What role do dietitians have in providing nutrition care for eating disorder treatment? An integrative review

Alana Heafala1,2, Lauren Ball1,2, Jessica Rayner1,2, Lana J. Mitchell1,2

1School of Allied Health Sciences, Gold Coast Campus, Griffith University, 1 Parklands Dr, Southport, 4215, QLD, Australia
2Menzies Health Institute Queensland, Gold Coast Campus, Griffith University, 1 Parklands Dr, Southport, 4215, QLD, Australia

Keywords: dietitian; eating disorders; nutrition care; patient; experience.

Author Contributions:

AH, LB, LM were involved in the study design, screening. Quality assessment and data extraction were completed by AH and JR. Data analysis was primarily undertaken by AH and was supported by the other authors. AH, LB, LM contributed to planning and writing of the manuscript, and all authors approved the final version of the paper submitted for publication.

Acknowledgements

The authors declare LB is on the editorial board for Journal of Human Nutrition and Dietetics. LB’s salary is supported by a National Health and Medical Research Council fellowship (APP 1173496).
Abstract

Background: Dietitians are recognised as experts in nutrition care and essential members of multidisciplinary health care teams. However, dietitians’ role in caring for people with eating disorders is not well understood. This review aimed to identify, critically appraise and synthesise the current evidence exploring the views and experiences of dietitians, other health professionals, patients and carers regarding the role of dietitians in the treatment of eating disorders.

Methodology: CINAHL, MEDLINE, Embase, Scopus and PsycINFO were searched in April 2020 and again in February 2021. Studies were included if they were original research; explored views and experiences of the role of dietitians in the treatment of eating disorders, including perceptions of patients, carers, and other health professionals regarding nutrition care for eating disorders; and the full text article was available in English. Title and abstract screening, full text screening, quality assessment and data extraction were completed in duplicate. Quality assessment was conducted using the Mixed Methods Assessment Tool. Thematic synthesis was used for data analysis.

Results: Fourteen studies met the inclusion criteria. Quantitative, qualitative and mixed-methods study designs were included. Four themes emerged inductively from the data: (i) dietitians as collaborators, educators and counsellors, (ii) dietitians individualising care and desiring a holistic
approach, (iii) opportunities for dietitians to gain confidence, and (iv) experiencing nutrition care as a patient or carer.

**Conclusion:** This review suggests that dietitians have a varied role in eating disorder treatment but desire further training. Understanding the training needs of dietitians can identify practice gaps and opportunities to enhance clinician confidence.

**Introduction**

Eating Disorders (EDs) are serious psychological illnesses characterised by a preoccupation with food, weight and body image (1). If left undetected or untreated, EDs can lead to serious negative physical, medical, social, nutritional and psychological implications (1). EDs are common, affecting 8.4% of women and 2.2% of men at some point in their lives (2). The mortality rate of EDs (specifically anorexia nervosa) is higher than any other mental health condition (3). As a result, screening, early identification and intervention of EDs by health professionals is paramount to high quality health services (4-6).

Dietitians are uniquely qualified to provide medical nutrition therapy and are viewed as essential members of the treating team across the continuum of care (6-8). Dietitians who care for patients with EDs are expected to have undergone advanced training to develop the knowledge, skills and experience required to safely and effectively care for this vulnerable patient population (7, 9-12). However, many health care systems, including the UK and Australia, allow dietitians to provide care to patients with EDs, regardless of post-graduate training or experience (9), warranting further investigation into the impact on health care provided. A literature review by Hart and colleagues in 2011 examined the practices, intervention strategies and challenges faced by dietitians providing care to patients with EDs and found dietetic practice in this field is not well defined (13). As dietitians of varying levels of experience may encounter patients experiencing an ED, it is important to explore the perspectives of specialist and non-specialist clinicians regarding the provision of care for this population. This can provide insight into the experience of delivering ED care, levels of confidence among clinicians, their ideal role and identify any knowledge and practice gaps within the profession (14, 15).
A multidisciplinary approach to care is fundamental in the treatment of EDs and aligns with evidence-based practice (4, 5). Treating team members’ understanding of the role of dietitians in EDs can have important implications for dietetic involvement in care (16, 17). A recent review of treatment manuals for EDs revealed only 36% of manuals recommended consultation with a dietitian as part of a multidisciplinary approach (16). Additionally, an Australian study found only 6% of primary or probable ED encounters with general practitioners received a referral to a dietitian (18). These findings suggest a poor understanding of dietitians’ role among other health professionals and potential barriers to referring ED patients to a dietitian. Exploring the perceptions of other health professionals can help to understand their attitudes and beliefs regarding dietetic care for EDs and identify ways to enhance collaboration among clinicians (19).

