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Midwives' experiences of discussing health behaviour change within routine maternity care: A qualitative systematic review and meta-synthesis

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ABSTRACT

Problem: Behaviours, such as smoking, alcohol use, unhealthy diet, lack of physical activity and vaccination non-adherence may lead to adverse pregnancy outcomes.
Background: Pregnancy has been identified as an opportune time for midwives to support women to make health behaviour changes.
Aim: To synthesise existing qualitative research exploring midwives' experiences of discussing health behaviour change with women within routine care.
Methods: A systematic search was conducted across: Maternity and Infant Care, PsycINFO, Cumulative Index to Nursing and Allied Health Literature, and Applied Social Sciences Index and Abstracts. Thematic analysis was used to synthesise the data. A professional and public advisory group provided feedback during the synthesis stage.
Findings: Twenty-two studies, published between 2005 and 2023, which represented findings from eight countries, were included in the review. The meta-synthesis revealed three themes: *The midwife-woman relationship; Reflective and tailored behaviour change communication; Practical barriers to behaviour change conversations.* This led to one overarching theme: *Although midwives recognised the importance of behaviour change discussions, these conversations were not prioritised in clinical practice.*
Conclusion: Health behaviour change discussions were de-prioritised in midwives' clinical practice. Future research should explore intervention development to support midwives with their health behaviour change communication.

Statement of significance

Problem or issue

Smoking, alcohol use, unhealthy dietary behaviours, lack of physical activity and vaccination non-adherence may lead to adverse pregnancy outcomes.

What is already known

Pregnancy and the postnatal period is an opportune time for midwives to encourage health behaviour change.

What this papers adds

A synthesis of qualitative research exploring midwives' experiences of discussing health behaviour change with women in routine maternity care. The meta-synthesis revealed that midwives recognised the importance of health behaviour change discussions, but did not prioritise these conversations, highlighting the need for midwives to be supported in clinical practice through the provision of behaviour change training.

Introduction

Unhealthy behaviours increase the risk of non-communicable diseases, such as cardiovascular diseases, cancers, respiratory diseases and diabetes, which account for 73% of global deaths [1]. In pregnancy, these behaviours, such as smoking, alcohol consumption, unhealthy diet, lack of physical activity and non-adherence to vaccination,

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contribute to adverse pregnancy outcomes [2–4]. Smoking has been associated with an increased risk of stillbirth, miscarriage and birth defects, alongside the risk of respiratory conditions, attention and hyperactivity difficulties, learning difficulties, obesity and diabetes for children of women who smoke in pregnancy. [4] The adverse outcomes related to alcohol consumption in pregnancy include miscarriage, preterm birth, low birthweight and fetal alcohol spectrum disorder [2]. Having a raised body mass index (BMI) is also associated with increased risks of pregnancy-related conditions, such as gestational diabetes mellitus and pre-eclampsia and adverse outcomes, such as caesarean birth, preterm birth, large for gestational age babies and admission to the neonatal unit [3]. Non-adherence to vaccination increases women and babies' vulnerability to disease, with influenza increasing risks such as premature birth and reduced birth weight, as well as hospitalisation and admission to intensive care, [5] and coronavirus increasing risks of pre-eclampsia, preterm birth and stillbirth [6].

Although there are risks of adverse pregnancy outcomes, many pregnant women continue to engage in unhealthy behaviours [7–11]. A global meta-analysis including over one million women, revealed that 47% had higher gestational weight gain than recommended. [7] Furthermore, in a systematic review across 22 countries, 59% of studies indicated that pregnant women had a low level of physical activity. [11] The global prevalence rate for smoking in pregnancy has been estimated to be 21% [10] and it has been determined that globally 9.8% of pregnant women consume alcohol. [8] The uptake of vaccinations is also suboptimal, with rates of influenza vaccination for pregnant women estimated to be 8.7% across Europe and 49.1% in the US, both considerably lower than national targets of 75% and 80% respectively [9].

By engaging in healthy behaviours, women could positively impact their physical and mental health. Pregnancy has been identified as a unique opportunity to promote healthy behaviours, through its recognition as a Teachable Moment; [12] a health or life event that presents an opportunity for health behaviour change. [13,14] Pregnancy is considered a Teachable Moment as an individual experiences risk relating to their health and their baby's health and their perceived value of healthy behaviours increases [12]. Pregnancy also elicits emotional responses and re-defines an individual's self-concept, through becoming a mother and role model [12]. The Capability-Opportunity-Motivation-Behaviour Framework (COM-B) has also been applied to pregnancy, [15–19] theorising that experiences and psychological factors that may influence behaviour change in pregnancy not only increase women's motivation, but also their capabilities and opportunities for healthy behaviours. However, when assessed in their ability to explain dietary behaviours, the COM-B framework and Teachable Moment model were not able to sufficiently explain all behaviours, suggesting that a pregnancy-specific model which accounts for the transient nature of these factors is necessary [19]. Nevertheless, it is critical for behaviour change interventions to be underpinned by psychological theory, to target theoretically-informed causal determinants of behaviour [20–23]. Therefore, the Teachable Moment model and COM-B framework provide a theoretical underpinning for pregnancy as an opportunity for health behaviour change.

As the primary maternity care provider for most women in many countries, midwives are in an optimal position to support behaviour change during pregnancy and the postnatal period. [24–29] Midwives have high levels of contact with women [28,29] and are women's preferred healthcare professional to discuss health behaviours with. [30,31] However, women report that they do not consistently receive behaviour change advice. [31] It is critical that midwives are capitalising upon these opportunities.

Considerable qualitative research has investigated midwives' experiences of providing behaviour change conversations. However, there has not yet been a synthesis of this growing body of evidence. A meta-synthesis enables findings across qualitative studies to be analysed to provide in-depth understandings beyond those of individual studies, and are a valuable evidence source for informing healthcare policy and practice. [32] Therefore, this qualitative systematic review and meta-synthesis aimed to explore midwives' experiences of discussing health behaviour change with women within routine care.

Methods

This systematic review was conducted in accordance with PRISMA guidelines [33]. The protocol was published on the PROSPERO International prospective register of systematic reviews on 19th January 2023 (reference: CRD42023383880).

