

Physical activity during the perinatal period among women from marginalised backgrounds

FURNESS, Amy, DE VIVO, Marlice and SOLTANI, Hora
<<http://orcid.org/0000-0001-9611-6777>>

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Facilitators and barriers for adapting physical activity during the perinatal period by women from marginalised backgrounds.

Short title: Perinatal physical activity among marginalised women.

Amy Furness, Researcher¹

Marlize De Vivo, Senior Research Fellow¹

Hora Soltani, Professor¹

¹Amy Furness, Sheffield Hallam University, Sheffield, United Kingdom

¹Marlize De Vivo, Sheffield Hallam University, Sheffield, United Kingdom

¹Hora Soltani, Sheffield Hallam University, Sheffield, United Kingdom

Corresponding author: Hora Soltani, h.soltani@shu.ac.uk

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Abstract:

Background:

There is substantial evidence of the benefits of physical activity (PA) during pregnancy and the postpartum period. However, PA levels remain low, especially in deprived areas and among ethnic minorities.

Aim: This study set out to explore the PA experiences and perspectives of women from high ethnic diversity and socioeconomically deprived backgrounds.

Method: A semi-structured interview schedule, based on using the COM-B (capability, opportunity, motivation and behaviour) model, focused on PA experiences among pregnant women and those who had recently given birth.

Findings: Participants were frustrated by limited local opportunities and minimal information on being active during and after pregnancy. Barriers included physical symptoms, lack of information, limited resources, and cultural myths. Facilitators included clear advice, consistent healthcare guidance, community support, accessible resources, and positive health beliefs.

Conclusion: The findings highlight the need for culturally sensitive, accessible interventions and greater support from healthcare and community resources.

Keywords: Maternal health disparities; Physical activity; Socioeconomic inequality; Pregnancy; Postnatal; Cultural barriers

Key points: The study investigates the physical activity (PA) experiences and perspectives of women from diverse ethnic and socioeconomically deprived backgrounds during and after pregnancy. Participants highlighted several barriers to PA, such as physical discomfort, lack of information, limited access to resources, and cultural misconceptions about exercise during and after pregnancy. A significant gap in local opportunities for physical activity and a need for more consistent healthcare guidance was identified. Facilitators for engaging in PA included clear and consistent advice from healthcare providers, community support, and the availability of accessible

resources. Positive health beliefs and a supportive environment were also key factors in encouraging PA participation. Overall, the findings emphasise the importance of addressing informational and resource gaps while considering cultural factors to improve PA engagement among this group of women.

Reflective questions:

1. How can healthcare professionals better address the cultural misconceptions and barriers that prevent women from ethnically diverse and deprived backgrounds from engaging in physical activity during and after pregnancy?
2. In what ways can local communities be empowered to provide more accessible resources and support for women seeking to engage in physical activity during the prenatal and postpartum periods?
3. What strategies can healthcare providers use to ensure consistent and clear advice about physical activity is communicated to pregnant women and new mothers, especially those from socioeconomically deprived backgrounds?
4. How can healthcare systems collaborate with community organisations to improve access to physical activity opportunities for women in underserved areas?

5. Reflecting on the findings, how can we tailor health promotion interventions to be more culturally sensitive and effective in encouraging physical activity among women from diverse ethnic backgrounds?

Introduction

There is increasing recognition of the role of physical activity (PA) in enhancing health and well-being through all life stages including pregnancy and the postpartum period (Martínez-Vizcaíno et al. 2023). Antenatal PA has become known as a powerful preventative tool to reduce major pregnancy complications (Martínez-Vizcaíno et al. 2023; Mudd et al. 2013). Depression, pre-eclampsia and gestational diabetes are reduced by 40–67%, without increasing the risk of adverse pregnancy outcomes, including miscarriage, preterm delivery or small for gestational age baby (Borodulin et al. 2009; Davenport & Hayman 2022; Díaz-Burrueco et al. 2021; Ribeiro et al. 2022; Davenport et al. 2019). However, obesity remains a large problem in the pregnant population which may exacerbate these risks (Flannery et al. 2018; Felker et al. 2024). Women from an ethnic minority background face an increased risk of adverse birth outcomes and certain pregnancy-related conditions, such as gestational diabetes (Yuen et al. 2018). Additionally, being active during pregnancy may help narrow ethnic differences in neonatal birth weight, and even low levels of engagement have been linked to health benefits for ethnic minority women (Collings et al. 2020; Raper et al. 2021).

