Factors Influencing Women's Perceptions of Choice and Control During Pregnancy and Birth: A Cross-Sectional Study.

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Abstract

Background

Women across the world value choice and control throughout their maternity care experiences. In response to this health policy and frameworks are adapting and developing. The concepts of choice and control are extrinsically complex and open to interpretation by healthcare professionals and service users, with the two not necessarily aligning. Depending on a number of factors, women's experiences of choice and control within the same maternity care system may be very different. This study aimed to investigate the factors influencing women's perceptions of choice and control during pregnancy and birth in Ireland.

Methods

We conducted a cross-sectional study using an adapted version of the questionnaire from the UK national maternity experience survey (National Perinatal Epidemiology Unit). During 2017, a sample of 1,277 women were recruited from the postnatal wards of three maternity units and a tertiary maternity hospital. Poisson regression was used to assess the association between twelve factors and a series of measures of the women's perception of choice and control.

Results

The majority of women were multiparous (64%), aged over 30 years (79%), educated to third level (82%), of Irish nationality (85%) and accessed public maternity care (76%). Most women reported not having choice in the model or location of their maternity care but most reported being involved enough in decision-making, especially during birth. Women who availed of private maternity care reported higher levels of choice and control than those who availed of public maternity care. This factor was the most influential factor on almost all choice and control measures.

Conclusion

Most women experiencing maternity care in Ireland report not having choice in the model and location of care. These are core elements of the Irish maternity strategy and significant investment will be required if improved choice is to be provided. Availing of private maternity care has the strongest influence on a woman's perceived choice and control but many women cannot afford this type of care.

1. Background

Maternity services in many countries worldwide are going through a period of evaluation and change. Health policy and frameworks are placing increasing emphasis on concepts such as choice and control. Whether this is a tokenistic attempt to present health services as person centred (1) or a genuine pursuit to implement a different model of care remains unclear. Nonetheless, it is evident that women across the world value care that incorporates these two concepts. Social models of maternity care advocate for individualised care and decision making that occurs in the context of a relationship between a childbearing woman and their midwife (2). The philosophy of this approach to maternity care is often aligned closely to that of midwifery-led care. Research demonstrates that sociologically informed approaches to healthcare are associated with women feeling more in control and having access to care related choices (3, 4). Furthermore studies where midwifery led or caseloading models of care have been adopted have found improved outcomes, with a decrease in preterm birth and medical interventions (4, 5).

In Ireland, recommendations from national reports and strategies have indicated a need for a biopsychosocial approach to maternity care to foster choice and control (6, 7). In addition to this, recent health policies in Ireland make a case for services to relocate to community settings where possible, an approach which is thought to be more cost effective and lead to improvements in patient satisfaction through continuity of care(r) (8). In response to this, proposals are in place for, at least 20% of women, to have access a midwifery led pathway of care, based on the DOMINO (Domiciliary In and Out) service model (9). In recent years some of these recommendations have begun to be actualised on a small scale in Irish cities, examples include the establishment of community based antenatal clinics and DOMINO schemes for a select group of women living within allocated catchment areas (6, 7). However, despite evidence supporting alternative models of maternity care, Combined Care is the predominant pathway of

care available to women living in Ireland (10). Combined Care is based on a medical model and is led by the woman's GP alongside an assigned hospital obstetrician under the HSE Maternity and Infant Care Scheme. For the vast majority of the childbearing women, care during labour, birth and the immediate postnatal period is provided in an obstetric led hospital by hospital-based midwives and obstetricians (11). Apart from a few community midwifery services, postnatal community support is provided by public health nurses, who also provide a range of health-related services across the lifespan, including infant development, wound care, care of the elderly at home and home-based palliative care (12).

The private obstetric led option remains popular amongst those who can afford the cost. (13) found that over a six-year period between 2005–2010 30.3% of all maternities had booked for privately. However, this figure steadily decreased to 24.2% over the six years. According to national statistics issued by the Department of Health (DOH) between 2012–2014, 17% of discharges were accounted for by private patients (14). It is presumed that this figure varies depending on geographical location, however at the time of writing this paper data relating to this were not available. Women who avail of private obstetric-led care receive antenatal care led by their chosen obstetrician in a clinic style setting. During labour they are usually cared for in a public maternity hospital by a midwife employed by the public health service, their chosen obstetrician is usually present for the birth. If any complications are to arise, they are generally managed by their chosen obstetrician. Their immediate postnatal care takes place in a public hospital, often within a private room by midwives employed in the public health system. Once discharged they are visited by a public health nurse in the community. Follow up postnatal appointment(s) are arranged with their obstetrician, in a clinic style setting. Despite women being significantly more likely to have an obstetric intervention irrespective of obstetric risk factors, private obstetric led care remains the only viable option for many women to ensure continuity of carer in Ireland (13, 15).

In 2017, a year after the publication of the National Maternity Strategy (NMS) (7) and a year before the Eighth amendment was repealed from the Irish Constitution there was a sense that change was on the horizon. The need to greater understand women's experiences of maternity care and to obtain baseline data for future comparison initiated a review of women's experience of maternity services in the South / South West of Ireland. As populations change and maternity services evolve surveys have become increasingly popular tools for measuring women's experiences of maternity care; informing health policy; and initiating improvements to the quality of maternity care (16, 17). Experiences during the perinatal period have an impact on the future health of both parent and child, therefore making it a critical time for health providers to ensure service users have a positive experience (17). The SSWHG survey offers the first large scale insight into the lived experiences of women accessing maternity care in four Irish hospitals. This paper further examines the results of this survey, with the aim of revealing how women experience choice and control within Irish maternity services.

1.1 Choice

Choice within healthcare can involve making a number of complex decisions, such decisions include choice of care provider; choice of care facility; choice of treatment; and choice to refuse a suggested treatment/care plan. Choice within maternity care is different from that of general healthcare as pregnant women are usually not sick, and have the capacity to make decisions regarding their care. The fact that women's choices will inevitably affect that of their fetus/unborn baby means that their choices are often scrutinised (18) and rarely free from a pro-fetus, paternalistic rhetoric (19). The complexity involved in this decision-making process has meant that choice within maternity services is not clearly defined and therefore is open to interpretation by service users and healthcare professional; with the two necessarily aligning. This can lead to women feeling pressured into the option deemed 'least risky' and 'most sensible' by their healthcare practitioner(s) (20). This in turn can result in women feeling a lack of control of their physiological processes and prevent the actualisation of choice (21).