The perceptions of patients and carers regarding the role of dietitians in ED treatment are not widely understood. Carers have an important role in their loved ones’ recovery journey and are often involved with meal preparation and providing meal support (17, 20). Including people with a lived experience of EDs and their families in research is crucial to furthering our understanding of EDs and best practice (21). Exploring their perspectives can provide an understanding of their expectations of nutrition care for EDs, preferences and identify opportunities to enhance collaboration and optimise dietetic care in this field (19). Including a range of perspectives can allow for a comprehensive understanding of nutrition care for EDs. Therefore, this review aimed to identify, critically appraise and synthesise the current evidence regarding the views and experiences of dietitians, other health professionals, patients and carers of the role of dietitians in the treatment of EDs.

Methods

Overview of study design

An integrative review was conducted to canvas a range of study designs including qualitative, quantitative and mixed-methods studies. The inclusion of different study designs allowed for a broader understanding of the phenomenon of nutrition care for EDs compared to a traditional systematic review approach (22). A five-stage methodology framework (problem identification, a literature search, data evaluation, data analysis and presentation) was used to ensure the review was systematic and rigorous (22). The framework enabled the results from various methodologies to be integrated, forming a synthesis of different perspectives of nutrition care for EDs, providing
new knowledge to this area of dietetic practice \(^{(22)}\). The SPIDER tool was used to develop search terms for the research question as shown in Table 1 \(^{(23)}\). The protocol for the review was registered with PROSPERO (CRD: 42020178762) prior to the commencement of screening. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed to report the findings \(^{(24)}\).

Table 1. SPIDER tool for developing search terms

<table>
<thead>
<tr>
<th>SPIDER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample</strong></td>
<td>Dietitians, nutritionists, other health professionals, patients and carers.</td>
</tr>
<tr>
<td><strong>Phenomenon of Interest</strong></td>
<td>Nutrition care provided by dietitians for the management/treatment of eating disorders. Includes all treatment settings such as inpatient, outpatient, day treatment programs, community, private practice.</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>All original research studies including: survey, interview, focus group, questionnaire, case-study, Delphi or observational studies.</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td>Views, experiences, confidence, preparedness, perspectives, self-efficacy, capable, qualified, skilled, proficient, trained, readiness and willing.</td>
</tr>
<tr>
<td><strong>Research type</strong></td>
<td>Quantitative, qualitative and mixed methods studies.</td>
</tr>
</tbody>
</table>

*Search Strategy*

This article is protected by copyright. All rights reserved
The search terms were purposefully broad to prioritise sensitivity rather than specificity, ensuring a comprehensive approach to the search. Search terms included a dietitian search string and an ED string that included key words for anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant restrictive food intake disorder (ARFID), other specified feeding and eating disorders (OSFED), eating disorders not otherwise specified (EDNOS) and disordered eating (for an example of search strategy refer to supplementary material). Orthorexia nervosa was included in the strategy despite not being classified as an ED in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) as it is considered a form of disordered eating that dietitians may encounter. OSFED replaced EDNOS in the DSM-5, therefore both were included. The search strategies were adapted to each of the databases to include relevant MeSH headings and key words with the assistance of a health librarian.

The literature search was conducted in April 2020 with the assistance of a health librarian and updated in February 2021 to capture any recent publications. Five electronic databases were searched including MEDLINE, CINAHL, Embase, Scopus and PsycINFO. Boolean connectors including ‘AND’ and ‘OR’ were used in the search strategy. Journal hand searches and checking reference lists of included articles were conducted to locate any additional relevant articles. Search results from each database were imported into EndNote prior to screening. Duplicates were removed in EndNote before exporting into a web-based platform (Covidence) to facilitate screening.

**Study Selection**

Articles were excluded if they did not include original research, were not about dietitians or dietetic practice as it relates to EDs, or if data about dietitians could not be separated from other health professionals. Articles related to EDs of dietetic students were excluded. Articles where the primary condition/focus was not disordered eating, orthorexia nervosa or a DSM-5 ED (i.e., anorexia secondary to cancer treatment, bariatric surgery, haemodialysis, liver disease, Phenylketonuria (PKU), diabetes, HIV, surgery, autism, cystic fibrosis, gut microbiome, female athlete triad) were also excluded. Articles regarding pharmacotherapy for ED were excluded. Searches were limited to English language only and no date restrictions were applied.

