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1 A survey regarding acceptability of oral emergency contraception according to the **posited**
2 mechanism of action.

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Abstract

Objective: To determine the acceptability to women of oral emergency contraception (EC) that works by inhibiting ovulation, preventing implantation or disrupting implantation. Also, to determine the characteristics of women associated with the acceptability of each **posited** mechanism of action.

Study design: Women completed a self-administered, anonymous questionnaire asking whether they would consider using an EC pill based on each of three **hypothetical** mechanisms of action: inhibiting ovulation, preventing implantation or disrupting implantation. The questionnaire was distributed among women in Edinburgh, UK: (i) presenting for EC at a community pharmacy, (ii) attending a clinic for insertion of intrauterine contraception (IUC) or (iii) attending a clinic for an induced abortion. Descriptive analyses stratified women according to healthcare setting and personal characteristics. Univariable and multivariable analyses were used to establish factors which may predict acceptability of each EC pill's mechanism of action.

Results: Four hundred and nineteen out of 458 (91%) women responded to the survey. **Overall** women reported that EC would be acceptable if it worked by inhibiting ovulation (89%), preventing implantation (83%) or disrupting implantation (75%). **Among women seeking abortion, more** would accept an EC pill which disrupted implantation, compared to women **seeking** IUC (OR, 2.19; 95% CI, 1.30-3.69; $p = 0.004$). Based on multivariable analyses, factors associated with acceptability included previous use of EC, previously holding strong views against abortion and having had a previous abortion.

Conclusion: For each of the **posited** mechanisms of action, a majority of women surveyed would be willing to consider oral EC to prevent unintended pregnancy.

Implications statement: The scope of the study was limited and further work on the views of women in the wider population is needed. This is important as the development of such drugs to prevent pregnancy is likely to raise political and ethical challenges, particularly in relation to disruption of implantation.

Keywords: oral emergency contraception; missed-period pill; contragestion; post-fertilization

1. Introduction

In the UK, as many as one third of all pregnancies are thought to be unintended [1, 2] and over half of these end in termination [1, 2]. The US also reports high rates of unintended pregnancy and abortion [3]. EC gives women a second chance to prevent unintended pregnancy. The copper intrauterine device (IUD) is the most effective EC but is not widely used. It is unpopular with women due to the invasive procedure and requires skilled clinicians to insert it [4]. Oral EC is more commonly used and is more easily obtainable. However, at the population level, oral EC has not reduced the number of unintended pregnancies [5]. Whilst this may be due to women failing to use EC after every act of unprotected sexual intercourse [6], it may also be because current oral EC is not sufficiently effective.

The current oral EC methods available in Europe and the US are levonorgestrel and ulipristal acetate. Clinical trials have shown that when taken within 120 hours of unprotected sexual intercourse, these methods resulted in an observed pregnancy rate of 2.6% and 1.8% respectively. This compares to an expected pregnancy rate of 5.4% and 5.5% respectively, suggesting that these methods might only prevent between approximately one half and two thirds of pregnancies [7]. The only confirmed mechanism of action of these oral methods is through delaying ovulation [8].

The accumulated evidence suggests that while there is scope and considerable enthusiasm among the research community to develop a more effective oral EC pill that acts both pre- and post-fertilization, moral objections continue to be expressed by “many opponents” about the use of EC [9]. Of the two post-fertilization methods, namely preventing or disrupting implantation, the latter, which occurs once the implantation process has begun, is defined in the UK and US as abortion, not contraception [10]. Expanding the emergency options available to women throughout the menstrual cycle by the development of a new post-fertilization fertility control drug would raise political and ethical challenges. In this paper we have used the term ‘EC’ to describe potential interventions which (a) inhibit ovulation, (b) prevent implantation or (c) disrupt implantation.

Approximately 20 years ago, surveys were conducted [11, 12] involving over 800 women of reproductive age in Edinburgh, Scotland attending a family planning service. These studies focused on women's views on the use of a hypothetical once-a-month contraceptive pill. The combined findings of these surveys showed that a pill that worked through inhibiting ovulation was acceptable to the majority of respondents. A pill that prevented implantation was acceptable to half of respondents and a pill which disrupted implantation was acceptable to a smaller proportion. Women surveyed in China, Romania, Slovenia and South Africa reported a similar pattern of acceptability [11, 12].