Current guidelines recommend that pregnant women accumulate 150 minutes of moderate-intensity physical activity (PA) per week, along with strength training activities

two days a week (Department of Health and Social Care, 2019). Postpartum, women are advised to gradually return to these levels (World Health Organization 2024). However, many women report being unaware of these recommendations (De Vivo and Mills 2019).

Globally, fewer women than men meet PA recommendations (World Health Organization 2024), and in Sheffield (a city in northern England), engagement in PA is lower than the national average (Sheffield Joint 2019; Sheffield City Council 2023). PA levels vary by socioeconomic and health disparities, with lower engagement observed in areas with poorer health outcomes (Sheffield City Council 2023). Additionally, women from certain ethnic groups are significantly less likely to meet the recommended levels of PA (Higgins & Dale 2010; Sport England 2024; Marvin-Dowle & Soltani 2023).

Numerous barriers prevent women from achieving these activity levels. During pregnancy, women suggest they have a lack of confidence and lack of information on safe PA during pregnancy (De Vivo et al. 2019; Taylor 2021). In addition, physical issues such as pelvic pain (Eggen et al. 2012), lower back pain (Kinser et al. 2017), sickness and exhaustion during pregnancy hinder PA engagement (Baattaiah et al. 2022). Postpartum women report time constraints, childcare responsibilities, and a lack of adequate support as barriers (De Vivo et al. 2024; Harrison et al. 2018). Those who experience fatigue are also more likely to engage in sedentary behaviours (Baattaiah et al. 2022; Saligheh et al. 2016). Despite these barriers, women express a desire to be more active, however, they often feel unsupported in their efforts (Harrison et al. 2018).

A recent report revealed that only 49% of pregnant women and 76% of postnatal women received any information about being active during pregnancy or after childbirth (De Vivo et al. 2024). Consequently, women express a fear of harming their babies when being active throughout their pregnancy (Marini et al. 2023). This lack of professional support has driven women to seek information online despite expressing a strong desire for clear and consistent advice from HCPs (Flannery et al. 2018; The Active Pregnancy Foundation 2023).

Recognising women's experiences on a local level is paramount to implementing interventions and improving access to PA (GOV.UK 2019; Green & Thorogood 2018). The local area plays an active role in women's barriers to exercise postpartum (Green & Thorogood 2018). Women report poor access to affordable and appropriate PA opportunities in areas of higher deprivation (Saligheh et al. 2016). This underscores the crucial role of infrastructure in supporting women's participation in PA during pregnancy and postpartum, as well as the need for tailored advice that considers their specific environments (De Vivo & Mills 2019).

There is a notable lack of literature examining the barriers to PA for ethnic minority women during the perinatal period (Iqbal et al. 2024). Calls have been made for more PA research focused on those experiencing significant inequalities including those living in areas of deprivation (Atkinson et al. 2020). Given the potential of perinatal PA to help reduce ethnic disparities and improve intergenerational health, this area warrants greater attention (Raper et al. 2021).

2. Materials and Methods

2.1. Study setting:

The study took place in Sheffield, a northern city in England, UK, focusing on Darnall, Parson Cross, and Burngreave, among the city's most socioeconomically deprived areas and within the UK's 10% most deprived neighbourhoods per the Index of Multiple Deprivation (GOV.UK 2019).