Eligibility criteria

Studies were included which researched midwives' experiences of providing health behaviour change discussions within routine care. The inclusion and exclusion criteria were specified using the SPIDER framework, [34] see Table 1. To focus on midwives' experiences, studies which included other participants, such as doctors or pregnant women, were excluded, unless the midwives' data were able to be extracted. The health behaviours included were dietary behaviours, physical activity, smoking, alcohol use, vaccination and supplementation, as these are recommended to be discussed within antenatal and postnatal care. [28,35] Papers relating to substance use disorders, mental health disorders or other medical or social factors were considered out of the scope of this review, as they are outside the remit of routine care, and care for women with these complex needs introduces additional barriers for midwives. [36] Furthermore, national guidelines have separate guidance on complex social factors, mental health and raised BMI. [37–39] Included studies needed to have employed qualitative data collection and analysis

Table 1
Inclusion and exclusion criteria specified using the SPIDER framework.

SPIDER	Inclusion Criteria	Exclusion Criteria
Sample	Midwives with the relevant midwifery registration for their country, e.g. in the UK, they are registered with the Nursing and Midwifery Council (NMC)	Student midwives or other healthcare professionals, e.g. doctors, nurses, health visitorsStudies where qualitative data from midwives cannot be extracted from that of other health professionals and/or womenStudies which focus on midwives' interactions with women under the age of 18
Phenomenon of Interest	Studies focusing on midwives' experiences of providing health behaviour change discussions during routine antenatal or postnatal careHealth behaviour change discussions include; diet, physical activity, smoking, alcohol use, sedentary behaviours, vaccination and pregnancy vitamin supplementation	Studies which focus on other health behaviours, e.g. breastfeeding, contraceptionStudies which focus on mental health disorders or substance abuse disorders and therefore are not a part of routine careStudies which relate to a new intervention that is not a part of routine care
Design	Qualitative data collection and analysis methods, e.g. interviews or focus groups, thematic analysis	Quantitative data collection and analysis methods, e.g. randomised controlled trialsSurvey methods, where there is no follow up
Evaluation	Midwives experiencesResearch where alternative terminology is used for experiences, e.g. attitudes, beliefs, practices	
Research type	Qualitative studies with qualitative data collection and analysisMixed-methods studies, where qualitative data can be extracted	Quantitative studies

methods, or if it is a mixed-methods study, this qualitative data should be able to be extracted. [40] It was decided to exclude surveys which provided qualitative data, as the Cochrane Handbook for Systematic Reviews (2022) state these data should not be prioritised, as there may lack conceptual detail, whereas a stronger synthesis can be developed using rich qualitative evidence. [40].

Search strategy

A search was conducted across four databases: Maternity and Infant Care, PsycINFO, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Applied Social Sciences Index and Abstracts (ASSIA) in January 2023. The search terms were finalised after a scoping exercise and feedback from a University librarian, for which amendments were made. [41] The terms were adapted for individual database requirements, see Supplementary file 1. No limitations were placed on language or year of publication, to reduce language or publication bias. [41] Grey literature was searched using the Monash University grey literature library, which contains research produced outside of traditional publishing channels. [40,42] However, ultimately no grey literature met the inclusion criteria. Hand searching of literature referenced in included studies was also conducted, [40] which generated six papers.

Study selection

The results from each database were imported into EndNote x7 and duplicates were removed in EndNote x7. Following the eligibility criteria, titles and abstracts were screened for inclusion. [41] A random sample of 5% of the studies were screened by an independent reviewer (VV). To obtain this sample, a number was assigned to each study and a random number generator was used. The inclusion and exclusion decisions were compared between the first researcher (HT) and an independent reviewer (VV) and an inter-rater reliability assessment was conducted to determine consistency between reviewers and as a measure of reliability of the screening. [43] The percentage agreement was 97.78% and the Cohen's Kappa statistic demonstrated a substantial agreement, $k = 0.63$, (95% CI, 0.37 to 0.88). Disagreements were discussed and resolved between a third reviewer (DS) and when needed, the wider research team. [41].

The full-text of included studies were then screened for inclusion. A random 10% of studies were screened by an independent reviewer (VV). The percentage agreement was 88.24% and the Cohen's Kappa statistic demonstrated a moderate agreement, $k = 0.60$, (95% CI, 0.45 to 0.74). Disagreements were resolved after discussion with the research team. [41].

Procedures for screening qualitative research remain relatively under-developed and the role of a second reviewer is less clearly defined [40,44]. In qualitative screening, researchers should aim for a manageable process, which can identify studies that will contribute to the conceptual synthesis, with transparent reporting of reviewers' roles, [40,44] as opposed to obtaining all evidence to ensure statistical representativeness, as in quantitative reviews. [41] The chosen methodology is consistent with these qualitative aims and other peer-reviewed qualitative systematic reviews [45–47].

Quality appraisal

All studies were assessed for quality using the Critical Appraisal Skills Programme (CASP) checklist for qualitative research. [48] The CASP checklist is the most commonly used tool in healthcare evidence synthesis. [49] To utilise the tool, the reviewer answers yes or no to ten questions assessing different research elements. Traditionally, this tool does not require studies to be ranked, however, recent research has enhanced the utility of the tool, demonstrating a method to determine if studies are low, medium or high quality and then apply appropriate weighting. [50] Organising the synthesis based on quality allows all studies to contribute, whilst moderating the impact of lower quality studies, enabling their findings to strengthen the findings from higher quality studies. [50] In this review, four studies were appraised as medium quality and eighteen of high quality, see Supplementary file 2. No studies were removed after quality appraisal. A random sample of 10% of the studies were assessed by an independent reviewer (VV) and 100% agreement was reached. [40,43].

Professional and public advisory group

A professional and public advisory group, consisting of two service users, two midwives and a General Practitioner, provided valuable contributions to the research. [51] The group engaged with a presentation to ensure a shared understanding. [52] The group then ranked twelve health behaviours in order of importance to be researched, where they prioritised the five health behaviours included in this review within their top six of importance; providing confirmation that the health behaviours chosen are not only those prioritised within guidelines, [28] but are also important to a group of service-users and health professionals. The group provided feedback on the meta-synthesis, where they correctly paired the majority of themes and quotes, signifying that they represented each other well. The group confirmed that the findings characterised their personal and professional experiences.

Analysis

The analysis was conducted in accordance with Thomas and Harden's (2008) thematic synthesis method [53] by two researchers (HT and DS). [40,41] Both researchers analysed 10% of the studies and discussed their findings to ensure consistency, then continued to independently analyse the remaining studies. First, the analytical data from each study were extracted and transcribed. The first stage of synthesis involved each line of text being given a code to capture its meaning. This coding enabled the translation of concepts between studies, as codes remained consistent, with new codes developed when needed. To weight the synthesis based on quality, the findings from high quality studies were coded first, then these codes were used for the remaining studies, with new codes being generated when appropriate. [50] The second stage of synthesis involved identifying similarities and differences between codes, and organising codes into related groups, where descriptive themes captured their meaning. In the final stage, researchers moved beyond the original findings and generated additional concepts in relation to the research question, where analytical themes were developed, see Supplementary file 3 for an example of this process. After completion of individual analysis, the researchers agreed on the final analytical themes.

