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What women want: Unveiling predisposition to vaginal birth in an Italian population

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Abstract

Introduction: In the world, the rates of Cesarean sections are rising. In Italy, we have the highest percentage of abdominal delivery in Europe. Studies show that the increasing request for cesarean section by women contributes to this phenomenon. The purpose of this study was to analyze the predisposition of women to vaginal birth, the factors that influenced their preferences, and the role of the information.

Methods: We used questionnaires compiled by pregnant women [nulliparous and multiparous] of any gestational era. The questionnaire was made of four parts: personal data, obstetric anamnesis, information received during gestation, and emotional aspects.

Results: We administered 802 questionnaires. Questionnaires considered valid for inclusion were 754. The percentage of women predisposed to cesarean section was 17.6% (nulliparous) and 20.3% (multiparous). Considering nulliparous, cesarean section preference was statistically associated with advanced maternal age [O.R. 2.17, p 0.005], smoking during pregnancy [O.R. 2.37, p 0.02], the beginning of pregnancy [O.R. 3.16 p 0.0045], the information that aroused their anxiety and fear [O.R. 3.50, p <0.0001], the fear of vaginal delivery [O.R. 6.66, p <0.0001], not having attended to the pre-birth course [O.R. 2.24, p 0.0007], the thought that cesarean section is physically [O.R. 6.45, p <0.0001] and psychologically [O.R. 7.02, p <0.0001] simpler than vaginal delivery and safer for the baby [O.R.6.33, p <0.0001], and the belief to have the right to choose the modality of giving birth [O.R. 3.86, p 0.0022]. Considering multiparous women, statistically significant associations were found between cesarean section and foreign women [O.R. 3.62, p 0.02], information received about labor and childbirth that aroused their anxiety and fear [O.R. 2.85, p 0.0005], fear of childbirth [O.R. 3.28, p 0.0003], the thought that cesarean section is physically [O.R. 16.62, p <0.0001] and psychologically [O.R. 13.66, p <0.0001] simpler than vaginal delivery and safer for the baby [O.R.6.43, p <0.0001], and the belief to have the right to choose the modality of giving birth [O.R. 4.20, p 0.003].

Discussion: A growing portion of women wish to deliver by cesarean section. This is due to anthropological and social aspects. We analyzed that the role of the information in this predisposition is relevant. For this reason, we believe that emphatic, careful, correct information can reduce this tendency.

Take-home message: This study highlights the increasing preference for cesarean sections among women in Italy, influenced by factors such as age, smoking, fear of vaginal delivery, and misinformation. Nulliparous and multiparous women showed significant predispositions towards cesareans, linked to misconceptions about its simplicity and safety. Emphasizing accurate and empathetic information could mitigate this trend, suggesting the critical role of education in childbirth preferences.

Key words: cesarean section; maternal preferences; midwifery.

INTRODUCTION

In Italy, the rate of cesarean sections [CS] has recently been rising. In 1980, the CS rate was 11 % [1]; in 2016, it was 33,7% [2]. This percentage is the highest in Europe, followed by Portugal [33%]. Moreover, it is higher in Southern Italy, in private hospitals, and where few deliveries are executed compared to Northern Italy and public structures. Fewer foreign women gave birth to CS than Italians. The reason for this increase is due to many variables. Cesarean section [CS] alleviates gynecologists' concerns regarding medico-legal consequences, while parents perceive it as a safer option for both the mother and newborn. Additionally, expectant mothers commonly associate abdominal delivery with increased pain compared to vaginal childbirth [3].

CS may be conducted in various scenarios, including urgent/emergent obstetrical events to safeguard the mother and baby's lives; clinical indications, such as breech presentation, central and marginal placenta previa; and maternal request. A specific category, including Caesarean Section performed before the onset of labor without other medical indications, constitutes 3.6% of all abdominal deliveries globally [5]. Remarkably, in the South-East region of China, this percentage rises significantly to 36% [6]. In Italy, our guidelines are categorical. They showed that maternal request does not constitute an indication of abdominal delivery. When a woman asks for it, the doctor may refuse it [7].

In 2019, ACOG published a committee opinion where they affirmed that when a pregnant woman reveals such a desire, obstetrics have to offer counselling, and then - if women persevere on this request - doctors have to ponder it [8].