Choice becomes even more challenging to achieve for women who are experiencing social deprivation and disadvantage. Although they want to engage in their care, in reality they encounter a number of barriers, such as receiving insufficient information; perceived risks in not conforming to routine procedures; and negative reactions from midwives (22). Choice during the perinatal period is thought to be largely relational, meaning that the choices that are made by women occur in the context of their relationship with their baby and with their healthcare provider. The availability of informed choice does not rely independently on the availability of evidence-based information, but instead depends on an in depth discussion with a professional who they have had the opportunity to establish a relationship and build up a rapport with (23).

1.2 Control

In the past decade, increased emphasis has been placed on the concept of control within maternity services. Like choice, control in maternity services is a concept open to interpretation without a conclusive definition. Control in maternity services has been found to include decision making, access to information, personal security and physical functioning (24). Feeling in control during the perinatal period has many benefits for both the mother and her baby, including increased childbirth satisfaction; positive childbirth experience; emotional wellbeing; and supporting the transition to motherhood (24).

Control is a concept that is intrinsically linked to the concept of choice. Research suggest that the extent to which women are included in the decision-making processes during pregnancy, labour and birth varies considerably (25). Studies have found that patient involvement in decision making and provision of information is dependent on a number of factors, including how embedded the procedure is in routine care; whether there is a policy for ensuring and obtaining documented consent for the procedure and whether clinical policies or guidelines recommend its use (25). Thus, procedures such as fetal monitoring, vaginal examination, blood tests and ultrasound scans are more likely to be adopted in an 'uniformed' and 'un-consulted' decision making approach. This suggests that the more a procedure is considered routine, the less likely there is to be decision making processes fostering patient involvement (25).

The Lancet Midwifery Series brings attention to the prevalence of disrespectful and abusive treatment (D&A) that occurs in countries, rich and poor worldwide. D&A is defined as having a broad spectrum and includes emotional abuse (e.g. shouting, scolding); physical abuse (e.g. slapping); abandonment of patients, discrimination, and non-consented interventions. Such treatment is associated with feeling a lack of control, which is negatively correlated with anxiety and fear (24). As indicated in the recent MBRRACE report, black women have more than five time the risk of dying in pregnancy or up to six weeks when compared to white women, whilst women of mixed ethnicity have three times the risk and Asian women have almost twice the risk (26). Research to date has found that women from ethnic minorities in Ireland experience an array of inequalities within Irish maternity care, including ineffective communication (27), inadequate 24-hour access to properly trained interpreters (27, 28), and a lack of cultural sensitive care, where instead women from ethnic minorities are expected to conform to the existing system (28). In addition to women from ethnic minority groups, primiparous women in the UK have been found to be significantly less likely to feel they received appropriate advice when they phoned a midwife or hospital and were more likely to be worried about not knowing when labour would start (29). Research suggests that D&A behaviours are often normalised in maternity services worldwide and can therefore go unnoticed by providers or patients, or both. The Lancet publication proposes that in order to achieve respectful maternity care, D&A needs to be acknowledged as a symptom of a wider issue relating to power imbalances and inequities that exists within many maternity services (30).

1.3 Problem Statement

The concepts of control and choice are complex and open to many different interpretations. Depending on a multitude of factors, women's experiences of choice and control within the same maternity care system may be very different. According to international research race, age, socioeconomic factors, co-morbidities, and parity can all influence outcomes (31). There is a paucity of research examining the factors that influence women's perception of choice and control within Irish Maternity Services. Gaining a greater understanding of these factors is needed to facilitate a wider discussion about how maternity related health policy addresses issues relating equity of choice and control for all women accessing maternity care in Ireland.

2. Method

1. *2.1 Aim*This study aimed to investigate the factors that influence women's perceptions of choice and control during pregnancy and birth in Ireland.
2. *2.2 Design*

We conducted a cross-sectional study using an adapted version of the questionnaire from the UK national maternity experience survey, which was designed by the National Perinatal Epidemiology Unit (NPEU). This questionnaire was used as part of a larger study examining women's experiences of maternity care in a region of Ireland (11).

2.3 Setting and Participants

Participants were recruited during 2017 in three Irish maternity units and a tertiary level maternity hospital where one in five pregnant women give birth each year. All women on the postnatal wards who were 18 years or older and who had been able to communicate in English were offered the opportunity to participate. This included women who had given birth to a live baby and those whose babies were admitted to the neonatal intensive care unit. Women were not approached if they or their baby was critically unwell or if they had experienced a pregnancy loss or stillbirth. Based on power analysis a sample size of 1091 was considered sufficient for the study. Ethical approval for the study was obtained (ECM4(f)07/02/17) along with permission from the Directorate of the services.

2.4 Data Analysis

Double data entry was undertaken by an independent company. Data were checked and out of range values and inconsistent responses were resolved through discussion by the research team. A range of twelve participant characteristics were identified as factors with potential to influence choice and control. Data analysis was confined to the 1,176 women who provided complete data on all twelve of these factors. Nominal categorical variables were described using frequency and percentage (%). Univariable and multivariable Poisson regression analyses were used to investigate factors associated with the Control variables. As recommended by (32) robust error variances were used. Factors with a p-value < 0.25 in the univariable analysis were eligible for inclusion in the multivariable analysis. For all factors investigated, the unadjusted and adjusted relative risks (RR) and 95% confidence intervals (95% CIs) are presented. Prior to performing the multivariable analyses, multicollinearity among the factors was tested using the variance inflation factor (VIF). All tests were two-sided and a p-value < 0.05 was considered to be statistically significant. All statistical analysis was performed using Stata (version 15.1, StataCorp LP, College Station, TX, USA).

3 Results

3.1 Characteristic of Participants

Less than 40% of women who responded were primiparous, whilst 64% of women had at least one child previously. At least three quarters of women were over 30 years of age, had completed third-level education (82%), had a planned pregnancy (80%), were of Irish nationality (85%) and accessed public maternity care (76%) (Table 1). In terms of morbidities during pregnancy, 9% of women experienced high blood pressure; 7% of women experienced gestational diabetes; and 12% experienced emotional or mental health problems (Table 1). Finally, less than half of women had a vaginal delivery (47%), with others having an instrumental delivery (16%); a planned caesarean-section (24%); or an emergency caesarean-section (14%) (Table 1).