Findings

Study selection

The search identified 8322 results, and after duplicates were removed, 7206 titles and abstracts were screened. The full-text of 171 studies were reviewed and 22 studies were included. [54–75] See Fig. 1. for the PRISMA flow diagram of the study selection process. [33].

Study characteristics

Studies were conducted across eight countries, mostly in the UK [58,63,65,68–71] (including the Channel Islands) *(n = 7)* and Australia [55,59–62,72] *(n = 6),* from 2005 to 2023. Sample sizes ranged from seven to 53 and provided data from 410 midwives. 20 studies were qualitative [54–64,66–71,73–75] and two were mixed-methods. [65,72] The studies focused on smoking [54,59,61,68–70] *(n = 6)*, dietary behaviours [55,56,74,75] *(n = 4)*, general health promotion [57,63,65,67] *(n = 4)*, physical activity [58,64,66] *(n = 3)*, vaccination [60,62,72]

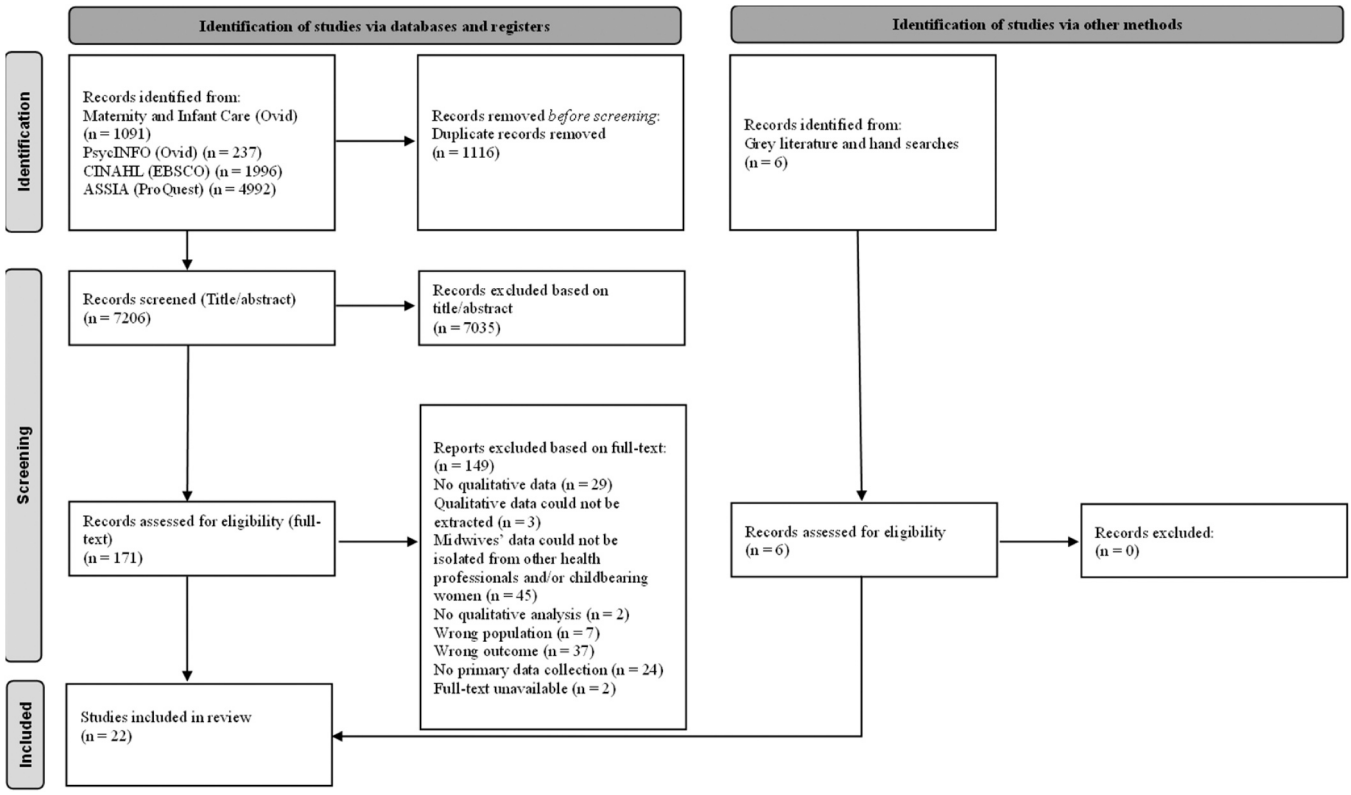

Fig. 1. PRISMA flow diagram of the study selection process. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. Int J Surg. 2021;88(105906):1–9.

(n = 3), and alcohol use [71,73] *(n = 2)*. The studies explored midwives' experiences in the antenatal period [54,56–62,64–66,68,70–75] *(n = 18)*, both the antenatal and postnatal periods [55,63,67] *(n = 3)* and the postnatal period alone [69] *(n = 1)*. See Table 2. for study characteristics.

Meta-synthesis

The meta-synthesis identified three themes: *The midwife-woman relationship; Reflective and tailored behaviour change communication; Practical barriers to behaviour change conversations.* Each theme was supported by a number of sub-themes. These themes led to one overarching theme: *Although midwives recognised the importance of behaviour change discussions, these conversations were not prioritised in clinical practice.* Quotes are provided to illustrate the findings and additional quotes are provided in Table 3. See Fig. 2. for a thematic diagram and Supplementary file 4. for the allocation of themes across studies.

Overarching theme: Although midwives recognised the importance of behaviour change discussions, these conversations were not prioritised in clinical practice

Midwives recognised pregnancy and the postnatal period as an opportune time for women to engage in health behaviour change. They viewed health behaviour change discussions as an important part of their role and recognised they are in an optimal position to support women.

"I think it's a huge window of opportunity for midwives." [65]

"I think public health is an essential part our role." [65]

However, in clinical practice, midwives did not prioritise these conversations. This de-prioritisation was due to fear of jeopardising the midwife-woman relationship, the need to individualise their approach and various practical barriers; these are presented as three themes below.