No recent data report women's views on acceptability of oral EC and its mechanism of action. The primary aim of this study was to report on the acceptability of oral EC posited to inhibit ovulation, prevent implantation or disrupt implantation and whether women would accept a 'missed menses pill' (a pill that women would take only if a period was late by a few days). We also sought to establish any relationship between the women's characteristics and their responses.

2. Materials and Methods

We designed a questionnaire for self-completion by women attending various sexual and reproductive healthcare (SRH) settings in Edinburgh, UK. We based it upon previous surveys [11, 12, 13] and we piloted it for understandability and ease of completion amongst women (n=10) attending a sexual health clinic. Based on their feedback, we then made some small changes to the questionnaire.

In the introduction we explained that women were under no obligation to complete the questionnaire, that they could leave any parts of it blank and that responses were anonymous and strictly confidential.

Women answered 17 questions in three sections. The first section asked whether 'in theory' they would consider using a pill which worked in each of three different ways (a) by stopping or delaying

an egg being released (inhibiting ovulation), (b) by preventing a very early fertilised egg attaching to the lining of the womb (preventing implantation) or (c) by dislodging a very early fertilised egg from the lining of the womb before a period is missed (disrupting implantation). They also reported whether they would use a missed-period pill. The response categories were 'yes', 'no' or 'uncertain'.

The second section asked about previous contraceptive use, including previous oral EC and use of intrauterine contraception (IUC) for EC. The third section asked respondents specific questions on whether they were in a sexual relationship, held any strong religious beliefs and had in the past held any strong views against abortion, in addition to questions on their previous reproductive history (including previous births and abortions) and their age. The terms 'strong beliefs' and 'strong views' were not defined as these are subjective. As in previous surveys [14], we asked whether women had in the past held any strong views against abortion, rather than asking about their current views, mindful of the potential sensitivity of their immediate situation. They were also asked for the first four characters of their postcode pertaining to area, district and sector, to obtain a Carstairs deprivation category score (2011) (a marker of deprivation based on postcode area of residence in Scotland) [15].

The questionnaire was distributed between February 2015 and August 2015 and given to three groups of women in Edinburgh attending: (i) five independent community pharmacies across the city requesting EC, (ii) clinics at the SRH service for insertion of IUC (as a regular method of contraception) and (iii) clinics at the SRH service for termination of pregnancy (TOP).

These respective groups represented women choosing: (a) to use oral EC, (b) to use a method of contraception that prevents implantation and (c) to terminate (disrupt) a pregnancy that had already implanted.

At each pharmacy, duty pharmacists gave out a questionnaire when a woman requested EC. In the SRH clinics, receptionists or clinic staff distributed the questionnaires.

We coded each questionnaire to track the numbers distributed and returned. Each respondent put their questionnaire in an opaque, sealed envelope and placed it in a secure box. The questionnaires were collected regularly and stored securely.

The National Health Service (NHS) ethical officer reviewed the survey and protocol and confirmed that ethical committee approval was not required. The Quality Improvement Team for SRH and the local NHS Research and Development Office approved the project.

Statistical analysis

The data were coded and recorded in Microsoft Excel and responses analysed for each group and for all respondents. IBM Statistical Package for the Social Sciences (SPSS), version 22 was used for statistical analysis. To allow statistical comparison between age groups, we defined four age categories (≤ 19 , 20-24, 25-34 and ≥ 35 years old) and created deprivation category groupings (1-2 = affluent, 3-5 = moderate, 6-7 = deprived). We based these on previous studies [13,16].

We conducted statistical comparisons of the ages of women across the cohorts using unpaired t-tests. In testing for associations between categorical variables, the chi-squared test of association or, where appropriate, Fisher's exact test was performed. The chi-squared test of linear trend was used to test for a monotonic trend in acceptability across the different hypothetical mechanisms of action according to when they acted during the reproductive cycle.

We assumed a significance level of 0.05 for all univariable analyses and of 0.1 at the final stage of the multivariable analyses in the identification of possible independent predictors of acceptability. This was carried out separately for each of the acceptability categories: inhibits ovulation, prevents ovulation, disrupts implantation and missed period pill. We assumed the weaker significance level for the multivariable models because in such models, more stringent significant levels carry the risk of ruling out factors of practical importance [17].