Table 1
Participant characteristics

	N = 1176* % (n)
First Baby	
No	63.6 (748)
Yes	36.4 (428)
Age Group	
< 30 years	21.3 (250)
30–34 years	35.0 (412)
35–39 years	34.9 (411)
40 + years	8.8 (103)
Third Level Education	
No	17.8 (209)
Yes	82.2 (967)
Planned on becoming pregnancy with this baby	
No	19.8 (233)
Yes	80.2 (943)
Type of Maternity Care	
Public Maternity Care	76.1 (895)
Private Maternity Care	23.9 (281)
Nationality	
Non-Irish	14.8 (174)
Irish	85.2 (1002)
Experienced high blood pressure during pregnancy	
No	91.1 (1071)
Yes	8.9 (105)
Experienced gestational diabetes during pregnancy	
No	92.6 (1089)
Yes	7.4 (87)
Experienced any emotional or mental health problems during pregnancy	
No	87.7 (1031)
Yes	12.3 (145)
Mode of delivery (n = 1086)	

	N = 1176* % (n)
Vaginal delivery	47.1 (512)
Instrumental vaginal delivery	15.6 (169)
Planned Caesarean section	23.6 (256)
Emergency Caesarean-section	13.7 (149)
*unless otherwise stated	

3.2 Choice and Control

Results for choice and control are presented under the following headings: Women's Experiences of Choice; Women's Experiences of Control; Women's Experiences of Involvement in Decision Making. Table 2 provides a summary of these results.

Table 2
Women's reported perceptions of choice and control during antenatal care and childbirth

	Yes % (n)	No % (n)
Reported being offered choice of practitioner carrying out antenatal check-ups (n = 1078)	22.1% (238)	77.9% (840)
Reported being offered choice of where antenatal check-ups would take place (n = 1075)	31.6% (340)	68.4% (735)
Reported having choice of midwifery-led care (n = 805)	33.2% (267)	66.8% (538)
Reported having choice of DOMINO Scheme (n = 804)	14.6% (118)	85.3% (686)
Reported 'always' having time to discuss pregnancy during antenatal check-ups (n = 1,145)	79.0% (905)	21.0% (240)
Felt you had a choice of having scans (n = 1,116)	67.7% (756)	32.3% (410)
Reported 'always' being involved enough in decisions about your antenatal care (n = 1,162)	64.4% (748)	35.6% (414)
Reported being offered a choice of birth location (n = 1,117)	15.6 (175)	84.3% (942)
Felt in control 'almost always' during childbirth (n = 1063)	29.6% (315)	70.4% (748)
Reported receiving pain relief at the time they wanted (n = 660)	81.8% (540)	18.2% (120)
Reported 'always' being involved enough in decisions about your care during labour and birth (n = 1,111)	77.0% (856)	23.0% (255)
Felt under pressure from HCP (healthcare professional) on decisions taken (n = 1076)	14.7% (158)	85.3% (918)

3.2.1 Women's Experiences of Choice

With reference to Table 2, 84.6% of women reported not being offered any birth place choices, with 8.7% reporting that they had no birth place choices due to medical reasons and 10.8% stating they 'did not know' if they had been offered birth place choices. A number of women (12.6%) reported being offered a choice of hospitals outside the county they live. Data exploring the rationale for this were not collected, however it is suspected that women may have considered giving birth in larger maternity hospitals in

other counties due to potential complexity of the pregnancy or for personal reasons. Only 2.3% of women in the study reported being offered a choice of giving birth at home (See Supplementary File 1 Table A).

In terms of choice of DOMINO scheme, first time mothers were more likely to be offered this as an option. Multivariable analysis found that first time mothers ($p < 0.001$), who planned on becoming pregnant with this baby ($p = 0.042$) and did not experience high blood pressure during this pregnancy ($p = 0.041$) were more likely to be offered the choice of a DOMINO scheme (Supplementary File 1 Table D). According to univariable analysis older women ($p = 0.018$), women with private care ($p = 0.011$) and women who experienced gestational diabetes (0.019) were less likely to be offered choice about where their check-ups would take place (Supplementary File 1 Table B). All three variables remained statistically significant following multivariable analysis (Supplementary File 1 Table D).

Based on univariable analysis, women with third level education ($p = 0.005$), private care ($p < 0.001$), planned pregnancies ($p = 0.008$) and older women ($p = 0.002$) were more likely to be offered choices of practitioner carrying out check-ups (Table 3). Type of maternity care ($p < 0.001$) was the only variable to remain statistically significant following multivariable analysis, with those who had private care being more likely to be offered the choice of practitioner (Table 3). In terms of being offered Midwifery Led Care, univariable analysis found that women with third level education and women with public maternity care were more likely to be offered this model of care (Supplementary File 1 Table C). Third level education ($p = 0.004$) and type of maternity care ($p < 0.001$) remained statistically significant in the multivariable analysis.

Table 3
Women's choice of practitioner carrying out check-ups and factors influencing their perception of this choice

Dependent variable: 1="Yes" 0="No"	During your pregnancy, did you have a choice about who would carry out your check-ups?									
	Yes	No[1]	Univariable analysis	Multivariable analysis						
	%	(n)	%	(n)	Relative Risk	(95% CI)	p-value	Relative Risk	(95% CI)	p-value
	238	840								
First baby							0.895			
No	22.2	(151)	77.8	(529)	1					
Yes	21.9	(87)	78.1	(311)	0.98	(0.78 - 1.24)				
Age group (years)							0.002			0.212
< 30 years	11.9	(26)	88.1	(193)	1			1		
30-34 years	24.9	(96)	75.1	(289)	2.10	(1.41 - 3.13)		1.49	(0.97 - 2.29)	
35-39 years	25.1	(95)	74.9	(283)	2.12	(1.42 - 3.16)		1.34	(0.87 - 2.06)	
40+ years	21.9	(21)	78.1	(75)	1.84	(1.09 - 3.11)		1.12	(0.65 - 1.93)	
Third level education							0.005			0.458
No	13.6	(24)	86.4	(153)	1			1		
Yes	23.8	(214)	76.2	(687)	1.75	(1.19 - 2.59)		1.17	(0.78 - 1.75)	
Planned on becoming pregnant with this baby							0.008			0.327
No	14.9	(31)	85.1	(177)	1			1		
Yes	23.8	(207)	76.2	(663)	1.60	(1.13 - 2.26)		1.20	(0.84 - 1.71)	
Type of Maternity Care							<0.001			<0.001

Public Maternity Care	15.6	(127)	84.4	(685)	1			1		
Private Maternity Care	41.7	(111)	58.3	(155)	2.67	(2.15 - 3.30)		2.42	(1.91 - 3.06)	
Nationality							0.180			0.871
Non-Irish	17.6	(25)	82.4	(117)	1			1		
Irish	22.8	(213)	77.2	(723)	1.29	(0.89 - 1.88)		0.97	(0.67 - 1.41)	
Experienced high blood pressure during pregnancy							0.828			
No	22.2	(217)	77.8	(762)	1					
Yes	21.2	(21)	78.8	(78)	0.96	(0.64 - 1.42)				
Experienced gestational diabetes during pregnancy							0.079			0.215
No	22.7	(227)	77.3	(771)	1			1		
Yes	13.8	(11)	86.3	(69)	0.60	(0.35 - 1.06)		0.70	(0.40 - 1.23)	
Experienced any emotional or mental health problems during pregnancy							0.297			
No	22.6	(213)	77.4	(730)	1					
Yes	18.5	(25)	81.5	(110)	0.82	(0.56 - 1.19)				
[1]includes responses "No" and "N/A"										

Univariable analysis found that women who planned on becoming pregnant ($p = 0.034$), had private care ($p < 0.001$), identified as Irish ($p = 0.021$) and older women ($p = 0.004$) were more likely to have felt they had choice about having antenatal scan/scans (Table 4). Following multivariable analysis, type of maternity care was the only variable to remain statistically significant ($p < 0.001$), meaning women with private care were more likely to answer that they felt they had a choice of having scan/scans.

