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An online educational resource addressing eating disorders during the menopause transition: a brief evaluation study

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Abstract

The biological, psychological and social changes that occur during the menopause transition can contribute to increased risk of eating disorder onset, re-emergence or exacerbation of a pre-existing eating disorder. Owing to a substantial lack of available evidence-based information addressing the intersection of eating disorders and menopause, we co-designed a novel online resource with people with a lived experience of an eating disorder during the menopause transition and other key stakeholders. We previously demonstrated preliminary acceptability and feasibility of this resource. The aim of our study was to conduct a brief evaluation of the online resource with "real world" users. In an approximately 7-month period during 2024, with the resource being hosted on Eating Disorders Victoria's LearnED platform, 279 people enrolled in the resource. The most common resource users were health professionals, particularly dietitians and psychologists. Of these users, almost 40% completed a brief online evaluation survey included within the resource which showed that participants were primarily seeking to understand the intersection of eating disorders and menopause as well as find services for support as their reasons for engaging with the resource. According to the evaluation results, the feedback from users was very positive - they had their learning needs met, were satisfied with the experience and would recommend the resource to others. Although more comprehensive resource evaluation should be completed in the future, our brief evaluation helps to pave the way for expansion of much needed research and resource development in the neglected field of eating disorders intersecting with menopause.

Keywords Menopause, Eating disorders, Education, Resource, Evaluation, Survey, Co-design, Lived experience, Health professional

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Background

Emerging literature has suggested that people experiencing menopause (i.e., the end of ovarian and reproductive functioning that typically occurs in midlife [1]) may be more susceptible to the development, re-emergence and exacerbation of eating disorders (EDs) [2–4]. Preliminary findings suggest that changes in hormones, particularly oestradiol and progesterone, during the transition between pre-menopause and menopause are associated with heightened disordered eating [5]. Moreover, lifestyle changes and weight gain during midlife can result in undesired bodily changes and heightened body dissatisfaction, which can further elevate the risk of ED onset [6–8]. Additionally, ageing-related emotional factors, environmental stressors, and sociocultural pressures promoting a youthful appearance ideal can precipitate intense efforts for appearance and weight control, like disordered eating [9–12].

Concerningly, there is a lack of available information, awareness, and accessible support tailored to the unique challenges of experiencing an ED during the menopause transition [13–15]. To address this issue, we recently co-designed – with Australian-based individuals with a lived experience of EDs in the menopause transition, as well as health professionals, researchers, and ED and women's health advocates – a novel online educational resource which comprehensively explored the intersection of EDs and menopause [16, 17]. Overall, the developed resource was well-received by individuals with a lived experience (the primary target audience) in the co-design process who reported that it was enlightening, empowering, and motivating in regard to treatment-seeking [16]. Based on this positive feedback, the resource was deemed preliminarily feasible and acceptable.

Although these results were positive, we acknowledged that further evaluation of the resource was necessary [16]. Thorough evaluation of online health resources, involving end-users, is highly important, however, it is inconsistently performed [18]. The prevalence of misinformation about menopause [19, 20] and EDs [21–23] is widespread. Therefore, promoting evidence-based resources is crucial to ensure women and those with ovaries, their loved ones, and health professionals have access to accurate information. Furthermore, ensuring user satisfaction is vital to enhance user trust, increase engagement and loyalty, and enable informed decision-making [24]. Accordingly, the aim of the current study was to evaluate our novel co-designed resource with users in a community setting.

Method

Participants and procedure

To access the online resource called "Menopause and Eating Disorders: Understanding the intersection of eating disorders and menopause" [17], participants had to register to access Eating Disorder Victoria's LearnED platform [25], the hosting site of the resource. Access to LearnED and the resource was free of charge for any interested person globally. The resource included 10 sub-sections [16, 17] including a feedback section where users aged 16 and over residing in Australia were invited to complete a 10-minute optional online survey (through Qualtrics) which was anonymous and confidential. The survey was restricted to Australian-based residents as the resource was co-designed specifically for Australian audiences (e.g., specific health organisations recommended are in Australia) although the general information and research presented was of relevance to a global audience. The evaluation period was 7 May 2024 to 31 December 2024. This evaluation study received approval from the Monash University Human Research Ethics Committee (ID: 42003). All participants provided written consent for participation within the survey where those aged 16–17 years were considered sufficiently mature to provide consent for themselves. Participants were not reimbursed for their study participation.