A two-phase approach was initially taken, where three researchers (AH, LB, LM) screened the first 50 abstracts independently prior to discussing the findings and resolving discrepancies.
study inclusion criteria were then amended, clarifying intervention and outcome inclusion and exclusion criteria, to ensure consistency between all researchers. The remaining abstracts were screened independently until all title and abstracts were reviewed in duplicate. Conflicts that arose were resolved through discussion. Full text screening was completed in duplicate and discrepancies were resolved through regular team meetings. A third researcher was not needed to resolve any discrepancies.

**Data extraction and quality assessment**

Data from the eligible studies were extracted in duplicate (AH and JR). Extracted data included: author/s, year published, country, setting, study aim, participants (number), description of intervention, any relevant outcomes related to the dietitian’s role and dietetic care. Quality assessment was carried out in duplicate by the same researchers using the Mixed Methods Appraisal Tool (MMAT) version 2018, as it is specifically designed for systematic mixed studies reviews. It allows appraisal of methodological quality of qualitative research, quantitative descriptive studies and mixed methods using a rating system out of five key criterion. Some examples of the criterion for each study design include: the relevance of sampling strategy; appropriateness of the methodological approach; the representativeness of the target population; low-response bias risk; whether the results are adequately derived from the data and whether appropriate statistical analysis has been conducted. Discrepancies were resolved through discussion.

**Data analysis and synthesis**

Data reduction was the first phase of analysing the data by arranging primary sources into subgroups. These initial subgroups were based on participant type including dietitians only; dietitians and healthcare professionals; dietitians, health professionals, patients and carers; patients only; patient and carer participants only. The findings were thematically synthesised using the approach outlined by Thomas and Harden. This consisted of three stages including line by line text coding, the development of descriptive themes and then analytical themes. This approach added strength to the data analysis phase as outlined by Whittemore and Knafl. The lead researcher (AH) used inductive line by line coding for the first 3 studies, and data extracted from subsequent studies were allocated to one of these codes or a new code was
developed (28). These initial codes were grouped together into related categories where descriptive themes emerged (28). Analytical themes were developed from the descriptive themes and were agreed upon by all researchers.

Results

Descriptive Findings

After screening, a total of fourteen studies were included in this review as shown in Figure 1, including one recent article identified in the February 2021 database search. The main reasons for exclusion were due to study design (i.e., not original research or abstract only), full manuscript not being published in English and ineligible intervention (primary condition/focus not EDs, not about dietetic practice in EDs). Several countries were represented in the eligible studies including United States of America (n= 8), Australia (n= 3), England (n= 1), Brazil (n= 1) and Canada (n= 1). Studies utilised cross-sectional surveys (n=8), semi-structured interview designs (n=3), Delphi methodology (n=2) and focus groups (n=1). The total number of participants included in the review was 1,192 (range:3-310). Most participants were dietitians (n=638) (8, 15, 29-36), followed by people with a lived experience of an ED (n= 261) (36-40), parents/carers (n= 205) (36, 37, 40) and other health professionals (n=88) (35, 36). Eight studies included dietitian participants only (8, 15, 29-34) and one study explored collaboration between dietitians and mental health professionals (35). Two studies only included people with a lived experience of EDs (38, 39), and a further two explored patients’ and parents’ perspectives of dietetic care for EDs (37, 40). One study included the perspectives of dietitians, other health professionals, carers and people with a lived experience of EDs (36).
Table 2 provides an overview of the included studies, arranged by participant type. Dietitian participants worked in a variety of settings including inpatient, outpatient, day treatment programs, private practice, education and management positions. Experience level of dietitians varied within the studies, from those who had little to no experience working with ED patients, to dietitians who had >20 years’ experience \(^{15,34}\). Patients refers to individuals with a lived experience of an ED, carers within the included studies all identified as parents. Other health professionals included mental health professionals, ED researchers, specialist ED clinicians and

This article is protected by copyright. All rights reserved
non-specialist clinicians. Non-specialist dietitians refers to dietitians who don’t have ED patients as the majority of their caseload (36).
Table 2. Description of included studies (n=14) arranged by participant type.