The purpose of this study is to investigate (1) pregnant women who prefer cesarean section, (2) who informed them about labor and delivery, and (3) what scares them about childbirth.

METHODS

Sample description and pre-processing

The study encompassed both paper-based surveys distributed at the Departments of Gynecological and Obstetrical Sciences in Messina University Hospital and Biancavilla Hospitalization and virtual surveys conducted via social networks from February 2019 to February 2020. Pregnant women with previous CS were excluded from the study. The questionnaire was anonymous, and it was composed of four parts.

The first part included personal data: geographical origin [Italy, Eastern Europe, Asia, Africa, Others], Italian provenance [North, Centre, South], Age [<35 years, ≥35 years], educational level [low such as middle school and middle-high such as high school diploma, graduation], occupation [employed, unemployed] and smoking [yes, even in pregnancy; yes but not in pregnancy; no].

The second part focused on the obstetric anamnesis: gestational era [1st, 2nd, 3rd trimester], physiological pregnancy [yes, no], previous infertility therapies [yes, no], previous miscarriages [yes, no], previous normal childbirth [yes, no], and the healthcare provider during pregnancy [gynecologist in private practice, family counselor, general practitioner, hospital ambulatory].

The third part explored the information pregnant women received about childbirth, including the main information source [relatives/friends, gynecologist/midwife, movies/books, Internet], sensations transmitted by these notions [positive

such as tranquility or negative such as anxiety and fear]. Questions included whether they sought information on the Internet about delivery, obtained notions from blogs or social networks, felt they had sufficient information about childbirth, and whether they attended or planned to attend a pre-birth course. The fourth and final section analyzed emotions, covering the fear of childbirth, aspects most frightening [pain of contractions, duration of labor, feeling unable to manage the event, potential negative outcomes for the fetus, other causes], and perceptions of cesarean section as a simpler or less traumatic event compared to natural childbirth. Questions also explored whether patients would live their pregnancy with less anxiety if they knew they would give birth by cesarean section and if they felt they should have the autonomy to decide the mode of birth. Data were categorized into two classes: nulliparous and multiparous. Statistical analysis was studied using a med.calc software package. A sample size of 377 women was deemed sufficient to achieve a significance level of 0.05 at 95%. The sample of women interviewed had the same socio-demographic characteristics as those in Italy. Logistic regression was employed to investigate associations between personal and obstetrical variables, information, emotions, and women's preferences for the mode of delivery. Odds ratios with corresponding 95% confidence intervals were calculated, and a p-value <0.05 was considered significant.

RESULTS

Out of 802 questionnaires, 754 [94 %] were included in the study. Forty-eight women were excluded due to CS indication or incomplete responses. Considering the nulliparous group (Table 1), 365 women [82.4 %] preferred natural childbirth, while 190 pregnant women [18.6 %] favored a Cesarean Section. Univariate analysis demonstrated a statistically significant association between a preference for abdominal delivery and age >35 years [O.R. 2.1771, 95% CI 1.2612 to 3.7581, p 0.0052] and smoking during pregnancy [O.R. 2.37, 95% CI 1.13 to 4.93, p 0.02]. No significant associations were found for other demographic variables.

Table 1. Nulliparous group.

	Demographics				
	n (%)	*Cesarean Section*	*OR**	*(95 % CI)**	*P value**
Age					
< 35 years	353 (79.6 %)	53 (15%)	0.45	0.26 to 0.79	0.005
≥ 35 years	90 (20.4 %)	25 (27.7 %)	2.17	1.26 to 3.75	0.005
Educational level					
Low	79 (17.8)	13 (16.4%)	0.90	0.47 to 1.73	0.7670
Middle-high	364 (82.2)	65 (17.9 %)	1.10	0.57 to 2.11	0.7670
Occupation					
Employed	258 (58.2 %)	49 (18.8%)	1.26	0.76 to 2.08	0.36
Unemployed	185 (41.8 %)	29 (16.6 %)	0.79	0.47 to 1.31	0.36
Smoking					
Yes, even in pregnancy	38 (8.5 %)	12 (31.5 %)	2.37	1.13 to 4.93	0.02
Yes, but not during the pregnancy	82 (18.5 %)	18 (21.9 %)	1.41	0.78 to 2.54	0.25
No	323 (73 %)	48 (14.8 %)	0.52	0.31 to 0.87	0.01