2.2. Study approach and recruitment strategy:

The current research utilised a qualitative ethnographic approach to deeply explore participants experiences. Women were recruited through posters and advertised through well-established research communities, Facebook and other community groups. A purposive sampling strategy was used, with the inclusion criteria including women who were pregnant or had an experience of pregnancy within the last 8 years. Five online and three in-person workshops were conducted between June and August 2024. Recruitment continued until data saturation as reached and no new topics emerged after the eighth focus group. Workshops were audio recorded and then transcribed verbatim. Before undertaking workshops, ethical approval was obtained from the Sheffield Hallam University Research Ethics Committee. Prior to workshops participants were emailed with a participant information sheet and consent form, which was returned electronically signed or returned in person. A semi-structured interview schedule utilised open-ended questions to explore participants' experiences of physical activity across pregnancy stages. Grounding the interview schedule in the

COM-B model (Michie et al., 2011) and adapting it from the This Mum Moves framework (Gilroy et al., 2019) ensured theoretical rigour and relevance to maternal health behaviour change. Focus groups were held in accessible community settings chosen in partnership with community leaders e.g. libraries and mosques, to ensure inclusivity, comfort, and cultural relevance. These familiar environments supported open dialogue and encouraged participation from diverse groups, aligning with the study's aim to explore lived experiences in context. Focus groups were conducted in English, with participants occasionally assuming the role of informal translators, facilitating communication and highlighting the collaborative and adaptive nature of the data collection process.

Established community relationships, built on trust and shared goals, supported recruitment and engagement. Women were asked about the types of activities they engage in, as well as their perceived capability, opportunity, and motivation.

Experiences of PA in their local area and the challenges faced were also explored. A £20 gift voucher was given to compensate them for the time to participate in the workshop.

2.3. Data analysis

Qualitative data analysis was managed using NVivo software to systematically address each data item, identifying the repetition of patterns (themes). Then organising and combining the different codes into possible overarching themes nestled within the COM-B structure (Michie et al. 2011). Once overarching themes and subthemes were collated and extracts of data linked to each of them, the next phase involved reviewing and refining the themes. This was done in two stages: first, reviewing all data for each

theme to ensure coherence, and second, refining themes or creating new ones for better alignment with the data. The data set was reviewed to ensure extracts aligned with the thematic map. If needed, themes were refined until they formed a coherent narrative. Finally, themes were clearly defined, capturing their essence, and supported with data extracts to address the research question. The analysis is presented narratively with extensive pseudonymised direct quotations presented in Table 3 to illustrate and confirm the researchers' interpretations. To enhance the reliability of the analysis, two researchers independently coded the same transcript. This process supported consistency in theme identification and reduced individual bias. Discrepancies were discussed and resolved collaboratively, strengthening the credibility and trustworthiness of the findings.

3. Results

3.1. Sample Characteristics

Thirty women participated in the study, twenty-six of whom had one or more children, and four were currently pregnant. Tables 1 and 2 describe the characteristics of the participants.

Table 1: Study participants' Demographic characteristics (N=30).

	Women who have had children recently	Pregnant women
Total	26	4
Ethnicity		
Asian		1
Pakistani	6	
Bangladeshi	4	

Chinese	1	
Indian	1	
White		
White	6	2
White other	2	1
Black		
African	3	
Arab	1	
Migration status		
Born in the UK	14	2
Born outside the UK	8	2
Maternal Age		
<30	3	3
31-35	8	1
36-40	3	
41-45	4	
45+	2	
Age of youngest child		
(years)		
<1	6	
2-3	7	1
4-5	4	1
6+	2	
Education		
Junior/ senior high	7	2
school	8	

Undergraduate degree	4	2
Postgraduate degree		
Jobs		
Full-time mum	10	1
Healthcare or caring role	4	
Education role		1
Administrative role	4	1
Other	2	1
Mode of delivery of youngest child		
Vaginal Delivery	12	
Assisted vaginal delivery	4	
Emergency Caesarean section	5	

*Where numbers do not add up to 30 this indicates missing data.