<table>
<thead>
<tr>
<th>Author/s (year), Country</th>
<th>Aim of Study</th>
<th>Study Design</th>
<th>Participants, Sample size (n)</th>
<th>Setting</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cairns &amp; Milne (2006), Canada</td>
<td>Identify nutrition counselling strategies for EDs and educational needs of English-speaking Canadian RDs.</td>
<td>Cross-sectional survey</td>
<td>Dietitians (n=65)</td>
<td>Inpatient, outpatient, day treatment and PP</td>
<td>Participants reported inadequate preparation and minimal support for their practices in ED. Upskilling occurred through self-directed study and experience. Strong desire for further training.</td>
</tr>
<tr>
<td>Eckstein-Harmon (1993), USA</td>
<td>To compare nutrition care practices for inpatient ED treatment over two-year period.</td>
<td>Cross-sectional survey</td>
<td>Dietitians (n=34)</td>
<td>Inpatient</td>
<td>Menu planning, basic nutrition and metabolism perceived as important knowledge for dietitians caring for ED patients. A decline in the nutrition education and shorter hospital stays with increased outsourcing to outpatient setting were reported.</td>
</tr>
<tr>
<td>Hart et al., (2008), Australia</td>
<td>To examine dietetic practice in ED inpatient and day patient settings in Australia and establish a baseline.</td>
<td>Cross-sectional Survey</td>
<td>Dietitians (n=36)</td>
<td>Inpatient and day treatment</td>
<td>Establishing baseline of dietetic practice in ED inpatient facilities. No standard practice among several different facilities.</td>
</tr>
<tr>
<td>Mittnacht &amp; Bulik (2015), USA</td>
<td>To evaluate the extent to which a panel of expert dietitians concur on nutrition counselling practices for AN.</td>
<td>Delphi Methodology</td>
<td>Dietitians (n=21)</td>
<td>Inpatient, outpatient and PP</td>
<td>Panellists achieved consensus on 47/133 items (35.3%). Unanimous consensus RD’s role is to help patients work through misbeliefs and distortions regarding food, health, metabolism and weight.</td>
</tr>
</tbody>
</table>

This article is protected by copyright. All rights reserved
Ozier & Henry (2010), USA
To explore dietitians’ views and confidence levels regarding nutrition care across the spectrum of EDs.
Cross-sectional survey
Dietitians (n=291) Inpatient, outpatient, education, management and other
Dietitians describe moderate levels of self-efficacy and comfort when counselling individuals with EDs and disordered eating. Working within an MDT and experience were perceived as most beneficial for upskilling in ED care.

Rocks et al., (2014), Australia
To describe the practices of Australian dietitians in the nutritional management of AN in children and adolescent inpatients.
Cross-sectional survey
Dietitians (n=17) Inpatient
Majority (90%, 14/16) of participants followed specific guidelines developed by the facility. Refeeding regimes varied, guided by the individual progress of the patient. Perceived lack of evidence regarding best practice for the nutritional treatment of children and adolescents with AN.

Trammell et al., (2016), USA
To explore the perceived factors that impact the self-efficacy of dietitians working with ED clients and address their educational needs.
Focus groups
Dietitians (n=16) Not specified
Participants described a poor understanding of mental health concerns, and scope of practice. Poor awareness of ED among HPs was a perceived barrier to treatment.

Whisenant & Smith (1995), USA
To obtain a profile of nutrition practice for EDs and to identify gaps in dietetics education and research regarding EDs.
Cross-sectional survey
Dietitians (n=117) Inpatient, outpatient and PP
Participants perceived having knowledge of assessment specific to EDs, diagnostic criteria, psychological counselling techniques, referral procedures and being affiliated with a MDT were important skills for dietitians caring for ED patients. Techniques used in outpatient vs inpatient settings varied considerably.
<table>
<thead>
<tr>
<th>Reference</th>
<th>Country</th>
<th>Study Objective</th>
<th>Research Methods</th>
<th>Participants</th>
<th>Setting</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeJesse (2013), USA</td>
<td>To identify ways to optimise collaboration between MHPs and dietitians in the treatment of EDs.</td>
<td>Semi-structured interviews</td>
<td>Dietitians (n=10); MHPs (n=12)</td>
<td>Outpatient, day treatment and PP</td>
<td>Dietitians described their role as a 'liaison between the medical and psych team.' MHPs perceived inexperienced dietitians can potentially increase resistance in clients.</td>
<td></td>
</tr>
<tr>
<td>McMaster et al., (2020), Australia</td>
<td>To develop consensus-based guidelines for outpatient dietetic care for EDs.</td>
<td>Delphi Methodology</td>
<td>Dietitians (n=31); HPs (n=76); Patients (n=32); Carers (n=23)</td>
<td>Outpatient</td>
<td>All panellists agreed a specialist clinical dietitian was most qualified to provide nutrition care to patients and dietitians providing treatment in EDs should participate in PD. Specialist ED dietitians were more likely to endorse treatment be delivered by a specialist dietitian compared to non-specialist dietitians (82.2% vs 33.3%).</td>
<td></td>
</tr>
<tr>
<td>Bravender et al., (2017), USA</td>
<td>To describe parent and patient impressions and experiences of inpatient medical stabilization for EDs.</td>
<td>Semi-structured interviews</td>
<td>Patients (n=23); Carers (n=32)</td>
<td>Inpatient</td>
<td>Parents valued dietitian-directed meal planning and appreciated having a respite from meal planning.</td>
<td></td>
</tr>
<tr>
<td>Roots et al., (2009), England.</td>
<td>To assess patients’ and parents’ satisfaction with outpatient, specialist outpatient and inpatient ED treatment.</td>
<td>Cross-sectional survey</td>
<td>Patients (n=160); Carers (n=150)</td>
<td>Inpatient and outpatient</td>
<td>Dietitians were highly valued among parents. Provision of services were reliant on resources. Specialist dietetic input only available in specialist services.</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Objective</td>
<td>Study Design</td>
<td>Patients (n)</td>
<td>Location</td>
<td>Barriers/Results</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Neyland &amp; Bardone-Cone (2019), USA</td>
<td>To assess the use of different modalities of treatment and their perceived helpfulness and identify barriers to treatment.</td>
<td>Cross-sectional Survey</td>
<td>Patients (n= 43)</td>
<td>Not specified</td>
<td>Dietitians were among the most frequently seen HPs for ED treatment (n=19, 68%). Dietitians’ mean helpfulness of treatment score was 3.00/5.</td>
<td></td>
</tr>
<tr>
<td>Petry et al., (2017), Brazil.</td>
<td>To explore the perceptions of women in recovery from AN regarding their ED experience.</td>
<td>Semi-structured interviews</td>
<td>Patients (n=3)</td>
<td>Not specified</td>
<td>Nutritionist sought to further control food intake, not for recovery purposes. &quot;For me it was absurd. But I decided to try only to follow 50% of it [meal plan].&quot;</td>
<td></td>
</tr>
</tbody>
</table>