3. Results

A total of 419 out of 458 women responded to the survey (91% response rate): (a) for the EC group 104 out of 104 (100% response rate), (b) for the TOP group 207 out of 238 (87% response rate) and (c) for the IUC group 108 out of 116 (93% response rate). Table 1 shows the demographic characteristics of the women in each group. Eight percent (31/407; 95% CI, 0.05-0.11) of women in all groups indicated that they held strong religious beliefs and 17% (69/403; 95% CI, 0.14-0.21) indicated that they previously held strong views against abortion.

Table 1 shows that 63% (263/417) of women had previously used oral EC; however, the TOP group was less likely than the EC group to have done so. In total, only 3% (13/414) of the women had previously had an IUC fitted as EC (95% CI, 0.02-0.05).

Table 2 shows that in all groups the acceptability of an EC pill decreased as the posited mechanism of action during the reproductive cycle moved from inhibiting ovulation to preventing implantation and then to disrupting implantation. More women requesting TOP considered an EC pill that disrupts implantation to be acceptable, compared to those attending for IUC insertion. Table 2 shows that women requesting a TOP found a missed-period pill more acceptable than the EC and the IUC groups (77% TOP vs 59% EC vs 44% IUC).

There was statistical evidence for an association between acceptability of the hypothetical pills and each of the following factors: previous EC use, being in a sexual relationship, previous abortion, parity, strong religious beliefs and previously holding strong views against abortion (Table 3).

We found a lack of statistical evidence for an association between acceptability of an EC method of action and any one of deprivation category score, age or the other factors measured (Tables 4a-d).

For the EC categories *prevents implantation* and *missed period pill*, the model diagnostics did not support use of a binary logistic regression model to represent the independent effects of potential predictor variables from this study. For example, for the EC category *prevents implantation*, inclusion

of the variables for holding strong religious beliefs and previously holding strong views against abortion in the same model removed the statistical significance of the latter variable, leaving only the former independent variable for consideration. The adjusted odds ratios and corresponding 90% CIs for the regression models pertaining to the EC categories *inhibits ovulation* and *disrupts implantation* are provided in Table 5.

4. Discussion

The majority of women who took part in this survey indicated that they would be willing to consider the use of an EC pill with the posited mechanisms of action (inhibiting ovulation, preventing implantation or disrupting implantation). Although most women would also use a missed-period pill, the acceptability of this and of a pill which acted by disrupting implantation was less than for EC that worked by inhibiting ovulation.

Overall, one in ten women were not accepting of a pill which worked by inhibiting ovulation. The IUC group was not unanimously accepting of an EC pill which worked by preventing implantation. Women's reasons for not accepting the posited mechanisms of action were not determined and this is an area that requires further investigation.

Perhaps unsurprisingly, women requesting an abortion were more likely to find a pill that disrupted implantation or a missed-period pill acceptable, compared to those who were requesting an IUC. Women at the IUC clinic were choosing long-acting reversible contraception and so might not need to use oral EC. One might hypothesise that the TOP group would be more willing to take effective EC regardless of its mechanism, to avoid having an abortion or because they are accepting of abortion.

Based on the multivariable analyses, this study presents a number of important findings (Table 5) concerning acceptability of EC pills for women attending the types of healthcare clinics in Edinburgh represented in this study. Firstly, it is estimated that women who have previously held strong views against abortion are about 75% less likely to consider a hypothetical pill which disrupts implantation

as acceptable rather than unacceptable than women who have not or are uncertain whether they have held such views previously. A similar result applies for acceptability of a hypothetical pill which inhibits ovulation.

Additionally, it is estimated that women from the above population are about twice as likely to accept a hypothetical pill which disrupts implantation if they have previously had an abortion in contrast to those who have not. A similar result applies for acceptability of a hypothetical pill which inhibits ovulation on comparing women who have previously used EC with those who have not used EC or are uncertain about previous use of EC.