Provenance					
Italy	424 (96 %)	76 (17.9 %)	1.85	0.42 to 8.20	0.41
Eastern-Europe	6 (1.35 %)	0			
Asia	6 (1.35 %)	1			
Africa	6 (1.35 %)	0			
Other	1 (0.22 %)	1			
Part of Italy provenance					
North	51 (11.5 %)	10 (19.6 %)	1.621	0.55 to 2.43	0.68
Center	17 (3.8 %)	1 (5.9%)	0.28	0.03 to 2.16	0.22
South	375 (84.7%)	67 (17.9%)	1.12	0.56 to 2.26	0.76
Obstetric Anamnesis					
Gestational Age					
1st trimester	29 (6.5 %)	11 (37.9 %)	3.16	1.43 to 7.00	0.0045
2nd trimester	72 (16.3 %)	13 (18 %)	1.03	0.537 to 2.001	0.91
3rd trimester	342 (77.2 %)	54 (15.7 %)	0.60	0.34 to 1.03	0.06
Pregnancy Risk					
Low	383 (86.5 %)	68 (17.7 %)	1.07	0.52 to 2.23	0.83
High	60 (13.5 %)	10 (16.6 %)	0.92	0.44 to 1.91	0.83
Previous infertility therapy					
Yes	40 (9 %)	9 (22.5 %)	1.40	0.64 to 3.08	0.39
No	403 (91 %)	69 (17.1 %)	0.71	0.32 to 1.56	0.39
Previous miscarriage					
Yes	67 (15.1 %)	13 (19.4%)	1.15	0.59 to 2.23	0.67
No	376 (84.9 %)	65 (17.2 %)	0.86	0.44 to 1.68	0.67
Healthcare professionals who assisted pregnant women					
Private gynecologist	340 (76.8 %)	56 (16.4 %)	0.72	0.41 to 1.26	0.25
Family Counseling	23 (5.2 %)	6 (26 %)	1.88	0.71 to 4.9	0.19
Family doctor	1 (0.2 %)	0			
Medical Clinic	79 (17.8 %)	16 (20.2 %)	1.23	0.67 to 2.28	0.49

Information section					
Main information source on labor and delivery					
Relatives/friends	147 (33.2 %)	29 (19.7 %)	1.23	0.74 to 2.06	0.40
Midwife/gynecologist	245 (55.3%)	41 (16.7 %)	0.87	0.53 to 1.42	0.59
Movies/books	14 (3.2 %)	0			
Internet	37 (8.3 %)	8 (21.6 %)	1.32	0.58 to 1.42	0.50
Sensations provoked by information received					
Positive (tranquillity)	205 (46.3 %)	18 (8.8 %)	0.28	0.16 to 0.50	<0.0001
Negative (anxiety, fear)	238 (53.7 %)	60 (25.2)	3.50	1.98 to 6.16	<0.0001
Use of the Internet during pregnancy to obtain information					
Yes	308 (69.5 %)	54 (17.5 %)	0.98	0.57 to 1.67	0.95
No	135 (30.5 %)	24 (17.8 %)	1.01	0.59 to 1.72	0.95
Use of social networks/blogs to obtain information					
Yes	190 (43 %)	32 (16.8 %)	0.91	0.55 to 1.49	0.71
No	253 (57 %)	46 (18.2%)	1.09	0.66 to 1.80	0.71
Sufficient information received					
Yes	249 (56.3 %)	42 (16.9 %)	0.88	0.54 to 1.44	0.62
No	86 (19.5 %)	20 (23.5 %)	1.55	0.87 to 2.76	0.13
Don't Know	107 (24.2 %)	16 (15 %)	0.77	0.42 to 1.40	0.40
Attending pre-birth courses					
Yes	252 (57 %)	33 (13 %)	0.42	0.25 to 0.69	0.0007
No	159 (35.8 %)	39 (24.5 %)	2.24	1.24 to 3.34	0.0067
Don't Know	32 (7.2 %)	6 (15.75 %)	1.086	0.43 to 2.73	0.86