3.2. Themes

Table 2: themes aligned with the COM-B framework.

<i>COM-B</i>		<i>Barriers</i>	<i>Facilitators</i>
<i>Capability</i>	<i>Physical</i>	<i>Physical limitations</i>	<i>Postpartum Physical capabilities</i>
	<i>Psychological</i>	<i>Insufficient knowledge</i>	<i>The desire for more information</i>
<i>Opportunity</i>	<i>Physical opportunity</i>	<i>Environmental factors</i>	<i>Proximity of resources</i>
			<i>Environmental factors.</i>
	<i>Social opportunity</i>	<i>Expectations, judgement & stigma</i>	<i>Community & support network</i>
		<i>Lack of support</i>	

	<i>Reflective</i>	<i>Health Beliefs & Attitudes</i>	<i>Health Beliefs & attitudes</i>
<i>Motivation</i>	<i>Automatic</i>	<i>Emotional state</i>	

Table 3: Quotes aligned with the COM-B framework.

PHYSICAL CAPABILITY

PHYSICAL
LIMITATIONS

“Sometimes I can't pick up a glass of water. Sometimes I can't pick up a glass of water because of the pain in my joints. And I never thought that this was pregnancy-related.” MM18

“And but with, like, you're doing under five, it's more stressful. You've got to think about prams, holding hands, wings, harnesses. You don't want to run off in the streets. Where are you going to be? How are you going to get there? How are you going to be there? Are you going to come back? Do they need food, snacks? Do you still have a pram?” MM24

“Because most women, they would not go by themselves, they're just driving a whole bunch of kids. So it's £3, £3, £3, £3, £3, £3. So actually it's the cost of taking everybody there as well.” MM11

“Friends have said in the past. “Oh, if you want to go back to dance, we'll babysit.” But it's not really materialised so far.” MM27

PSYCHOLOGICAL CAPABILITY

INSUFFICIENT
INFORMATION

"They only say, there's only one sentence when I go to doctors, "be physically active," that's it." MM10

PHYSICAL OPPORTUNITY

ENVIRONMENTAL
FACTORS

"I don't think we have the facilities within Darnall at all, because I find myself, there really is myself and my kids, I have to travel to the other end of Sheffield in order to get to the right facility, especially like in swimming or the gym things like that." MM16

"We've got sport activities in Darnall, you've got the Urban Centre, you've got a lobby, all of these offer physical activities. But pregnant. Nothing specific. Nobody's going to tell me when I go in that this is appropriate for you as a pregnant woman." MM5

SOCIAL OPPORTUNITY

LACK OF
SUPPORT

“Served like a king and that's it. Yeah. They just... I always say they, but expect, expect, expect. And if it's not done, then you know, it's not good. But no, there's no support.” MM25

“Women who I know personally, their husbands have this weird idea of the role of a woman, and have this idea that a woman should be at home. And they will not [be physically active], but then they also expect her to look good for him.” MM4

EXPECTATIONS,
JUDGEMENT &
STIGMA

“Because most women that have come from Bangladesh, India or wherever they've given the opposite. They're normally told to sit and rest for that nine months.” (on behalf of MM1)

“That happened to my sister. She carried on working and she lost, she had a miscarriage and straight away it was up to my mother-in-law to blame her because she carried on working. It's, that blame culture is really big. It's really big. Even now, you'd think it's dying out. And that would be one of the biggest, I'd say, obstacles for women who don't speak the language and who may live in mixed households.” MM3

MOTIVATION BARRIERS

FEAR OF

HURTING THE

BABY OR SELVES

“Well for me personally, I knew that if I had ended up miscarrying and I'd been to the gym that day I knew I would never have accepted any explanation other than I caused this I would have absolutely. And you know I met a lady who's had a second, and she'd miscarried between her 2 children, and she had done a park run when she was newly pregnant and then miscarried, and she said she could kind of. She was kind of saying the same thing like she's got no proof either way, but she never did any more in pregnancy, because it frightened her thinking of what if I'd caused this?” MM30