More generally, it is implicit from the results of the diagnostic testing of the binary logistic regression models for the acceptability categories *inhibits ovulation* and *disrupts implantation* that there is a call for a systematic investigation of potential additional predictive factors of acceptability. This would produce more valid predictive models which can explain variability in acceptability across eligible respondents far better and improve on the classification accuracy of these models. For the categories *prevents implantation* and *missed period pill*, for which no multivariable model was forthcoming, it is possible that similar work is needed.

A strength of this study is that a considerable number of women from different healthcare settings were surveyed. It also provides comparative data, as the women were from the same city, Edinburgh and some of them were attending a similar setting (a family planning clinic) as in previous studies [11, 12]. A limitation of this study is that the questionnaire asked what the women would do 'in theory', which may not translate into what they would do 'in real life'. Research in the pharmacy setting can be challenging [13] and it was not possible to ensure that the pharmacists distributed the questionnaire to all women seeking EC so the data may not be representative. The survey was only conducted in Edinburgh, amongst subgroups of women. In the future it would be important to have multi-site and multi-population studies elsewhere to determine if women in the wider population hold similar views.

Compared to the studies of 20 years ago that examined women's views towards a once-a-month contraceptive [11, 12], our study concludes that a higher proportion of women would be accepting of a pill that prevents implantation (83% vs 54%), a pill that disrupts implantation (75% vs 18%) or a missed period pill (64% vs 28%). This suggests that attitudes towards the mechanisms of action of contraception have changed.

A method that works by disrupting implantation would currently raise ethical and legal issues in many settings including the UK and US as it would be classed as abortion. However, this method would currently be permissible in countries where 'menstrual induction' (i.e. evacuation of the uterus in women who have delayed menses but no laboratory confirmation of pregnancy) is permitted, such as China [18]. In the 1980's, French scientists and clinicians, engaged in contraceptive research using PRMs, coined the term 'contragestion' to describe a method that could remain effective after ovulation to prevent or disrupt the establishment of a very early pregnancy at the end of the luteal phase of the cycle [19, 20]. Perhaps this terminology could be used in future to convey the concept of an 'emergency' method that works throughout the cycle in order to prevent unintended pregnancy.

Our study suggests that women in the above healthcare settings may be willing to consider oral EC which works either by inhibiting ovulation, preventing implantation or disrupting implantation. In addition, women may also be prepared to use a missed-menses pill to prevent unintended pregnancy. However, our study was of limited scope and further work on the views of women in the wider population is needed. This is important, as the development of such drugs to prevent pregnancy is likely to raise political and ethical challenges, particularly in relation to disruption of implantation.

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Table 1. Demographic characteristics of the women in each **group**.

Group	EC¹	TOP²	IUC³	Total
Age (Years)				
Median	21 ^a	25	34 ^b	25
Range	16-45	15-43	18-53	15-53
Deprivation Category Score (n (%))				
1-2 (Affluent)	1 (1)	13 (7)	15 (15)	29 (7)
3-5 (Moderate)	32 (33)	103 (54)	60 (61)	195 (50)
6-7 (Deprived)	31 (32) ^c	27 (14) ^d	6 (6)	64 (17)
Unknown	32 (33)	49 (26)	18 (18)	99 (26)
In a sexual relationship (n (%))				
	71 (70)	162 (81)	93 (89)	326 (80)
Previous use of oral EC (n (%))				
	73 (70)	116 (57) ^e	74 (69)	263 (63)
Previous IUC fitted for EC (n (%))				
	2 (2)	7 (3)	4 (4)	13 (3)
Previous pregnancy (n (%))				
	15 (15)	124 (61)	62 (60)	201 (49)
Previous birth (n (%))				
	1 (1)	93 (46)	56 (54)	150 (37)
Previous TOP (n (%))				
	9 (9)	68 (35)	18 (17)	95 (24)
Hold strong religious beliefs (n (%))				
	9 (9)	12 (6)	10 (10)	31 (8)
In the past held strong views against abortion (n (%))				
	21 (21)	34 (17)	14 (14)	69 (17)

¹ EC: Emergency contraception; ² TOP: Termination of pregnancy; ³IUC: Intrauterine contraception

^a Women from the TOP group (mean: 26.04; SD: 6.59) and IUC group (mean: 33.88; SD: 8.83) were on average older in age than those from the EC group (mean: 22.57, SD: 4.63). The corresponding mean differences were 3.47 (95% CI, 2.15-4.79; p < 0.001) and 11.31 (95% CI, 9.33-13.29; p < 0.001), respectively.