Table 4
Women's choice of scan(s) and factors influencing their perception of this choice

Dependent variable: 1="Yes" 0="No"	Do you feel you had a choice about having the scan/scans?									
	Yes		No[1]		Univariable analysis			Multivariable analysis		
	%	(n)	%	(n)	Relative Risk	(95% CI)	p-value	Relative Risk	(95% CI)	p-value
	756		410							
First baby			.				0.383			
No	63.9	(473)	36.1	(267)	1					
Yes	66.4	(283)	33.6	(143)	1.04	(0.95 - 1.13)				
Age group (years)							0.004			0.304
< 30 years	56.3	(139)	43.7	(108)	1			1		
30-34 years	65.7	(270)	34.3	(141)	1.17	(1.02 - 1.33)		1.07	(0.94 - 1.23)	
35-39 years	66.6	(271)	33.4	(136)	1.18	(1.04 - 1.35)		1.04	(0.90 - 1.20)	
40+ years	75.2	(76)	24.8	(25)	1.34	(1.14 - 1.56)		1.15	(0.98 - 1.36)	
Third level education							0.474			
No	62.6	(129)	37.4	(77)	1					
Yes	65.3	(627)	34.7	(333)	1.04	(0.93 - 1.17)				
Planned on becoming pregnant with this baby							0.034			0.459
No	58.4	(135)	41.6	(96)	1			1		
Yes	66.4	(621)	33.6	(314)	1.14	(1.01 - 1.28)		1.05	(0.93 - 1.18)	
Type of Maternity Care							<0.001			<0.001
Public Maternity Care	59.0	(524)	41.0	(364)	1			1		
Private Maternity Care	83.5	(232)	16.5	(46)	1.41	(1.31 - 1.53)		1.37	(1.26 - 1.49)	
Nationality							0.021			0.214
Non-Irish	56.2	(95)	43.8	(74)	1			1		
Irish	66.3	(661)	33.7	(336)	1.18	(1.03 - 1.36)		1.09	(0.95 - 1.26)	
Experienced high blood pressure during pregnancy							0.227			0.130

No	64.3	(684)	35.7	(379)	1			1	
Yes	69.9	(72)	30.1	(31)	1.09	(0.95 - 1.24)		1.11	(0.97 - 1.27)
Experienced gestational diabetes during pregnancy							0.704		
No	64.7	(698)	35.3	(381)	1				
Yes	66.7	(58)	33.3	(29)	1.03	(0.88 - 1.20)			
Experienced any emotional or mental health problems during pregnancy							0.471		
No	65.2	(666)	34.8	(355)	1				
Yes	62.1	(90)	37.9	(55)	0.95	(0.83 - 1.09)			
[1]includes responses "No" and "N/A"									

3.2.1 Women's Experiences of Control

During antenatal check ups women who were aged < 30 years (p = 0.009) or those that had planned on becoming pregnant were more likely to report feeling they were given enough time to ask questions during their antenatal care 'almost always' (p = 0.017) (Supplementary File 1 table E). Those who were receiving private care (p < 0.001); who did not experience emotional or mental health problem during pregnancy (p = 0.021) were also more likely to answer 'yes always' (Supplementary File 1 table E). Following multivariable analysis type of maternity care was the only variable to remain statistically significant (p < 0.001), meaning women who received private care were more likely to answer 'yes always' (Supplementary File 1 Table E).

Univariable analysis found that women who did not have third level education women who identified as non-Irish (p < 0.001) were more likely to report being in control during childbirth 'almost always' (p = 0.006) (Table 5). In the multivariable analysis, third level education (p = 0.021), type of maternity care (p = 0.007) and Nationality (p < 0.001) were statistically significant (Table 5). Women who did not have third level education, non-Irish women and those with private maternity care were more likely to have felt in control during childbirth "almost always" (Table 5).

Table 5
Women's perception of control during childbirth and factors influencing this perception

Dependent variable: 1="Almost always" 0="Not almost always"	I was in Control									
	Almost always[1]		Not almost always[1]		Univariable analysis			Multivariable analysis		
	%	(n)	%	(n)	Relative Risk	(95% CI)	p-value	Relative Risk	(95% CI)	p-value
	315		748							
First baby							0.151			0.076
No	31.2	(211)	68.8	(466)	1			1		
Yes	26.9	(104)	73.1	(282)	0.86	(0.71 - 1.05)		0.83	(0.68 - 1.02)	
Age group (years)							0.170			0.155
< 30 years	35.5	(78)	64.5	(142)	1			1		
30-34 years	27.3	(103)	72.7	(274)	0.77	(0.60 - 0.98)		0.77	(0.60 - 1.00)	
35-39 years	29.1	(109)	70.9	(266)	0.82	(0.65 - 1.04)		0.77	(0.59 - 1.00)	
40+ years	27.5	(25)	72.5	(66)	0.77	(0.53 - 1.13)		0.71	(0.47 - 1.08)	
Third level education							0.006			0.021
No	37.8	(68)	62.2	(112)	1			1		
Yes	28.0	(247)	72.0	(636)	0.74	(0.60 - 0.92)		0.76	(0.61 - 0.96)	
Planned on becoming pregnant with this baby							0.528			
No	27.8	(57)	72.2	(148)	1					
Yes	30.1	(258)	69.9	(600)	1.08	(0.85 - 1.38)				
Type of Maternity Care							0.226			0.007
Public Maternity Care	28.7	(230)	71.3	(572)	1			1		
Private Maternity Care	32.6	(85)	67.4	(176)	1.14	(0.92 - 1.40)		1.37	(1.09 - 1.72)	
Nationality							<0.001			<0.001
Non-Irish	43.2	(64)	56.8	(84)	1			1		
Irish	27.4	(251)	72.6	(664)	0.63	(0.51 - 0.78)		0.62	(0.50 - 0.76)	
Experienced high blood pressure							0.219			0.178

during pregnancy										
No	30.2	(292)	69.8	(675)	1			1		
Yes	24.0	(23)	76.0	(73)	0.79	(0.55 - 1.15)		0.78	(0.54 - 1.12)	
Experienced gestational diabetes during pregnancy							0.617			
No	29.8	(295)	70.2	(694)	1					
Yes	27.0	(20)	73.0	(54)	0.91	(0.62 - 1.33)				
Experienced any emotional or mental health problems during pregnancy							0.074			0.086
No	30.6	(284)	69.4	(643)	1			1		
Yes	22.8	(31)	77.2	(105)	0.74	(0.54 - 1.03)		0.75	(0.55 - 1.04)	

[1]Almost always: score=1 or 2; Not almost always: score=3 to 7

None of variables for pain relief at the time wanted were found to be statistically significant in the univariable and multivariable analysis (Supplementary file Table H), suggesting that despite different variables women had similar experiences of receiving pain relief at the time they wanted.