“But that's because my first one was born so premature. And then all the doctors kept telling me, like, just to lay down. So now, like when I become pregnant, I instantly get scared and I don't move.” MM24

PERSONAL

PRIORITIES

“As a mum, I mean, I'm sure as as dads as well, or the caregivers, but like I'm quite often like the least washed, the least fed the least. It's like whatever. So I think for me, exercise fits into that box like, because it's not super immediate” MM26

PHYSICAL CAPABILITY

THE DESIRE FOR
MORE

"I went for my like post, you know like 6 to 8 week check it wasn't mentioned until I asked." **MM8**

INFORMATION

"It was more finding out, and what I can and can't do what is safe, what's unsafe. And so, yeah, I've just been having to Google, because I've been going to be honest to find out what what what I should be doing," **MM28**

POSTPARTUM

PHYSICAL

CAPABILITIES

"I was already quite active, so the advice for me was just to continue, although I wasn't able to, and I'm sure we'll come onto it. But I wasn't actually able to continue being as active as I was, I would have liked to. But yeah, my understanding is that whatever you were doing before as long as it's safe. Just continue with that, or introduce some gentle exercise." **MM30**

"To be honest, I'm not 100% sure, because I've not got to that point myself yet, and I'm sort of just taking each week as it comes. Really. So at the moment I'm still pregnant, I'm just like seeing what I can do as I'm pregnant each week. And but then I do really want to make sure I do try and keep active after childbirth as well to try and get back to how I was." **MM28**

PHYSICAL OPPORTUNITY

PROXIMITY OF
RESOURCES

“Proximity to my house. The classes just I can walk down there, which is brilliant because nothing's ever near about my house, really.” MM27

“it's a must. You must go out every day. You must have that walk every day. Everybody else can wait. The house can be a tip. It doesn't matter. You need to go out every day.” MM11

TIME OFF WORK

“So I'm on 6-week holiday at the minute. So I found that actually, I'm more active now because I've got more time to sort of walk the dog, so I'll do an hour and a half, walking slash, jogging sometimes with the dog, and and then do like a little bit of a home workout as well.” MM28

SOCIAL OPPORTUNITY FACILITATORS:

COMMUNITY &
SUPPORT
NETWORK

“Like my sister-in-law, they’ll come to my house, they’ll be like, come on, let’s go for a walk. And I’ll be like, nope, [and she says] I’m dragging you.”

“especially my partner because he do calls whenever he’s free to remind me if I’ve, you know, walked around, you know, cause for a day. I need to take required steps.” MM9

REFLECTIVE MOTIVATION:

HEALTH BELIEFS
AND ATTITUDES

“Something for me, something that’s mine, something I can really take ownership of.” MM30

“It also educates the children to not be lazy, couch potatoes. Yeah. It’s good for the entire family’s health, children, especially.” MM25

TYPES OF CLASSES WANTED

“An exercise class “suitable for, light stretchers, you know? Let's stretch out your muscles and things like that... but it was being made aware that there was an instructor there, who could adapt to pregnancy.” MM4

‘It would have to be, like, pregnancy-specific activities with someone running it who is in the know of pregnancy, and exercise and pregnancy, and possible issues, complications, things like that. So you want those people who are really educated. Not just a random swim aerobics person.’ MM24

“People who specialise in like things like postpartum yoga and things like that, just like videos that they've posted. But you kind of you've got to presume that they know what they're talking about. You've just kind of got to trust that that's the correct information and just do what suits you.” MM8

3.2.1 Barriers

Please see illustrative quotes in table

Physical Capability

Physical limitations

Participants detailed experiences of pregnancy and postpartum symptoms such as tiredness, joint pain, complications or other interventions (e.g. epidural or caesarean section) that reduced the movement capability. Several interviewees described physical challenges within their recovery and stated being active felt harder postpartum.