250 ^b Women from the IUC group were on average older than the women in the other groups (see above
251 for comparison to EC group; the mean difference in comparison to TOP group was 7.84 (95% CI,
252 5.85-9.84; $p < 0.001$)) and had the largest age range.

253 ^c A woman from the EC group was more likely to live in a deprived area compared to a woman from
254 the IUC group (OR, 11.74; 95% CI, 4.47-30.84; $p < 0.001$) and a woman from the TOP group (OR, 4.04;
255 95% CI, 2.12-7.69; $p < 0.001$).

256 ^d A woman from the TOP group was more likely to live in a deprived area compared to a woman
257 from the IUC group (OR, 2.91; 95% CI, 1.15-7.38; $p = 0.033$).

258 ^e A woman from the TOP group was less likely to have used oral EC in the past compared to a woman
259 from the EC group (OR, 0.56; 95% CI, 0.34-0.93; $p = 0.032$).

Table 2. Percentages of women in each **group** who answered ‘yes’ to using potential EC pills depending on their mechanism of action and to using a missed-period pill.

Group	Inhibits ovulation (n (%))	Prevents implantation (n (%))	Disrupts implantation (n (%))	Missed-period pill (n (%))
EC¹ (n=104)	93 (89)	85 (82)	79 (77)	61 (59)
TOP² (n=207)	182 (88)	176 (85)	159 (80) ^a	157 (77) ^b
IUC³ (n=108)	96 (89)	85 (79)	69 (64) ^a	48 (44)
Total (n=419)	371 (89)^c	346 (83)^c	307 (75)^c	266 (64)

¹ EC: Emergency contraception; ² TOP: Termination of pregnancy; ³IUC: Intrauterine contraception

^a There was an absence of statistical evidence for a difference between **groups** for acceptability of EC except between women requesting abortion (TOP) and women attending for IUC for a method that disrupts implantation (OR, 2.19; 95% CI, 1.30-3.69; p=0.004).

^b A woman requesting a TOP was more likely to find a missed-period pill acceptable than a woman from the EC **group** (OR, 2.41; 95% CI, 1.44-4.01; p=0.001) and the IUC **group** (OR, 4.27; 95% CI, 2.58-7.05; p < 0.001).

^c The proportion of women who considered a potential EC pill as acceptable decreased as the mechanism of action moved from inhibiting ovulation, to preventing implantation, to disrupting implantation ($\chi^2= 27.853$, p < 0.001).

272 **Table 3.** Factors for which there is evidence of an association with the acceptability of a) EC pills,
 273 depending on their mechanism of action and b) a missed-period pill

	Factor	N (%)	OR and 95% CI	p-value
Inhibits ovulation	Previous use of EC vs. no or uncertain previous use of EC	242 (65) vs. 128 (35)	2.25; 1.21-4.18	0.014
	Having children vs. no children	126 (35) vs. 236 (65)	0.51; 0.27-0.95	0.048
	Hold strong religious beliefs vs. do not hold strong religious beliefs or uncertain	23 (6) vs. 338 (94)	0.41; 0.18-0.91	0.036
	In the past held strong views against abortion vs. in the past not held strong views against abortion or uncertain	51 (14) vs. 306 (86)	0.25; 0.13-0.49	<0.001
Prevents implantation	Hold strong religious beliefs vs. do not hold strong religious beliefs or uncertain	21 (6) vs. 315 (94)	0.37; 0.15-0.92	0.044
	In the past held strong views against abortion vs. in the past not held strong views against abortion or uncertain	43 (13) vs. 289 (87)	0.26; 0.14-0.46	<0.001
Disrupts implantation	Previous abortion vs. no previous abortion	81 (28) vs. 212 (72)	2.53; 1.34-4.78	0.005
	In a sexual relationship vs. not in a sexual relationship or uncertain	248 (83) vs. 51 (17)	1.77; 1.04-3.03	0.048
	In the past held strong views against abortion vs. in the past not held strong views against abortion or uncertain	32 (11) vs. 263 (89)	0.22; 0.13-0.39	<0.001
Missed-period pill	Previous abortion vs. no previous abortion	75 (30) vs. 178 (70)	2.75; 1.58-4.78	<0.001
	In the past held strong views against abortion vs. in the past not held strong views against abortion or uncertain	33 (13) vs. 222 (87)	0.47; 0.28-0.80	0.007