AN, Anorexia Nervosa; ED, eating disorder; HP, health professional; MDT, multidisciplinary team; MHP, mental health provider; PD, professional development; PP, private practice; RD, registered dietitian; USA, United States of America.
Quality assessment

MMAT ratings ranged from moderate (3/5) to high (5/5). Low non-response bias risk was the most frequent unmet criteria (n=6/10) for quantitative study designs, with no reason provided for non-response. It was unclear whether the measurements for two of the studies were appropriate as a validated tool was not used to assess self-efficacy and a limitation in the study design. The quality of the qualitative studies was high, with all three studies meeting the five MMAT criteria. The mixed-methods study was also of high quality and met all five criteria. A summary of the findings from the quality assessment are available as supplementary material (Table S2).

Meta-synthesis

Four themes emerged inductively from the data: (i) dietitians as collaborators, educators and counsellors, (ii) dietitians individualising care and desiring a holistic approach, (iii) opportunities for dietitians to gain confidence, and (iv) experiencing nutrition care as a patient or carer. Table 3 provides a summary of themes with indicative quotes from text.

Dietitians as collaborators, educators and counsellors

Six of the fourteen studies examined dietitians’ role within ED treatment, and one study reported a need for defining the role in the treating team. Dietitians’ role was described as providing patient-centred care that includes the assessment, planning, treatment and management of nutritional requirements for medical stabilisation and recovery, that are tailored to the patient’s stage of change and level of motivation. In addition to working collaboratively within a multidisciplinary team (MDT), dietitians were perceived as the most qualified to provide nutrition education to patients. Dietitians reported providing education on a range of topics including weight changes, body image, metabolism, normalising eating patterns, challenging misinformation and beliefs about food and nutrition, coping strategies, ways to reduce anxiety around mealtimes, the consequences of malnutrition, dieting and weight loss. One qualitative study suggested dietitians can be the first to recognise EDs and can provide education regarding disordered eating behaviours to other professionals. A quantitative study had a similar finding where dietitians reported to train and educate other professionals who regularly interact with populations who are at high risk of developing EDs.
There were conflicting views about the involvement of non-specialist dietitians in ED treatment (8, 34). A Delphi study showed there was disagreement about whether only specialist dietitians should accept ED referrals in an outpatient setting, with ED specialists (including dietitians and other health professionals) more likely to agree with this compared to non-specialists (82.2% vs 33.3% respectively) (36). Professional boundaries within a MDT were also found to influence practice (29, 35). Two studies indicated that professional boundaries within treating teams were not always well defined, particularly between dietitians and mental health professionals (MHPs) (34, 35). Some dietitians reported being unsure where their scope of practice ended and other therapists began, indicating more clarity is needed regarding the dietitians role in ED care (34).