Concerns were expressed about having enough time to be physically active. Other worries arose regarding the timing and flexibility of classes. Women mentioned the cost of activities in addition to the cost of travel to activities out of their local areas. Others described having to stop their pre-pregnancy exercise routines due to financial constraints while receiving maternity pay. Some felt that limited access to childcare hindered their engagement, particularly if their family was not nearby.

Psychological Capability

Insufficient information

Participants highlighted the lack of PA information received from HCPs about during and after pregnancy. Women wanted more information, particularly about being active with certain health conditions. There were suggestions that healthcare professionals do not have time to discuss PA.

Physical Opportunity

Environmental factors:

A common view amongst participants was a lack of locally accessible safe spaces; to be active, this was particularly felt by those living in low socioeconomic areas. Women wanted more options for pregnancy or postpartum classes in their areas. Other factors, such as bad weather and a lack of communication from physical activity providers, meant that many women were unaware that classes were taking place.

Social Opportunity

Lack of support

Participants described not feeling supported by friends and family to be PA during or after pregnancy, with some noting that both their partners and friends' partners were unsupportive.

Expectations, judgement & stigma

A recurrent theme was a pervasive fear of judgement from both families and community members, which was felt particularly strongly by participants from ethnic minority backgrounds. Women also reported feeling pressure within their cultures to rest during pregnancy, and they expressed concerns about a 'blame culture' in which they feared being held responsible if anything happened to their child if they were active.

Motivation Barriers

Fear of hurting the baby or selves

Participants expressed a reluctance to be active due to fear of hurting their baby during pregnancy and were further put off by previous negative pregnancy experiences or conditions. Several interviewees suggested fear of hurting themselves and causing themselves injuries.

Personal priorities

PA was not seen as a priority by some women, others also discussed not being active before they'd had their babies.

3.2.2 Facilitators

Physical Capability

The desire for more information

Several participants valued combining HCP advice with their instincts. A few women said they received information about PA during pregnancy or postpartum. Others received this information at specific times during their pregnancy. Women prompted their HCP if an activity was not mentioned and those who desired more information conducted their research online.

Postpartum physical capabilities

Women said starting slowly and tailoring their activity levels depending on their pre-pregnancy engagement, helped them reach their desired PA levels.

Physical opportunity

Proximity of resources

A common view among interviewees was that women needed resources to be close to their homes. Walking was noted as highly accessible, and Sheffield was commended for its number of outdoor spaces.

Time off work

Participants reported that time off work, including maternity leave and holidays, increased their activity levels due to having more time available.

Social opportunity facilitators:

Community & support network

Participants noted that support from friends and family was instrumental, with many identifying an active family and a supportive partner as key factors in fostering their engagement.

Reflective motivation:

Health Beliefs and Attitudes

The most prominent facilitator amongst women was their positive belief in the benefits of being active, with many viewing it as a means of self-improvement that promoted mental well-being, overall health, and weight loss. Participants indicated that their views on PA evolved postpartum, with many mothers expressing increased pride in

maintaining an active lifestyle after childbirth. Participants wanted to maintain high activity levels for the benefit of their children. They expressed that being active helped structure their day and set a positive example for their children. Seeing other pregnant women stay active also motivated them to maintain their activity levels throughout their pregnancies.

Future considerations:

How do women want to be communicated with?

The communication of classes or PA opportunities by providers was described as inadequate. Women expressed a desire for reminders to engage in PA on their own, through technology such as text messages or mobile phone applications. Others preferred communication through their HCPs or community organisations. A few participants suggested that leaflets with advice on being active after a caesarean delivery could be helpful.