Theme 1: The midwife-woman relationship

Midwives felt the midwife-woman relationship was central to their role as a midwife and necessary to provide excellent midwifery care. Midwives valued the creation of this relationship, and therefore were hesitant to jeopardise this. In terms of behaviour change, midwives felt a strong relationship was necessary to facilitate effective conversations, yet also felt that health behaviour change discussions could have a negative impact on this relationship. This concern for the relationship created a challenge for midwives, as they must navigate the internal conflict of protecting the established rapport and safe environment, yet recognised their professional duty to discuss health behaviour change.

"Sometimes it feels as if you're being eaten up, inasmuch as you have a special relationship with the woman because you meet so many times. You want to be professional and give the facts in a good way and at the same time create a sense of security. It's quite difficult. You don't want to be known as a nagging old cow." [54]

Two sub-themes supported this theme.

Sub-theme 1: the midwife-woman relationship was required for effective behaviour change conversations

Midwives felt that developing a relationship with women enabled them to understand the woman and foster an environment of trust and respect. The midwives felt relationship-building was a pre-requisite for productive health behaviour change discussions, as they felt these conversations were sensitive and emotive for women, and a safe environment was needed to allow women to feel comfortable without fear of judgement.

"It's that, trying to provide continuity of care and trying to build up relationships so that women do feel safe to give you that information." [63]

Table 2
Characteristics of the included studies.

Author (Year)	Location	Health Behaviour	Title	Aim	Context	Midwife sample size	Stage of maternity care	Data Collection	Data Analysis
Abrahamsson et al. (2005) [54]	Sweden	Smoking	Some lessons from Swedish midwives' experiences of approaching women smokers in antenatal care	To describe the qualitatively different ways in which midwives make sense of how to approach women smokers	Antenatal care	*n = 24*	Antenatal	Face-to-face interviews	Thematic analysis
Arrish, Yeatman and Williamson (2017)[55]	Australia	Dietary behaviours	Midwives' role in providing nutrition advice during pregnancy: Meeting the challenges? A qualitative study	To gain further understanding of midwives' perceptions of their role, particularly the effect of the model of care on the way they provide nutrition advice, the barriers that hinder their role, and the facilitators that may help them to provide better nutrition advice to pregnant women	All types of maternity care setting	*n = 16*	Antenatal/ postnatal	Telephone semi-structured interviews	Braun and Clarke (2006) thematic analysis
Beulen et al. (2021)[56]	Netherlands	Dietary behaviours	What is needed to facilitate healthy dietary behaviours in pregnant women: A qualitative study of Dutch midwives' perceptions of current versus preferred nutrition communication practices in antenatal care	To explore midwives' perceptions of current and preferred nutrition communication practices in antenatal care, and to identify what is needed to achieve their preferred practices	Primary or secondary care in urban and rural locations	*n = 20*	Antenatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Dayyani, Lou and Jepsen (2022)[57]	Denmark	General health promotion	Midwives' provision of health promotion in antenatal care: A qualitative exploratory study	To explore how Danish midwives experienced antenatal care and practiced health promotion	Antenatal care in two hospitals	*n = 18*	Antenatal	Face-to-face semi-structured interviews *(n = 8)* and focus groups *(n = 2)*	Braun and Clarke (2006) thematic analysis
De Vivo and Mills (2019)[58]	England, UK	Physical activity	"They turn to you first for everything": insights into midwives' perspectives of providing physical activity advice and guidance to pregnant women	To gain insight into midwives' perspectives of providing physical activity advice and guidance to pregnant women	Ten antenatal clinics	*n = 10*	Antenatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Ebert et al. (2009)[59]	Gosford, Australia	Smoking	Midwives' interactions with women who smoke in pregnancy	To find out how midwives currently interact with women who smoke in pregnancy, in relation to the women's health and wellbeing	Community	*n = 7*	Antenatal	Face-to-face interviews	Thematic analysis
Frawley et al. (2020)[60]	Australia	Vaccination	Midwives' role in the provision of	To explore midwives'	Public and private	*n = 23*	Antenatal	Telephone semi-	Thematic analysis

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Table 2 (*continued*)

Author (Year)	Location	Health Behaviour	Title	Aim	Context	Midwife sample size	Stage of maternity care	Data Collection	Data Analysis
			maternal and childhood immunisation information	experiences of discussing maternal and childhood immunisation with women and their partners and their confidence in answering parent's questions	hospital settings and private practice			structured interviews	
Kalamkarian et al. (2023)[61]	South Australia	Smoking	Smoking cessation care during pregnancy: A qualitative exploration of midwives' challenging role	To understand midwives' perspectives on current practice, perceived barriers and facilitators to delivery of smoking cessation care, and potential improvements to models of smoking cessation care	Hospital-based care *(n = 43)* and a Midwifery Group Practice *(n = 10)*	*n = 53*	Antenatal	Focus groups *(n = 5)*	Braun and Clarke (2006) thematic analysis
Kaufman et al. (2019)[62]	Victoria and Perth, Australia	Vaccination	Vaccine discussions in pregnancy: interviews with midwives to inform design of an intervention to promote uptake of maternal and childhood vaccines	To gather qualitative data from midwives to inform the design of a feasible and acceptable vaccine communication intervention package building on an evidence-based model utilized with US obstetricians	Two tertiary public hospitals	*n = 12*	Antenatal	Face-to-face and telephone semi-structured interviews	King (2012) template analysis
Lee, Haynes and Garrod (2012)[63]	North West England, UK	General health promotion	Exploring the midwife's role in health promotion practice	To explore midwives' opinions and working practice on health promotion	All types of maternity care in three NHS Trusts	*n = 15*	Antenatal/ postnatal	Face-to-face semi-structured interviews	Thematic analysis
Lindqvist et al. (2014)[64]	Sweden (North, Mid and Southern)	Physical activity	"An on-going individual adjustment": a qualitative study of midwives' experiences counselling pregnant women on physical activity in Sweden	To explore how Swedish midwives experience the counselling of pregnant women on physical activity, specifically focusing on facilitators and barriers during pregnancy	Antenatal clinics	*n = 41*	Antenatal	Focus groups *(n = 8)*	Graneheim and Lundman (2004) qualitative manifest and latent content analysis
McLellan et al. (2019)[65]	Scotland, UK and worldwide	General health promotion	Investigating midwives' barriers and facilitators to multiple health promotion practice behaviours: a qualitative study using the theoretical domains framework	The aim of the study was to investigate the barriers and facilitators midwives perceive to undertaking health promotion practice behaviours	Community	*n = 11 The sample included a further 505 midwives not included in this review*	Antenatal	Face-to-face semi-structured interviews *There was also an online questionnaire not included in this review*	Hsieh & Shannon (2005) qualitative content analysis