Measures

For the LearnED platform registration component of the evaluation, we were able to determine the number of people who enrolled to access the resource, their engagement with other LearnED resources, geographic location, and user type – person with an ED, carer, or professional (including specific role).

The online survey included questions to understand participant demographics (i.e., age, gender identity, LGBTIQA+community membership, culturally and linguistically diverse identification) and clarify their role in relation to EDs (i.e., person with an ED, carer, professional). The next section asked about participants' reasoning for engaging with the resource, and participants could select multiple responses (e.g., "*To obtain resources/skills from experts*", "*Learn more about eating disorder best practice*", "*Increase knowledge of eating disorder services/pathways*"). To evaluate the participant experience of engaging with the resource and perceived impact/outcomes, 10 items rated participants' level of agreement on a 5-point Likert scale ranging from "*Strongly Disagree*" to "*Strongly Agree*" on the following aspects; addressed reason(s) for engaging with the resource, obtained new skills/tools, satisfied with the experience, would recommend the resource to others, increased knowledge, increased skills, application of learnings to personal/professional lives, felt supported, positively impacted well-being, and more likely to reach out for support. A final open-ended question asked for any other feedback on the resource.

Table 1 Demographic characteristics of survey participants ($N = 85$)

Demographic Characteristic	*n* (%)
Age (Mean, SD)	40.0 (6.3)
Range	29–50
Gender	
Cisgender Woman	80 (94.1)
Gender Diverse	3 (3.5)
Cisgender Man	2 (2.4)
LGBTIQA+	
Did not identify as LGBTIQA+	77 (90.6)
Lesbian	5 (5.9)
Bisexual	3 (3.5)
Culturally and Linguistically Diverse	
Did not identify as Culturally and Linguistically Diverse	79 (92.9)
Chinese	2 (2.4)
Greek	2 (2.4)
Indian	2 (2.4)
Role	
Health Professional	57 (67.1)
Dietitian	22 (25.9)
Psychologist	15 (17.6)
Nurse	10 (11.8)
Counsellor	7 (8.2)
General Practitioner/Medical Doctor	3 (3.5)
Lived Experience	28 (32.9)
Personal	21 (24.7)
Carer/Supporter	7 (8.2)

Data analysis

The Statistical Package for Social Sciences (SPSS, V.30) was used for quantitative statistical analysis. Descriptive statistics were used to analyse participant demographic characteristics and resource feedback statistics. Open-ended qualitative text responses were analysed using an abbreviated content analysis approach [26] given the brevity of responses (i.e., 2–3 sentences maximum).

Results

Participant characteristics

Enrolled participants

A total of 279 participants enrolled in the resource over the ~ 7 month study period. The vast majority were based in Australia ($n = 217$, 77.8%) and was their first enrolment in the LearnED platform ($n = 240$, 86.0%). Participants commonly identified as health professionals ($n = 125$, 44.8%) with dietitians ($n = 38$, 30.4%) and psychologists ($n = 27$, 21.6%) being the most highly represented. People with a lived ED experience (including carer) were the next most common ($n = 84$, 30.1%) followed by other professionals ($n = 70$, 25.1%) who were mostly engaged in ED advocacy roles (e.g., helpline volunteer, peer mentor).