3.2.3 Women's Experiences of Involvement in Decision Making

Decision making is a fundamental component of feeling in control and for most women the involvement in decision making has a positive impact on their childbirth experience (33). To further explore control this study examined women's experiences of involvement in decision making. Univariable analysis found that women who were aged < 30 years ($p = 0.002$); had a planned pregnancy ($p = 0.022$); with private maternity care; were Irish; or did not experience any emotional or mental health problems during pregnancy were more likely to report feeling involved in decisions about their care during the antenatal period (Supplementary File 1 Table F). Multivariable analysis found that type of maternity care ($p < 0.001$) and experiencing any emotional or mental health problems during pregnancy ($p = 0.003$) remained statistically significant (Supplementary File 1 Table F). Women with private care and women who did not experience any emotional or mental health problems during pregnancy were more likely to 'always' feel involved in decisions about their antenatal care (Supplementary File Table F).

With regards to decision-making during childbirth, univariable analysis found that women with private care were more likely to report feeling involved enough ($p = 0.003$) (Supplementary File 1 Table G). Type of maternity care ($p = 0.009$) remained statistically significant following multivariable analysis (Supplementary File 1 Table G).

Finally, women were asked if they felt under pressure from healthcare professionals (HCP) during decision making. Those who had an unplanned pregnancy ($p = 0.011$); public care ($p = 0.004$); high blood pressure during pregnancy ($p < 0.001$); experienced any emotional or mental health problems during pregnancy ($p = 0.009$); or who were non-Irish ($p < 0.001$) were more likely to have felt pressure from HCP during decision making (Table 6). Multivariable analysis found that nationality ($p < 0.001$) was the only variable to remain statistically significant, with non-Irish women were more likely to have felt pressure from HCP on decisions taken (Table 6).

Table 6
Women's perception of feeling pressure from a healthcare professional during decision making and factors influencing this perception

Dependent variable: 1="Yes" 0="No"	Did you feel pressure from HCP on decisions taken									
	Yes		No		Univariable analysis			Multivariable analysis		
	%	(n)	%	(n)	Relative Risk	(95% CI)	p-value	Relative Risk	(95% CI)	p-value
	158		918							
First baby							0.127			0.329
No	13.5	(93)	86.5	(598)	1			1		
Yes	16.9	(65)	83.1	(320)	1.25	(0.94 - 1.68)		1.16	(0.86 - 1.55)	
Age group (years)							0.060			0.392
< 30 years	19.7	(43)	80.3	(175)	1			1		
30-34 years	13.2	(50)	86.8	(329)	0.67	(0.46 - 0.97)		0.82	(0.56 - 1.21)	
35-39 years	12.5	(48)	87.5	(336)	0.63	(0.43 - 0.92)		0.85	(0.58 - 1.26)	
40+ years	17.9	(17)	82.1	(78)	0.91	(0.55 - 1.51)		1.21	(0.72 - 2.06)	
Third level education							0.751			
No	15.4	(29)	84.6	(159)	1					
Yes	14.5	(129)	85.5	(759)	0.94	(0.65 - 1.36)				
Planned on becoming pregnant with this baby							0.011			0.226
No	20.2	(42)	79.8	(166)	1			1		
Yes	13.4	(116)	86.6	(752)	0.66	(0.48 - 0.91)		0.81	(0.58 - 1.14)	
Type of Maternity Care							0.004			0.067
Public Maternity Care	16.5	(134)	83.5	(676)	1			1		
Private Maternity Care	9.0	(24)	91.0	(242)	0.55	(0.36 - 0.82)		0.67	(0.44 - 1.03)	
Nationality							<0.001			<0.001
Non-Irish	28.1	(43)	71.9	(110)	1			1		
Irish	12.5	(115)	87.5	(808)	0.44	(0.33 - 0.60)		0.49	(0.36 - 0.67)	
Experienced high blood pressure							0.019			0.055

during pregnancy										
No	13.9	(136)	86.1	(842)	1			1		
Yes	22.4	(22)	77.6	(76)	1.61	(1.08 - 2.41)		1.46	(0.99 - 2.16)	
Experienced gestational diabetes during pregnancy							0.972			
No	14.7	(146)	85.3	(849)	1					
Yes	14.8	(12)	85.2	(69)	1.01	(0.59 - 1.74)				
Experienced any emotional or mental health problems during pregnancy							0.009			0.081
No	13.6	(128)	86.4	(811)	1			1		
Yes	21.9	(30)	78.1	(107)	1.61	(1.13 - 2.29)		1.38	(0.96 - 1.97)	

4 Discussion

4.1 Demographics

Women who responded were more likely to be older, living with their husband/partner and had completed third level education. According to the Central Statistics Office (34), 77.7% of infants nationally were born to mothers of Irish nationality, which is slightly less then this sample. The average age of mothers nationally for births registered in 2016 was 32.7, which compares well with this sample as almost 70% were in their thirties. Slightly more women over 40 years participated in the study compared with the national average. In each maternity unit, less than 40% of women were primiparous, with 34% attending with their second baby and just 3% of women had at least four other children. This compares well with National figures where 37.5% of births were to first time mothers and 35% of mothers were having their second baby (34).

4.2 Mode of Birth

Research has found that mode of birth is associated with different outcomes at three months postpartum, with women who had forceps assisted birth or unplanned caesarean section reporting the poorest health and wellbeing. Whilst women's physical and emotional health was least affected for those who had a an unassisted vaginal birth or planned caesarean Sect. (35). Almost half of the women in the study experienced a vaginal birth (47%), these figures are lower than the national average in 2016 of 53% (36). Whilst, the figures for instrumental birth in this study (16%) are comparable to those nationally of 15%. The rates of caesarean sections (planned and emergency) was 37%, this is slightly higher than the national figures of 31%, yet considerably higher than 10%, the amount deemed by the World Health Organisation (WHO) as necessary to reduce maternal and neonatal mortality. According to the WHO, caesarean section rates that increase above 10% are not associated with reductions in maternal or neonatal mortality rates, and could instead cause unnecessary, significant and permanent complications (37). A recent Irish study, found that women in private care were more likely to give birth by caesarean Sect. (15).

