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Fear of Food in Gastrointestinal Disease: A Framework Based on the Interpreted Experiences of Adults with Diverticular Disease

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Abstract: The patient voice is missing from the evidence regarding the dietary management of diverticular disease. This study aimed to determine the patient experiences of imposed dietary restrictions during the medical treatment of acute, uncomplicated diverticulitis. An Interpretive Phenomenological Analysis methodology guided participant selection, data collection, and the data analysis of a qualitative interview study. Four interviews were conducted with adults admitted to hospital with acute, uncomplicated diverticulitis. Six themes were interpreted. Five themes were found to inter-relate as a cycle, which was embedded within a driving theme of ‘corrupted diet-disease knowledge of patients, family, and healthcare providers’. The cycle commenced with a theme of ‘fear of food’, which was followed by the theme of an ‘internal locus of control with rigid constraint’. ‘Loss of culture and social stigma’ ensued, which led to ‘vulnerability amid self-perceived failure’, and finally ‘overshadowed psychological pain’. The cycle recommenced with a renewed fear of food. The thematic phenomenon of the ‘Fear of Food in Gastrointestinal Disease Framework’ was developed. Adults with diverticular disease and at least one hospitalisation for acute, uncomplicated diverticulitis were interpreted to experience a cyclical thematic phenomenon represented by the ‘Fear of Food in Gastrointestinal Disease Framework’. Further qualitative research is required to evaluate the transferability of the framework to other conditions.

Keywords: diverticulitis; dietary restrictions; liberalised diet; qualitative research; liquid diet; bowel rest



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1. Introduction

Acute diverticulitis has been witnessed as the third most common inpatient gastrointestinal disease in the United States, contributing to an increased burden on both patients and health services [1]. Diverticulitis is a complication of diverticular disease that occurs with the inflammation of diverticula in the colon and may have acute and/or chronic symptoms. Acute, uncomplicated diverticulitis refers to acute inflammation with or without a small (<5 cm) abscess and is without complications beyond pain; whereas acute, complicated diverticulitis involves a large (>5 cm) abscess, intestinal fistula, perforation, obstruction, generalized peritonitis, sepsis, and/or stricture disease [2].

The existing treatment for acute, uncomplicated diverticulitis focuses on reducing inflammation, small abscesses, and the severe pain during the acute episode, where post-acute management aims to prevent recurrence, reduce gastrointestinal symptoms, and improve quality of life [2,3]. Although the treatment approach varies, patients may be hospitalised for acute, uncomplicated diverticulitis to be managed medically with antibiotics, analgesia, and dietary restriction [2]. Inpatient dietary restrictions may include nil by mouth (with intravenous fluid), fluid only (clear or full fluids), or low dietary fibre [4], usually implemented as a progression from more severe restrictions through to having low dietary fibre at discharge [5]. Discharge recommendations often involve advice to continue a short-term low dietary fibre diet then progress to high dietary fibre (i.e., an unrestricted fully liberalised diet), though the implementation of dietary education and post-discharge dietary support is inconsistent [5].

However, despite being routine in some health services, dietary restrictions during and after the hospitalisation of patients with acute, uncomplicated diverticulitis lack evidence. A restricted diet for inpatient treatment is primarily based upon expert opinion [6–8] reflecting the theory that eliminating or restricting the consumption of dietary fibre reduces the digestive load, thereby increasing the recovery of the intestinal lumen [9]. However, recent evidence-based GRADE clinical recommendations indicate adults with acute, uncomplicated diverticulitis should be placed on a liberalised diet (i.e., with no dietary restrictions) as emerging evidence suggests it is associated with a decreased length of stay, a low risk of harm, and avoids the restriction of essential nutrients (dietary fibre, vitamins, minerals, energy, protein) [5]. What is missing from the evidence regarding the dietary management of acute, uncomplicated diverticulitis is the patient voice.

In the general hospitalised population, dietary restrictions have been shown to negatively impact the patient emotionally and physically, causing distress, discomfort, and worsened appetite [10]. Both the dietary restriction itself as well as the insufficient explanation of the restriction to the patient has been shown to cause a fear of re-introducing foods and continued unnecessary dietary restrictions [10]. Understanding the patient's experience can add context to the empirical evidence and promote value-based care [11].

Research Aim

This study aimed to determine the patient experiences of imposed dietary restrictions during the medical treatment of acute, uncomplicated diverticulitis.