Table 2 Frequencies for reasons for engaging with the menopause and eating disorders resource ($N = 85$)

Reason	*n* (%)
Learn how eating disorders intersect with other areas of health	64 (75.3)
Increase knowledge of eating disorder services/pathways	59 (69.4)
Learn more about eating disorder best practice	55 (64.7)
Learn how to identify risk factors and warning signs	44 (51.7)
Obtain resources/skills from experts	42 (49.4)
Increase understanding/awareness of eating disorders	40 (47.1)
Learn more about eating disorders	38 (44.7)
Discover what support is available and how to access	22 (25.9)
Hear other people's stories	18 (21.2)
Connect with other professionals	12 (14.1)

Survey participants

Eighty-five participants completed the evaluation survey, representing 39.2% of Australian-based users. As seen in Table 1, the majority were cisgender women with a mean age of 40.0 years. The vast majority did not self-identify as LGBTIQA+, but those who did identified as lesbian and bisexual. The vast majority also did not identify with a culture other than Australian or speaking a language other than English at home. However, those who did identified as Chinese, Greek and Indian. Around two thirds identified as health professionals, with dietitians and psychologists being the most common, while others identified as having a lived experience of an ED, with a personal experience being the highest represented. Please note that all subsequent results address only the evaluation survey participants ($N = 85$).

Evaluation

Survey data

As seen in Table 2, the participants selected a wide range of reasons for engaging with the resource, with the most common being a desire to learn more about how EDs intersect with other areas of health.

With regards to participants' experience of engaging with the resource and perceived impact, participants generally responded positively to the resource (see Table 3). Mean scores were in the *"agree"* range (score 4.0) and there were no scores in the *"disagree"* range (score < 3.0). The highest rated items were having their reasons for engaging addressed, satisfaction with the resource, recommending the resource to others, and applying their learnings in their professionals/personal lives. We did explore whether there were any differences in responses from health professionals versus those with a lived experience for all responses and there were no significant differences (all $ps > 0.05$). However, it should be noted that the subgroup sample sizes allowed for detection of only differences with large effects [27] and all effect sizes were less than "small", *Cohen's* $d < 0.2$ [28].

Table 3 Descriptive statistics for the menopause and eating disorders resource evaluation survey items (*N* = 85)

Item	Range	Mean (SD)
Reasons for engaging with the resource addressed	3.0–5.0	4.3 (0.7)
New tools/skills	3.0–5.0	4.0 (0.5)
Satisfied with experience	4.0–5.0	4.3 (0.7)
Recommend resource	4.0–5.0	4.3 (0.7)
Increased knowledge	3.0–5.0	4.1 (0.8)
Increased skills	3.0–5.0	3.6 (0.7)
Application of learnings	3.0–5.0	4.3 (0.7)
Feel supported engaging with the resource	3.0–5.0	4.0 (0.8)
Positively impacted well-being	3.0–5.0	3.8 (0.9)
More likely to reach out for support	3.0–4.0	3.9 (0.4)

Other feedback

A proportion of participants (*n* = 25, 29.4%) responded to the open-ended text question at the end of the survey. The most common theme, noting that participant responses could be coded into more than one theme, was an expression of gratitude/thanks to the resource developers (*n* = 15, 60.0%), followed by positive feedback about the resource content and visual appeal (*n* = 12, 48.0%). Some participants also reported feeling less isolated/alone in their lived experience after engaging with the resource (*n* = 4, 16.0%), and a couple of participants (*n* = 2, 8.0%) provided suggestions for the inclusion of additional weblink support options.

Discussion

Overall, the users of our novel online resource addressing the experience of EDs during the menopause transition. responded positively in our brief evaluation study. Users were primarily seeking a greater understanding of the intersection of EDs with menopause and how to access support services for these issues, and it appeared that their learning needs were generally met. Our resource addresses a highly under-acknowledged area, despite documented concerns over increased ED risk during the menopause transition [2–4]. Our brief evaluation helps to pave the way for expansion of much needed evidence-based resources in this area with accompanied comprehensive evaluation.

Although we co-designed the resource with our primary target audience as lived experience [16], health professionals were the largest cohort of users and evaluation participants, followed by lived experience. It is possible that the registration requirements for the LearnED platform and course style format of the resource were more familiar to health professionals seeking to meet professional development requirements (through a free of charge resource) than those with a lived experience. However, as we found in our co-design, our lived experience participants were particularly eager for health professionals to have access to this information in order to better support their patients [16]. These results also suggest that potentially a more accessible form of the resource, especially for those with a lived experience should be considered. Indeed, the click rates to access the resource landing page were very high suggesting strong interest, but only a portion enrolled. Our ~ 40% evaluation survey completion was much higher than expected based on other research [29], but clearly ~ 60% still chose not to complete.

