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"We need more guidance, more encouragement and empowerment for what our bodies are capable of", pregnant and postpartum women's knowledge and experiences of receiving physical activity guidance and support on the island of Ireland: an online survey study

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Abstract

Background Physical activity (PA) during pregnancy provides maternal and foetal health benefits such as improving mental wellbeing, cardiometabolic and delivery outcomes. However, little is known about pregnant and postpartum individuals' PA knowledge or guidance and support received during maternity care on the island of Ireland. This study aimed to assess knowledge of PA guidelines and explore experiences of receiving PA guidance and support during maternity care.

Methods Pregnant (≥ 8 weeks gestation, post-initial maternity appointment) or postpartum (birthed and received maternity care within three years previous) adults who received antenatal care on the island of Ireland completed an online survey. Descriptive analysis and frequencies were performed with the principles of thematic analysis applied to the concluding open-text question.

Results Of the 430 women surveyed only 7% ($n = 30$) correctly stated the PA guidelines for pregnancy and postpartum. 28% ($n = 120$) received PA advice from a healthcare practitioner (HCP) during maternity care. Overall, few felt timely (24%, $n = 103$) or clear and easy to follow (25%, $n = 107$) advice was received. 22% ($n = 96$) felt confident in the advice received and only 17% ($n = 74$) felt supported to engage in PA. Two themes and seven subthemes relating to women's experiences of PA guidance and support during pregnancy and future needs were generated. Using study findings, five actionable steps were created.

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Conclusions 93% of women surveyed could not accurately state the PA guidelines for pregnancy and postpartum. Largely, maternity care delivered on the island of Ireland does not include PA guidance or support. Recommendations are proposed to improve PA guidance and support provided during pregnancy and following childbirth on the island of Ireland.

Keywords Pregnancy, Postpartum, Maternal health, Antenatal, Postnatal, Sedentary living, Lifestyle, Exercise

Background

Regular physical activity (PA) during pregnancy and postpartum is associated with benefits to maternal and foetal health, including reduced risks of pre-eclampsia, antenatal and postpartum depression, cardiometabolic health and delivery complications [1–5]. Importantly, in pregnancies without absolute contraindications PA has been shown to have no detrimental effect on foetal and newborn health and may improve newborn and childhood outcomes [6–8]. The World Health Organisation (WHO) and United Kingdom (UK) Chief Medical Officer (CMO) recommend regular PA throughout pregnancy and postpartum [9, 10]. Evidence based guidelines suggest at least 150 min of weekly moderate-intensity activity to include aerobic PA and muscle strengthening activities on at least two days per week [9, 10]. These guidelines recognise that every move counts and sedentary activity should be reduced and replaced by any movement, with daily pelvic floor exercises recommended [9, 10]. For the first time these guidelines highlight those who were habitually engaged in vigorous-intensity aerobic activity or who were physically active before pregnancy can continue these activities during pregnancy and following childbirth [9, 10]. Notably, in 2025 Canada released the first standalone postpartum PA, sedentary behaviour and sleep guidelines that recommend people follow an individualised, gradual, and symptom-based progression toward at least 120 min/week of moderate-to-vigorous PA [11]. Despite published global guidelines and the growing evidence base supporting the benefits of PA during pregnancy, antenatal and postpartum PA participation is poor [1, 12–14], and lower than national averages for PA participation amongst non-pregnant women [14–17]. This lack of PA participation has direct implications for maternal (antenatal and postpartum) and foetal health [12]. Antenatal and postpartum PA is associated with lifelong healthy habits and continued health and wellbeing throughout the lifespan of both parent and child [1, 7, 8]. Therefore, promoting PA during pregnancy is important for the health and wellbeing of mother and child both during and following pregnancy and childbirth.

Maternity care on the island of Ireland[1] is unique as it encompasses two separate national healthcare systems. While Northern Ireland adheres to PA guidelines under the UK funded Health and Social Care Northern Ireland (HSCNI) system [9, 18] the Republic of Ireland and Health Service Executive (HSE) is yet to publish specific PA guidelines for pregnant and postpartum populations [19]. Due to multiple clinical appointments across the course of a pregnancy in both jurisdictions, maternity healthcare may be an opportunistic setting for promotion of PA during pregnancy and postpartum on the island of Ireland. Despite an exciting recent UK publication [14], more research is clearly needed to explore the lived experiences of pregnant and postpartum individuals on the island of Ireland regarding PA guidance and support received during maternity care. Given the poor levels of PA participation during pregnancy [13, 14] and the increase in maternal morbidities [20] it is pertinent that research aims to understand the lived experience of women during this phase of their lifespan. This study aims to address this gap and examines pregnant and postpartum women's[2] knowledge of PA guidelines and their experiences with PA guidance and support during maternity care on the island of Ireland.