2. Materials and Methods

A qualitative study was performed as a sub-study of a larger prospective observational study [5] and was approved by the Gold Coast Hospital and Health Service Human Research Ethics Committee (HREC/16/QGC/282). The study was prospectively registered with the Australian New Zealand Clinical Trial Registry (ACTRN12616001378415). Participation was via written informed consent followed by verbal consent during the interview; and no incentive was offered for participation. This study was reported according to the Consolidated criteria for Reporting Qualitative research (COREQ) checklist [12].

2.1. Methodological Approach

Interpretive Phenomenological Analysis (IPA) guided the study design and the interpretation of data, using an inductive approach [13,14]. This methodology was selected due to the novelty of the research and the aim to investigate how hospital-imposed dietary restrictions affect the cognition, and therefore the life, of the patient. IPA has also been recognised to be highly relevant to the investigation of pain, which is the primary symptom leading to hospital presentation in those with acute diverticulitis [13]. We acknowledged the methodological variations due to the evolution of IPA methods and addressed this via a transparent step-based method that was followed chronologically.

2.2. Study Sample

The target sample size was three to four participants as per an IPA methodology which focuses on a small defined population to enable personal experiences to be ideographically explored in rich detail [14]. Participants were recruited from a 56-bed acute surgical ward at a government-funded tertiary hospital in Southeast Queensland, Australia. Participant eligibility criteria were based on the larger cohort study: (1) inpatients ≥ 18 years old, (2) diagnosed with acute, uncomplicated diverticulitis via a computed tomography (CT) scan, and (3) inpatient treatment was conservative (i.e., non-surgical). Different to the observational study, this qualitative study only recruited participants who were placed on a restricted diet (nil by mouth, clear fluids, free fluids for ≥ 15 h) within 48 h of admission and were recruited in the final two months of the cohort study's recruitment timeframe. The final two months were selected due to researcher availability to conduct interviews. Patients were excluded if they were pregnant, unable to give informed consent, were discharged in <48 h, or had received discharge dietary education. In addition, participants who subjectively seemed unwilling to engage in conversation were excluded. Participants were assigned pseudonyms via an Australian name generator coded for their age and sex to maintain confidentiality.

2.3. Data Collection

Demographic data were collected via an interview and electronic medical records to describe participants. Individual semi-structured face-to-face interviews were undertaken with the participants by the second author (FE) at bedside. The first interview was observed by a stakeholder for feedback to improve the quality of subsequent interviews. Questions were open-ended with prompting to extract experiences and gain deeper details. Interviews aimed to proceed for at least 30 min as the ideal time of at least 60 min was anticipated to be difficult to achieve in the acute setting. Interviews were audio-recorded and supplemented by field notes that documented interviewer thoughts and observations of non-verbal cues. Interviews were transcribed verbatim, checked for accuracy by a second researcher within 2 weeks of their recording, then uploaded to the qualitative analysis software NVIVO (version 12.0 QSR International Pty Ltd., Doncaster, VIC, Australia), which was used for data management.

2.4. Research Team and Reflexivity

The interviewer (FE, second author) and both interview coders (FE and the third author, PD) were Master of Nutrition and Dietetic Practice students completing their research internships. The primary researcher, SM, was a senior PhD-qualified dietitian with experience in both digestive health and qualitative research. All researchers and stakeholders involved in the analysis were female with English as their native language. The interviewer had previously met all patients on one or two occasions during the participants' involvement in the larger observational cohort study. Participants understood the purpose of the research and that the interviewer was pursuing the research as part of their tertiary qualification. The interviewer came into the study with no known preconceived ideas, due to their novice status in a clinical and research practice setting.

2.5. Data Analysis

Data analysis was guided by the steps of the IPA methodological framework [15], and thematic analysis was performed to interpret the data. The steps undertaken to analyse the data included:

1. Data familiarisation via audio transcription followed by repeatedly reading and listening to each interview. Notes were made reflecting what the researcher found interesting or poignant.
2. Line-by-line semantic coding in NVivo [QSR International LLC, Burlington, MA, USA] was used in an inductive manner for the first three interview transcripts. Codes