Emotional section					
Fear of childbirth					
Yes	306 (69 %)	72 (23.5 %)	6.66	2.82 to 15.75	<0.0001
No	128 (29 %)	5 (4 %)	0.13	0.05 to 0.34	<0.0001
Don't Know	8 (2%)	1 (12.5 %)	0.66	0.08 to 5.46	0.70
Aspects that scared them					
Pain of contractions	101 (31.4 %)	25 (24.7 %)	1.18	0.68 to 2.06	0.54
Duration of labor	43 (13.4 %)	13 (30.2 %)	1.68	0.82 to 3.42	0.15
Not feeling capable of managing the event	101 (31.4 %)	20 (19.8 %)	0.78	0.43 to 1.39	0.40
Possible adverse outcomes of the fetus	62 (19.2 %)	13 (21 %)	0.88	0.44 to 1.73	0.72
Perineal injuries and episiotomy	13 (4%)	2 (15.3 %)	0.60	0.13 to 2.81	0.52
The incompetence of the medical team	2 (0.6 %)	0			
Thought that CS is physically simpler than Vaginal birth					
Yes	73 (16.5 %)	34 (46.5%)	6.45	3.69 to 11.27	<0.0001
No	282 (63.7 %)	25 (8.9 %)	0.19	0.11 to 0.33	<0.0001
Don't Know	88 (19.8 %)	19 (21.5 %)	1.38	0.77 to 2.46	0.27
Thought that CS is psychologically simpler than vaginal birth					
Yes	124 (28 %)	50 (40.3 %)	7.02	4.14 to 11.91	<0.0001
No	229 (51.7 %)	12 (5.2 %)	0.12	0.06 to 0.23	<0.0001
Don't Know	90 (20.3 %)	16 (17.7 %)	1.01	0.55 to 1.86	0.96
Thought that CS is safer for the fetus than Vaginal Birth					
Yes	155 (35 %)	55 (35.4 %)	6.33	3.60 to 10.8	<0.0001
No	186 (42 %)	8 (4.3 %)	0.12	0.056 to 0.25	<0.0001
Don't Know	102 (23 %)	15 (14.7 %)	0.76	0.41 to 1.40	0.38
Thought that by choosing CS she would feel less anxiety					
Yes	86 (19.4 %)	49 (57 %)	14.97	8.45 to 26.5	<0.0001
No	264 (59.6 %)	10 (3.7 %)	0.064	0.03 to 0.129	<0.0001
Don't know	93 (21 %)	19 (20.4 %)	1.26	0.71 to 2.25	0.42

Thought that women should decide the modality of birth					
Yes	348 (78.6 %)	72 (20.6 %)	3.86	1.62 to 9.20	0.0022
No	95 (21.4 %)	6 (6.3%)	0.25	0.10 to 0.61	0.0022

No significant associations were found for the other variables [working occupation, provenience, education level]. Regarding obstetrical history, a significant association was observed between cesarean section and the first quarter of pregnancy [O.R. 3.16, 95% CI 1.43 to 7.00, p 0.0045]. However, no significant associations were found with previous miscarriages, pregnancy pathology, infertility history, or the type of healthcare assistance during pregnancy.

Analyzing the third part of the questionnaire about information on labor and delivery, 55% of women were informed by gynecologists and midwives, with those feeling tranquillity more likely to prefer Caesarean Section [O.R. 0.28, 95% CI 0.16 to 0.50, p < 0.0001]. Participation in pre-birth courses was associated with a tendency toward vaginal childbirth [O.R. 0.42, 95% CI 0.25 to 0.69, p 0.0007]. Women informed by friends and relatives reported more anxiety and fear, with a significant association with a predisposition to abdominal delivery [O.R. 3.50, 95% CI 1.98 to 6.16, p < 0.001]. No significant associations were found for information from movies/magazines or online sources.

The emotions section noted a significant association between the fear of childbirth and a predisposition to Cesarean Section [O.R. 6.66, 95% CI 2.82 to 15.75, p < 0.0001]. Specific fears included pain of contractions, inability to manage the event, adverse outcomes for the fetus, and the duration of labor. Women perceive Cesarean Section as physically simpler [O.R. 6.45, 95% CI 3.69 to 11.27, p < 0.0001] and safer for the newborn [O.R. 6.33, 95% CI 3.60 to 10.8, p < 0.0001] were more predisposed to it.