Methods

Study design

This mixed-methods research study used a cross-sectional design to understand the lived experience of pregnant or recently postpartum women that received maternity care on the island of Ireland within the past three years. An online survey was created using JISC online surveys (https://www.onlinesurveys.ac.uk/). The research project was developed in accorda nce with Enhancing the QUAlity and Transparency Of health Research (EQUATOR) Network principles [21]. Ethical approval was granted by Ulster University, School of Sport Research Ethics Filter Committee (SESRI-24-039-A).

Measures

The survey comprised of four sections with questions developed by the research team. Survey sections were predominantly closed questions with some open-ended questions to allow participants to provide context if they

[1] The term 'island of Ireland' is used to encompass the 32 counties on the island of Ireland, which includes two jurisdictions; Northern Ireland (6 counties) and the Republic of Ireland (26 counties).

[2] The term 'women' is used throughout this manuscript as all participants self-identified as women.

wished regarding their knowledge or lived experiences. Sections included: (i) Demographic data, (ii) Knowledge of PA guidelines (general population and pregnancy/postpartum), (iii) Knowledge of tools to support PA during pregnancy and (iv) Experience of receiving PA guidance and support during pregnancy. Within the final survey section (iv) participants were provided with an open-ended question allowing them to provide free text thoughts on receiving PA guidance during pregnancy. To ensure content validity, items were based on most recent PA guidelines and current evidence [2, 10, 22, 23]. The survey underwent expert review, and a pre-test was conducted using a purposeful sample of three women (≥18 years of age) who were pregnant within the previous 2 years. This approach was used to assess overall functionality, clarity of instructions, question flow, and survey length. Participants completed the survey independently and provided brief feedback on any confusing or unclear items. Feedback informed minor revisions to wording and format prior to wider distribution.

Participants

Adult participants (≥18 years of age) were invited to take part in this research if they were currently pregnant (≥8 weeks gestation and had received initial care with a maternity HCP) or had given birth within the past three years and received their maternity care on the island of Ireland. Participants did not have to identify as a woman to take part in this research. The survey intended to be inclusive and aimed to reach as varied an audience as possible to be representative of the diversity of pregnant people on the island of Ireland [24, 25].

The primary recruitment strategy was through social media advertisement using snowball sampling through various platforms i.e. Instagram, X, Facebook and LinkedIn. The target sample size was 384 participants. This was calculated based upon annual birth rate statistics for Northern Ireland ($n = 22{,}071$) [26] and the Republic of Ireland ($n = 57{,}540$) [27] which would total ~240,000 live births across a three-year period which the study encompasses. The target sample size allowed for a 95% confidence level, with a 5% margin of error [28].

In advance of completing the electronic survey interested individuals received a participant information sheet and provided informed consent. To ensure anonymity whilst also ensuring no duplication in respondents, participants were asked to generate a non-identifiable code to include their initials, their year of birth and the last three numbers of their phone number (e.g., LD1990523) before completing the survey. Participation in the survey was anonymous, and the authors have no known relationship with participants.

The researchers acknowledge a constructivist epistemological position, which is also influenced by pragmatism. This combined philosophical viewpoint (pragmatic constructivism) seeks to uncover knowledge within the social conditions from which they arise or are constructed [29]. It is important to recognise the researchers positioning in relation to this topic as all authors are parents, with three having children born on the island of Ireland. All authors are academics working within PA for health research domains.

Data analysis

Data was downloaded from JISC to Microsoft Excel initially for exploration and organisation including screening of duplicated participant codes. Descriptive data were analysed using Microsoft Excel and presented as descriptives and frequencies. When appropriate, open-ended responses were used to provide context to quantitative data (sections i-iv). The principles of thematic analysis were used to analyse the qualitative data from the final open-ended question (section iv). Once familiarisation with the free text data was completed, one researcher (ED) coded the data and then generated related groups. Themes and subthemes were then created by the research team using a reflexive and flexible approach. Using this iterative process all data extracts used to identify themes were reviewed by all researchers to ensure trustworthiness and credibility of the data. A thematic map of the data was generated, and all researchers defined and named the themes. Key quotes were reviewed and selected to best represent each theme. Finally actionable steps and recommendations were created to inform future research, policy and practice.