Our evaluation results are another important demonstration of an extensive co-design process with lived experience resulting in positive results with "real world" users whose needs were generally met, were satisfied with their experiences and were grateful for the learning experience [30–32]. Through our dissemination of evidence-based information, we are also helping to combat misinformation which is unfortunately common in menopause and EDs [19–23]. We strongly encourage public health efforts to join with us and actively address misinformation in public forums, including social media, where unhelpful messages can be readily and quickly spread. For example, testosterone therapy is not a routine component of menopausal hormone therapy for *cisgender* women while it is reported to treat "low mood, brain fog and a loss of vitality" and other menopause-related symptoms on social media [33, 34]. The only evidence-based indication for the use of testosterone in *cisgender* women is for the treatment of *postmenopausal* women who have hypoactive sexual desire disorder [35]. We recommend that public health campaigns and health professionals be willing to acknowledge where the evidence is lacking in menopause and ED topics so people impacted can make the most informed decisions. Even within our resource [17], we fully acknowledge that the research addressing the intersection of EDs and menopause is still emerging and in order to provide the most helpful information, further research is much needed.

Limitations and future directions

Our findings must be interpreted with some limitations in mind. Our evaluation survey was brief, completed by only a portion of users, and an accurate assessment of changes to participant knowledge/skills as a result of engaging with the resource was lacking. With no follow-up evaluation, we also cannot be certain that users actually applied this new information to their personal and/or professional lives. Furthermore, it would have also been useful to ask our participants how they came to learn about the resource for further promotion. As we found in this study, for ~ 86% of enrolled participants, it was their first resource accessed from the LearnED platform so it was probably more likely that they heard about the resource through external sources like mainstream media and social media [36, 37]. Finally, our participants were lacking in demographic diversity (e.g., gender, LGBTIQA+, culturally and linguistically diverse). Future research and development should specifically address and cater for other experiences such as menopause/ED experiences of non-binary and transgender individuals. Their needs are likely to be very different from cisgender individuals as preliminary menopause focused research has shown in non-binary and transgender individuals (e.g., [38]). There is also a great need for more investigation and tailoring for a variety of ethnicities as research suggests that the timing of the menopause transition and symptom severity can differ substantially by ethnicity [39]. It will be important to determine how experiencing an eating disorder may potentially impact timing, symptom severity and other menopause-related experiences.

Conclusions

Overall, we have demonstrated positive feedback in response to a novel online resource addressing a neglected area of research and healthcare – the intersection of EDs and menopause. Further resource development and evaluation will help to optimise the experience for people with a lived experience, health professionals, and the broader community.

Abbreviations

ED	Eating disorder
LGBTIQA+	Lesbian, gay, bisexual, transgender, intersex, queer/questioning, asexual
SD	Standard deviation

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Author contributions

G.S.: Conceptualisation, Methodology, Investigation, Formal Analysis, Writing - Original Draft, Writing - Review & Editing, Supervision, Project Administration. L.B.: Conceptualisation, Methodology, Investigation, Writing - Review & Editing, Project Administration. B.C.: Conceptualisation, Writing - Review & Editing, Project Administration. I.M.: Formal Analysis, Writing - Original Draft, Writing - Review & Editing. S.R.D.: Writing - Review & Editing, Supervision. A.R.: Conceptualisation, Methodology, Writing - Review & Editing.

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Data availability

The datasets generated and analysed during the current study are not publicly available under the participant confidentiality conditions of ethics approval from the Monash University Human Research Ethics Committee.

Declarations

Ethics approval and consent to participate

This study received approval from the Monash University Human Research Ethics Committee (ID: 42003). Participants provided written consent.

Consent for publication

Consent for publication has been obtained.

Competing interests

Professor Susan R. Davis reports having received honoraria from Abbott Laboratories, Besins Healthcare, and Mayne Pharma, has served on Advisory Boards for Mayne Pharma, Astellas Pharmaceuticals, Gedeon Richter, Theramex and Besins Healthcare, and has been an institutional investigator for OvocaBio. The other authors have no conflicts of interest to declare.

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