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Table 2 (*continued*)

Author (Year)	Location	Health Behaviour	Title	Aim	Context	Midwife sample size	Stage of maternity care	Data Collection	Data Analysis
Okafor and Goon (2021)[66]	South Africa (Buffalo City Municipality, Eastern Cape Province)	Physical activity	Providing physical activity education and counselling during pregnancy: A qualitative study of midwives' perspectives	To explore a cohort of midwives' perspectives on providing prenatal physical activity education and counseling during pregnancy	12 community antenatal clinics	*n = 17*	Antenatal	Face-to-face semi-structured interviews	Tesch content analysis
Owusu-Addo (2015)[67]	Ghana (Northern and Upper East regions)	General health promotion	Midwives' perceptions and experiences of health promotion practice in Ghana	To explore midwives' perceptions and experiences of health promotion practice in Ghana	Attending a contraceptive training programme	*n = 21*	Antenatal/ postnatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Randall (2009)[68]	England, UK	Smoking	Midwives' attitudes to smoking and smoking cessation in pregnancy	To explore seven midwives' attitudes towards smoking and smoking cessation in pregnant women	Antenatal care and carried out bookings	*n = 7*	Antenatal	Face-to-face semi-structured interviews	Sanders (2003) thematic analysis of phenomenological data
Reardon and Grogan (2019)[69]	Jersey, Channel Islands, UK	Smoking	Talking about smoking cessation with postnatal women: exploring midwives experiences	To explore midwives' experiences of talking to postnatal women about smoking cessation	One health service	*n = 7*	Postnatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Reardon and Grogan (2016)[70]	Jersey, Channel Islands, UK	Smoking	Talking about smoking cessation with pregnant women: Exploring midwives' accounts	To use interviews to explore midwives' experiences of talking to pregnant women about smoking cessation	One NHS hospital	*n = 8*	Antenatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Scholin et al. (2018)[71]	Liverpool, England, UK and Orebro County, Sweden	Alcohol use	"I think we should all be singing from the same hymn sheet"- English and Swedish midwives' views of advising pregnant women about alcohol	To explore perceptions and practices of providing alcohol advice to pregnant women among frontline midwives in England and Sweden	Community, and specialist settings and local general practices	*n = 16*	Antenatal	Face-to-face semi-structured interviews	Braun and Clarke (2006) thematic analysis
Smith, Gum and Thornton (2021)[72]	South Australia	Influenza vaccination	An exploration of midwives' role in the promotion and provision of antenatal influenza immunisation: A mixed methods inquiry	To investigate the role of midwives in the promotion and provision of antenatal influenza vaccine and, to provide a statistical and thematic description of the barriers and enablers midwives encounter	Birth and assessment, antenatal, postnatal, Child and Family Health Service and General Practices	*n = 10*	Antenatal	Face-to-face semi-structured interviews *(n = 5)* and telephone semi-structured interviews *(n = 5)* *There was also a cross-sectional on-line survey not included in this review*	Schneider (2013) iterative thematic analysis
Van der Wulp, Hoving and de Vries (2013)[73]	Netherlands	Alcohol use	A qualitative investigation of alcohol use advice during pregnancy: Experiences of Dutch midwives, pregnant women	To explore the advice Dutch midwives give and the information Dutch pregnant women and partners of	Solo or group practice in urban and rural locations	*n = 10* *The sample also included 25 pregnant women*	Antenatal	Telephone semi-structured interviews *(n = 3)* and face-to-face semi-structured	Krippendorff (1980) and Patton (1990) qualitative content analysis, categories based on the I-Change model

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Table 2 (*continued*)

Author (Year)	Location	Health Behaviour	Title	Aim	Context	Midwife sample size	Stage of maternity care	Data Collection	Data Analysis
			and their partners	pregnant women receive about alcohol consumption in pregnancy		*and nine partners not included in this review*		interviews *(n = 7) There were also focus groups and semi-structured interviews not included in this review*	
Wennberg, Hornsten and Hamberg (2015)[74]	Sweden	Dietary behaviours	A questioned authority meets well-informed pregnant women- a qualitative study examining how midwives perceive their role in dietary counselling	To describe how midwives perceive their role and their significance in dietary counselling of pregnant women	Antenatal care	*n = 21*	Antenatal	Semi-structured telephone interviews *(n = 17)* and face-to-face interviews *(n = 4)*	Kippendorf (2013) and Graneheim and Lundman (2004) qualitative content analysis
Wennberg, Hamberg and Hornsten (2014)[75]	Sweden	Dietary Behaviours	Midwives' strategies in challenging dietary and weight counselling situations	To explore midwives' strategies when faced with challenging dietary counselling situations	Antenatal care	*n = 17*	Antenatal	Telephone semi-structured interviews	Graneheim and Lundman (2004) qualitative content analysis

Sub-theme 2: midwives feared behaviour change discussions could jeopardise the relationship

Although midwives argued that a strong relationship was required for behaviour change discussions, they were also concerned that addressing unhealthy behaviours could potentially jeopardise it. Midwives worried that women may find these conversations unacceptable, as they are personal choices, which could negatively impact the women's perception of them as health providers. Therefore, discussing behaviour change was a risk for midwives, as they did not want to be perceived as judgemental and cause a breakdown in communication, and so often avoided these conversations.

> "We're trying to create that relationship with them, you don't – if it is quite an emotive support for them, you don't want to come across being the big, bad midwife who's telling them they shouldn't smoke … I will talk about sort of the risks, and then they say, "Okay, I understand," and then you might just, for that day, leave it there, just because you know you're trying to build that relationship rather than getting them offside straight away." [61]

Theme 2: reflective and tailored behaviour change communication

It was apparent that behaviour change discussions required midwives to reflect on women's needs, in order to understand individuals and tailor their communication, enabling them to provide holistic care and foster informed choice and empowerment. However, by considering women's individual needs, midwives often judged behaviour change conversations to be inappropriate. The three sub-themes below describe the aspects that midwives reflected upon, including women's beliefs and motivations, their individual circumstances, and the midwives' own beliefs about health behaviours.

> "Of course, it [counselling] is an individual thing because the women who come to us are so very different from one another. Some talk about certain things while others have such difficulties socially that there is no use in trying. They're not in situations where diet and physical activity are appropriate topics for discussion. So, for me, there is a constant need to adapt, which makes this line of work both fascinating and difficult." [64]

Sub-theme 1: midwives reflected on women's beliefs and motivations

Midwives considered women's beliefs and motivations in regards to their health behaviours, recognising that some women welcome health behaviour change conversations in pregnancy, as they are concerned for their health and the health of their baby. However, for others midwives recognised unhealthy behaviours are a normalised part of their lifestyle and they are not receptive to advice. The midwives reflected on their perception of women's beliefs and motivations and considered the appropriateness of discussing behaviour change.