\textit{Dietitians individualising care and desiring a holistic approach}

Two studies detailed the clinical practices of specialist ED dietitians working within a clinical/hospital setting in Australia (31, 33). The studies revealed dietetic practice varied highly between ED facilities, which often had their own guidelines and protocols to guide practice (33). Strategies regarding feeding regimes, supplementation, energy requirements for weight gain, mealtime supervision, and expectations regarding weight gain and meal compliance differed greatly (31, 33). Dietitians reported tailoring nutrition goals, feeding regimes and weight targets to individual needs of patients, which influenced the highly variable treatment reported in the studies (31, 33).

A desire for guidelines to standardise care with indicators of progress and recovery was expressed, as weight restoration is currently the only nutritional focus in existing guidelines (4, 34). Dietitians reported wanting to take a holistic approach to care, that focuses beyond weight restoration, is appropriate for nutritional rehabilitation and the fostering of a healthy relationship with food (34).

\textit{Opportunities for dietitians to gain confidence}

Two studies found that many dietitians lacked confidence when faced with the prospect of counselling clients with an ED (15, 34). One quantitative study found dietitians had a moderate level of self-efficacy and confidence to treat people with an ED, despite the inclusion of both experienced and inexperienced dietitians in the study (15). Mental health concerns and comorbidities were identified as barriers to dietitians feeling confident to provide care to ED patients, fearing they would “make the disorder worse” (34). Inexperienced dietitians were
described as potentially harmful to people experiencing an ED. One study detailed a MHP’s experience referring to a dietitian with a perceived lack of expertise in EDs, which triggered the client and increased resistance at their next session (refer to Table 3 for quote) (35).

Three studies described the education about EDs received during dietetic training as inadequate and suggested more ED specific training would increase their confidence (15, 29, 34). In contrast, another study reported some participants perceived training as sufficient to identify an ED, however, made a distinction between identifying an ED and being able to treat one (8). Primary reasons given for not being able to identify an ED included: patient denial, lack of training and experience, orientation towards diets and weight loss – a risk factor in the development of EDs, and a limited understanding of psychological issues (8).

Overall, there was agreement that dietitians working or wanting to work in the ED field would benefit from undertaking professional development to ensure safe, competent practice (32, 35, 36). Dietitians reported the most useful strategies for upskilling in ED care were working within a MDT, on the job experience, professional development, mentoring from experienced clinicians (within and outside of dietetics) and textbooks (15, 29, 34). Counselling techniques such as motivational interviewing were identified as an important strategy for dietitians to use and upskill in for ED care (29, 32).

Experiencing nutrition care as a patient or carer

Two of the fourteen included studies explored the perspectives of patients and carers regarding dietetic care in ED treatment (37, 40), and a further two investigated patient perspectives only (38, 39). Carers perceived dietitians as providing respite and support during mealtimes and with planning, and were appreciative of not having the responsibility of ‘making their child eat’ (37). Carers valued the role of dietitians and were reportedly concerned when this service was unavailable (40). A Delphi study revealed carers and patients were more likely to agree to all patients diagnosed with an ED being referred to a dietitian compared to specialist ED clinicians (86.9% vs 47.8% respectively) (36). Patient experiences regarding the nutrition care they had received for EDs varied. Two studies reported that although patients sought the help of dietitians for ED treatment, they found these services only moderately helpful (37, 38). In a qualitative study, two of three patients reported viewing the dietitian as a means to further control their food intake rather than seeking recovery (39). In another study, a patient reported it was helpful to have
structured and supervised meal times in an inpatient setting \(^{(37)}\). The same study found parents experienced higher levels of satisfaction with nutrition counselling, the use of liquid supplements and daily meal planning for ED treatment compared to patients \(^{(37)}\).
Table 3 Themes with indicative quotes (verbatim) and the source.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
<th>Summary</th>
<th>Example (text excerpt or quote and source)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dietitians as collaborators, educators and counsellors</td>
<td>Dietitians have a role in prevention, early detection and nutrition education for EDs.</td>
<td>Dietitians require a variety of skills to provide nutrition care for EDs. They have a role in educating patients, carers and other professionals about disordered eating behaviours.</td>
<td>The RDN is often one of the first to recognize an ED and may have the opportunity to educate other professionals in their network about the signs and symptoms of disordered food relationships (34) – Dietitian.</td>
</tr>
<tr>
<td></td>
<td>Difficulty separating food and therapy</td>
<td>Dietitians described blurred boundaries between treating team members and poor understanding of scope of practice.</td>
<td>“Because inevitably, food and therapy cannot be disconnected. We have that blurred line between a therapist and a dietitian…” (34) – Dietitian.</td>
</tr>
<tr>
<td></td>
<td>Working collaboratively</td>
<td>Navigating professional boundaries within the MDT</td>
<td>“There is so much the two [dietitian and mental health] providers can do together and really collaborate using the therapy techniques, but this therapist, was from the place of, ‘we don’t need you, we just need you for calories’ (35)…” – Dietitian.</td>
</tr>
</tbody>
</table>