Results

Participant characteristics (section i of survey)

430 Participants completed the online survey between 18th July 2024 and 30th August 2024. All participants ($n = 430$) self-identified as women. 97% of participants ($n = 419$) ranged in age between 26 and 49 years (Table 1). 17% of respondents ($n = 71$) were currently pregnant and, 3% ($n = 12$) were expecting multiples. 20% ($n = 88$) had given birth in the previous six months, 24% ($n = 102$) had given birth in the past year, 24% had given birth in the past two years and 16% ($n = 67$) had given birth in the past three years. 16% ($n = 69$) of the sample held a medical or healthcare qualification, and 10% ($n = 44$) held a relevant qualification in PA, exercise or sport or had personal experience of participating in sport, exercise or PA for health. Participant characteristics including ethnicity, number of children and pregnancy related conditions can be found in Table 1.

Table 1 Participant characteristics

Age (years)	*N*	Percentage
18–25	8	2%
26–35	207	48%
36–45	212	49%
> 45	3	1%
Ethnicity		
White	426	99%
Mixed	3	< 1%
Prefer not to say	1	< 1%
Number of children		
None (currently pregnant)	27	6%
1	187	43%
2	133	31%
3	54	13%
4	26	6%
5	1	< 1%
> 5	2	< 1%
Pregnancy related conditions		
High BMI	93	22%
Low BMI	4	1%
Gestational diabetes	59	14%
Hypertension	31	7%
Pelvic girdle pain	101	23%
Placenta previa	18	4%
Other	35	8%
None	205	48%

Knowledge of PA guidelines and screening tools (section ii and iii of survey)

45% of the sample ($n = 195$) reported to be aware of the PA guidelines for the general population. 28% of the sample ($n = 120$) reported to be aware of the PA guidelines during pregnancy and postpartum. Open-text responses showed that only 16% of the total sample were able to correctly state the PA guidelines for the general population, with only 7% of the total sample able to correctly state the PA guidelines during pregnancy and postpartum (Fig. 1).

96% of the sample ($n = 411$) had not heard of any pre-screening tools or questionnaires related to PA during pregnancy. Of the 4% ($n = 19$) who had, 42% ($n = 8$) had heard of the Healthcare Professional Consultation Form for Prenatal Physical Activity and 32% ($n = 6$) had heard of the Get Active Questionnaire for Pregnancy (GAQ-P) [22, 30]. 32% of participants were unsure of the name of the tool they had heard of. Two respondents had heard of the Physical Activity Readiness Medical Examination Physical Activity Readiness Questionnaire (PARMED PAR-Q) [23].

Of the 4% ($n = 19$) of participants who had heard of a pre-screening tool or questionnaire, 42% ($n = 8$) had learned of these tools during their maternity care, 32% ($n = 6$) in their own professional training, 21% ($n = 4$) via an online search and 11% ($n = 2$) via social media. Three participants reported to hear about these tools from other sources, and these included antenatal coach ($n = 1$), in a physiotherapy led class ($n = 1$) and the Active Pregnancy Foundation webpage ($n = 1$) [31].

Experience of receiving PA guidance and support during pregnancy (section iv of survey)

Section iv results are presented under subheadings a-g below.

(a) PA guidance and support received through standard maternity care

During their most recent or current pregnancy, 59% ($n = 252$) of respondents did not receive PA guidance or advice from an HCP. Of these, 70% ($n = 177$) would have liked to, 4% ($n = 10$) would not have liked to and