- were reviewed by a second researcher who also added or expanded upon codes after discussion between the two researchers.
3. Potential themes for each interview were identified and discussed in a group meeting among three researchers until a consensus was reached.
 4. For each interview, potential themes that showed commonality were grouped by the three researchers; with a hierarchical structure given to the grouped potential themes based upon their relevance and suitability to address the research aim.
 5. Grouped potential themes more relevant to the research aim were explored across the first three interviews, creating a list of 'shared themes' by the three researchers.
 6. From the shared themes, commonalities were identified and discussed to produce the final themes. The researchers and an expert stakeholder (a clinical dietitian specialising in diverticulitis) held a group meeting to discuss, confirm, and interpret the final themes. Iterative rounds of review and revision were held to interpret the themes and their representation.
 7. The first three interviews were reviewed by the first (senior) researcher to ensure that the themes worked with the original source material and the broader meaning of what participants were expressing.
 8. The fourth and final interview was conducted after step 6 to confirm the interpreted themes. It went through the process of familiarisation, then was examined for how it aligned or deviated from the existing interpreted themes. Themes were adjusted to incorporate the influence of the final interview.

Themes were examined for how they interrelated, and a framework was created to represent the interpreted phenomenon. Exemplar quotes were selected by the research team through discussion to illustrate the developed themes and describe each of the individual cases in detail.

3. Results

Four participants were interviewed between February and March 2019 (Table 1); no invited participants declined. Each interview was conducted in the patient's hospital room prior to being discharged (i.e., towards the end of their hospital stay). The interview duration ranged from 33 to 78 min; however, three of the four interviews were ended earlier than the natural conclusion of the conversation due to diverticulitis-related pain experienced by the patient (Donna and Keith) or being interrupted by a medical consultation (Brendan). All participants had known of their diverticular disease prior to admission; but the current admission was Phyllis' first acute episode, and it was Brendan's first episode requiring hospitalisation.

From the IPA-guided analysis, we interpreted that the experiences of patients followed a cyclical thematic phenomenon in which the theme of 'fear of food' acted as a cycle trigger, after which patients had a downward spiral of experiences towards the theme 'overshadowed psychological pain', which was the cycle outcome. Overshadowed psychological pain then led to a reaffirmed fear of food, starting the cycle again. The cyclical thematic phenomenon sat within a theme of 'corrupted diet-disease knowledge of patients, family, and healthcare professionals', considered to be a 'driver' because the theme underpinned the experiences in all other themes. The interaction between the interpreted cyclical thematic phenomena was represented in our development of a theoretical model 'Fear of Food in Gastrointestinal Disease Framework' (Figure 1). The cycle was represented as a downward spiral that repeated itself rather than a simple circular process as the themes were interpreted to represent a 'downward' spiral towards being in psychological pain rather than being equal steps in a process. Although the spiral-like cycle has a dominant process (solid arrows), there were deviations and complex interactions between multiple themes (dashed arrows or lines) (Figure 1). Further, we interpreted that some patients may experience cognitive recovery (dashed arrows leaving the figure) whereas others may continue to experience the process long-term.

Table 1. Characteristics of the participants with diverticulitis placed on restrictive diets.

Demographic	Donna	Keith	Phyllis	Brendan
Age	71	52	87	39
Gender	Female	Male	Female	Male
Interview duration (minutes)	45	42	78	33
BMI (kg/m ²)	30.4	26.4	31.0	26.3
Ethnic origin	Caucasian (Australia)	Caucasian (New Zealand)	Caucasian	Caucasian (Australia)
Occupation	Retired	Excavator operator	Retired	Stone mason
Marital status	Married	Married	Widowed	Married
Time since diverticular disease diagnosis	30 years	6 months	Unspecified ^a	1.5 months ago
Previous hospital admissions related to diverticular disease:				
- Number of admissions	0	1	0	0
- Last admission	N/A	6 months ago	N/A	N/A
Current admission: Length of stay	5 days	4 days	4 days	1 day
Number of diet codes prescribed during admission	2	3	NR	1
Solid food within first 48 h of admission	Yes	No	NR	Yes
Smoking status	Never	Quit 6 years ago	NR	Yes, average two cigarettes per day
Alcohol intake	None	2 std. drinks/day	NR	4 std. drinks/day
Comorbidities	None	None reported	NR	None
Admission biochemistry				
- CRP (mg/L)	6.3	<2.0	NR	44
- WCC	6.7	14.6	NR	13.3
Gastrointestinal symptom rating scale ^b	32	47	NR	30

NR, not reported. Participant names are pseudonyms. ^a Patient could not recall the year of diverticular disease diagnosis, but was vaguely described as “a number of years ago”. ^b The gastrointestinal symptom rating scale (GSRs) is scored from 7 to 98, with higher scores indicating worse symptoms.