Table 4a. Factors for which there is a lack of evidence for an association with the acceptability of an

EC pill inhibiting ovulation

Factor	N (%)	OR and 95% CI	p-value
Previous use of IUD for EC vs. no or uncertain previous use of IUD for EC	10 (3) vs. 358 (97)	0.40 0.11-1.51	0.166
In a sexual relationship vs. not in a sexual relationship or uncertain	291 (80) vs. 71 (20)	1.21 0.57-2.56	0.773
Previous pregnancy vs. no previous pregnancy	173 (48) vs. 188 (52)	0.61 0.33-1.15	0.171
Previous abortion vs. no previous abortion	85 (24) vs. 268 (76)	1.11 0.59-2.34	0.929
DEPCAT			
Affluent vs. moderate	18 (10) vs. 172 (90)	1.20 0.26-5.53	1.000
Moderate vs. deprived	172 (75) vs. 57 (25)	0.92 0.37-2.25	1.000
Affluent vs. deprived	18 (24) vs. 57 (76)	1.10 0.21-5.80	1.000
Age			
<20 vs. 20-24	51 (31) vs. 115 (69)	1.44 0.45-4.64	0.735
<20 vs. 25-34	51 (32) vs. 110 (68)	1.23 0.39-4.20	0.779
<20 vs. >34	51 (43) vs. 68 (57)	2.06 0.62-6.85	0.356
20-24 vs. 25-34	115 (51) vs. 110 (49)	0.89 0.38-2.06	0.944
20-24 vs. >34	115 (63) vs. 68 (37)	1.43 0.61-3.37	0.549
25-34 vs. >34	110 (62) vs. 68 (38)	1.62 0.67-3.93	0.403

278 **Table 4b.** Factors for which there is a lack of evidence for an association with the acceptability of an

279 EC pill preventing implantation

Factor	N (%)	OR and 95% CI	p-value
Previous use of EC vs. no or uncertain previous use of EC	224 (65) vs. 121 (35)	1.52 0.91-2.55	0.145
Previous use of IUD for EC vs. no or uncertain previous use of IUD for EC	10 (3) vs. 333 (97)	0.68 0.18-2.54	0.474
In a sexual relationship vs. not in a sexual relationship or uncertain	275 (82) vs. 62 (18)	1.65 0.91-2.99	0.133
Previous pregnancy vs. no previous pregnancy	169 (50) vs. 167 (50)	1.23 0.74-2.06	0.503
Having children vs. not having children	120 (36) vs. 217 (64)	0.76 0.45-1.27	0.358
Previous abortion vs. no previous abortion	85 (26) vs. 244 (74)	2.09 1.02-4.27	0.057
DEPCAT			
Affluent vs. moderate	14 (8) vs. 162 (92)	0.46 0.17-1.33	0.207
Moderate vs. deprived	162 (75) vs. 53 (25)	1.02 0.48-2.16	1.000
Affluent vs. deprived	14 (21) vs. 53 (79)	0.48 0.15-1.10	0.219
Age			
<20 vs. 20-24	49 (31) vs. 107 (69)	1.60 0.61-4.22	0.463
<20 vs. 25-34	49 (33) vs. 101 (67)	1.70 0.64-4.48	0.393
<20 vs. >34	49 (44) vs. 62 (56)	2.24 0.82-6.15	0.171
20-24 vs. 25-34	107 (51) vs. 101 (49)	1.06 0.55-2.06	0.999
20-24 vs. >34	107 (63) vs. 62 (37)	1.40 0.69-2.85	0.460
25-34 vs. >34	101 (62) vs. 62 (38)	1.32 0.65-2.69	0.564

280

Table 4c. Factors for which there is a lack of evidence for an association with the acceptability of an
EC pill disrupting implantation