Seventy-eight % of the women believed that they have to decide how to give birth, and this was associated with a predisposition towards cesarean section [O.R. 3.86, 95 % CI 1.62 to 9.20, p 0.0022]. Regarding multiparous women (table 2), no associations were found between demographic or obstetric variables and the mode of childbirth. However, a statistically significant association was found between Cesarean Section and negative feelings about information on labor and delivery [O.R. 2.85, 95% CI 1.57 to 5.17, p 0.0002].

Table 2. Multiparous group.

Demographic section					
Age					
< 35 years	218 (70 %)	40 (18. 3 %)	0.68	0.38 to 1.22	0.20
≥ 35 years	93 (30 %)	23 (24.7 %)	1.46	0.81 to 2.61	0.20
Educational level					
Low	107 (34.4 %)	29 (27.1 %)	1.85	1.05 to 3.26	0.03
Middle-high	204 (65.6)	34 (16.7 %)	0.53	0.30 to 0.94	0.03
Occupation					
Employed	139 (44.7 %)	26 (18.7 %)	0.83	0.47 to 1.47	0.54
Unemployed	172 (55.3 %)	37 (21.5 %)	1.19	0.68 to 2.08	0.54

Smoking					
Yes, even in pregnancy	39 (12.5 %)	10 (25.6 %)	1.42	0.65 to 3.10	0.37
Yes, but not during the pregnancy	42 (13.5 %)	7 (16.6 %)	0.76	0.32 to 1.80	0.53
No	230 (74 %)	46 (20 %)	0.94	0.50 to 1.75	0.84
Provenance					
Italy	298 (95.6 %)	57 (19.1 %)	0.27	0.08 to 0.85	0.02
Eastern-Europe	4 (1.3 %)	3 (75 %)			
Asia	6 (2 %)	2 (33.3 %)			
Africa	1 (0.3 %)	0			
Other	2 (0.6)	1 (50 %)			
Part of Italy Provenance					
Nord	44 (14. 1%)	8 (18.2 %)	0.85	0.37 to 1.9	0.71
Centre	12 (3.9 %)	1 (8.3 %)	0.34	0.04 to 2.74	0.31
South	255 (82 %)	54 (21.2 %)	1.40	0.64 to 3.04	0.39
Obstetric anamnesis					
Gestational Era					
1st trimester	29 (9.3 %)	6 (15 %)	1.02	0.40 to 2.64	0.95
2nd trimester	72 (23.2 %)	15 (20.8 %)	1.04	0.54 to 2.00	0.88
3rd trimester	210 (67.5 %)	42 (20 %)	0.95	0.52 to 1.71	0.87
Risk level					
Low	277 (89 %)	53 (19.1 %)	0.56	0.25 to 1.25	0.16
High	34 (11 %)	10 (29.4 %)	1.76	0.79 to 3.9	0.16
Previous infertility therapy					
Yes	11 (3.5 %)	2 (18.1 %)	0.87	0.18 to 4.13	0.86
No	300 (96.5%)	61 (20.3%)	1.76	0.24 to 5.45	0.86
Previous miscarriage					
Yes	100 (32.2 %)	19 (19%)	0.89	0.48 to 1.62	0.70
No	211 (67.8%)	44 (20.9%)	1.12	0.61 to 2.04	0.70
Healthcare professional that assisted pregnant women					
Private gynecologist	210 (67.5 %)	38 (18 %)	0.20	0.10 to 0.39	<0.0001

Family counseling	27 (8.7 %)	4 (14.8%)	0.66	0.22 to 1.99	0.46
Medical Clinic	74 (23.8 %)	21 (28.3%)	1.83	1.004 to 3.370	0.04
Information section					
Main information source on labor and delivery					
Relatives/friends	109 (35 %)	28 (25.7 %)	1.64	0.93 to 2.89	0.08
Midwife/gynecologist	165 (53 %)	29 (17.5%)	0.70	0.40 to 1.22	0.21
Movies/books	15 (4.9 %)	0			
Internet	22 (7.1%)	6 (27.2 %)	0.39	0.57 to 4.07	0.39
Sensations provoked by information received					
Positive (tranquillity)	156 (50.2 %)	19 (12.1 %)	0.34	0.19 to 0.63	0.0005
Negative (anxiety, fear)	155 (49.8 %)	44 (28.3 %)	2.85	1.57 to 5.17	0.0005
Use of Internet during pregnancy to obtain information					
Yes	195 (62.7 %)	41 (21 %)	1.13	0.63 to 2.02	0.66
No	116 (37.3%)	22 (19 %)	0.87	0.49 to 1.56	0.66
Use of social networks/blog to obtain information					
Yes	101 (32.5 %)	14 (13.9 %)	0.52	0.27 to 1.01	0.05
No	210 (67.5 %)	49 (23.3 %)	1.89	0.98 to 3.61	0.05
Sufficient information received					
Yes	218 (79.7%)	50 (23 %)	0.97	0.48 to 1.92	0.93
No	31 (10 %)	6 (19.3 %)	0.93	0.36 to 2.39	0.89
Don't Know	32 (10.3%)	7 (21.9 %)	1.11	0.45 to 2.70	0.81
Attending pre-birth courses					
Yes	86 (27.6 %)	10 (11.6 %)	0.42	0.20 to 0.87	0.002
No	215 (69.1 %)	53 (24.6 %)	2.78	1.34 to 5.7	0.05
Dont't Know	9 (2.9 %)	0			