3.1. Theme 1: Corrupted Diet–Disease Knowledge of Patients, Family, and Healthcare Professionals (Driver)

Participants largely reported incorrect or insufficient knowledge of the diverticulitis diet–disease relationship on behalf of themselves, their family, and their healthcare providers. They reported being actively or passively denied knowledge during their inpatient care for acute diverticulitis aetiology, risk factors, dietary management, and dietary strategy for reoccurrence prevention:

“No, they haven’t really discussed it with me at all in that way, with the diet”. (Donna)

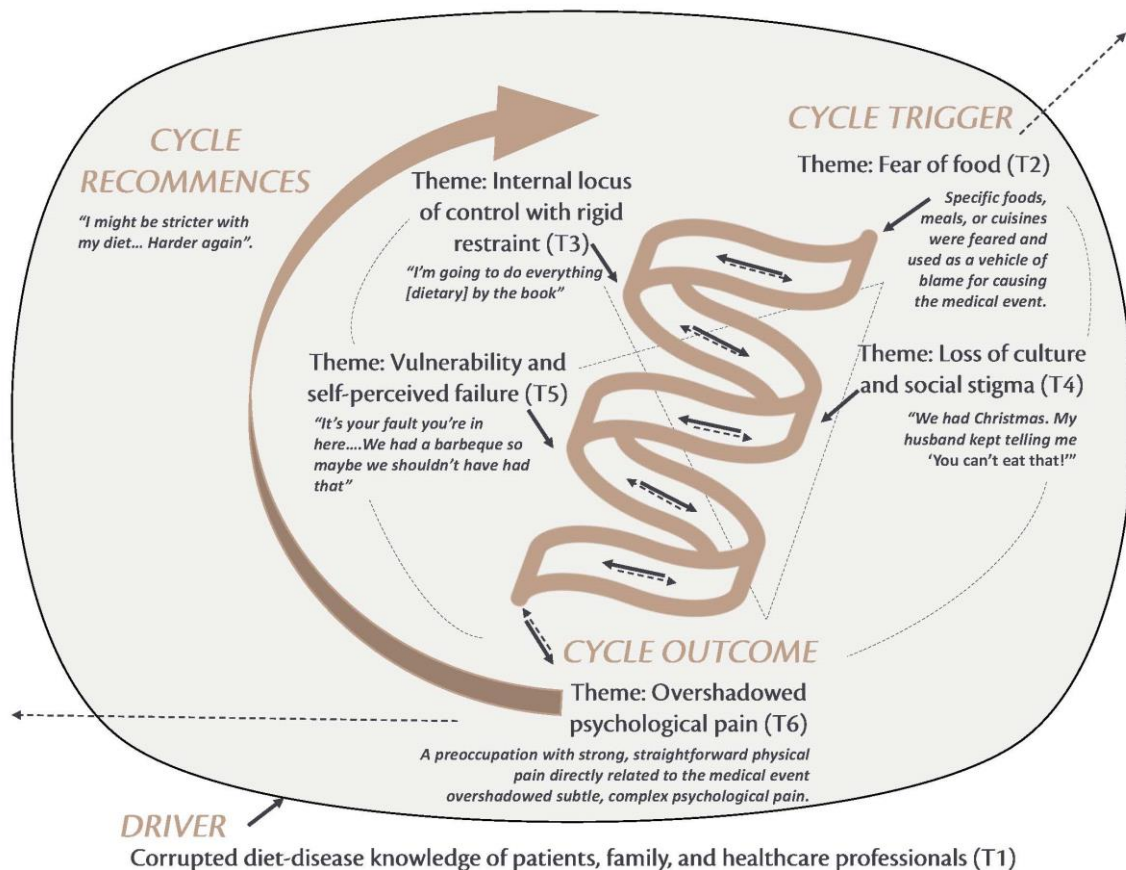


Figure 1. The ‘Fear of Food in Gastrointestinal Disease Framework’ representing the downward spiral-like cyclical thematic phenomenon interpreted as the experiences of patients placed on restrictive diets during inpatient treatment for acute, uncomplicated diverticulitis. T, theme. Solid arrows, dominant relationship. Dashed lines/arrows, divergent and/or complex relationships.