Types of classes

While participants were dissatisfied with the current offerings in Sheffield, their responses varied regarding what they wanted during and after pregnancy. The importance of having a knowledgeable instructor deliver classes, whether that be in person or online, was emphasised. Participants expressed a preference for women-only spaces, as they felt more comfortable being active in such environments. For some, these preferences were shaped by cultural or religious values, highlighting the importance of offering inclusive and culturally sensitive physical activity options. . They

also desired a variety of low-cost exercise classes during pregnancy and postpartum, including running clubs, gym and swimming classes, and gentle exercise sessions accessible to everyone, not just those in the perinatal period. Ideally, women would like crèche facilities available, so they wouldn't need to arrange childcare and could stay close to their children.

4. Discussion

The current study aimed to investigate the PA needs of pregnant and postpartum women in three of Sheffield's most socioeconomically deprived areas: Darnall, Parson Cross, and Burngreave. These areas are characterised by high levels of ethnic diversity and significant socioeconomic challenges, making them critical locations for understanding the unique barriers and facilitators to physical activity within these communities.

The study concurs with previous literature, which highlights that PA uptake in Sheffield remains low (Sheffield Joint 2019; Sheffield City Council 2023; De Vivo et al. 2024). However, this is one of the few studies to explore PA barriers and facilitators in highly deprived, ethnically diverse areas (Bhatnagar et al. 2021). Findings suggest that cost, time constraints, and cultural factors limit PA uptake. These results have important implications for local health policy and intervention design.

Residential areas have been shown to impact health behaviours profoundly (Cohen-Cline et al. 2015). Studies show that access to greenspace supports PA engagement

and mental health (Cohen-Cline et al. 2015; Coombes et al. 2010; Helbich et al. 2019; Dadvand et al. 2014; Sun et al. 2023) including among pregnant and postpartum women (Poudevigne and O'Connor 2006). Postpartum, women resume lower intensity PA (Borodulin et al. 2009) primarily, due to its accessibility and social nature (De Vivo et al. 2024). Although greenspace access encourages PA, this study reveals the complex factors affecting PA uptake, particularly for women from ethnic minorities or high-deprivation backgrounds.

Cost remains a critical barrier to PA (De Vivo et al. 2024). Women reflected not just their costs but also the cost of family participation, which affects intergenerational health behaviours (Schoeppe et al. 2016, Brockman et al. 2009, Hesketh et al. 2019). Equitable access to PA opportunities for women and children in socioeconomically disadvantaged areas is required (Felker et al. 2024; De Vivo et al. 2024). Low family income is linked to inadequate PA levels in pregnancy (Garnweidner-Holme et al. 2022), reinforcing the need for low-cost or free community-based PA interventions (Department of Health and Social Care 2019).

Consistent with previous studies, the results from this study demonstrate that women require more information about PA (De Vivo & Mills 2019; Findley et al. 2020). Pregnant women from low socioeconomic backgrounds, in particular, need better awareness of PA's health benefits (Garnweidner-Holme et al. 2022). Many rely on online sources, with some questioning their reliability (Davenport & Hayman 2022; Flannery et al. 2018). Furthermore, a fear of harming their babies or themselves when being active is exacerbated by previous negative pregnancy experiences (Harrison et al. 2018; Marini et

al. 2023; Shum et al. 2022). Therefore, more trusted information is needed for an HCP to address these concerns.

Midwives report feeling undertrained in PA guidance (Marini et al. 2023), and HCPs require deeper insight into barriers to support women effectively (Gilroy et al. 2019). However, midwives have noted that training in this area is not prioritised within their professional development (Taylor 2021). Studies have targeted PA training to increase HCPs' confidence in providing PA advice, underscoring the need to equip HCPs with essential knowledge and skills (Netherway, 2021).