This article is protected by copyright. All rights reserved.
2. Dietitians individualising care and desiring a holistic approach

<table>
<thead>
<tr>
<th>Individualising care</th>
<th>Dietitians report tailoring weight targets, nutrition goals and feeding regimes to meet clients’ individual needs, contributing to high variability in nutrition care for EDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanting to use a holistic approach</td>
<td>Dietitians desired guidelines that include indicators of progress and recovery, beyond weight restoration</td>
</tr>
</tbody>
</table>

…an individual approach based on the age, gender, presenting weight, physiological state and recent intake of the patient was emphasised (33) – Dietitian.

“The actual recommendations are for really fast, hospitalized refeeding, and it’s hard because the goal of that is weight restoration, and that does not indicate cure from the eating disorder (34)” – Dietitian.

…all panels agreeing a patient's goal weight/rate of weight gain should be determined on a case-by-case basis and that there should be a focus on outcomes other than weight as a marker of patient progress (36) – Dietitian, other health professionals, patient and carer.

“When I got to my internship and I did see eating disorders, it sort of scared me, I didn’t know what to do, I didn’t know how to approach it (34)” – Dietitian.

“This is scary. They’re like ‘Whoa, these people (clients with EDs) are way beyond me!’ (34)” – Dietitian.

3. Opportunities for dietitians to gain confidence

| Apprehension to treat ED clients | Mental health concerns, inexperience and fear of ‘making it worse’ contributed to dietitians feeling ‘unprepared’ to treat clients experiencing an ED |

“Some people get scared. They’re like ‘Whoa, these people (clients with EDs) are way beyond me!’ (34)” – Dietitian.
Desire for more PD opportunities, particularly regarding nutrition counselling for EDs.

Seventy-one percent (44 of 62) of respondents stated that they were either dissatisfied or very dissatisfied with current educational opportunities for eating disorders nutrition counselling.

The only professional role whose importance was repeatedly singled out was the dietician’s. This was highly valued and there was some concern when this service was not available.

“They [patients] reported they looked for a nutritionist not to seek recovery, but to learn how to control their food intake.”

ED, eating disorder; MDT, multidisciplinary team; PD, professional development; RD, registered dietitian; RDN, registered dietitian nutritionist.
Discussion

The synthesis of what is currently known about the experiences of dietitians, other health professionals, patients and carers regarding nutrition care for EDs has provided a broad overview of this important area of dietetic practice. Understanding the knowledge, experiences, and views of dietitians regarding nutrition care for patients with EDs provides valuable insight into current practices while identifying potential needs and training gaps of the profession. In addition, including patient and carer perspectives has provided a deeper understanding of the personal experience of receiving ED nutrition care.

Although dietitians possess knowledge and skills to provide nutrition care for EDs, opportunities exist to increase clinician confidence and further clarity regarding dietitians’ role in ED treatment is needed. The findings revealed that dietitians have a role in the identification, treatment and management of EDs, however, professional boundaries and uncertainty regarding scope of practice can influence their role within the treating team. Hart and colleagues previously highlighted the need for dietitians to have a good understanding of their scope of practice and role within the treating team. Position statements outlining dietitians’ scope of practice for EDs are available from dietetic associations in the UK, USA and Australia, however, the findings suggest dietitians are still unclear about their role in practice. Outside of hospitals, dietitians’ role in ED treatment is less defined and treatment manuals for EDs often make no mention of dietetic involvement. Further clarifying the roles and responsibilities of dietitians would be beneficial to ensure all treating team members have a clear understanding and can explain their involvement to patients. Increased clarity among health professionals may also enhance collaboration and promote dietetic involvement in ED treatment. Dietitians can use the existing position statements as a resource to support their role in ED care and demonstrate how they can contribute to positive nutritional outcomes for patients.

Variability in practice among dietitians is not surprising given that clinical practice guidelines for the treatment of EDs emphasise a client-centred and individualised approach to care. McMaster and colleagues found that clinical practice guidelines lack specific guidance for dietetic practice in ED treatment. Additionally, a lack of consensus among specialist ED dietitians regarding best practice was evident in a Delphi study by Mittnacht and Bulik included in this review. This lack of guidance and consensus may contribute to inconsistent practice.
among dietitians, ultimately impacting the experience and perceptions of patients and carers regarding nutrition care for EDs. Until recently, best practice guidelines for nutrition care of EDs have not been available, particularly outside an inpatient setting. Revised practice and training standards for dietitians providing ED treatment have recently been published in the USA (11) and Australia (43) ahead of the introduction of an ED credentialing system (43, 44). While this is progress for developing a minimum acceptable standard of care, the impact of these standards on dietetic practice warrants further exploration. The inclusion of specific guidance for medical, psychological and nutritional aspects of treatment in future guideline development may provide clarity for clinicians and assist with consistency in practice between treatment facilities.