Although they were apparently denied explanations of the diverticulitis diet–disease relationship, participants were subjected to hospital-imposed dietary restrictions, thereby leaving the participants and their family to infer the purpose of such restrictions. This further led patients and their families to seek information from online and uncontrolled sources, leading to corrupted knowledge followed by non-evidence-based dietary behaviours:

“It’s a road the healing process, you got to do it [clear fluid diet for 1-week post-discharge]”.
(Keith)

“My wife loves to Google stuff . . . she said it [red meat] just takes so long to digest and it gets stuck in all the parts of your bowel and then it just rots . . . that’s what causes the infection and that’s not the only one there’s other stuff that does the same too, like seeds, can’t have seeds . . . corn I don’t have [be]cause it gets stuck in the polyps”. (Keith)

Phyllis’ current admission was her first experience with acute diverticulitis, although she was aware diverticula had been identified on a colonoscopy years earlier. She believed she was passively denied knowledge of her current diagnosis of diverticulitis by the medical team *“I know the sisters [nurses] can’t tell me anything but I should have asked the doctor [what my diagnosis is]”*. It is unclear if the knowledge was directly denied to her or if her memory had been affected by the hospitalisation and disease experience. Without knowing of her acute, uncomplicated diverticulitis diagnosis, she was unable to link the hospital-imposed dietary restrictions to the diverticulitis diagnosis *“I was wondering, they took some blood, so unless it [the dietary restriction] was something to do with the blood”*.

Brendan, the youngest participant, deviated regarding diverticulitis diet–disease knowledge. He was the only participant who correctly understood that the trigger of acute diverticulitis is unknown, and correctly linked a long-term, high intake of dietary fibre with the prevention of diverticulitis reoccurrence. However, Brendan still demonstrated corrupted knowledge when attempting to practically apply this knowledge to his lifestyle (see quote in the Fear of Food theme).

Participants' corrupted diet–disease knowledge, whether directly or indirectly influenced by their own experiences, their family, or healthcare professionals, was interpreted to underpin all other themes. Without this corrupted knowledge, the researchers interpreted that the remaining thematic experiences would not have occurred in their current form.

3.2. Theme 2: Fear of Food (Cycle Trigger)

In the context of an unknown or misunderstood aetiology for an episode of acute diverticulitis, food was used as a vehicle of blame by all participants except Phyllis, who did not understand the cause of her hospitalisation. Anticipatory concern over certain foods was reinforced from multiple sources, including the participants' previous experiences, their family, and healthcare professionals:

“I can understand when she [the treating doctor] said if you eat solid food now it's just going to cause you more harm, and she's right, [be]cause after I had the food yesterday, that's when I had the big pain”. (Keith)

The direct and indirect reinforcement of the fear of food in general, of specific foods, or of certain cuisines was persuasive. Despite knowing that the trigger for an acute episode is unknown, Brendan repeatedly expressed concern that certain foods may trigger acute diverticulitis:

“I really, really, love meat . . . I just love all sorts of meat . . . but I do believe that I eat way more than what that is right. It does say here [refers to diverticulitis educational handout] what causes diverticular disease, there is not one known clear cause of diverticular disease, so this is just a guideline, but I'm definitely going to be sticking by this . . . [be]cause . . . when you've got what I've got, especially how acute I've got it”. (Brendan)

Although it was not the only food or dietary behaviour negatively linked to an acute diverticulitis episode by the participants, red meat was of principal concern for Donna, Keith, and Brendan.

3.3. Theme 3: Internal Locus of Control with Rigid Restraint

Regarding risk factors for acute diverticulitis, participants were interpreted to have adopted a strong internal locus of control and a desire to avoid shared responsibility:

“[I] can't complain about anything [in this hospital], [be]cause they are in here to make you feel better. It's your fault you're in here”. (Keith)

“I don't want them to worry about what's going on and I don't feel as if I want to use their [my family's] time”. (Phyllis)

Due to the established and reinforced fear of certain foods, cuisines, or dietary behaviours causing an acute diverticulitis episode, dietary restriction enabled our participants to feel they had control over their health. When implementing the dietary restrictions, approaches taken by our participants reflected a mindset of rigid cognitive restraint [16], leading to a state of dietary hypervigilance:

“I do hesitate a lot . . . I'm very careful with foods that I do eat, I'm a bit nervous you may say, on things I don't eat. I don't think I'll ever be able to eat, like, red meat again”. (Donna)

Driven by the corrupted diverticulitis diet–disease knowledge, participants were interpreted to overestimate their ability to control their health, specifically their risk of diverticulitis reoccurrence. Although there are many non-modifiable risk factors for an

acute episode of diverticulitis, only the youngest participant considered that the risk may be outside of their control:

“I’m going to do everything by the book and if it flares up again, I know I’ve done everything right, and then I know there is just something wrong”. (Brendan)

3.4. Theme 4: Loss of Culture and Social Stigma

When discussing dietary restrictions that our participants believed were necessary and that they had previously implemented or intended to implement, cultural loss was interpreted to be at the front of their minds.