> "Most women are quite receptive to that because they know they're pregnant and know it's not just about their health anymore." [65]

> "A lot of women out here that's just their lifestyle. That's what they've grown up with. Drugs is normal for them. Smoking is normal for them." [61]

The midwives also noted that if women were not responsive to advice, they may withhold information about the extent of their unhealthy behaviours, through fear of judgement.

> "… I wonder if my clients are honest. In my whole career, there was only one client who admitted that she found it difficult not to drink alcohol. I do not believe she was the only one in over ten years." [73]

Midwives also believed that if the woman had already received an abundance of information, they would not be responsive to receiving further information on behaviour change.

> "I mean, they must just feel bombarded with information. So, I don't know how much actually gets through to be quite honest." [63]

Sub-theme 2: midwives reflected on women's circumstances

Midwives considered women's individual circumstances and the

Table 3
Additional illustrative quotes.

Theme		Quote
Although midwives recognise the importance of behaviour change discussions, these conversations are not prioritised in clinical practice		*I believe that health promotion underpins every midwife's practice, and it's their responsibility to empower women to take their own control over their own lives; not, not to say to them like in an accusatory way, but to help people to, women, to take charge of their own health, and to hopefully get a healthy lifestyle so they'll have a healthy pregnancy and a healthy outcome.* [63]
The midwife-woman relationship	The midwife-woman relationship is required for effective behaviour change conversations	*I think midwives are health promoters. Health educators. I think midwives have a unique opportunity to engage with women at that level and if you're providing, if you're a continuity of carer, so that means that a woman's having care from a known midwife then basically throughout the pregnancy you can establish a relationship of trust and respect, and then you can work with the women more closely with regards to their specific lives. support her to provide good nutrition for her family.* [55]
	Midwives fear behaviour change discussions could jeopardise the relationship	*We also think that it is something that I, or that we as midwives, consider important. And not everyone wants you to interfere with what they are eating. So there is a bit of a tension field there, because you are touching their private choices. […] You also want to keep your treatment and trust relationship good, and not be the one who is going to shout down from the ivory tower what would be good for you.* [56]
Reflective and tailored behaviour change communication	Midwives reflect on women's beliefs and motivations	*Sometimes women don't always inform you that they smoke. I think they think that you're going to judge them so it's just a case of keep giving the information.* [63]
		There's a lot to get across, you know, there's all the stuff around infant feeding which is very important. There's the other stuff around sudden infant death syndrome. You're talking to them about food, you're talking to them about the role of the health visitor and developmental stuff, and drinking and breast feeding, and then we go to smoking as well. It's an awful lot of information coming their way in the early postnatal period. [69]
	Midwives reflect on women's circumstances	*There are many [women who have migrated] who are afraid, who won't go outside on their own, and there may be many reasons why they're reluctant to do so. Many don't know their way around, so I make a point of telling their husbands: "You need to walk with her on the same route several times so she gets to know the way. Then she can walk on her own." Others tell me that they've never been out on their own, that they're not allowed to do so. They have to go with a cousin, mother, brother, or someone else.* [64]
		The only exercise, there's only a small amount of women who would take up anything remotely official, exercise like swimming or yoga or gym and that's the ladies who have good jobs or husbands with good jobs, they only have one child at home, perhaps two maximum, those who can afford the time and the money. [58]
	Midwives reflect on their own health behaviours	*[My own smoking is] not something that I would bring up, but I don't have a problem saying to people that I do if they've asked. But then I suppose it's like the pot calling the kettle black, isn't it? At the end of the day, I don't really find it's a problem. If anything, I suppose I can understand more, the difficulties through trying to stop myself in the past.* [69]
Practical barriers to behaviour change conversations	Time constraints and competing tasks	*To be fair, I'm sure my colleagues will say the same thing, we asked them about exercise and we have a little tick box which we do during the booking, umm, the initial booking, umm, appointments, however, we don't kind of explore that any further.* [58]
		I'd say [health behaviour change is] definitely secondary though, obviously check the woman's blood pressure, making sure she's well, doing urine analysis, making sure there's no infections, ruling out preeclampsia, listening to baby. That comes first and everything else, I think, would come second to that. [65]
	Lack of knowledge and skills	*Um, I felt quite unprepared for vaccination when I first came out. It was one of the areas that I felt like I had to go and find information, for myself. So, I did feel like that was one of the areas that I wasn't prepared to really be*

(continued on next page)

Table 3 (*continued*)

Theme		Quote
		in depth discussions with them about what they actually are and what they're protecting against. [60]
	Need for resources and effective multi-disciplinary working	*I think, umm, midwives can do the initial umm, talk, because it isn't rocket science, everyone can give a little talk on the importance of, uh, exercise and as you said incorporate it with, it's walking, or perhaps taking the children swimming, playing in the park, that sort of thing. But it would be nice to have something then we can say, if you like to know more about this, this is where you go to or if you're happy, like with smoking, it's filling out a form and send it off and then someone will contact them.* [58] *I have referred women back that I've seen at the beginning that have stopped seeing you guys [stop-smoking service] and started smoking again and then I've done a re-referral back in. I did find once I tried to do re-referral back in on the phone and they wouldn't have it. They said I had to fill in a form and everything which then, you know in those situations in a busy clinic. I did re-fill in a form, but you might find that there are some people in that situation that would just be, "Oh, I just haven't got time to be doing that."* [70]

associated barriers to behaviour change. They considered women's living situations and socio-economic status, recognising that access to healthier foods and opportunities for physical activity may be limited by environmental and financial barriers. They considered that those with a higher socio-economic status, family support and more available time, may find engaging in healthier behaviours more accessible. Reflecting on this affected whether midwives felt it was a priority to discuss health behaviour change.

> "The other thing is I think as midwives we are very conscious that sometimes the women that we're dealing with come from difficult circumstances so, you know, buying fresh fruit and vegetables might be difficult or cooking in your facility might be difficult, so you tend to opt for the easiest option and that often isn't the best in terms of nutrition. That's where. the social determinants of health affect a midwife's ability to engage with a woman in regards to her nutrition." [55]

The midwives also reflected upon women's cultural circumstances, recognising that those who have migrated from another country may experience different challenges, such as living in unknown surroundings or difficulty pursuing activities alone, which may act as barriers to engaging in healthy behaviours.