4.3 Women's Experiences of Choice and Control

Findings suggest that women's perceptions of choice and control within Irish maternity services can differ greatly depending on a multitude of factors. The only area whereby women were found to equal access to choice was in relation to pain relief.

Pregnant women who reported unplanned pregnancy were more likely to experience a lack of choice in relation to choice of scans, practitioner, and access to the DOMINO scheme; whilst also perceiving a lack of control in antenatal check-ups; being less likely to have felt involved in decision making and more likely to have felt pressure from a HCW. It is important to consider that the term

'unplanned' could potentially mean different things to different people and thus this is one of the limitations of the study. In Ireland, a national report found that 16% of all pregnancies experienced by women were described as a 'crisis pregnancy'(38). An Irish study conducted in 2015 found that younger women, married women and women with lower educational achievement were at an increased risk of crisis pregnancy (39). Unplanned pregnancy is associated with an increased risk of postnatal depression at 9 months postpartum, particularly amongst women who felt unhappy or ambivalent at the start (40).

The age of women was found to be another influential factor, with older women being more likely to have choice in relation to scans and antenatal check-up location. Whilst, younger women were more likely to have reported feeling in control during antenatal check-ups and involved in decisions about their care. In Ireland, women who are older, are frequently considered high risk in line with local hospital policy, which may account for why they had more access to medical support (e.g. scans). This is an important factor to note as the average age of births to mothers in Ireland is currently 32.2 years, with 6.4% of mothers 40 years or over, these figures have increased steadily in the past two decades (36). Women with third level education were more likely to be offered choice of practitioner and more likely to be offered choice of MLC. However, they were likely to feel less 'in control' in comparison to women who did not have third level education. These results are in contrast with similar studies internationally which found that with decreasing socio-economic position (including lower level of education and younger age) women were generally more likely to report not being treated respectfully or spoken to in a way that they could understand (41). Further research is needed to understand the experiences of women from different socioeconomic groups from an Irish perspective.

Interestingly non-Irish women were more likely to report having felt in control during childbirth 'almost always' The number of non-Irish women who took part in this study was 10% lower than the national figure. This combined with the limited research available nationally examining how non-Irish women experience maternity care means it is difficult to draw a conclusion at this time. Secondary analysis of a service user experience survey conducted in the UK, found that women from ethnic minority groups were less likely to feel spoken to so that they could understand, to be treated with kindness, to be sufficiently involved in decisions about their care and to have confidence and trust in the staff (42). As the number of non-Irish women accessing Irish maternity services increases further research is needed to understand their experiences and guide maternity services provision, health policy and professional education to address migrant women's individualised needs (43).

Women with pregnancy related complications (e.g. Gestational Diabetes or/and raised blood pressure) were less likely to experience choice and control. Women with gestational diabetes and women with raised blood pressure both reported feeling under pressure by HCP during decision making. Furthermore, women with gestational diabetes were less likely to be offered choice of where their antenatal checks ups would take place, whilst women with a raised blood pressure were less likely to have a choice to avail of DOMINO scheme. These results are unsurprising in the Irish context as women who are categorised as high risk have limited choices regarding the type of maternity care they receive e.g. women must be deemed 'low risk' to access the DOMINO scheme (7). Although there are studies looking at pregnant women's experience of gestational diabetes and raised blood pressure, they do not often examine factors such as choice and control, as it is widely accepted that choices within the medical model of care become more limited when complications arise.

Women who experienced emotional or mental health problems during pregnancy were not found to perceive lack of choices in maternity care. However, they were found to perceive a lack of control in relation to the decision making during antenatal care and felt more under pressure from HCP when making decisions. These results are of importance, as it has been reported that women who experience birth trauma report having a lack of control and perceive being subjected to authoritarian decision making (44). One study found that despite women with mental health difficulties receiving substantially more care, they were significantly more worried about labour and had lower satisfaction with their birth experience (45). Following the launch of a new model for perinatal mental health services in Ireland (HSE 2017), perinatal mental services in the region have begun to develop. This model proposes for multidisciplinary teams to offer individualised support to women experiencing mild to severe mental difficulties, to ensure their needs are responded sensitively within maternity services (46). Future research is required to determine whether such changes to maternity care provision are effective at alleviating the inequalities women experiencing mental health difficulties encounter during the perinatal period.

Type of maternity care was found to impact nine of the ten examined areas of choice and control. Women who had private care were more likely to have experienced choice and control throughout their maternity care, for example they were more likely to have

choice of scans, more likely to felt involved in decision making, and more likely to have felt in control. It is assumed that this cohort of women had already chosen to have obstetric led care privately, therefore it was expected that they would report having less choice of midwifery led care and access to the DOMINO scheme as this is only offered in the public maternity care system. In contrast women who received public care were more likely to have felt under pressure from their healthcare provider when decision making. These results demonstrate the inequality that exists between private and public maternity care in Ireland.

Finally this study findings demonstrates the lack of birth place choices women have in the South/South West of Ireland, with over three quarters of women not being offered any birth place choices; 8.7% of those reporting that they had no birth place choices due to medical reasons and 10.8% of those stating they 'did not know' if they had been offered birth place choices. In the region where this survey took place, One of the maternity units in this study provides a home birth service within a specific catchment area, whilst in all other areas the homebirth service is predominantly provided by self-employed community midwives (SECM) on behalf of the Health Service Executive (HSE). Although nationally the number of home births is low at 0.3%, 58.8% of homebirths nationally occur in the region where this study took place (47). Despite this only 2.3% of women in the study reported being offered a choice of giving birth at home. The eligibility and suitability of homebirth for women is assessed under the HSE Policy (48). Women who wish to give birth at home must meet certain criteria and be assessed by a consultant obstetrician in order to avail of the homebirth service. Studies have found that the interpretation of risk and thus the decision as to where to give birth is deeply subjective, with high risk women who wish to give birth at home perceiving risk differently to those who wish to give birth in hospital (49). At the time of writing this paper, there is no alongside or standalone birth centre in the South/South West of Ireland. It is clear that the vast majority of women in this study were not consulted about their birthplace choices and an implicit expectation existed for them to give birth in hospital.

5 Limitations

This study did have some limitations, as with other surveys there was more responses from women of certain demographic groups. Women who responded were more likely to be older, living with their husband/partner and had completed third level education. The reason for these discrepancies is possibly due to the use of a convenience sample. However, a convenience sample was deemed necessary to reach the desired number of participants. A random sample may have allowed for a more accurate representation of the total population; however, it would not have achieved such a high response rate.