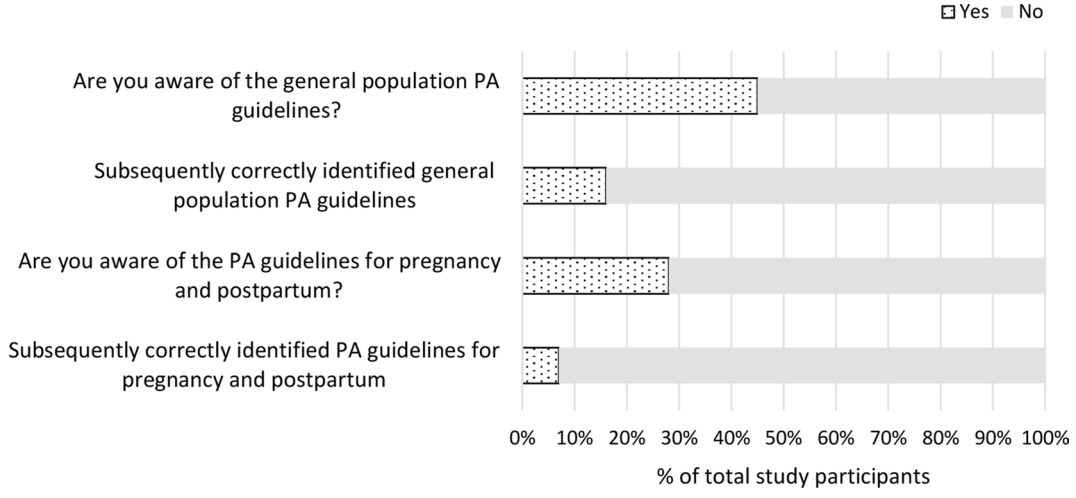

Fig. 1 Participants' knowledge of PA guidelines for the general population and pregnancy and postpartum populations (data expressed as a percentage of the total sample)

26% ($n = 65$) were indifferent. 13% ($n = 58$) were unsure whether they had received PA guidance or advice from an HCP. Of the 70% who would have liked to receive PA guidance or advice from an HCP during pregnancy, 79% ($n = 140$) would have liked this to be a conversation with a maternity HCP, 44% ($n = 77$) would like to be directed to an online resource, 41% ($n = 73$) would like to be directed to local groups and 35% ($n = 62$) would have liked to receive a flyer or handout relating to PA during pregnancy.

Of the 28% ($n = 120$) who did receive PA guidance or advice from an HCP during their pregnancy, 86% ($n = 103$) had a conversation with a maternity HCP, 13% ($n = 15$) received a flyer or handout, 13% ($n = 16$) were directed to an online resource and 2% ($n = 2$) were directed to local groups. 63% of these women ($n = 76$) reported that the guidance they received included advice about pelvic floor exercise. Of the 112 open-text responses related to the guidance received from their HCP, no responses referred to the CMO or WHO PA guidelines of 150 min per week [9, 10].

(b) Timing and timeliness of the guidance and support

35% (n = 42) of those who did receive guidance reported to receive the guidance at multiple appointments, 25% (n = 30) received it at their booking appointment and 26% (n = 31) received it at a later appointment. Fifteen participants received the guidance when they were diagnosed with a pregnancy morbidity (e.g. high blood pressure, gestational diabetes etc.). 86% of those that received guidance (n = 103, 24% of total sample) reported to receive information in a timely manner, whilst 13% (n = 15) felt that it came too late:

> *"I had attended the GP prior, and he didn't give me any advice. When I attended the hospital for [an] appointment I was asked to wait for physiotherapy. No guidance really from any other healthcare professional. The physiotherapist was really helpful, but I had suffered a lot before I met her." Participant 1.*
> *"It was terrible advice generally so no time would have been good." Participant 2.*
> *"I was in a lot of pain and had to bring it up several times before an appointment was made." Participant 3.*
> *"By the time the physio rang me I was in the 3rd trimester but thankfully my trainer had supplied me with a guide and monitored me each week". Participant 4.*
> *"I had pains and aches and wanted info and support early so I could adjust my exercise routine and prevent further issues. Only got personal help when I was few weeks from Birth and then as well very little personalised." Participant 5.*

(c) Clarity of guidance and support provided

Of the 28% (n = 120) who did receive PA guidance or support from an HCP during their pregnancy, 89% (n = 107, 25% of the total sample) felt that it was clear and easy to follow. Of those who did not feel the advice given was clear or easy to follow this related to conflicting information, ambiguity or vagueness and incorrect advice being provided. Some also reported having to repeatedly ask for advice:

> *"Told not to exercise even though the pregnancy was complication free." Participant 6.*
> *"I had to ask each time for advice, it wasn't routinely incorporated." Participant 21.*
> *"It was vague. No written resources. I suppose it was clear in that I was essentially told to do nothing more than low intensity walking." Participant 2.*

(d) Adequacy of PA guidance and support provided

Of the 28% (n = 120) who did receive PA guidance or advice from an HCP, 62% (n = 74) which is only 17% of the total sample, felt supported to begin or maintain PA during their pregnancy. The value of such support was captured by one participant:

> *"I am very grateful to the healthcare professionals for the sound advice they gave. I was confident to continue exercise and reduce when I didn't feel able any longer. I saw lots of my friends just stop exercising and they struggled to resume post pregnancy. I felt strong and able for labour as I felt so fit." Participant 8.*

Of those who did not feel supported (n = 16), reasons given for this were that the advice was not given, that the advice varied depending on the HCP themselves, and some felt dismissed or belittled by the HCP:

> *"Focused on alcohol and smoking behaviours at every appointment (I don't do either) but never raised being active." Participant 9.*
> *"Instead of [the advice] being evidence informed, they [the HCP] used exercise (and stopping it) as a fear tool." Participant 6.*
> *"I felt the obstetrician was put out when I challenged his poor advice. In fact, he became overtly angry towards me and my partner. He was furious that I had read up on exercise and gestational diabetes- at one stage he told me I 'should not believe everything I read in women's magazines' - when I was trying to discuss a Cochrane review guideline which contradicted his advice, with him. His focus was more on being right and me deferring to him, than on sup-*

porting me to continue a healthy lifestyle in pregnancy." Participant 2.
"After attending physio, I walked away feeling like my pains weren't real and I was imagining it." Participant 10.
"The advice was very generic; I felt the recommendation I got was based on whether the practitioner was themself physically active too. The more active they were, the more they could say 'you're okay to keep up a higher intensity level." Participant 11.

(e) Confidence in the PA guidance and support provided

Of the 28% (n = 120) who did receive PA guidance or support from an HCP during their pregnancy which is only 22% of the total sample, 80% (n = 96), felt confident in the advice and knowledge of the HCP, with regards to PA during pregnancy. Of those who did not feel confident reported reasons such as receiving inconsistent advice, vagueness or ambiguity of advice given and a lack of up-to-date evidence-based guidance:

"It was a flyer instead of asking what I was currently doing or wanting to achieve." Participant 12.
"Appeared to be a one size fits all approach." Participant 13.
"My midwife very rarely knew what I could and couldn't do during pregnancy she only knew how to do blood pressure checks and day to day midwifery." Participant 14.
"I would like more information about safe exercise during pregnancy." Participant 15.
"Very general advice, [that was] non-committal. [The HCP} only gave [me] information because I asked it, [it] wasn't voluntarily provided." Participant 16.

Figure 2 summarises findings expressed as a percentage of the total sample. Only 28% ($n = 120$) of the total sample received PA advice from an HCP; 25% ($n = 107$) received advice that they felt was clear and easy to follow; 24% ($n = 103$) received advice that they felt was timely. 22% ($n = 96$) felt confident in the advice they received; Only 17% ($n = 74$) of women felt supported to begin or maintain PA during their pregnancy.

(f) Consistency in advice received across multiple pregnancies

For 240 participants (56% of total sample), their most recent or current pregnancy was not the first time they had accessed maternity care on the island of Ireland. For 83% of these participants (n = 199) experiences of receiving PA guidance during pregnancy were similar between pregnancies. For those who had inconsistent experiences of receiving PA advice across two or more pregnancies, this often related to provision, content of the advice received, an assumption that women do not need to be informed if it is their second (or more) pregnancy and due to differences in pregnancy symptoms or conditions. Some women attributed differences in provision due to the covid-19 lockdown:

"With this [subsequent] pregnancy I was told I'm a pro now I don't need them [HCP] to tell me everything, they didn't want to know." Participant 17.
"In my first pregnancy I got access to online yoga through a sure start program. Nothing offered in this pregnancy." Participant 18.
"First pregnancy was during lockdown, so my classes were not taking place." Participant 4.
"Covid impacted whole pregnancy experience second time round. Far more fragmented. No advice given on pelvic floor exercises. Was not referred to physio even though consultant suggested getting review while still in hospital postpartum." Participant 19.