“... we had a barbeque the other day which could have flared it up, for my son. He helped us move not long ago, the other day, so I said we would have dinner with him and his girlfriend. . . I don’t know, maybe no more barbeques”. (Keith)

The loss of valuable social- and food-related experiences, central to cultural participation, were presented as psychologically painful. Linked to the internal locus of control with rigid restraint, Keith blamed his choice of foods at a single culturally meaningful meal (the Australian family barbeque) as the trigger for his current episode of acute diverticulitis, and his intention to change his diet was portrayed as a sacrifice that would decrease his quality of life. Beyond the loss of some food-related social experiences, social stigma was present in some descriptions of participants’ cultural loss:

“We had Christmas. My husband kept telling me ‘You can’t eat that!’ . . . and then I have family saying ‘Oh, don’t eat that!’”. (Donna)

3.5. Theme 5: Vulnerability Amid Self-Perceived Failure

The internal locus of control and the ownership of responsibility for diverticular disease by our participants was interpreted to create a reality of ‘self-perceived failure’ when acute diverticulitis occurred. As Keith described: *“It’s your fault you’re in here”*. The self-perceived failure was founded upon participants linking their consumption of a certain food or specific meal as breaking their rigid dietary restrictions, thus causing their acute, uncomplicated diverticulitis:

“So, everyone else around you is sort of eating this food, so you have a little, but which I did indulge in things I normally wouldn’t do any other time and . . . a couple of weeks ago I started to feel a little pain in my side niggling and then it just progressively got worse”. (Donna)

We interpreted that our participants were experiencing a strong sense of guilt for believing they caused the episode of acute diverticulitis, and for burdening their family and the healthcare system. As there is no medical rationale linking a specific food or meal as a trigger for acute diverticulitis, this revealed the vulnerability of our participants to unintended consequences of medically imposed dietary restrictions in the context of corrupted diet–disease knowledge.

Self-perceived failure combined with an internal locus of control contributed to emotional pain for the patients. This emotional pain was expressed as concern by the female participants, but was shown as self-effacing humour by the male participants:

“Oh, they [friends] laugh at me (laughs) “what is that [referring to hospital fluid meals]?”, “Want to try mate?” (laughs) . . . yeah, oh well it is funny, I guess . . . but it’s all good, they’re not the one suffering”. (Keith)

3.6. Theme 6: Overshadowed Psychological Pain (Cycle Outcome)

The physical pain directly caused by acute diverticulitis was ubiquitous throughout all interviews as either the topic directly discussed, as a device used to explain other experiences and beliefs, or as the background conveyed through body language and pauses in dialogue. ‘Pain’, which we noted was mentioned multiple times in the first three

interviews, was the principal symptom experienced by participants and was interpreted to be the motivator of the rigid cognitive restraint for dietary restrictions:

“... put a T-bone steak in front of me and I probably would have been like ‘Oh Yes!’. But then ... I would have wanted to die, like even with the smooth porridge, I was walking around, I was actually starting to panic a bit because it was really painful”. (Brendan)

Previously described themes represented multiple forms and expressions of psychological pain as defined by Meerwijk and Weiss [17]: a loss of culture, emotional pain, guilt, and a sense of deficiency of self, resulting from the failure to achieve something linked to the participant’s psychological need for control. The preoccupation with physical pain and the obscuration of psychological pain revealed that the subtle, complex psychological pain of patients had been overshadowed by the strong, straightforward physical pain. The physical pain appeared to be directly and solely caused by the disease process, whereas the elements contributing to the psychological pain were multifactorial and not fully elucidated. Our ‘Fear of Food in Gastrointestinal Disease Framework’ (Figure 1) proposes that the psychological pain was at least partly caused by the experience of going through the cyclical thematic phenomenon triggered by the fear of food. The outcome of psychological pain should be a deterrent from re-entering the cycle; however, the fear of physical pain was so great that it reinstated and amplified the fear of food, thus, recommencing the cycle:

“I think I might be a bit stricter with my diet. I thought I was last time ... [I will] look more into what foods I can have ... that won’t upset my diverticulitis ... My wife said she was going to do some more homework to see what may have caused it [acute diverticulitis] and what we had eaten in the past, and why it happened again, and look at our diet again, try [to] change it. Harder again, that’s about the only thing that’s going to change ... I don’t want to be in here again in the same pain as I was before”. (Keith)

4. Discussion

Our study is the first to interpret the experiences of patients admitted to hospital with acute, uncomplicated diverticulitis, with a focus on dietary restrictions. The six themes described in this study were our interpretation of the participants’ experiences following medically imposed dietary restrictions for the treatment of diverticulitis. Although they predominantly connected as a one-directional spiral-like cycle, represented in the ‘Fear of Food in Gastrointestinal Disease Framework’, each theme contained layered and complex links to multiple themes. For example, self-perceived failure was interpreted to be both caused by as well as strengthening the participants’ internal locus of control. Depending on unique circumstances and individual factors, our analysis found a participant may exit the cycle, although the majority had cognitions reinforced.

The corrupted diet–disease knowledge, which we interpreted to drive all other themes, cannot simply be attributed to poor patient care or a lack of communication. Effective health communication is complex and is a shared responsibility within the multidisciplinary team [18,19]. Hospital-imposed stresses, known to contribute to post-hospital syndrome, confound the cognitive stresses of disease processes and likely contributed to knowledge corruption [20].

The utilisation of food as a vehicle for blame in order to regain psychological control over one’s health in a context of corrupted diet–disease knowledge and the consequent experiences are consistent with the literature exploring other gastrointestinal health conditions linked to food and guilt. An interview study with patients living with irritable bowel syndrome (IBS) revealed a preoccupation with the dietary triggers of symptoms and a lack of knowledge of the aetiology of IBS [21]. In IBS patients, this was linked to a loss of culture due to limited food-related social engagements. The IBS patient’s internal locus of control was evident through a feeling of guilt about their dietary choices, and their prioritisation of self-management via rigid dietary constraint [21]. In another interview study with patients living with Coeliac disease, patients were interpreted to be controlled by food. The patients’ lived experiences were characterised by themes of fear of gluten, dietary hypervigilance,

the guilt of being a burden to others, and both social isolation and social stigma around food-related cultural events [22]. A British interview study of patients with inflammatory bowel disease (IBD) identified psychosocial impacts of dietary restrictions, which shared commonalities with the current study. In the context of limited diet–disease knowledge, patients utilised their diet to exercise control over their health by focusing on food triggers and implementing a severely restricted diet. Patients had a fear of eating, and cultural loss was experienced through the negative social impacts of the dietary restrictions [23].

Although each of these described interview studies had a unique research aim, utilised a different methodological framework to guide data analyses, and were conducted in different cultural contexts, all the themes developed in our study were explicitly described in the IBS, IBD, and coeliac disease studies, except for the ‘vulnerability amid self-perceived failure’ and the ‘overshadowed psychological pain’. The lack of the thematic description of these two themes in other literature may be due to the methodological approaches taken. Our study was the only study to use an IPA approach, and as these two themes represented patient experiences that were interpreted rather than simply described by patients, they may not have been recognised by the other studies that used semantic-focused thematic methodologies [21–23].

The previously published Framework for Gastrointestinal Distress (FGD) explores how gastrointestinal disease impacts the health-related quality of life and provides an explanation for these shared themes across gastrointestinal conditions [24]. The ‘Fear of Food in Gastrointestinal Disease Framework’, developed through our analysis, aligns with, and appears to be explained by, the FGD’s ‘gastrointestinal cognitions’ domain. The gastrointestinal cognitions domain proposes that the cognitions of patients with gastrointestinal disease, who experience physical and emotional distress, will be centred around their locus of control (internal or external), catastrophising (disease-specific fears), anticipatory concerns (symptom triggers), and embarrassment and stigma leading to social avoidance or social isolation [24]. As IPA is concerned with cognitions, the alignment of this study with the FGD gastrointestinal cognitions domain, but not with the physical distress nor emotions domain, is expected [13]. The current study extended upon the FGD cognitions domain by exploring and interpreting how this phenomenon relates to dietary restriction and food-related culture.

