹⁰. Mr. D is a 51-year-old businessman who runs his own company. He lives with his young wife and two children, enjoys playing sports, and has good relationships with friends and coworkers. However, during a routine

check-up, he discovered he had colorectal cancer and needed surgery to create a stoma. After surgery, he felt sad, worried, and scared of the cancer returning. Despite these challenges, the nurses and his family took care of him and provided information about his illness. This support made him feel more confident, enabling him to communicate with his friends and others more effectively. He began to adapt to the changes in his body and learned how to manage his stoma. Over time, Mr. D became more hopeful, and his health gradually improved”.

In this case, Mr. D experienced feelings of sadness and fear of cancer recurrence, but these alone may not be sufficient to categorize his condition as anxiety. Furthermore, he successfully adjusted to his situation and became more optimistic. This borderline case only demonstrates one attributes of anxiety, specifically the fear of cancer recurrence.

Related case: A related case refers to a situation, or example that is similar or relevant to attributes of a concept¹⁰

“Mr. T, a 49-year-old accountant who enjoys gardening, was diagnosed with colorectal cancer after experiencing persistent abdominal pain. The news of his diagnosis left him feeling worry and overwhelmed. With the help of therapy, support groups, and his loved ones, he gradually learned to cope with his worry and focus on his recovery journey. Over time, Mr. T found solace in his gardening hobby, which provided him with a sense of peace and distraction from his worries.”

This related case illustrates the presence of worry, a common emotion that shares similarities with anxiety. It is important to note that not all individuals diagnosed with colorectal cancer experience anxiety.

Contrary case: A contrary case is an example that contradicts the defining attributes of a concept ¹⁰.

“Mr. G, a 52-year-old entrepreneur who manages his own business, resides with his youthful spouse and two kids. He takes pleasure in engaging in sports activities and maintains positive connections with friends and colleagues. Despite being diagnosed with colorectal cancer during a recent check-up, Mr. G had successful stoma surgery. He was thankful for the early detection of his illness and the successful operation. Mr. G managed to adjust to the changes in his body and new bodily functions, making it easier for him to return to his normal routine. He continued to work closely with nurses, friends, family, and colleagues during his recovery. His positive attitude and ability to adapt helped him face the challenges of his diagnosis and treatment with strength and support from his loved ones.

This case demonstrates that Mr. G does not show any signs of anxiety related to his illness. His optimistic outlook and capacity to adjust enabled him to face the challenges of his diagnosis and treatment. This contrary case showcases emotional characteristics that are entirely distinct from anxiety, as none of the attributes of anxiety are present.

Antecedents: Antecedents of anxiety are the events or incidents that must be present before the concept of anxiety occurs ¹⁰. There are several antecedents to anxiety. Firstly, genetic factors play a significant role. Secondly, psychological factors, including personality traits and cognitive distortions, can contribute to the development of anxiety. Lastly, stressful life events such as work-related stress, academic pressure, abuse, poverty, illness, pregnancy, and the death or loss of a loved one can trigger or exacerbate anxiety ¹⁷.

Research has shown that childhood anxiety, behavioral inhibition, anxiety sensitivity, and negative affectivity are antecedents to anxiety disorders. Offspring of parents with anxiety disorders are at a higher risk of developing various forms of anxiety disorders ²⁶. Additionally, Christine and Murray have argued that factors such as parental influence, childhood experiences, and emotional distress can also serve as antecedents to anxiety ²⁷.

Consequences: Consequences refer to the events or incidents that may arise as a result of a concept ¹⁰. The way individuals respond to anxiety can be categorized as either positive or negative. Positive adaptations to anxiety, such as early detection and effective coping strategies, can promote personal growth and enhance both physical and mental well-being. On the other hand, negative behaviors, allowing anxiety to escalate unchecked and losing control over it, can have detrimental effects on physical and psychological health, potentially leading to dysfunction in both body and mind ¹⁷. Authors have outlined that symptoms of anxiety often manifest in issues like weight loss, fatigue, and motor difficulties, which can be mistaken for symptoms of other illnesses ⁶.

Empirical references: Empirical evidence plays a crucial role in quantifying and identifying a clinically significant phenomenon in both research and practical settings ²⁸. Anxiety, being an emotion that eludes direct measurement, is often assessed using various tools.

Commonly used tools include the Hospital Anxiety and Depression Scale (HADS) ²⁹, the State-Trait Anxiety Inventory (STAI) ³⁰, Beck Anxiety Inventory (BAI) ³¹, Hamilton Anxiety Rating Scale (HAM-A) ³², Anxiety Sensitivity Index (ASI) ³³ and

the Generalized Anxiety Disorder 7-item (GAD-7) scale³⁴. These instruments provide standardized measures of anxiety symptoms, allowing for quantitative assessment and comparison across studies.

The HADS is a widely used self-report questionnaire that assesses anxiety and depression symptoms separately, providing a comprehensive evaluation of psychological distress in cancer patients. The STAI measures both trait anxiety, reflecting a person's dispositional anxiety over time and situations, and state anxiety, capturing their current anxious feelings. The BAI measurement is a self-report inventory assesses the severity of anxiety symptoms and is widely used in both clinical and research settings. The HAM-A is clinician-administered scale is often used to assess the severity of anxiety symptoms in clinical trials and research studies. The ASI is a self-report questionnaire assesses the fear of anxiety-related symptoms and is often used to measure anxiety sensitivity, particularly in the context of anxiety disorders. In addition, the GAD-7 is a brief screening tool specifically designed to assess generalized anxiety disorder symptoms, offering a quick and efficient way to identify anxiety in clinical settings^{14, 35, 36}. While these measurement tools offer valuable insights into anxiety levels among colorectal cancer patients, it is essential to consider the context and individual differences that may influence symptom expression. Factors such as disease stage, treatment modality, and coping strategies can impact anxiety levels and should be taken into account when interpreting assessment results.

CONCLUSION

This article outlines anxiety in colorectal cancer patients as emotional distress arising from changes in body image, concerns about social roles, and fears of disease recurrence

or mortality. Anxiety is impacted by multiple factors and results in various outcomes. Various assessment tools exist to measure anxiety levels. This conceptual analysis provides a comprehensive understanding of anxiety, benefiting nurses in conducting further research to assess and manage anxiety in this group effectively. This, in turn, enhances the overall well-being and quality of care for colorectal cancer patients.

Ethical approval: Ethical issues are not involved in this article.

Conflicts of interest: There are no conflicts of interest.

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