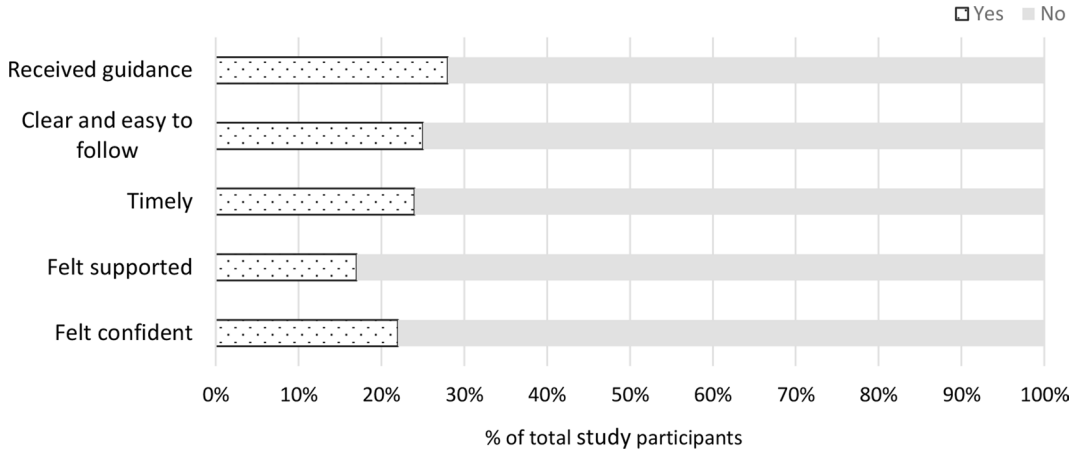

Fig. 2 Perception of PA guidance and support received by participants during maternity care (data expressed as a percentage of the total sample)

(g) Personal experiences and future needs

When asked for final thoughts on receiving PA guidance during pregnancy, 99 participants offered open-text responses, highlighting how important it was to them. These responses formed two themes and seven subthemes explaining the experiences of women relating to PA advice and guidance during pregnancy, as well as future needs identified to improve women's experiences (Fig. 3).

Theme 1, *Experiences of Receiving Guidance and Support* generated three subthemes including: (i) *Lacking*: which outlines the experience of having insufficient support and guidance regarding PA during pregnancy; (ii) *Scaremongering*: which highlights women's experience of fear-based narratives being leveraged during maternity care to influence behaviour and decision-making relating to PA during pregnancy and (iii) *Outsourcing*: which encompasses the experience of women feeling they needed to outsource support and guidance relating to PA during pregnancy. This often involved engaging with private physiotherapists and exercise professionals as well as relying on their own research, knowledge and

Fig. 3 Themes and subthemes of women's experiences of PA guidance and support during pregnancy and postpartum

Table 2 Actionable steps and recommendations generated

No.	Actionable step(s) and recommendation(s)
1.	Clear, specific, and accessible evidence-based guidelines are needed regarding PA, exercise and sport during pregnancy and postpartum on the island of Ireland. a. guidelines should include pelvic floor exercises and maternity specific exercises b. return to PA, exercise and sport guidance should be included c. specific guidance is required for contraindicated pregnancies d. specific guidance is needed for those considered highly active (engaging in regular vigorous activity) prior to pregnancy
2.	Consistent PA guidance and support needs to be provided by appropriately trained professionals to all women, at multiple points, throughout their maternity care delivered across the island of Ireland.
3.	Provision of specialised physiotherapy should form an integral part of standard maternity care on the island of Ireland.
4.	Provision of pregnancy specific activities, exercise classes and evidence-based resources are required to support these populations in this region.
5.	Development of specialist roles/training to support women across the island of Ireland to be physically active during pregnancy and after childbirth.

experience. Theme 2, *Future Needs Identified to Improve Experiences* (Fig. 3) generated four subthemes including: (i) *Consistent education and guidance for all*: which highlighted the inconsistencies in advice and guidance received during maternity care, and a need to ensure there is consistency in education and guidance delivered during all women's maternity care; (ii) *Change to cultural norms*: this subtheme illustrates the need to shift culture and narrative relating to women being physically active during pregnancy; (iii) *Judgement free and women-centred*: which highlights the need to ensure that women feel supported to be physically active and (iv) *Specialist field required*: which reflects the need highlighted for professional training and specialist roles to ensure individualised and safe PA screening, prescription and monitoring is provided for women through maternity care. Illustrative quotes for each subtheme are provided in Supplementary Table 1, Additional File 1.

From the study findings a list of five actionable steps and recommendations were generated (Table 2).