Emotional section					
Fear of childbirth					
Yes	177 (57 %)	49 (27.6 %)	3.28	1.72 to 6.24	0.0003
No	132 (42.4 %)	13 (9.8 %)	0.28	0.14 to 0.54	0.0002
Don't Know	2 (0.6%)	1 (50 %)			
Aspects that scared them					
Pain of contractions	85 (27.3 %)	28 (32.9 %)	1.87	0.97 to 3.59	0.05
Duration of labor	35 (11.2 %)	6 (17.1 %)	0.52	0.20 to 1.35	0.18
Not feeling capable of managing the event	19 (6.1 %)	4 (21 %)	0.73	0.23 to 2.31	0.59
Possible negative outcomes of the fetus	42 (13.5 %)	9 (21.4 %)	0.66	0.29 to 1.51	0.33
Perineal injuries and episiotomy	9 (2.9 %)	3 (33.3 %)	1.43	0.34 to 5.97	0.61
Incompetence of medical team					
Thought that CS is physically simpler than Vaginal birth					
Yes	66 (21.2 %)	41 (62.1 %)	16.62	8.56 to 32.25	<0.0001
No	217 (69.8 %)	19 (8.7 %)	0.109	0.05 to 0.20	<0.0001
Don't Know	28 (9 %)	3 (46.4 %)	0.44	0.13 to 1.527	0.198
Thought that CS is psychologically simpler than vaginal birth					
Yes	87 (28 %)	46 (52.8 %)	13.66	7.13 to 26.15	<0.0001
No	197 (63.3 %)	14 (7.1 %)	0.10	0.05 to 0.19	<0.0001
Don't Know	27 (8.7 %)	3 (11.1 %)	0.46	0.13 to 1.60	0.22
Thought that CS in safer for fetus than Vaginal Birth					
Yes	89 (28.6 %)	39 (43.8 %)	6.43	3.54 to 11.67	<0.0001
No	158 (50.8 %)	13 (8.2 %)	0.18	0.09 to 0.35	<0.0001
Don't Know	64 (20.6 %)	11 (17.1 %)	0.77	0.37to 1.59	0.49
Thought that by choosing CS she would feel less anxiety					

Yes	66 (21.2 %)	41 (62.1 %)	16.62	8.56 to 32.25	<0.0001
No	200 (64.3 %)	10 (5 %)	0.005	0.02 to 0.12	<0.0001
Don't know	45 (14.4 %)	12 (26.6 %)	1.53	0.74 to 3.17	0.25
Thought that women should decide the modality of birth					
Yes	240 (77.1%)	58 (24.16 %)	4.20	1.61 to 10.94	0.003
No	71 (22.9 %)	5 (7.04 %)	0.23	0.09 to 0.61	0.003

Multiparous women scared of vaginal delivery [57%] were less than nulliparous [69.1%], and this fear was associated with a predisposition to Caesarean Section [O.R. 3.28, 95% CI 1.72 to 6.24, p 0.0003]. A preference for abdominal delivery was associated with the perception that it is physically [O.R. 16.62, 95% CI 8.56 to 32.25, $p < 0.0001$] and psychologically simpler [O.R. 13.66, 95% CI 7.13 to 26.15, $p < 0.0001$], safer for the fetus [O.R. 6.43, 95% CI 3.54 to 11.67, $p < 0.0001$]. It would result in less anxiety [O.R. 16.62, 95% CI 8.56 to 32.25, $p < 0.0001$].