Finally, satisfaction surveys have been found to have important limitations which need to be considered when examining the results of this paper. The often-cited paper by (50) highlights that although satisfaction surveys often find that women are overwhelming satisfied with their maternity care, it is important to remember that marginal groups are rarely well represented in these surveys and service users tend to value the status quo over innovations of which they have no experience.

6 Conclusion

From this study it is evident that women face unequal access to choice and control in Irish maternity services. Women have limited options in terms of birthplace choices with most women not being giving a choice of where to give birth. Women's perceptions of choice and control is particularly impacted by the type of care they access; with women who access private care being more likely to experience choice and control in comparison to those who access public care. In addition to this woman who experience an unplanned pregnancy; emotional or mental health difficulty during pregnancy; morbidities during pregnancy and are non-Irish are more likely to have poorer experiences of choice and control. To conclude women's perceptions vary depending on a number of variables, demonstrating that women do not have equal access to choice and control in Irish maternity services.

Abbreviations

CSO
Central Statistics Office
D&A
Disrespectful and Abusive Treatment
DOH

Department of Health
DOMINO
Domiciliary In and Out
HCP
Healthcare Professional
HIQA
Health Information and Quality Authority
HPO
Healthcare Pricing Office
HSE
Health Service Executive
MBRRACE
Mothers and Babies:Reducing Risk through Audits and Confidential Enquiries
MLC
Midwifery-Led Care
NPEU
National Perinatal Epidemiology Unit
NMS
National Maternity Strategy
RR
Relative Risk
SECM
Self-Employed Community Midwives
SSWHG
South/South West Hospital Group
VIF
Variance Inflation Factor
WHO
World Health Organisation

Declarations

Ethics Approval

The Clinical Research Ethics Committee of the Cork teaching hospitals (CREC) granted approval for the study Ref: ECM 4 (f) 07/02/2017 as did the Southern-Eastern Area Ethics Committee for the Maternity Unit in University Hospital Waterford. As outlined below, the verbal consent procedure was approved by the relevant ethics committees.

Consent to Participate

In the respective hospitals, the researcher met with the midwife managers on the postnatal wards to seek their support in recruiting potential participants. The study information leaflet was discussed with midwives who in turn informed women about the study. Midwives, working on postnatal wards, who had been briefed about the study, included the Study Informational leaflet in the Postnatal Information Pack given to all when admitted to the postnatal ward following birth. Following the opportunity to review the information leaflet, potential participant women who expressed interest in the study to the midwives were then followed up by researchers. On a daily basis, the research midwives liaised with the midwives on the postnatal wards to ensure that potential participants who expressed interest in the study met with the inclusion criteria. This provided an opportunity for potential participants to ask any questions and have any queries addressed in facilitating their decision to take part. Once potential participants were willing, eligible and verbally consented they completed Survey 1 Questionnaire. As the women were in the early postnatal period when the survey took place, verbal consent was deemed most appropriate. Participants were also given the

option to ‘opt out’ at the beginning of Survey 1 by ticking an allocated box stating “Please tick here if you do **NOT** wish to complete this or future surveys”. This consent procedure was approved by the relevant ethics committees.

Consent for Publication

Not applicable.

Availability of Data and Material

Public access was not part of the ethical approval for this research study, thus data and materials are not available.

Competing Interest

The authors declare that they have no competing interests.

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Authors’ Contributions

PLW, HM, PC, MOC and ROC were responsible for conception of the study. PC advised on design. Research assistants collected the data under the supervision of PLW, HM, PC, MOC and ROC. PLW, HM, PC, RB and ROC analysed the data and interpreted the findings. RB drafted the manuscript. PLW, HM, PC, RB and ROC reviewed and edited the final draft. All authors approved the final draft.

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Footnotes

1 Eighth Amendment: A constitutional amendment which equated the life of the woman to the life of the fetus. This amendment prevented women from making many decisions during pregnancy and birth e.g. termination of pregnancy; birthplace choices; access to/refusal of medical treatment.

References

1. Brady S, Lee N, Gibbons K, Bogossian F. Woman-centred care: An integrative review of the empirical literature. Int J Nurs Stud. 2019;94:107–19.
2. Kirkham M. The Midwife-Mother Relationship (2nd Edition). 2nd Edition ed. UK: Palgrave; 2010.
3. Hundley VA, Milne JM, Glazener CMA, Mollison J. Satisfaction and the three C's: continuity, choice and control. Women's views from a randomised controlled trial of midwife-led care. BJOG: An International Journal of Obstetrics Gynaecology. 1997;104(11):1273–80.
4. Homer CSE, Leap N, Edwards N, Sandall J. Midwifery continuity of carer in an area of high socio-economic disadvantage in London: A retrospective analysis of Albany Midwifery Practice outcomes using routine data (1997–2009). Midwifery. 2017;48:1–10.
5. Sandall J, Devane D, Soltani H, Hatem M, Gates S. Improving Quality and Safety in Maternity Care: The Contribution of Midwife-Led Care. Journal of Midwifery Women's Health. 2010;55(3):255–61.
6. HIQA. Maternity Overview Report. Ireland: Dublin; 2020.