Discussion

Key findings from this study highlights recently pregnant and postpartum (within the past three years) women that received maternity care on the island of Ireland lack knowledge regarding current PA guidelines during pregnancy and postpartum. Results also show PA guidance and support received by women through existing maternity care on the island of Ireland is largely inconsistent and insufficient. Only 28% of participants ($n = 120$) reported to be aware of the PA guidelines during pregnancy. However, only 7% of the total sample were able to correctly state these guidelines. Interestingly, less than half of participants (45%, $n = 195$) reported being aware of the PA guidelines for the general population with only 16% of the total sample able to correctly state the PA guidelines for the general population. These findings emphasise the importance of translating PA guideline messaging from policy to practice. Despite significant work leading to the development of global and national PA guidelines [9, 10, 19, 32] their implementation into the lived experiences of populations, in this case pregnant and recently postpartum women on the island of Ireland, remains a challenge.

Often society, including pregnant people and HCPs, has been cautious about maintaining or adopting PA in pregnancies without contraindications. This is reflected in the experiences of women in the current study with participants highlighting "*instead of [the advice] being evidence informed, they [the HCP] used exercise (and stopping it) as a fear tool*", and they were "*told not to exercise even though the pregnancy was complication free*". Such beliefs and attitudes regarding PA during non-contraindicated pregnancies, though not evidence-based, remain prevalent in society. The authors acknowledge while these beliefs and attitudes are often founded from genuine concern for the pregnant individual and foetus during gestation, they may instead be attributed to lack of education, cultural or gender bias. This historical 'put your feet up' approach may contribute to the decrease observed in PA and concomitant increase in maternal morbidities [20] specifically in pregnancies without absolute contraindications. As previous research has concluded, pregnancy should not be a state of confinement [33]. Empowering pregnant people without absolute contraindications to take part in PA has positive effects on maternal and foetal health [7, 14, 34]. Moreover, enabling HCPs within timely points of gestation to provide accurate PA guidance and support may increase the safe and enjoyable participation of PA during pregnancy. Internationally, pre-screening tools have been developed to support pregnant and postpartum individuals and professionals to assess the suitability and safety of PA [11, 22, 23, 30]. However, like the PA messaging challenge discussed earlier the vast majority (96%, $n = 411$) of pregnant women surveyed had not heard of any pre-screening tools or questionnaires related to PA during pregnancy. The use of validated PA pre-screening tools would enable guidance and support to be provided and received in a confident and safe manner to facilitate adoption and/or maintenance of PA during pregnancy and following childbirth.

The findings of this study highlight the need for women on the island of Ireland to receive evidence-based PA guidelines. 59% ($n = 252$) of participants did not receive PA guidance or support from an HCP during their most

recent or current pregnancy. Of these, most women (70%, $n = 177$) surveyed expressed they would have liked to receive this information. Effective PA guidance and support may be most efficiently and sustainably delivered through the existing maternity care systems on the island of Ireland. The authors recognise that people receiving maternity care through Northern Ireland's Health and Social Care system (HSCNI) have access to the UK PA guidelines for pregnancy and postpartum periods that adhere to global updates [9, 10]. In contrast, national PA guidelines in the Republic of Ireland currently provided by the HSE do not include guidelines for pregnancy or postpartum populations [19], however, the recent tender call to develop these guidelines is welcomed [35]. The authors acknowledge that through current maternity care in the Republic of Ireland PA guidance is addressed albeit briefly, within one-page (page 37–38) of the 228-page HSE *My Pregnancy* resource provided at antenatal booking appointments and available online [36]. In contrast to updated UK resources, the HSE advice omits the muscle strengthening guidelines and does not address postpartum PA guidance adopted in current global PA recommendations [10]. Moreover, guidance for those physically active (including vigorous-intensity activity) before pregnancy is not included and current advice to limit and reduce sedentary behaviour during pregnancy and postpartum periods is also omitted [10]. Pelvic floor information is provided briefly (page 39–40) in the HSE resource [36]. Interestingly, only 14% ($n = 62$) of total study participants suggested they would like to receive PA guidance and support in flyer or handout form and only 18% ($n = 77$) of total participants expressed they would like to be directed to an online source. These findings suggest this form of communicating PA guidance may not be an agreeable or effective method for many pregnant or recently postpartum women.

An all-systems approach has been proposed to link PA practice, research, and policy to drive change in this area [3, 37]. Only 28% of women surveyed received PA advice during pregnancy, with 25% finding it clear, 22% confident in it, and 24% feeling it was timely. Furthermore, only 17% felt supported to start or maintain PA. These findings highlight the need for improved PA guidance and support during maternity care across the island of Ireland. Pregnancy is an opportune time to positively influence maternal and foetal health and wellbeing, with long-term benefits for both [7, 38]. This may have secondary societal benefits such as reducing healthcare costs and improving health. Reviewing how PA guidance is delivered during maternity care could help promote consistent, evidence-based, and supportive advice, ensuring women can confidently engage in PA during pregnancy and postpartum. It has been highlighted that the strongest empirical evidence to date exists which clearly demonstrates the safety and benefits of PA during pregnancy [7], yet translating this into effective practice and policy remains a challenge on the island of Ireland. Based on the study findings, five actionable recommendations were made to inform future practice, research, and policy.