Additionally, the belief in deciding the mode of childbirth was associated with a preference for Caesarean Section [O.R. 4.20, 95% CI 1.61 to 10.94, p 0.0032].

DISCUSSION

The prevalence of maternal CS requests has contributed to an increase in the rate of abdominal delivery [5]. Our study shows that, compared to the 2005 rate [16 %], the percentage of women who prefer giving birth by CS is rising [17.6%]. The reasons for this choice may be found in previous or current psychological traumas such as sexual abuse or previous traumatic experience of delivery [5].

This last variable can probably explain the reason why the percentage of pregnant women that prefer CS [20.3 %] is more elevated in multiparous Modern societal trends, characterized by women having fewer children at a later age [1.34 births] [10], contribute to an inclination towards planned pregnancies. Cesarean Section emerges as an attractive delivery method aligning with the "theory of precious child," particularly among women aged over 35. Research from the World Health Organization (WHO) indicates a higher prevalence of Cesarean Section among college graduates [5].

Moreover, women predisposed to Caesarean Section often make this choice early in gestation, potentially due to an information gap and the unfamiliarity with midwifery or obstetric guidance in the first trimester. While our study did not explore changes in women's preferences throughout the nine months, a Chinese study suggests a shift in preference from vaginal birth to Cesarean Section over time, potentially driven by increasing concerns or fears [4].

Despite the different cesarean section rates in Italian Regions, we did not find differences in the predisposition to CS among women from South, Centre, or North Italy. According to existing literature, the midwifery-led model, which was not implemented in our study, has demonstrated benefits in reducing epidural analgesia usage, perineal injuries, and requests for Cesarean Section [11].

The positive role of midwifery is also shown by the tendency of women who had attended pre-birth meetings to exhibit a positive inclination toward natural delivery. Indeed, pre-birth meetings gave women instruments to cope with this event, reducing their anxiety and their fear. Midwives played a crucial role in disseminating scientific evidence, counteracting the influence of anecdotal stories that tend to focus on length and suffering, contributing to heightened anxiety and a preference for Cesarean Section [12].

On the other hand, Internet information did not significantly impact the predisposition of multiparous and nulliparous towards CS. This lack of influence is attributed to variations in the credibility and scientific evidence presented on different websites, as highlighted by Fioretti et al., emphasizing the need for accurate information dissemination [13].

Despite scientific evidence supporting the safety and benefits of vaginal delivery, a noteworthy portion of women still perceive Caesarean Section as psychologically and physically simpler to face, as well as safer for the newborn. This underscores the significance of addressing misinformation and promoting accurate education about delivery methods. Our research showed that almost 8/10 women would like to choose the delivery modality.

This aligns with the culture of active women's participation in care, as observed in England [14]. Empowering women in decision-making processes regarding childbirth emerges as a key consideration for healthcare providers and policymakers.

CONCLUSIONS

Our research shows that a higher percentage of women would like to give birth through a cesarean section. This trend is influenced by demographic characteristics (age, education level) or habits such as smoking. Notably, the information women receive about labor and delivery during pregnancy plays a crucial role in shaping this preference. In this regard, the role of a midwife emerges as pivotal. With empathy, clarity, and expertise, a midwife becomes an essential figure capable of imparting accurate information. Future studies should address the role of psychological factors, such as temperament [15-17], the role of mood [18-20], and the quality of couple relationship [21,22]. By providing women with the necessary tools to comprehend and navigate the process of vaginal birth as a natural and physiological event, midwives contribute significantly to shaping women's perceptions and choices regarding their preferred mode of delivery.