Although the ‘fear of food’ cognition appears to be shared across gastrointestinal diseases associated with dietary restriction, acute diverticulitis differs from IBS, IBD, and coeliac disease because there is no evidence that a particular food or nutrient acts as a trigger for symptom onset. The historical context of diverticular disease appears to continue to influence the collective consciousness. Until only recently, patients were advised to avoid nuts, seeds, and red meat as they were theorised to be triggers for acute diverticulitis [25]. Modern research has debunked such theories, with studies finding no association between red meat and diverticulitis incidence, and a high intake of nuts and seeds being associated with a decreased risk of diverticulitis [25]. While long-term dietary behaviours likely influence the risk of diverticulitis, dominant risk factors are not diet related and include smoking, body weight, age, sex, medications, and alcohol consumption [26]. The 17-year lag between health research and practice may be responsible for the ongoing and pervasive link between the risk of acute diverticulitis with food triggers [27]; particularly as recent systematic reviews have found a reduced focus on diet and diverticular disease research in the past 20 years [3,28].

4.1. Strengths and Limitations

Our study methods were strengthened by field notes and an audit trail to enhance trustworthiness. Dependability was established by a researcher reviewing the interviews, the audit trail, the interpretation of themes, and the structure of the framework to ensure they were integrated with the quantitative data. Dependability was also established by the fourth interview, which was used to confirm the analysis of the previous three.

The current study deviated from the IPA recommendation for a homogenous sample due to the heterogeneity of eligible patients within the recruitment period. However, participants were homogenous in so much as they all had experienced hospitalization for acute diverticulitis. In line with the IPA methodological framework, data saturation and data sufficiency were not pursued. Due to the prompt discharge of patients from hospital following the interview, transcripts were not returned to participants for comment. Participants were not available to comment upon the findings of the study as the analysis was put on pause due to COVID-19-related changes to staff availability.

4.2. Implications for Research and Practice

Taking a value-based care approach to healthcare necessitates that healthcare providers aim to diminish or end a cycle that leads to suffering. The theme which offers the greatest opportunity to healthcare providers is the driver of the ‘corrupted diet-disease knowledge of patients, family, and healthcare providers’. The ‘conceptual framework for person-centred care’ offers implementation and communication guidance for healthcare interventions, such as the dietary management of acute, uncomplicated diverticulitis [18,19].

There is thematic overlap for the cycle trigger for a ‘fear of food’ between this patient group and adults with eating disorders such as Avoidant/Restrictive Food Intake Disorder (ARFID) and anorexia nervosa [29–31]. The similarities in this cognitive presentation open avenues for further research. This includes a deeper exploration of the temporal outcomes associated with gastrointestinal conditions to examine if the fear of food triggers captured in this study and the other literature [21–23] may spiral beyond the outcome of psychological pain to an eating disorder. If the ‘Fear of Food in Gastrointestinal Disease Framework’ is found to be describing a phenomenon early in the journey towards an eating disorder, it presents an opportunity for early intervention. This may be particularly valuable for ARFID where the aetiology is not well understood [32,33]. For patients with diverticular disease where there is no evidence of food as a pathophysiological trigger [26], the evaluation of eating disorder treatment approaches, such as exposure therapy, may provide feasible treatment options beyond improving communication and patient education [29].

Further qualitative research is required to evaluate the transferability of the ‘Fear of Food in Gastrointestinal Disease Framework’ to other conditions characterised by gastrointestinal distress, food, and guilt, as well as its transferability to other settings such as those that are non-acute. Future research studies on diet and gastrointestinal disease should consider patient experience value-based care when designing interventions or measuring experiences.

5. Conclusions

Adult inpatients with acute, uncomplicated diverticulitis were interpreted to experience a cyclical thematic phenomenon, the ‘Fear of Food in Gastrointestinal Disease Framework’. Interactions between the six themes were complex but primarily moved in a repeating downward spiral. The thematic experiences of patients were embedded within a driver theme of the ‘corrupted diet-disease knowledge of patients, family, and healthcare professionals’, that was triggered by a theme of the ‘fear of food’ and ended with the theme of ‘overshadowed psychological pain’.

Further qualitative research is required to evaluate more experiences of diverticulitis, which will enhance the potential transferability of the ‘Fear of Food in Gastrointestinal Disease Framework’ to other conditions and settings. Clinical practice should focus upon embedding models of care that overcome barriers related to corrupted diet-disease knowledge and bridge the gap between research and practice.

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