Cultural practices influence PA engagement (Lawton et al. 2006). Some women prefer women-only facilities, yet these are limited, highlighting concerns about equity in access to PA opportunities (Iqbal et al. 2024). Additionally, rest is encouraged during pregnancy in some ethnic groups (Lawton et al. 2006; Patel et al. 2012; Chana and Haith-Cooper 2019). Although rest is important there is limited awareness of the balance between the benefits of PA and the risks associated with inactivity and a sedentary lifestyle (Baattaiah et al. 2022). Women fear family disapproval or being blamed for complications such as miscarriage (Greenhalgh et al. 2015, Guelfi et al. 2015). Understanding cultural influence is critical for designing effective PA interventions (Lawton et al. 2006, Patel et al. 2012). Educational campaigns directed at women and their families may help dispel the PA-related stigmas during pregnancy and postpartum (Lawton et al. 2006).

The study also highlighted a perceived lack of suitable PA opportunities within the areas studied. This aligns with prior research noting limited awareness of pregnancy-specific PA classes; De Vivo et al. 2024). Proximity of activities is key, as women are more likely to engage in PA when it is easily accessible from their homes (Garner-Purkis et al. 2020, Porter et al. 2019). Classes for pregnancy and postpartum, led by trained professionals, must also reach healthcare professionals unaware of referral options (De Vivo & Mills 2019; Porter et al. 2019). Due to physical symptoms limiting women's capability for PA, flexible person-centred strategies are needed to accommodate the bodily changes women experience (Raper et al. 202; Chana and Haith-Cooper 2019). Structured programmes that gradually increase intensity may help women develop sustainable PA habits.

The lack of time for women to engage in PA is reflected across multiple studies (Raper et al. 2021; Gilroy et al. 2019; Thompson et al. 2017). Incorporating children into PA classes may enhance postpartum participation (Raper et al. 2021; De Vivo & Mills 2019). Other research suggests working mothers face competing priorities, such as prioritising family time or managing financial concerns (Thompson et al. 2017). In this study, the need for flexible class timings also emerged as an important factor in the development of classes or interventions to allow women to attend. Addressing these barriers requires tailored, family-friendly interventions that integrate PA into daily routines. A whole-systems approach is needed, as pregnant women acknowledge PA's importance but lack access to affordable, appropriate opportunities (Marini et al. 2023). Targeted healthcare and community-level support are essential, particularly for vulnerable populations (Marini et al. 2023; Such et al. 2017).

A formative literature review identifies six key principles for PA intervention development in disadvantaged communities: leveraging community resources, identifying barriers, using sensitive communication strategies, aligning with community values, accommodating cultural identities, and fostering sustainability (Such et al. 2017). This study takes initial steps in addressing PA barriers while leveraging community resources, laying the foundation for inclusive, sustainable maternal health programmes.

Limitations:

This study focused on women from ethnic minority groups and socio-economically deprived areas, limiting generalisability but aligning with its objectives. Among 30 participants, only four were pregnant, while others reflected retrospectively, offering longitudinal insights into physical activity across motherhood. Future research should include more currently pregnant women and a broader representation of specific ethnic minority groups to better capture diverse perinatal experiences and inform culturally sensitive interventions.

5. Conclusions

This study explores the complex barriers and facilitators to physical activity during and after pregnancy for ethnic minority and socioeconomically disadvantaged women.

Barriers include limited resources, cultural expectations, and competing responsibilities, while social support and flexible options aid participation. Findings highlight the need for culturally sensitive, accessible interventions and greater support from healthcare and community resources.

Author Contributions:

Conceptualisation, MDV and HS; methodology, MDV, AF and HS; validation, AF and HS; formal analysis, AF and HS; investigation, AF and HS; resources, MDV and HSV; data curation, AF; writing—original draft preparation, AF; writing—review and editing, MDV; supervision, HS; project administration, AF; funding acquisition, MDV. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement:

The study was conducted in accordance with and approved by the Sheffield Hallam Ethics Committee (protocol code ER65013307 on 09.04.25).” for studies involving humans.

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Abbreviations

The following abbreviations are used in this manuscript:

PA Physical activity

HCP Health Care Professionals

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