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References

1. Agency for Healthcare Research and Quality. Vaginal birth after cesarean: new insights. AHRQ Publication 2010;10- E003. http://www.ahrq.gov/downloads/pub/evidence/pdf/vbacup/vbacup.pdf. Accessed 10 Janaury 2024.
2. Ministero della Salute - Direzione generale della digitalizzazione del sistema informativo sanitario e della statistica. Certificato di Assistenza al Parto (CEDAP). Analisi dell'evento Nascita Anno 2016. 2019. [Childbirth assistance certificate (CEDAP), Analysis of the birth event 2016]
3. Pescetto G, De Cecco L, Pecorari D, Ragni N. Ginecologia e Ostetricia. SEU. 2009; pp. 1194-1195.
4. Schantz C, De Loenzien M, Goyet S, Ravit M, Dancoisne A, Dumont A. How is women's demand for caesarean section measured? A systematic literature review. PLoS ONE. 2019;14(3).
5. Dursun P, Yanik F, Zeyneloglu H, Baser E, Kuscu E, Ayhan A. Why women request cesarean section without medical indication? J Matern Fetal Neonatal Med. 2011;24;1133-1137.
6. Huang K, Yan S, Wu X, Zhu P, Tao F. Elective caesarean section on maternal request prior to 39 gestational weeks and childhood psychopathology: a birth cohort study in China. BMC Psychiatry. 2019;22. https://doi.org/10.1186/s12888-019-2012-z.
7. SNLG. Taglio Cesareo: una scelta appropriata e consapevole. 2014. [Cesarean section: an appropriate and conscious choice]
8. ACOG Committee Opinion No. 761 Summary: Cesarean Delivery on Maternal Request. Obstet Gynecol. 2019;133;226-227.
9. Mancuso A, De Vivo A, Fanara G, Settineri S, Triolo O, Giacobbe A. Women's preference on mode of delivery in Southern Italy. Acta

Obstet Gynecol. 2006;85:694-699.

10. Maffi I. Annuario di Antropologia n 12. Nascita. Ledizioni. 2010. [Yearbook of anthropology n. 12. Birth].
11. Haterm M, Sandall J, Devane D, Soltani H, Gates S. Midwife-led versus other models of care for childbearing women. 2008 Oct 8;(4):CD004667. doi: 10.1002/14651858.CD004667.pub2. Update in: Cochrane Database Syst Rev. 2013;8:CD004667.
12. Regalia A, Bestetti G. Spandrio R. Fisiologia della nascita. Dai prodromi al post partum. Carocci Faber; 2014. ISBN: 9788874667055, pp.632.
13. Fioretti BT, Reiter M, Betrán AP, Torloni MR. Googling caesarean section: a survey on the quality of the information available on the Internet. BJOG. 2015 Apr;122(5):731-739. doi: 10.1111/1471-0528.13081.
14. Loke A, Davies L, Mak Y. Is the decision of women to choose a cesarean section ass the mode of birth? A review of literature on the views of stakeholders. BMC Pregnancy Childbirth. 2019;19:286.
15. Rizzo A. Temperament and Generativity during the life span. Mediterr J Clin Psychol. 2013;1(!):1-31.
16. Settineri S, Le Donne M, Rizzo A, Spanò G, Mento C. Vulvovestibulitis syndrome: the role of Temperament and Mood in Women. Eur J Pers Cent Healthc. 2016:4(4):618-623.
17. Rizzo A, Marra P. Temperament, Character and Organisational well-being among Obstetrics and Gynaecology Personnel: a pilot study. Quaderns de Psicologia. 2023;25(3):9.
18. Mento C, Le Donne M, Crisafulli S, Rizzo A, Settineri S. BMI at early puerperium: Body image, eating attitudes and mood states. J Obstet Gynaecol. 2017 May;37(4):428-434. doi: 10.1080/01443615.2016.1250727.
19. Rizzo A, Bruno A, Torre G, Mento C, Pandolfo G, Cedro C, et al. Subthreshold psychiatric symptoms as potential predictors of postpartum depression. Health Care Women Int. 2022 Jan-Mar;43(1-3):129-141. doi: 10.1080/07399332.2021.1963730.
20. Settineri S, Le Donne M, Dritto IP, Rizzo A, Mento C. The Rorschach in gynecological suffering: representations and complexes of the VI table. Mediterranean J Clin Psychol. 2015;3(2). Doi: 10.6092/2282-1619/2015.3.1089.
21. Bruno A, Celebre L, Mento C, Rizzo A, Silvestri MC, De Stefano R, et al.. When fathers begin to falter: a comprehensive review on paternal perinatal depression. Int J Environ Res Public Health. 2020;17(4):1139.
22. Cedro C, Mento C, Piccolo MC, Iannuzzo F, Rizzo A, Muscatello MRA, et al. Sexual Desire and Body Image. Gender Differences and Correlations before and during COVID-19 Lockdown. Int J Environ Res Public Health. 2022;19(7):4351.

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