Factor	N (%)	OR and 95% CI	p-value
Previous use of EC vs. no or uncertain previous use of EC	203 (66) vs. 103 (34)	1.56 0.99-2.46	0.069
Previous use of IUD for EC vs. no or uncertain previous use of IUD for EC	8 (3) vs. 297 (97)	0.53 0.17-1.67	0.330
Hold strong religious beliefs vs. do not hold strong religious beliefs or uncertain	20 (7) vs. 278 (93)	0.66 0.30-1.47	0.420
Previous pregnancy vs. no previous pregnancy	152 (51) vs. 147 (49)	1.29 0.82-2.02	0.329
Having children vs. not having children	106 (36) vs. 193 (64)	0.85 0.54-1.35	0.573
DEPCAT			
Affluent vs. moderate	13(9) vs. 136 (91)	0.77 0.29-2.02	0.775
Moderate vs. deprived	136 (72) vs. 53 (28)	0.46 0.22-0.96	0.054
Affluent vs. deprived	13 (20) vs. 53 (80)	0.35 0.11-1.10	0.108
Age			
<20 vs. 20-24	45 (32) vs. 97 (68)	1.30 0.58-2.90	0.660
<20 vs. 25-34	45 (35) vs. 84 (65)	1.82 0.82-4.02	0.191
<20 vs. >34	45 (43) vs. 59 (57)	1.53 0.65-3.58	0.445
20-24 vs. 25-34	97 (54) vs. 84 (46)	1.40 0.79-2.50	0.318
20-24 vs. >34	97(62) vs. 59 (38)	1.17 0.61-2.27	0.757
25-34 vs. >34	84 (59) vs. 59 (41)	0.84 0.44-1.60	0.707

284 **Table 4d.** Factors for which there is a lack of evidence for an association with the acceptability of a
 285 missed-period pill

Factor	N (%)	OR and 95% CI	p-value
Previous use of EC vs. no or uncertain previous use of EC	171 (65) vs. 94 (35)	1.159 0.77-1.76	0.553
Previous use of IUD for EC vs. no or uncertain previous use of IUD for EC	7 (3) vs. 259 (97)	0.64 0.21-1.93	0.557
In a sexual relationship vs. not in a sexual relationship or uncertain	208 (80) vs. 51 (20)	1.02 0.61-1.70	1.000
Hold strong religious beliefs vs. do not hold strong religious beliefs or uncertain	19 (7) vs. 239 (93)	0.98 0.45-2.11	1.000
Previous pregnancy vs. no previous pregnancy	136 (53) vs. 123 (47)	1.48 0.98-2.23	0.076
Having children vs. not having children	95 (37) vs. 164 (63)	1.05 0.69-1.60	0.916
DEPCAT			
Affluent vs. moderate	11 (8) vs. 119 (92)	0.77 0.31-1.95	0.755
Moderate vs. deprived	119 (73) vs. 43 (27)	0.78 0.43-1.41	0.490
Affluent vs. deprived	11 (20) vs. 43 (80)	0.60 0.21-1.66	0.468
Age			
<20 vs. 20-24	40 (32) vs. 84 (68)	1.40 0.70-2.80	0.441
<20 vs. 25-34	40 (34) vs. 77 (66)	1.46 0.72-2.94	0.382
<20 vs. >34	40 (47) vs. 45 (53)	2.02 0.96-4.23	0.093
20-24 vs. 25-34	84 (52) vs. 77 (48)	1.04 0.62-1.76	0.986
20-24 vs. >34	84 (65) vs. 45 (35)	1.44 0.81-2.57	0.271
25-34 vs. >34	77 (63) vs. 45 (37)	1.39 0.77-2.48	0.343

Table 5. Independent predictors of acceptability of EC pills according to mechanism of action

	Factor	Adjusted odds ratio	90% CI	p-value
Inhibits ovulation	Previous use of EC vs. no or uncertain previous use of EC	1.98	(1.16, 3.39)	0.037
	In the past did hold strong views against abortion vs. did not or uncertain	0.27	(0.15, 0.48)	p<0.001
Disrupts implantation	Previous abortion vs. no previous abortion	1.98	(1.14, 3.43)	0.041
	In the past did hold strong views against abortion vs. did not or uncertain	0.24	(0.15, 0.39)	p<0.001

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