> "People have different priorities in life. If your life involves having migrated from somewhere else and you're trying to adapt, then physical activity is not your first priority…" [64]

The midwives recognised the influence of women's support networks, acknowledging the difficulty of receiving conflicting advice from friends and family and the social pressure to engage in unhealthy behaviours.

> "I really think it's like a big family and friends thing. Like I really think it would be so hard to quit when your whole support network smokes, and I think it's a lot of misinformation from like their mums or dads. They're like, 'No, don't worry about [smoking].' … Or like, 'It's a good thing. You want a little baby." [61]

Sub-theme 3: midwives reflected on their own health behaviours

It was apparent in some studies that when midwives discussed behaviour change, they also reflected on their own health behaviours and were concerned that women may recognise that they engaged in unhealthy behaviours, and judge them as unsuitable to have these discussions. Yet, some midwives felt that engaging in unhealthy behaviours allowed them to relate to the women's difficulties with behaviour change.

> "I think midwives find it really difficult because if you're big yourself they're looking at you thinking: 'well, she's got a cheek', if you're small they're looking at you thinking: 'you have never had a problem in your life.'" [65]

Theme 3: practical barriers to behaviour change conversations

Midwives identified various practical barriers that made it challenging to initiate behaviour change discussions and led to discussions being de-prioritised. The midwives lacked time and needed to manage competing tasks, they also lacked knowledge and skills in these conversations, as well as lacking resources and effective multi-disciplinary working. Three subthemes further support this theme.

Sub-theme 1: time constraints and competing tasks

Behaviour change conversations were often considered a low priority compared to other clinical tasks that were deemed more essential. This de-prioritisation was heightened by the increasing responsibilities that midwives managed, with a limited amount of time to complete all duties.

> "Time's the biggest thing really, 'cos when you start asking them you know, you can be running late, they could have been booked in for a 15 min slot instead of a 30 min slot, so things like that [health promotion], that's the first thing that goes out of the window, because that's not the most, that's not the information, you know you don't necessarily need that information to continue the booking." [63]

Time constraints often led to midwives addressing behaviour change in a routine way by asking about women's health behaviours and documenting this, but without further discussion of how they were able to support women with behavioural change.

> "We've got to tick boxes, we've got to tick that we've discussed alcohol, we've discussed smoking." [65]

Sub-theme 2: lack of knowledge and skills

Although midwives were confident in their knowledge of appropriate health behaviours in pregnancy, they recognised this knowledge was often lacking in depth and acknowledged skill deficits in behaviour change communication. Midwives understood the need to keep their knowledge up-to-date and welcomed further education.

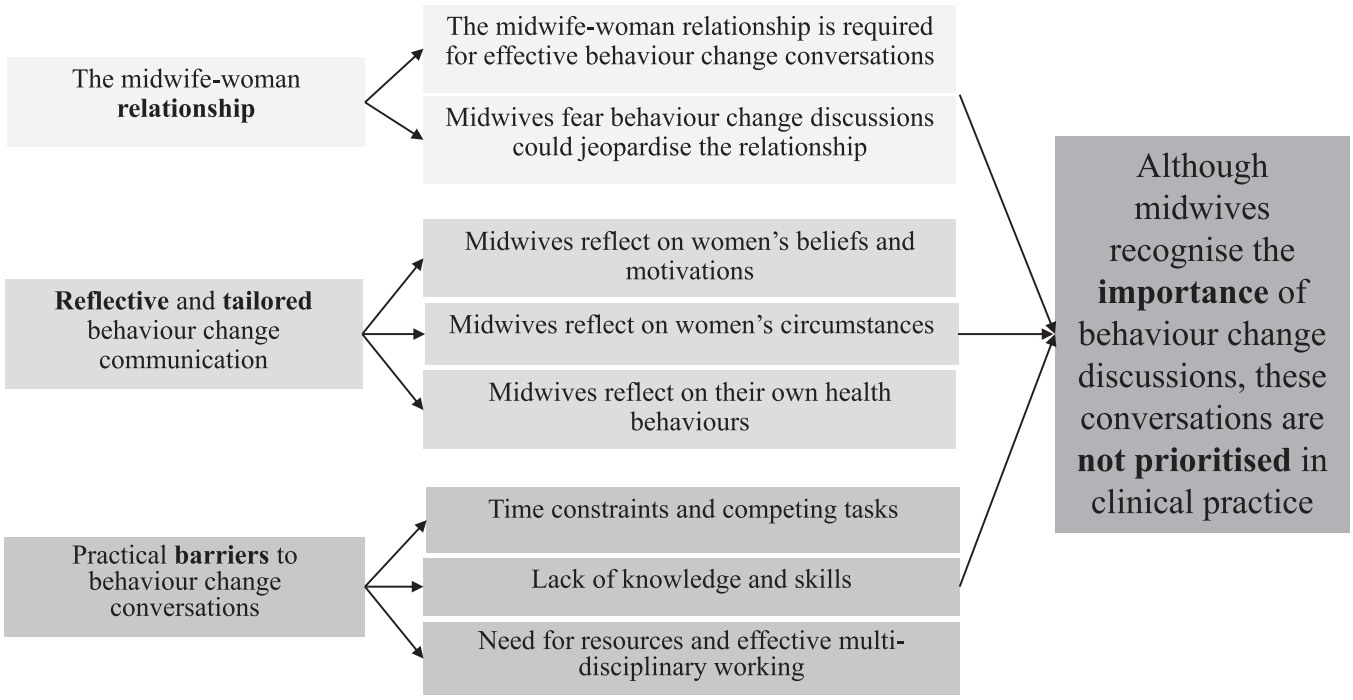

Fig. 2. Thematic map illustrating themes and sub-themes generated from the thematic synthesis.

"…There's a vague mention of [nutrition] in one of the elements in the midwifery practice guidelines but it's vague and not specific about how to teach or how to educate or how to get your information or anything else. It's just saying that you should give good nutritional advice." [55]

Sub-theme 3: need for resources and effective multi-disciplinary working

Midwives observed the need to have physical resources to provide to women, such as information leaflets, websites and support groups, yet felt available resources were insufficient, leaving them unable to direct women to useful information.

"It's usually quite a brief conversation probably because there isn't a lot of actual information that we can access." [62]

Midwives also recognised the benefit of effective multi-disciplinary working with dieticians, smoking cessation professionals and obstetricians to support women with behaviour change, but felt a functional multi-disciplinary service was lacking.