7. DOH. Creating a Better Future Together: National Maternity Strategy 2016–2026. 2016.
8. CFH. Committee on the Future of Healthcare Sláintecare Report. Dublin: Houses of the Oireachtas; 2017.
9. NWIP. National Women and Infant's.
10. Health Programme Annual Report. Health Service Executive; 2018.
11. Office HP, Executive HS. Perinatal Statistics R. 2018. Contract No.: ISBN 978-1-78602-107-6.
12. Leahy-Warren P, O'Connell R, Corcoran P, O'Connor M, Mulcahy H. Women's Experience of Maternity Care in the South/South West Hospital Group. Cork: School of Nursing and Midwifery, University College Cork and South/South West Hospital Group; 2018.
13. Giltenane M, Frazer K, Sheridan A. Evaluating the impact of a quality care-metric on public health nursing practice: protocol for a mixed methods study. J Adv Nurs. 2016;72(8):1935–47.
14. Lutomski JE, Murphy M, Devane D, Meaney S, Greene RA. Private health care coverage and increased risk of obstetric intervention. BMC Pregnancy Childbirth. 2014;14(1):13.
15. DOH. Trends in Public / Private Patient.
16. Activity. in Public Acute Hospitals. 2017.
17. Moran PS, Daly D, Wuytack F, Carroll M, Turner M, Normand C, et al. Predictors of choice of public and private maternity care among nulliparous women in Ireland, and implications for maternity care and birth experience. Health Policy. 2020;124(5):556–62.
18. (HIQA) THIaQA. National Standards for Safer Better Maternity Services. Dublin: Health Information and Quality Authority; 2016.
19. Redshaw M, Martin CR, Savage-McGlynn E, Harrison S. Women's experiences of maternity care in England: preliminary development of a standard measure. BMC Pregnancy & Childbirth. 2019;19(1):N.PAG-N.PAG.
20. Gregg R. Pregnancy in a High Tech Age, Paradoxes of Choice. New York: New York University Press; 1995.
21. Shaw J. Full-Spectrum Reproductive Justice: The Affinity of Abortion Rights and Birth Activism. Studies in Social Justice. 2013;7(1):143-n. /a.
22. Bryant J, Porter M, Tracy SK, Sullivan EA. Caesarean birth: Consumption, safety, order, and good mothering. Soc Sci Med. 2007;65(6):1192–201.
23. Snowden A, Martin C, Jomeen J, Martin CH. Concurrent analysis of choice and control in childbirth. BMC Pregnancy Childbirth. 2011;11(1):40.
24. Ebert L, Bellchambers H, Ferguson A, Browne J. Socially disadvantaged women's views of barriers to feeling safe to engage in decision-making in maternity care. Women Birth. 2014;27(2):132–7.
25. O'Brien D, Butler MM, Casey M. A participatory action research study exploring women's understandings of the concept of informed choice during pregnancy and childbirth in Ireland. Midwifery. 2017;46:1–7.
26. Meyer S. Control in childbirth: a concept analysis and synthesis. J Adv Nurs. 2013;69(1):218–28.
27. Thompson R, Miller YD. Birth control: to what extent do women report being informed and involved in decisions about pregnancy and birth procedures? BMC Pregnancy Childbirth. 2014;14(1):62.
28. Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015–2017
Saving Lives MBRRACE. Improving Mothers' Care. Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015–2017.: Mothers: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE); 2019.
29. Tobin CL, Murphy-Lawless J. Irish midwives' experiences of providing maternity care to non-Irish women seeking asylum. International Journal of Women's Health. 2014;6:159–69.
30. Lyons SM, O'Keeffe FM, Clarke AT, Staines A. Cultural diversity in the Dublin maternity services: the experiences of maternity service providers when caring for ethnic minority women. Ethnicity Health. 2008;13(3):261–76.

31. Henderson J, Redshaw M. Sociodemographic differences in women's experience of early labour care: a mixed methods study. BMJ Open. 2017;7(7):e016351.
32. Freedman LP, Kruk ME. Disrespect and abuse of women in childbirth: challenging the global quality and accountability agendas. The Lancet. 2014;384(9948):e42-e4.
33. Dewey R. Key messages from.
34. the MBRRACE-UK. 2018 report: challenging inequities in outcomes for ethnic.
35. minority women as. a public health priority: a Scottish perspective. MIDIRS Midwifery Digest. 2019;29(2):145–52.
36. Zou G. A Modified.
37. Poisson Regression Approach to Prospective Studies with Binary Data. Am J Epidemiol. 2004;159:702–6.
38. Nieuwenhuijze MJ, Korstjens I, de Jonge A, de Vries R, Lagro-Janssen A. On speaking terms: a Delphi study on shared decision-making in maternity care. BMC Pregnancy Childbirth. 2014;14(1):223.
39. CSO. Vital Statistics Annual Report COrk, Ireland: CSO (Central Statistics Office); 2017.
40. Rowlands IJ, Redshaw M. Mode of birth and women's psychological and physical wellbeing in the postnatal period. BMC Pregnancy Childbirth. 2012;12:138.
41. Healthcare Pricing Office (HPO) HSEH
Healthcare Pricing Office (HPO) HSEH. Perinatal Statistics Report. 2016. 2018. Contract No.: ISBN 978-1-78602-107-6.
42. WHO. WHO Statement on Caesarean Section Rates
Department of Reproductive Health and Research
Switzerland
Contract No.: WHO/RHR/15.02.
WHO. WHO Statement on Caesarean Section Rates. Geneva. Switzerland: Department of Reproductive Health and Research; 2015. Contract No.: WHO/RHR/15.02.
43. McBridie O, Morgan K, McGee H. Irish Crisis Pregnancy and Contraception Study 2010: A Survey of the General Population. Dublin: HSE Crisis Pregnancy Programme; 2012.
44. Bourke A, Kelleher C, Boduszek D, Morgan K. Factors associated with crisis pregnancies in Ireland: findings from three nationally representative sexual health surveys. Reproductive Health. 2015;12(1):14.
45. Barton K, Redshaw M, Quigley MA, Carson C. Unplanned pregnancy and subsequent psychological distress in partnered women: a cross-sectional study of the role of relationship quality and wider social support. BMC Pregnancy and Childbirth. 2017;17.
46. Lindquist A, Kurinczuk JJ, Redshaw M, Knight M. Experiences, utilisation and outcomes of maternity care in England among women from different socio-economic groups: findings from the 2010 National Maternity Survey. BJOG: An International Journal of Obstetrics Gynaecology. 2015;122(12):1610–7.
47. Henderson J, Gao H, Redshaw M. Experiencing maternity care: the care received and perceptions of women from different ethnic groups. BMC Pregnancy Childbirth. 2013;13(1):196.
48. Fair F, Raben L, Watson H, Vivilaki V, van den Muijsenbergh M, Soltani H, et al. Migrant women's experiences of pregnancy, childbirth and maternity care in European countries: A systematic review. PLOS ONE. 2020;15(2):e0228378.
49. Elmir R, Schmied V, Wilkes L, Jackson D. Women's perceptions and experiences of a traumatic birth: a meta-ethnography. J Adv Nurs. 2010;66(10):2142–53.
50. Henderson J, Jomeen J, Redshaw M. Care and self-reported outcomes of care experienced by women with mental health problems in pregnancy: Findings from a national survey. Midwifery. 2018;56:171–8.
51. HSE. Specialist Perinatal Mental Health Services. Model of Care for Ireland. Dublin: National Mental Health Division, Health Service Executive; 2017.
52. Meaney S, Byrne A, Corcoran P, Greene RA, Sugrue S. Planned Home Births in Ireland Annual Report 2016.
53. HSE National Home. Birth Service provided by Self Employed Community Midwives. Cork: Health Service Executive; 2018.
54. HSE. Policy to Support Self-Employed Community Midwives to Assess.

55. the Eligibility and Suitability of. Women for Inclusion/Exclusion for.
56. Planned Home Birth with the HSE. Health Service Executive (HSE); 2018.
57. Lee S, Ayers S, Holden D. Risk perception and choice of place of birth in women with high risk pregnancies: A qualitative study. Midwifery. 2016;38:49–54.
58. van Teijlingen ER, Hundley V, Rennie A-M, Graham W, Fitzmaurice A. Maternity Satisfaction Studies and Their Limitations: "What Is, Must Still Be Best". Birth. 2003;30(2):75–82.

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