Strengths and limitations

The sample size recruited ($N = 430$) for this study exceeded the target ($N = 384$), which strengthens the study's ability to reasonably reflect the current lived experiences of the recruited population across the island of Ireland. However, as 99% of participants were of white ethnicity the results may not reflect the lived experience of pregnant individuals from non-white ethnic backgrounds. The pregnant population on the island of Ireland is diversifying in terms of ethnicity and age [24, 25]. While the majority are of white ethnicity, similar to most respondents in the current study (99%), ethnic minority communities are growing. In the Republic of Ireland, there has been a significant increase in the number of pregnancy bookings among individuals of non-Irish ethnic backgrounds [39]. Similarly, in 2022–23, 94% of births in Northern Ireland were to individuals of white ethnicity [25]; however, 18.5% of live births were to pregnant individuals born outside Northern Ireland [25], indicating increasing diversity. Additionally, recent 2022 data displayed age diversity in pregnancy across the island of Ireland, with an average birthing age of 33.2 years in the Republic of Ireland [24] and 87% of births in Northern Ireland to individuals aged ≥ 25 years [25]. While this study exceeded the target sample size, only 2% of participants were aged 18–25 years and just 1% was over 45 years of age. Although these figures align with birthing age trends on the island of Ireland [24, 25], future studies should aim for broader age and demographic representation to better reflect the growing diversity of pregnant populations in this region. To reach a more diverse range of respondents, future studies should consider additional recruitment methods beyond social media, particularly to include pregnant and postpartum individuals who have limited access to digital devices or do not use social media. While this study focused on pregnant and recently postpartum women's PA knowledge and experiences, further research is needed to explore this during the preconception and extended postpartum periods (beyond three years) on the island of Ireland.

A strength of this study is the actionable steps proposed by the authors to inform future practice, research and policy. It is hoped these actionable steps will improve the lived experiences and ultimately benefit maternal and foetal health on the island of Ireland. The guidance and support provided from HCPs during (and beyond) these significant chapters of a woman's life require further

research. In particular, HCPs confidence and capacity in providing PA guidance and support through their professional practice merits future study. This would also assess if it were feasible for pregnant and postpartum populations to receive appropriate and timely PA guidance through the existing but as the authors recognise often over-burdened HCPs involved in maternity care on the island of Ireland. Finally, while research is emerging on PA during pregnancies with contraindications and complexities [40] more research is required in this area, including during IVF, to ensure evidence-based PA guidance for pregnancies without absolute contraindications.

Conclusions

It is clear based on these findings more work is needed to translate evidence-based PA guidelines into the lived experience of antenatal and postpartum individuals on the island of Ireland. These populations should be empowered using an all-systems approach to safely and confidently engage in a physically active lifestyle during this often vulnerable period. Providing accurate, evidence-based PA guidance and support at timely points of gestation through the existing maternity care structure may be a cost effective and sustainable way to translate the empirical evidence into the lived experience of pregnant and postpartum populations on the island of Ireland. Suggestions are proposed to inform future all-island pregnancy and postpartum PA research, policy and practice.

Abbreviations

CMO	Chief Medical Officer
HCP	Healthcare practitioner
HSCNI	Health and Social Care Northern Ireland
HSE	Health Service Executive
PA	Physical activity
UK	United Kingdom
WHO	World Health Organisation

Supplementary Information

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Supplementary Material 1

Supplementary Material 2

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Author contributions

MF and LD contributed equally to all aspects of this manuscript including conceptualisation, study design, data collection, analysis, and writing. MF and LD share first author contributions. SC and BF contributed to the data analysis, revision and final approval of the manuscript.

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Data availability

The datasets generated and/or analysed during the current study are not publicly available due to privacy but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This study was conducted in accordance with the Declaration of Helsinki and ethical approval was granted by Ulster University, School of Sport Research Ethics Filter Committee (SESRI-24-039-A). All participants provided informed consent before taking part in the research.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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