".there should be the ability for midwives to be in collaboration with dietitians or nutritionists.I know that's time consuming and I know that it's often hard to negotiate that and. [it] costs money, however, I think that would be the best way to do it." [55]

Discussion

This systematic review explored midwives' experiences of discussing health behaviour change within routine care. The synthesis revealed that although midwives understood the importance of discussing health behaviour change, conversations were de-prioritised as midwives were concerned for the midwife-woman relationship, needed to individualise their communication approach, and experienced various practical barriers. These findings support previous quantitative evidence that midwives experience many challenges when discussing health behaviour change. [76,77].

It is encouraging that midwives viewed these discussions as essential, as it is well-established that midwives should discuss health behaviours antenatally and postnatally. [28,29,35] The finding that midwives valued the midwife-woman relationship and feared jeopardising it, is pertinent in the current midwifery climate due to the introduction of continuity of carer.[29,78] Although in the UK targets for achieving continuity have been paused due to workforce challenges, [79] it is well-evidenced that there are substantial benefits to receiving care from a known midwife. [80] Women value continuity as it fosters personalised care, trust and empowerment [81] and feel this relationship is necessary to discuss health behaviours. [18,82] Yet, as this synthesis and other studies suggest, jeopardising the relationship remains an important concern for midwives and health professionals. [77,83] It was apparent that the midwives' view of how they were perceived by women factored into why addressing health behaviours felt a risk to the relationship; future research could explore why health professionals fear discussions may negatively impact relationships.

The synthesis highlighted that midwives felt they needed to reflect and individualise their approach, making health behaviour conversations challenging. A fundamental element of the midwife's role involves treating people as individuals and recognising and responding to their needs, [26] meaning this aspect of behaviour change communication is an essential part of their practice. It is encouraging that midwives applied individualised care to behaviour change, as a principal element of behaviour change theory is that behaviour change depends on individual factors, such as in the COM-B model or the theory of planned behaviour. [16,84] Furthermore, the psychological factors that influence behaviour change in pregnancy are individual. [18].

The synthesis highlighted that midwives experienced practical barriers to behaviour change conversations. Health professionals lacking time for behaviour change discussions and navigating competing priorities is a shared finding in the literature [85,86] and reflects the ongoing strain on health services, which lack staff, funding and resources. [87] Yet, it is important to recognise that patient engagement in unhealthy behaviours is a factor itself that places a high burden on health services. [88] Midwives experienced deficits in knowledge and skills in behaviour change conversations; a barrier recognised in previous research, [89] emphasising the need for continued professional

development. Midwives also felt that supporting behaviour change was hindered by a lack of effective multi-disciplinary working, which is central to effective care, with multi-professional training improving safety and clinical outcomes. [90] However, some successful pregnancy behaviour change interventions have adopted quick, simple messaging from health professionals, such as maintaining an awareness of fetal movements; [91] suggesting it may not be essential to utilise a multi-disciplinary approach.

Although this synthesis revealed that midwives de-prioritised health behaviour change conversations, midwives remain well-regarded as the optimal health professional to deliver behaviour change advice from the perspective of women, [31] midwives, [55,58,71] and policy makers. [28] Therefore, this synthesis highlights the need for midwives to receive health behaviour change communication support and education, so that they are able to effectively provide health behaviour change advice. Future research should explore areas of midwives' communication that could be targeted in interventions.

Strengths and limitations

This meta-synthesis has provided a meaningful narrative of the data through strong themes paired with illustrative quotes. The majority of studies were high quality, with studies of medium quality accounted for when weighting the analysis. Although this synthesis was not intended to be generalisable due to the nature of qualitative research, the studies provided data from 410 midwives, eight countries, and used three data collection methods; enhancing the transferability of the results.

To strengthen the reliability of the review, an independent midwife researcher was involved throughout the screening and quality appraisal process. [40] To enhance the credibility of the findings, the analysis was conducted by two researchers [40,44,92] and feedback was gained from a professional and public advisory group. To further maintain credible research, the primary researcher engaged in reflexivity [93] with relation to their identity as a researcher and registered midwife. The researcher maintained an awareness of their thoughts, acknowledging the benefit of their experiences in allowing sensitivity to the data, yet recognising the risk of pre-dispositions to assumptions. To mitigate this, the researcher respected the diverse perspectives and reflected this in the analysis. The wider research team consisted of two health psychologists and a registered midwife, all of whom employed reflexivity. [93].

It is important to recognise the limitations of this review. Limits were set on the inclusion criteria, for example, research focused on routine care, excluding new interventions or complex issues. Including this research could have produced different findings, though it is possible the de-prioritisation of conversations could have been more pronounced in complex care. The review also did not include all health behaviours or surveys. As there exists a wealth of research, these restrictions were necessary and justifications have been made explicit within the review. By employing some restrictions, a balance was struck between conducting a review manageable in size, whilst providing an abundance of rich data. [40,44] It is also important to recognise that although valuable contributions were gathered from a professional and public advisory group, diversity in gender and ethnicity was not achieved, see Supplementary file 5; a common issue in health research, which researchers must endeavour to tackle. [94].

The review sought midwives' experiences without limitation on country, yet it is important to recognise that in some countries, midwifery care is limited by health system barriers and overlapping responsibilities. [95] 20 studies [54–65,68–75] were from six countries where midwives are the primary maternity providers for most women, [24,25,27] however one study was from Ghana, [67] where traditional birth attendants provide the majority of care in rural areas [96] and another in South Africa, [66] where often care is provided in private settings and midwives function as obstetric nurses. [97,98] It is important, therefore, to consider the findings with recognition of their cultural and educational context.

Conclusion

In conclusion, this systematic review synthesised the evidence from 22 studies, strengthening the evidence base on midwives' experiences of providing behaviour change conversations. Globally, pregnant women engage in unhealthy behaviours, and this synthesis revealed that midwives de-prioritised these conversations in clinical practice. These findings highlight areas for future intervention development and training to support midwives with health behaviour change communication and improve the health of women in pregnancy, the postnatal period and beyond.

Ethical Statement

Not applicable, as the article is a systematic review.

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CRediT authorship contribution statement

Talbot, H: conceptualisation, data curation, formal analysis, investigation, methodology, writing - original draft. **Smith, D:** conceptualisation, formal analysis, supervision, validation, writing - review & editing. **Peters, S:** conceptualisation, supervision, writing - review & editing. **Furber, C:** conceptualisation, supervision, writing - review & editing.

Declaration of Competing Interest

None declared.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.wombi.2024.01.002.

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