The review highlighted that carers valued the role and support of dietitians, while patients had mixed perspectives (37-40). The findings of this review offer insight into how patients and carers experience nutrition care for EDs, however, the included studies explored ED treatment experiences broadly with only some aspects of dietetic care investigated. The inclusion of those with a lived experience of ED and carers in future research is recommended and can offer a richer understanding of the needs of this population (20, 45). Studies exploring the specific elements of dietetic care that contribute to positive nutritional outcomes and improved quality of life for patients and carers are needed (42).

Dietitians described having a moderate level of confidence to provide care to ED patients, with a strong desire for more training and education in this area (29, 34). There were conflicting views regarding the training received for EDs at university, with some dietitians viewing it as sufficient, while others felt it inadequately prepared them to treat these patients (8, 34). Previous studies have shown a perceived lack of confidence, skill and insufficient training is common among health professionals in ED treatment (46-48). Feelings of frustration, stress and a lack of competence can lead to negative reactions among clinicians and influence their willingness to treat these patients (49-51). Although it is acknowledged that dietitians working in ED treatment should undertake specialist training and supervision, there is an urgent need for a skilled and competent dietetic workforce across the continuum of care (11, 20). One way to address this need is to provide foundational training in tertiary dietetic programs that align with existing practice standards to ensure all dietitians are competent in identifying disordered eating behaviours and making appropriate referrals to experienced clinicians (15, 34). An increased focus on counselling
techniques such as motivational interviewing and behaviour change strategies in dietetic training may also enhance dietitians’ competence in nutrition counselling to assist patients with an ED \(^{(7, 32, 34)}\). Dietitians wanting to specialise in EDs can use existing practice and training guidelines to identify training gaps and pursue suitable professional development activities to further develop their skills and knowledge in this area \(^{(11, 43)}\). The review suggests mentoring and supervision by experienced clinicians is a useful strategy for dietitians to upskill in EDs \(^{(32, 34)}\). This is supported by a recent study which found mentoring and supervision were important professional development activities for dietetic students and recent graduates working with people affected by EDs \(^{(48)}\). Supervision by an expert ED clinician has been shown to effectively upskill novice psychologists and enable similar outcomes to experienced clinicians \(^{(43, 52)}\). Exploring mentoring and supervision in dietetics can offer new insights into whether this can bridge the gap between novice practitioners and ED specialists providing safe and effective care to patients.

A strength of the current review was the inclusion of a range of different study designs. Although cross-sectional and qualitative study designs are considered low quality evidence on the GRADE system \(^{(53)}\), they are the most appropriate design to explore participants experiences and perspectives \(^{(22, 28)}\). Synthesising the findings from multiple study designs is complex and the interpretation of findings can introduce bias \(^{(22)}\). The systematic, rigorous approach and use of methodological frameworks reduced the risk of bias in the present review \(^{(22)}\). The completion of data screening, extraction and quality assessment in duplicate assisted with consistency and further reduced bias \(^{(27, 28)}\). Regular team meetings between researchers throughout the meta-synthesis also added depth and rigour to the findings.

This is the first review to explore the experiences of nutrition care from the perspectives of dietitians, other health professionals, patients, and carers. This review suggests that dietitians have a varied role in the treatment of EDs but desire further training. More studies regarding nutrition care for EDs and the role of dietitians in all settings are needed. Specifically, studies exploring the training needs of dietitians and the impact of credentialing programs on dietetic practice are crucial to understand whether they are meeting the needs of practitioners and translating to positive outcomes for ED patients and carers.
Transparency Declaration

The lead author affirms that this manuscript is an honest, accurate, and transparent account of the study being reported. The reporting of this work is compliant with PRISMA guidelines. The lead author affirms that no important aspects of the study have been omitted and that any discrepancies from the study as planned (The protocol for the review was registered with PROSPERO (CRD: 42020178762) prior to the commencement of screening) have been explained.
References


This article is protected by copyright. All rights reserved


This article is protected by copyright. All rights reserved


This article is protected by copyright. All rights reserved


This article is protected by copyright. All rights reserved
Figure 1. PRISMA flow diagram of views and experiences of dietitians' role in the treatment of eating disorders